

Solano County

*675 Texas Street
Fairfield, California 94533
www.solanocounty.com*



Agenda - Final

Thursday, June 21, 2018

7:00 PM

Board of Supervisors Chambers

Planning Commission

Any person wishing to address any item listed on the Agenda may do so by submitting a Speaker Card to the Clerk before the Commission considers the specific item. Cards are available at the entrance to the meeting chambers. Please limit your comments to five (5) minutes. For items not listed on the Agenda, please see "Items From the Public".

All actions of the Solano County Planning Commission can be appealed to the Board of Supervisors in writing within 10 days of the decision to be appealed. The fee for appeal is \$150.

Any person wishing to review the application(s) and accompanying information may do so at the Solano County Department of Resource Management, Planning Division, 675 Texas Street, Suite 5500, Fairfield, CA. Non-confidential materials related to an item on this Agenda submitted to the Commission after distribution of the agenda packet are available for public inspection during normal business hours and on our website at www.solanocounty.com under Departments, Resource Management, Boards and Commissions.

The County of Solano does not discriminate against persons with disabilities and is an accessible facility. If you wish to attend this meeting and you will require assistance in order to participate, please contact Kristine Sowards, Department of Resource Management at (707) 784-6765 at least 24 hours in advance of the event to make reasonable arrangements to ensure accessibility to this meeting.

AGENDA

CALL TO ORDER

SALUTE TO THE FLAG

ROLL CALL

APPROVAL OF AGENDA

APPROVAL OF THE MINUTES

There are no minutes for approval at this time.

ITEMS FROM THE PUBLIC:

This is your opportunity to address the Commission on a matter not heard on the Agenda, but it must be within the subject matter jurisdiction of the Commission. Please submit a Speaker Card before the first speaker is called and limit your comments to five minutes. Items from the public will be taken under consideration without discussion by the Commission and may be referred to staff.

REGULAR CALENDAR

- 1 [PC 18-026](#) PUBLIC HEARING to consider Use Permit Application No. U-17-09 and Marsh Development Application No. MD-17-02 of Verizon Wireless for a new wireless telecommunications facility to be located near the intersection of Marshview Road, Goodyear Road and Interstate 680 on Assessor's Parcel Number 0046-110-280. (Project Planner: Karen Avery)
Staff Recommendation: Approval

Attachments: [A - PC Resolution](#)
 [B - APN Map](#)
 [C - Neg Dec & Initial Study](#)
 [D - Development Plans](#)
 [E - Photosimulations](#)
 [F - RF Study](#)
 [G - Noise Study](#)

- 2 [PC 18-027](#) PUBLIC HEARING to consider an ordinance amending Chapter 28 of the Solano County Code to define the short-term rental of a dwelling as a "vacation house rental" and to authorize such land use, subject to an administrative or minor use permit, within the Agricultural, Rural Residential and Watershed Zoning Districts. (Project Planner: Michael Yankovich)

Attachments: [A - Vacation House Rental AdminMinor061418Ord1](#)
 [B - Vacation House Rental Admin061418Ord 2](#)
 [C - Map - Overallmap](#)
 [C - Map - A-20](#)
 [C - Map - ASV-20](#)
 [C - Map - RR](#)
 [C - Map - A-40 \(2\)](#)

ANNOUNCEMENTS AND REPORTS

ADJOURN

*To the Planning Commission meeting of July 5, 2018 at 7:00 P.M., Board Chambers,
675 Texas Street, Fairfield, CA*

- A. Applicant/Owner:**
Complete Wireless Consulting on behalf of
Verizon Wireless
2009 V Street
Sacramento, CA 95818
- B. General Plan Land Use Designation/Zoning:**
General Plan: Agricultural
Zoning: Exclusive Agricultural "A-20"
- C. Existing Use:** Vacant
- D. Adjacent Zoning and Uses:**
North: Marsh Preservation (MP) - marshland/vacant
South: Exclusive Agricultural (A-20) - vacant
East: Marsh Preservation (MP) - marshland/vacant
West: Exclusive Agricultural (A-20) - Interstate 680

ANALYSIS:

A. Environmental Setting

The project site is located near the intersection of Marshview Road and Goodyear Road to the east of Interstate 680 (I-680) in a rural area of Solano County. The property sites near the access ramp for northbound I-680. The 2.8-acre parcel is vacant of structures and is approximately 1.5 miles southeast of the boundary of the City of Fairfield.

The parcel is mostly flat with the elevation gradually increasing adjacent to the three roads, I-680 on-ramp, Goodyear and Marshview. Goodyear Road borders the property to the north and east followed by the Suisun Marsh. Marshview Road borders the property to the south and the northbound on-ramp to I-680 borders the project to the west. The parcel has several mature trees along the I-680 on-ramp and a couple of trees scattered along Goodyear Road. There is an existing barbed wire fence that runs partially along Marshview Road and then extends north along the on-ramp. The property is covered in grasses and some scattered shrubs. The closest residence is approximately 2600' on the west side of the southbound lanes of I-680.

B. Project Description

Verizon Wireless, the applicant, has discovered a coverage gap along I-680 between two of their existing wireless facilities. The applicant is requesting a conditional use permit and marsh development permit to construct a 50' wireless communication facility, a slimline monopole painted dark green, to provide better wireless coverage in the area. The applicant is also requesting that the Planning Commission grant an exception to the height limitation per Section 28.81(D)(5)(e). The allowed height for a wireless facility is 35' within the I-680 and the applicant is requesting 50'. The applicant had originally proposed a 65' standard monopole painted dark green; this design was rejected by staff due to concerns about the visual impact of the wireless site when driving along I-680. The applicant redesigned the site, proposing a slimline monopole versus the standard monopole, and proposing two antenna arrays versus one antenna array at the top of the 65' tower, also the applicant is proposing to mount the two antenna arrays closer to the pole than the standard antenna mounts. The current proposed project would consist of the following:

Monopole:

The proposed facility consists of a 50' slimline monopole painted dark green with the antennas divided into two

sectors or split centerlines. There will be a total of four (4), eight foot (8') panel antennas with two antennas centered at 46' and two antennas centered at 37' on the pole. The antenna mounts will be 1' apart on the pole and mounted close to the pole. The remote radio units and surge protectors are to be placed behind the antennas and painted dark green to match the antennas and monopole. All cables and wiring will be located within the monopole.

Equipment Compound:

The proposed 33' x 33' (1189 sf) lease area will be located underneath the monopole. The equipment compound will be surrounded by a 9' tall chain link fence with green privacy slats. The fence will be topped with barbed wire and will have a locking gate. The lease area will contain the outdoor equipment cabinets necessary to operate the site. The applicant is proposing to install the equipment cabinets on a 21' x 21' concrete pad of cell blocks to raise the equipment 2' above ground level. No emergency generator is proposed at this site.

Access and Utilities:

The tower will be located within the parcel approximately 125' west off Goodyear Road. The applicant is proposing a new 15' wide gravel driveway off Goodyear Road to access the facility. Power and land-based telecommunications service will be provided from a nearby joint utility pole located near the proposed monopole. All power and telco lines to the monopole will be located underground. No water or septic is required as the site is unmanned. There will be a parking space and turnaround area for monthly service technician near the equipment compound.

C. General Plan and Zoning Consistency

The proposed project would occur on land designated Agriculture per the Solano County General Plan. The property is also within the Secondary Management Area of the Suisun Marsh which requires approval of a marsh development permit for development of a telecommunications facility within the Secondary Management Area.

The site is located on land zoned Agricultural (A-20). This designation allows new wireless telecommunications facilities subject to approval of a Conditional Use Permit by the Planning Commission. Per Section 28.81(D)(5)(b) of the Solano county Zoning Regulations, all wireless facilities constructed within $\frac{3}{4}$ mile of a designated scenic corridor shall conform with the height limit in the zoning district in which they are located. The proposed wireless facility is located within $\frac{3}{4}$ mile of Interstate 680, which is a designated scenic corridor in the Solano County General Plan. The height limit in the A-20 zoning district is 35'. The proposed monopole is 50'. The applicant is requesting that the Planning Commission grant an exception to this height limitation per Section 28.81(D)(5)(e).

D. Alternatives Analysis

Section 28.81(F) of the Wireless Ordinance requires an Alternatives Analysis to be prepared for Use Permits considered before the Planning Commission. The Alternatives Analysis shall include, at a minimum, these three considerations for siting a new wireless facility: 1) co-location at all existing wireless facilities; including facilities in an adjacent city or county; 2) lower, more closely spaced wireless communication facilities; and 3) mounting on an existing non-residential structure within 2-miles of the proposed facility.

The Alternatives Analysis submitted by the applicant stated that there were no existing wireless communications facilities within the desired coverage area in which to co-locate Verizon's antennas. The study also stated that there were no existing non-residential structures to co-locate as well. The applicant approached five additional property owners about the possibility of siting a wireless facility on their property. However, after multiple attempts to reach two of the property owners, those sites were abandoned. Three of the other sites were determined to be in the Marsh Preservation District which allows wireless facilities but in

this area of the marsh, the water level is higher and there are concerns about the aesthetics of siting a facility within the marsh. The analysis concluded that the proposed location was the most appropriate.

E. Visual Analysis

Section 28.81(G) of the Wireless Ordinance requires a Visual Analysis for a facility considered before the Planning Commission and located within $\frac{3}{4}$ mile of a designated scenic roadway. Figure RS-5 of the General Plan identifies Interstate 680, as the nearest scenic roadway. A Visual Analysis was prepared and submitted by the applicant for the initial project application for a 65' monopole with one antenna array consisting of 6 antennas located at the top. As mentioned above, the applicant redesigned the wireless facility to a 50' slimline monopole with two antenna arrays with two antennas each centered at 46' and 37'. The applicant submitted a series of photo simulations (Attachment E) of the site showing the proposed slimline monopole as it would be viewed from various locations within the vicinity of the project. The photo simulation of the site looking southeast from across I-680 is the most visible to southbound travelers specifically. However, while the site is still visible, the proposed slimline monopole at a reduced height and the 9' chain link fence with privacy slats surrounding the equipment compound, combined with the speed of travelers on I-680, staff concluded that the proposed design would have a less than significant visual impact to passers-by.

F. Radio-Frequency Exposure Review

Section 28.81(H) of the Wireless Ordinance requires the preparation of a radio-frequency (RF) exposure review for the project. Verizon Wireless has submitted the results of a radio frequency (RF) study prepared by Hammett & Edison, Inc. (Attachment F). The study evaluated the RF exposure level of the wireless facility with proposed Verizon antennas and equipment configuration. The study concluded that the site will comply with FCC guidelines limiting public exposure to RF energy.

G. Noise Assessment

The applicant submitted a noise study conducted by Bollard Acoustical Consultants, Inc. which concluded that the outdoor equipment cabinet noise levels would satisfy the noise standards in the Solano County General Plan and Zoning Regulations of 65 dB Ldn at the nearest property line. (Attachment G)

H. Development Review Committee

As part of the project review process, the application is reviewed by various divisions within the Department of Resource Management:

Environmental Health Division

The Environmental Health Division responded that the applicant will need to contact the Hazardous Materials Section of the Environmental Health Division to verify whether or not a hazardous materials business plan is needed for the site. This requirement is listed as a condition of approval below.

Public Works Engineering

The Public Works Engineering Division reviewed the project and will be requiring the applicant to construct the proposed access driveway from Goodyear Road to meet Solano County Road Improvement Standards. The project may require a grading permit; this will be determined during the building permit review process. These comments are included in the conditions of approval listed below.

Building Division

The Building Division reviewed the project and commented that the applicant will need to apply for a building permit prior to start of construction. Conditions of approval describing the necessary building application

submittal materials are listed below.

I. Outside Agency Review

Cordelia Fire District

The project location is within the Cordelia Fire District. The District reviewed the project and has provided comments for addressing the property, address signage and the requirement for the installation of a Knox lock box for emergency access purposes. These requirements are included in the conditions of approval below.

California Department of Transportation - District 4

The project application and environmental document were submitted to Caltrans District 4 for their review and comment. Caltrans responded that should the applicant need access through a State right-of-way, the applicant will need to obtain an encroachment permit and submit a traffic control plan to District 4 for review and approval. A condition of approval reflecting this requirement is included below.

J. Recommendation

Staff recommends approval of the Verizon wireless telecommunications facility at the intersection of I-680, Marshview and Goodyear Roads based on the Findings, Additional Findings, and with the Conditions of Approval discussed below.

FINDINGS:

- 1. The establishment, maintenance, or operation of the proposed use is in conformity with the County General Plan with regard to traffic circulations, population densities and distribution, and other aspects of the General Plan.**

The operation and maintenance of a wireless communication facility is consistent with the goals, objectives, and policies of the Solano County General Plan, including but not limited to the Land Use, Resources, and Public Facilities and Service Chapters.

- 2. Adequate utilities, access roads, drainage and other necessary facilities have been or are being provided.**

Vehicular access to the site will be via Goodyear Road with internal access via a proposed driveway. Utilities will be provided by existing power poles within the area. All utilities serving the site will be underground. Building plans will be reviewed and approved by the Solano County Building and Safety Division before a permit is issued. The facility will be unmanned and does not require a source for domestic drinking water or private septic system.

- 3. The subject use will not, under the circumstances of the particular case, constitute a nuisance or be detrimental to the health, safety, peace, morals, comfort or general welfare of persons residing or working in or passing through the neighborhood of such proposed use, or be detrimental or injurious to property and improvements in the neighborhood or to the general welfare of the County.**

The Solano County Development Review Committee has reviewed the project application and determined that the project should not present a detrimental or injurious impact on surrounding properties.

ADDITIONAL FINDINGS:

- 4. The proposed facility complies with applicable sub-sections of Wireless Communications Facilities,**

Sec. 28.81 of the Zoning Regulations.

5. The RF Environmental Evaluation Report for the facility shows that the cumulative radio-frequency energy emitted by the facility and any near-by facilities will be consistent with FCC regulations.
6. The facility blends in with its existing environment and will not have significant visual impacts. The Planning Commission grants a height exception for the slimline monopole to 50' based on the conclusions from the visual analysis.
7. The addition of the wireless communications facility will not have a significant incremental impact on the environment. A Negative Declaration was prepared and circulated for the project which found no significant impacts.

CONDITIONS OF APPROVAL:

General

1. Approval is hereby granted to Verizon Wireless to establish a wireless communication facility in accord with the application materials and development plans submitted with Use Permit Application U-17-09 and Marsh Development Application MD-17-02 and as approved by the Solano County Planning Commission. The approval includes the construction of a 50' slimline monopole painted dark green, with four (4), eight foot (8') panel antennas with two antennas centered at 46' and two antennas centered at 37' feet on the pole. The remote radio units and surge protectors are to be placed behind the antennas and painted a dark green to match the antennas and monopole. All cables and wiring will be located within the monopole. The equipment 1189 sq. ft. equipment compound is to be surrounded by a 9' tall chain link fence with green privacy slats.
2. Pursuant to Section 28.81(J) of the Wireless Ordinance, the subject use permit shall be granted for a fixed term of ten (10) years and shall expire June 21, 2028. Consideration of a new land use permit is required should the need for the wireless communication facility remain upon permit expiration.
3. No additional uses (including outdoor storage), new or expanded buildings shall be established or constructed beyond those identified on the approved development plans without prior approval of a new, revised, or amended use permit.
4. All requirements of the Federal Communications Commission including RF signage shall be met prior to building permit issuance and operation of the subject facility.
5. The permittee shall take such measures as may be necessary or as may be required by the County to prevent offensive noise, lighting, dust or other impacts which constitute a hazard or nuisance to surrounding properties.
6. The premises shall be maintained in a neat and orderly manner and kept free of accumulated debris and junk
7. Upon termination or expiration of the subject use permit, the proposed wireless communication infrastructure shall be removed from the site. All equipment, including concrete pads, shall be removed within 90 days of discontinuation of the use and the site shall be restored to its original pre-construction condition. The County shall have access across the subject property to effect such removal.
8. As proposed, all on-site utility lines leading to and connecting the leased areas and equipment shelters shall be located underground.

9. The applicant may be required to repaint or otherwise re-color the antennas, supporting structure and any portion of the wireless facility so as to match the original color if
10. All facility components including, but not limited to, monopole, antennas, microwave dishes, remote radio units, equipment cabinets, chain link fence/privacy slats, shall be maintained in good condition, including ensuring the facilities are reasonably free of:
 - a. Rust and corrosion;
 - b. Chipped, faded, peeling and cracked paint;
 - c. Graffiti, bill, stickers, advertisements, litter and debris; and
 - d. Broken or misshapen structural parts

The applicant shall repaint any damaged, faded, peeling paint to original quality and cover or remove graffiti as part of regular maintenance.

Building & Safety Division

11. The structure any site improvements shall be designed using the 2016 California Building Standards Codes including the mandatory measures found in the new 2016 California Green Building Code, Chapter(s) 1,2,3,5,6,7,8, and A5 for Voluntary Measures
12. Prior to any construction or improvements taking place, a Building Permit Application shall be submitted as per Section 105 of the 2016 California Building Code, or the latest edition enforced at the time of building permit application. "Any owner or authorized agent who intends to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert, or replace any electrical, gas, mechanical or plumbing system, the installation of which is regulated by this code, or to cause any such work to be done, shall first make application to the building official and obtain the required permit."
13. A geotechnical/soils report will be required for the construction of new buildings.
14. Plans and Specifications shall meet the requirements as per Section 107 of the 2016 California Building Code. "Construction documents, statement of special inspections and other data shall be submitted in one or more sets with each permit application. The construction documents shall be prepared by a registered design professional where required by the statues of the jurisdiction which the project is to be constructed. Where special conditions exist, the building official is authorized to require additional construction documents to be prepared by registered design professional. Electronic media documents are permitted when approval of the building official. Construction documents shall be of sufficient clarity to indicate the location nature, and extent of the work proposed and show in detail that it will conform to the provisions of this code and relevant law, ordnances, rules and regulations, as determined by the building official."
15. Any equipment rooms located in a special Flood Hazard Area (SFHA) must be elevated at least 1 foot above the base flood elevation. If the base flood elevation is unknown, the equipment rooms shall be elevated 3 feet above the highest adjacent grade.
16. The building permit plans shall include a code analysis as listed below and the design shall be under the 2016 California Codes and all current rules, regulations, laws and ordinances of the local, state and federal requirements. Upon building permit submittal, the licensed architect shall provide a code analysis for each building or structure such as:
 - a. Type of Construction
 - b. Seismic Zone and Wind Design
 - c. Location on property

d. Height of all structures

Environmental Health Division

17. The maximum potential volume of hazardous materials stored at the facility shall be calculated, and if required, the facility shall submit a hazardous materials business plan to Solano county Hazardous Materials Section.

Public Works Engineering

18. The applicant shall apply for, secure and abide by the conditions of a grading permit prior to any onsite grading. The applicant shall submit improvement plans to Public Works Engineering for review and approval by the appropriate official. The review of plans and inspection of the construction is subject to fees to cover the cost to Public Works Engineering.

19. The Applicant shall apply for secure ad abide by the conditions of an encroachment permit for any planned or any existing driveway connections to Marshview or Goodyear Road that do not have an existing encroachment permit issued by Solano County. All driveway connections to public roads shall meet Solano County Road Improvement Standards and Land Development Requirements.

Cordelia Fire District

20. The applicant shall purchase and install a Knox lock box to ensure access to the site for emergency personnel.

21. The site shall be assigned an address and the address signage shall be legible and visible.

Caltrans (District 4) - Office of Transit and Community Planning

22. Any work or traffic control that encroaches onto the State right-of-way requires an encroachment permit that is issued by the Department of Transportation, District 4. To apply, a completed encroachment permit application, environmental documentation and five set of plans indicating State right-of-way must be submitted to the Office of Permits in Oakland. All traffic-related mitigation measures should be incorporated into the construction plans during the encroachment permit process.

ATTACHMENTS:

A - Draft Resolution

B - Assessor Map

C - Draft Initial Study and Negative Declaration

D - Development Plans

E - Site Photo Simulations

F - Radio-frequency Study - Hammett and Edison, Inc.

G - Noise Study - Bollard Acoustical Consultants, Inc.

SOLANO COUNTY PLANNING COMMISSION

RESOLUTION NO. XX

WHEREAS, the Solano County Planning Commission has considered Use Permit Application No. U-17-09 and Marsh Development Permit Application No. MD-17-02 of **Verizon Wireless** c/o Complete Wireless Consulting, Inc. (Hwy 680 Cygnus) to install a 65' monopole with associated ground equipment as part of a wireless telecommunications facility to be located on a 2.8-acre parcel zoned Exclusive Agricultural "A-20" off Marshview and Goodyear Road as they intersect with Interstate 680. The site is approximately 1.5 miles southeast of the City of Fairfield, APN: 0046-110-280, and;

WHEREAS, the Commission has reviewed the report of the Department of Resource Management and heard testimony relative to the subject application at the duly noticed public hearing held on April 5, 2018 which was continued to May 5, 2018 and then again to June 21, 2018 and;

WHEREAS, after due consideration, the Planning Commission has made the following findings in regard to said proposal:

- 1. The establishment, maintenance, or operation of the proposed use is in conformity with the County General Plan with regard to traffic circulations, population densities and distribution, and other aspects of the General Plan.**

The operation and maintenance of a wireless communication facility is consistent with the goals, objectives, and policies of the Solano County General Plan, including but not limited to the Land Use, Resources, and Public Facilities and Service Chapters.

- 2. Adequate utilities, access roads, drainage and other necessary facilities have been or are being provided.**

Vehicular access to the site will be via Goodyear Road with internal access via a proposed driveway. Utilities will be provided by existing power poles within the area. All utilities serving the site will be underground. Building plans will be reviewed and approved by the Solano County Building and Safety Division before a permit is issued. The facility will be unmanned and does not require a source for domestic drinking water or private septic system.

- 3. The subject use will not, under the circumstances of the particular case, constitute a nuisance or be detrimental to the health, safety, peace, morals, comfort or general welfare of persons residing or working in or passing through the neighborhood of such proposed use, or be detrimental or injurious to property and improvements in the neighborhood or to the general welfare of the County.**

The Solano County Development Review Committee has reviewed the project application and determined that the project should not present a detrimental or injurious impact on surrounding properties.

- 4. The proposed facility complies with applicable sub-sections of Wireless Communications Facilities, Sec. 28.81 of the Zoning Regulations.**
- 5. The RF Environmental Evaluation Report for the facility shows that the cumulative radio-frequency energy emitted by the facility and any near-by facilities will be consistent with FCC regulations.**

6. The facility blends in with its existing environment and will not have significant visual impacts. The Planning Commission grants a height exception for the slimline monopole to 50' based on the conclusions from the visual analysis.
7. The addition of the wireless communications facility will not have a significant incremental impact on the environment. A Negative Declaration was prepared and circulated for the project which found no significant impacts.

BE IT, THEREFORE, RESOLVED, that the Planning Commission of the County of Solano does hereby approve Use Permit Application No. U-17-09 and Marsh Development Permit Application No. MD-17-02 subject to the following recommended conditions of approval:

General

1. Approval is hereby granted to Verizon Wireless to establish a wireless communication facility in accord with the application materials and development plans submitted with Use Permit Application U-17-09 and Marsh Development Application MD-17-02 and as approved by the Solano County Planning Commission. The approval includes the construction of a 50' slimline monopole painted dark green, with four (4), eight foot (8') panel antennas with two antennas centered at 46' and two antennas centered at 37' feet on the pole. The remote radio units and surge protectors are to be placed behind the antennas and painted a dark green to match the antennas and monopole. All cables and wiring will be located within the monopole. The equipment 1189 sq. ft. equipment compound is to be surrounded by a 9' tall chain link fence with green privacy slats.
2. Pursuant to Section 28.81(J) of the Wireless Ordinance, the subject use permit shall be granted for a fixed term of ten (10) years and shall expire June 21, 2028. Consideration of a new land use permit is required should the need for the wireless communication facility remain upon permit expiration.
3. No additional uses (including outdoor storage), new or expanded buildings shall be established or constructed beyond those identified on the approved development plans without prior approval of a new, revised, or amended use permit.
4. All requirements of the Federal Communications Commission including RF signage shall be met prior to building permit issuance and operation of the subject facility.
5. The permittee shall take such measures as may be necessary or as may be required by the County to prevent offensive noise, lighting, dust or other impacts which constitute a hazard or nuisance to surrounding properties.
6. The premises shall be maintained in a neat and orderly manner and kept free of accumulated debris and junk
7. Upon termination or expiration of the subject use permit, the proposed wireless communication infrastructure shall be removed from the site. All equipment, including concrete pads, shall be removed within 90 days of discontinuation of the use and the site shall be restored to its original pre-construction condition. The County shall have access across the subject property to effect such removal.
8. As proposed, all on-site utility lines leading to and connecting the leased areas and equipment shelters shall be located underground.

9. The Permittee may be required to repaint or otherwise re-color the antennas, supporting structure and any portion of the wireless facility so as to match the original color if
10. All facility components including, but not limited to, monopole, antennas, microwave dishes, remote radio units, equipment cabinets, chain link fence/privacy slats, shall be maintained in good condition, including ensuring the facilities are reasonably free of:
 - a. Rust and corrosion;
 - b. Chipped, faded, peeling and cracked paint;
 - c. Graffiti, bill, stickers, advertisements, litter and debris; and
 - d. Broken or misshapen structural parts

The Permittee shall repaint any damaged, faded, peeling paint to original quality and cover or remove graffiti as part of regular maintenance.

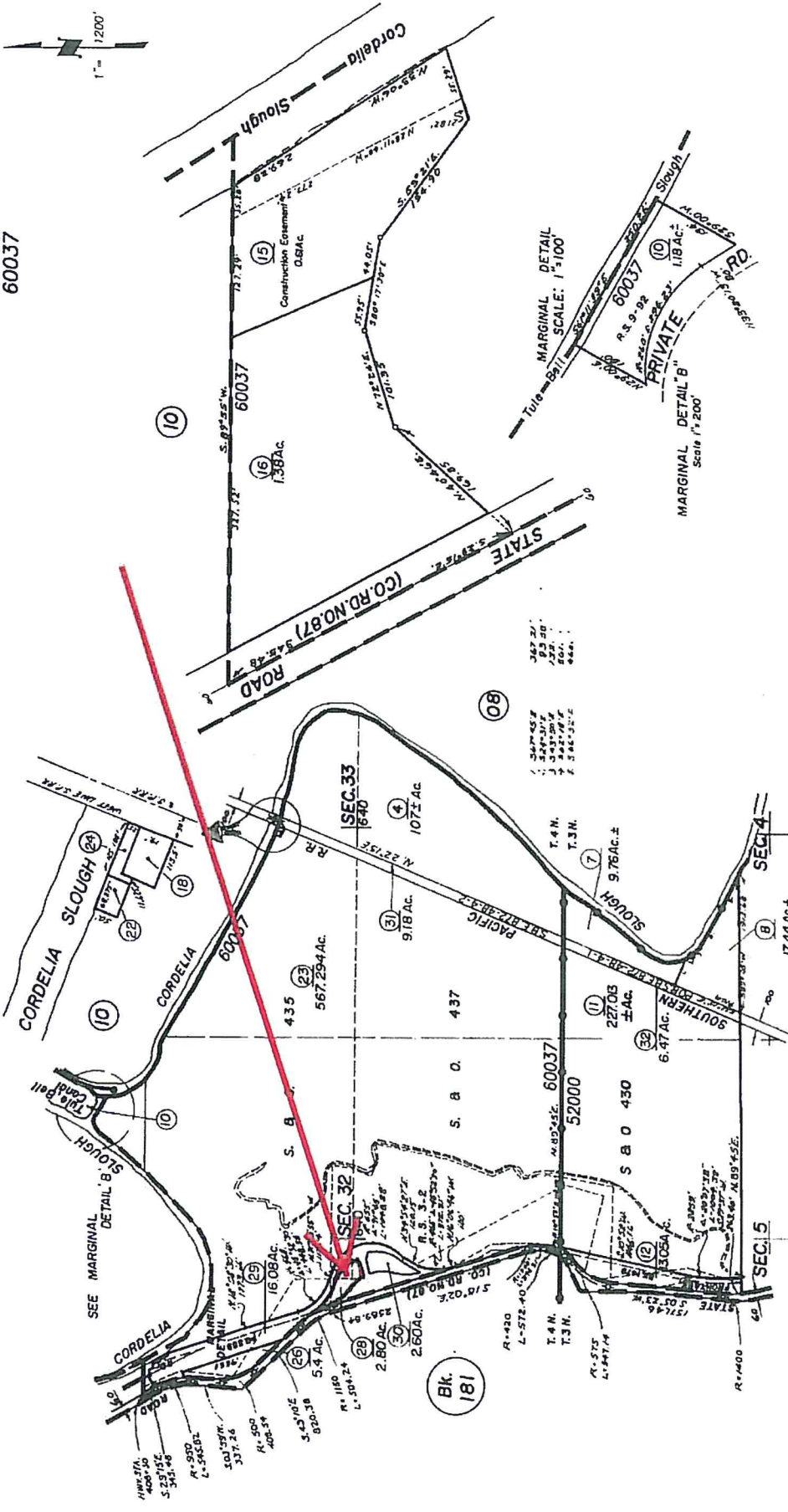
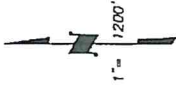
Building & Safety Division

11. The structure any site improvements shall be designed using the 2016 California Building Standards Codes including the mandatory measures found in the new 2016 California Green Building Code, Chapter(s) 1,2,3,5,6,7,8, and A5 for Voluntary Measures
12. Prior to any construction or improvements taking place, a Building Permit Application shall be submitted as per Section 105 of the 2016 California Building Code, or the latest edition enforced at the time of building permit application. "Any owner or authorized agent who intends to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert, or replace any electrical, gas, mechanical or plumbing system, the installation of which is regulated by this code, or to cause any such work to be done, shall first make application to the building official and obtain the required permit."
13. A geotechnical/soils report will be required for the construction of new buildings.
14. Plans and Specifications shall meet the requirements as per Section 107 of the 2016 California Building Code. "Construction documents, statement of special inspections and other data shall be submitted in one or more sets with each permit application. The construction documents shall be prepared by a registered design professional where required by the statutes of the jurisdiction which the project is to be constructed. Where special conditions exist, the building official is authorized to require additional construction documents to be prepared by registered design professional. Electronic media documents are permitted when approval of the building official. Construction documents shall be of sufficient clarity to indicate the location nature, and extent of the work proposed and show in detail that it will conform to the provisions of this code and relevant law, ordinances, rules and regulations, as determined by the building official."
15. Any equipment rooms located in a special Flood Hazard Area (SFHA) must be elevated at least 1 foot above the base flood elevation. If the base flood elevation is unknown, the equipment rooms shall be elevated 3 feet above the highest adjacent grade.
16. The building permit plans shall include a code analysis as listed below and the design shall be under the 2016 California Codes and all current rules, regulations, laws and ordinances of the local, state and federal requirements. Upon building permit submittal, the licensed architect shall provide a code analysis for each building or structure such as:

T.3 & 4N., R.2W., M.D.B.& M.

Tax Area Code
52000
60037

46-11



NOTE: This map is for assessment purposes only. It is not intended to define legal boundary rights or imply compliance with land division laws.

REVISION	DATE	BY
1	9-15-03	Cr
2	10-26-03	GJ

Bk. 90

Assessor's Map Bk. 46 Pg. 11
County of Solano, Calif.

09-10

Assessor's Block Numbers Shown in Ellipses, Assessor's Parcel Numbers Shown in Circles

**NEGATIVE DECLARATION
OF THE
SOLANO COUNTY DEPARTMENT OF RESOURCE MANAGEMENT**

PROJECT TITLE:

Use Permit U-17-09 & Marsh Development Permit MD-17-02 Verizon Wireless (Hwy 680/Cygnus)

PROJECT DESCRIPTION AND LOCATION:

Environmental Setting:

The project site is located near the intersection of Marshview Road and Goodyear Road to the east of Interstate 680 (I-680) in a rural area of Solano County. The property sits near the access ramp for northbound Interstate 680. The 2.8-acre parcel is vacant of structures and is approximately 1.5 miles southeast of the boundary of the City of Fairfield. The project site is located on Assessor's Parcel Number (APN) 0046-110-280.

The parcel is mostly flat with the elevation gradually increasing adjacent to the three roads, I-680 on-ramp, Goodyear and Marshview. Goodyear Road borders the property to the north and east followed by the Suisun Marsh. Marshview Road borders the property to the south and the northbound on-ramp to I-680 borders the project to the west. The parcel has several mature trees along the I-680 on-ramp and a couple of trees scattered along Goodyear Road. There is an existing barbed wire fence that runs partially along Marshview Road and then extends north along the on-ramp. The property is covered in grasses and some scattered shrubs.

Project Description:

The applicant, Verizon Wireless, is requesting a conditional use permit and marsh development permit to construct a 50' wireless communication facility, a slimline monopole painted dark green, in the southwest corner of the parcel. The project would consist of the following:

Monopole:

The proposed facility consists of a 50' slimline monopole painted dark green with the antennas divided into two sectors or split centerlines. There will be a total of four (4), eight foot (8') panel antennas with two antennas centered at 46' and two antennas centered at 37' on the pole. The antenna mounts will be 1' apart on the pole. The remote radio units and surge protectors are to be placed behind the antennas and painted dark green to match the antennas and monopole. All cables and wiring will be located within the monopole.

Equipment Compound:

The proposed 33' x 33' (1189 sf) lease area is to be located underneath the monopole. The equipment compound will be surrounded by a 9' tall chain link fence with green privacy slats. The lease area will contain all the outdoor equipment cabinets necessary to operate the site. The applicant is proposing to install the equipment cabinets on a 21' x 21' concrete pad of cell blocks to raise the equipment 2' above ground level. No emergency generator is proposed for this site.

Access and Utilities:

The tower will be located within the parcel approximately 125' west off Goodyear Road. The applicant is proposing a new 15' wide gravel driveway off Goodyear Road to access the facility. Power and land-based telecommunications service will be provided from a nearby joint utility pole

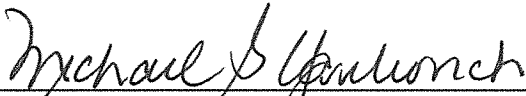
located near the proposed tower. All power and telco lines will be located underground. No water or septic is required as the site is unmanned.

FINDINGS:

The Solano County Department of Resource Management has evaluated the Initial Study which was prepared in regards to the project. The County found no potentially significant adverse environmental impacts likely to occur. The County determined that the project qualifies for a Negative Declaration. The Initial Study of Environmental Impact, including the project description, findings and disposition, are attached.

PREPARATION:

This Negative Declaration was prepared by the Solano County Department of Resource Management. Copies may be obtained at the address listed below.



Michael Yankovich, Planning Program Manager
Solano County Dept. of Resource Management
675 Texas Street, Suite 5500
Fairfield, CA 94533
(707) 784-6765

Verizon
Use Permit No. U-17-09 &
Marsh Development Permit No. MD-17-02

Draft Initial Study and
Mitigated Negative Declaration



View of proposed cell tower location.

May 16, 2018

Prepared By
Department of Resource Management
County of Solano

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DEPARTMENT OF RESOURCE MANAGEMENT PART II OF INITIAL STUDY OF ENVIRONMENTAL IMPACTS

Introduction

The following analysis is provided by the Solano County Department of Resource Management as a review of and supplement to the applicant's completed "Part I of Initial Study". These two documents, Part I and II, comprise the Initial Study prepared in accordance with the State CEQA Guidelines, Section 15063.

Project Title:	Verizon Wireless (Hwy 680/Cygnus)
Application Number:	U-17-09 and MD-17-02
Project Location:	Northwest corner of Marshview Road and Goodyear Road, off I-680 outside of Fairfield
Assessor Parcel No.(s):	0046-110-280
Project Sponsor's Name and Address:	Complete Wireless Consulting on behalf of Verizon Wireless 2009 V Street Sacramento, CA 95818

General Information

This document discusses the proposed project, the environmental setting for the proposed project, and the impacts on the environment from the proposed project and any measures incorporated which will minimize, avoid and/or provide mitigation measures for the impacts of the proposed project on the environment.

- Please review this Initial Study. You may order additional copies of this document from the Planning Services Division, Resource Management Department, County of Solano at 675 Texas Street, Suite 5500, Fairfield, CA, 94533.
- We welcome your comments. If you have any comments regarding the proposed project, please send your written comments to this Department by the deadline listed below.
- Submit comments via postal mail to

Planning Services Division
Resource Management Department
Attn: Karen Avery, Senior Planner
675 Texas Street Suite 5500
Fairfield, CA 94533

- Submit comments via fax to: (707) 784-4805
- Submit comments via email to: kmavery@solanocounty.com
- Submit comments by the deadline of: June 18, 2018**

Next Steps

After comments are received from the public and any reviewing agencies, the Department may recommend that the environmental review is adequate and that a Negative Declaration be adopted or that the environmental review is not adequate and that further environmental review is required.

ENVIRONMENTAL DETERMINATION

On the basis of this initial study:

- I find the proposed project could not have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the project proponent has agreed to revise the project to avoid any significant effect. A **MITIGATED NEGATIVE DECLARATION** will be prepared.
- I find the proposed project could have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT (EIR)** is required.
- I find the proposed project could have a significant effect on the environment, but at least one effect has been (1) adequately analyzed in a previous document pursuant to applicable legal standards, and (2) addressed by mitigation measures based on the previous analysis as described in the attached initial study.
An EIR is required that analyzes only the effects that were not adequately addressed in a previous document.
- I find that although the proposed project could have a significant effect on the environment, no further environmental analysis is required because all potentially significant effects have been (1) adequately analyzed in an earlier EIR or **NEGATIVE DECLARATION** pursuant to applicable standards, and (2) avoided or mitigated pursuant to that earlier EIR or **NEGATIVE DECLARATION**, including revisions or mitigation measures that are included in the project, and further analysis is not required.

May 15, 2018
Date

Karen Avery

Karen Avery
Senior Planner

1.0 ENVIRONMENTAL SETTING and PROJECT DESCRIPTION

1.1 ENVIRONMENTAL SETTING:

The project site is located near the intersection of Marshview Road and Goodyear Road to the east of Interstate 680 (I-680) in a rural area of Solano County. The property sits near the access ramp for northbound Interstate 680. The 2.8-acre parcel is vacant of structures and is approximately 1.5 miles southeast of the boundary of the City of Fairfield. The project site is located on Assessor's Parcel Number (APN) 0046-110-280.

The parcel is mostly flat with the elevation gradually increasing adjacent to the three roads, I-680 on-ramp, Goodyear and Marshview. Goodyear Road borders the property to the north and east followed by the Suisun Marsh. Marshview Road borders the property to the south and the northbound on-ramp to I-680 borders the project to the west. The parcel has several mature trees along the I-680 on-ramp and a couple of trees scattered along Goodyear Road. There is an existing barbed wire fence that runs partially along Marshview Road and then extends north along the on-ramp. The property is covered in grasses and some scattered shrubs.

1.2 PROJECT DESCRIPTION:

The applicant, Verizon Wireless, is requesting a conditional use permit and marsh development permit to construct a 50' wireless communication facility, a slimline monopole painted dark green, in the southwest corner of the parcel. The project would consist of the following:

Monopole:

The proposed facility consists of a 50' slimline monopole painted dark green with the antennas divided into two sectors or split centerlines. There will be a total of four (4), eight foot (8') panel antennas with two antennas centered at 46' and two antennas centered at 37' on the pole. The antenna mounts will be 1' apart on the pole. The remote radio units and surge protectors are to be placed behind the antennas and painted dark green to match the antennas and monopole. All cables and wiring will be located within the monopole.

Equipment Compound:

The proposed 33' x 33' (1189 sf) lease area is to be located underneath the monopole. The equipment compound will be surrounded by a 9' tall chain link fence with green privacy slats. The lease area will contain all the outdoor equipment cabinets necessary to operate the site. The applicant is proposing to install the equipment cabinets on a 21' x 21' concrete pad of cell blocks to raise the equipment 2' above ground level (see Appendices 6.7). No emergency generator is proposed for this site.

Access and Utilities:

The tower will be located within the parcel approximately 125' west off Goodyear Road. The applicant is proposing a new 15' wide gravel driveway off Goodyear Road to access the facility. Power and land-based telecommunications service will be provided from a nearby joint utility pole located near the proposed tower. All power and telco lines will be located underground. No water or septic is required as the site is unmanned.

1.2.1 ADDITIONAL DATA:

NRCS Soil Classification:	Class II and III
---------------------------	------------------

Agricultural Preserve Status/Contract No.:	N/A
Non-renewal Filed (date):	
Airport Land Use Referral Area:	Zone C – proposed tower below 100' no review required by Airport Land Use Commission
Alquist Priolo Special Study Zone:	N/A
Primary or Secondary Management Area of the Suisun Marsh:	Secondary Management Area
Primary or Secondary Zone identified in the Delta Protection Act of 1992:	N/A
Other:	None

1.2.2 Surrounding General Plan, Zoning and Land Uses

	General Plan	Zoning	Land Use
Property	Agriculture/	A-20	Vacant
North	Marsh/Resource Conservation Overlay	MP- Marsh Preservation	Marsh
South	Agriculture/Travis Reserve Overlay	A-20	Vacant
East	Marsh/Resource Conservation	MP- Marsh Preservation	Marsh
West	Agriculture	A-20	Interstate 680

1.3 CONSISTENCY WITH EXISTING GENERAL PLAN, ZONING, AND OTHER APPLICABLE LAND USE CONTROLS:

1.3.1 General Plan

The proposed project would occur on land designated Agriculture per the Solano County General Plan. The property is also within the Secondary Management Area of the Suisun Marsh which requires approval of a marsh development permit for development of a telecommunications facility within the Secondary Management Area.

1.3.2 Zoning

The site is located on land zoned Agricultural (A-20). This designation allows new wireless telecommunications facilities subject to approval of a Conditional Use Permit by the Planning Commission. Per Section 28.81 (D)(5)(b) of the Solano County Zoning Regulations, all wireless facilities constructed within ¼ mile of a designated scenic corridor shall conform with the height limit in the zoning district in which they are located. The proposed wireless facility is located within ¼ mile of Interstate 680, which is a designated scenic corridor in the Solano County General Plan. The height limit in the A-20 zoning district is 35'. The proposed monopole is 50'. The applicant is requesting that the Planning Commission grant an exception to this height limitation per Section 28.81(D)(5)(e).

1.4 Permits and Approvals Required from Other Agencies (Responsible, Trustee and Agencies with Jurisdiction):

1.41 Agencies that May Have Jurisdiction over the Project

- a. Federal Communications Commission (FCC)
- b. California Public Utility Commission (CPUC)

AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES AND AVOIDANCE, MINIMIZATION AND/OR PROTECTION MEASURES

This chapter discusses the potential for adverse impacts on the environment. Where the potential for adverse impacts exist, the report discusses the affected environment, the level of potential impact on the affected environment and methods to avoid, minimize or mitigate for potential impacts to the affected environment.

Findings of SIGNIFICANT IMPACT

Based on the Initial Study, Part I as well as other information reviewed by the Department of Resource Management, the project does not have the potential for significant impacts to any environmental resources.

Findings of LESS THAN SIGNIFICANT IMPACT Due to Mitigation Measures Incorporated into the Project

Based on the Initial Study, Part I as well as other information reviewed by the Department of Resource Management, the following environmental resources were considered and the potential for significant impacts were reduced to less than significant due to mitigation measures incorporated into the project. A detailed discussion of the potential adverse effects on environmental resources is provided below:

Findings of LESS THAN SIGNIFICANT IMPACT

Based on the Initial Study, Part I as well as the review of the proposed project by the Department of Resource Management, the following environmental resources were considered and the potential for impact is considered to be less than significant. A detailed discussion of the potential adverse effects on environmental resources is provided below:

- | | | | |
|--------------------------|--------------------------|--------------------------|-------|
| <input type="checkbox"/> | Aesthetics | <input type="checkbox"/> | Noise |
| <input type="checkbox"/> | Geology and Soils | | |
| <input type="checkbox"/> | Greenhouse Gas Emissions | | |
| <input type="checkbox"/> | Hydrology and Water | | |

Findings of NO IMPACT

Based on the Initial Study, Part I as well as the review of the proposed project by the Department of Resource Management, the following environmental resources were considered but no potential for adverse impacts to these resources were identified. A discussion of the no impact finding on environmental resources is provided below:

- | | |
|--|--|
| <input type="checkbox"/> Agricultural Resources | <input type="checkbox"/> Population & Housing |
| <input type="checkbox"/> Air Quality | |
| <input type="checkbox"/> Biological Resources | |
| <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Recreation |
| | <input type="checkbox"/> Transportation & Traffic |
| <input type="checkbox"/> Land Use Planning | |
| <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Utilities & Service Systems |

2.1 Aesthetics

Would the project	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock out-croppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Increase the amount of shading on public open space (e.g. parks, plazas, and/or school yards)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

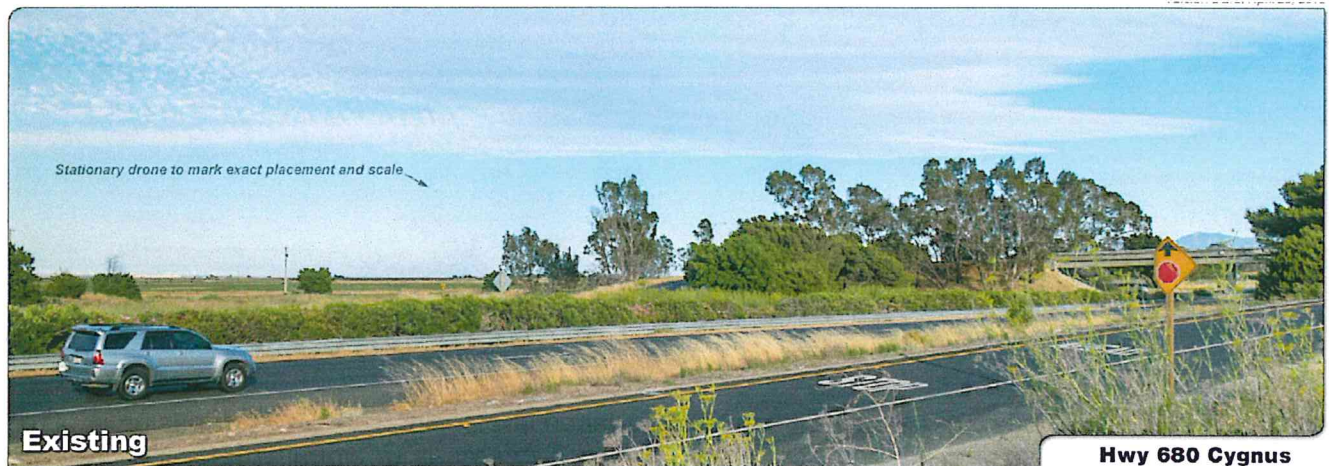
Discussion

a-c. Section 28-81(D)(5)(b) (Solano County Zoning Regulations) General Requirements describes the requirements which all wireless communication facilities must meet. These requirements state that wireless communication facilities constructed within 3/4 mile from a designated scenic corridor may not exceed the height limit established within the zoning district in which the site is located. The project site is located adjacent to Interstate 680 which is designated a scenic corridor by the Resources Chapter of the Solano County General Plan. The proposed monopole is within an A-20 zoning district which has a height limit of 35'. The applicant is proposing a 50' slimline monopole. Section 28.81(D)(5)(e) allows the applicant to apply for an exception to the height limitation and the Planning Commission has the authority to grant this exception and approve a wireless project exceeding the height limit established within a zoning district. In this case, the applicant is requesting such an exception be granted by the Planning Commission.

The applicant submitted a series of photo simulations (Appendices – 6.5) of the site showing the proposed monopole as it would be viewed from various locations within the vicinity of the project. The

photo simulation of the view looking southeast from across Interstate 680 (shown below) is the most visible to passers-by in this rural area of Solano County. The photo simulation shows the proposed 50' slimline monopole, painted dark green, with the two separate antenna arrays mounted closely to the pole.

Per this photo simulation and project drawings submitted by the applicant, the equipment cabinets are proposed to be located within an equipment compound surrounded by a 9' chainlink fence with green slat inserts. The height of the fence and opaque nature of the fence is designed to screen the equipment cabinets from view.



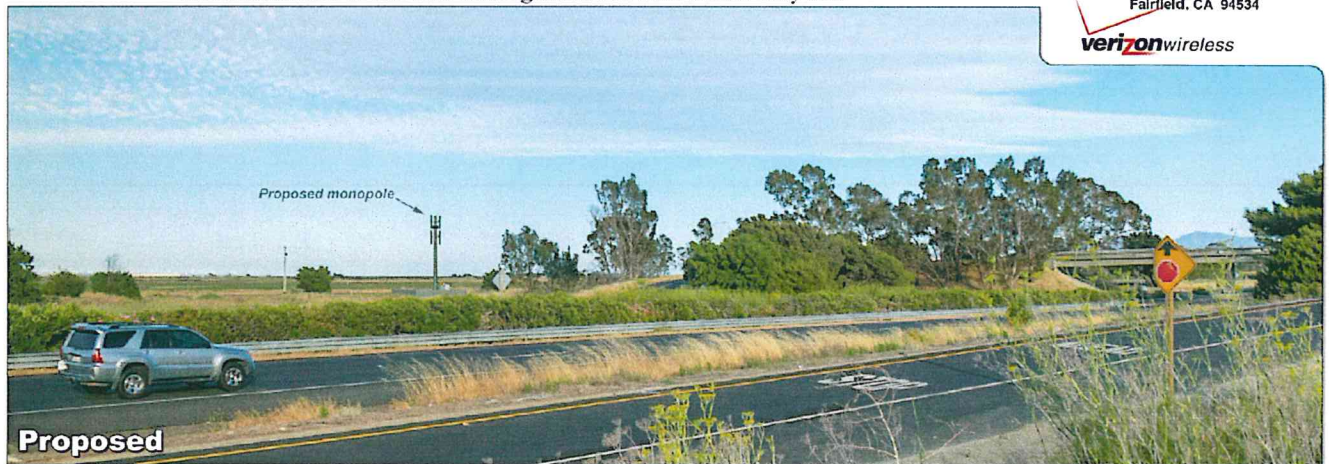
Existing

Photosimulation of the view looking southeast from across Hwy 680.

Hwy 680 Cygnus

Goodyear Road
Fairfield, CA 94534

verizonwireless



Proposed

© Copyright 2016 Previsual3d Inc. • www.photosim.com • Any modification is strictly prohibited. Printing letter size or larger is permissible. This photosimulation is based upon information provided by the project applicant.

While the project is still visible, the slimline monopole painted dark green is shorter in stature than existing trees in the area which helps blend the pole into the surroundings. The 9' tall chainlink fence with green slats screens the equipment cabinets from public view. When considering the speed of the traffic flow of southbound travelers along this portion of I-680, where the speed limit is 65 mph, visual impacts to passers-by should be **less than significant**.

d. The project plans indicate that there will be two downward facing LED lights that will be located within the compound near the equipment cabinets. These lights will be the only lights in the area as there are no street lights in the vicinity. These lights will create a new light source, especially if these lights remain on during nighttime hours. However, the application states that the lights are operated by motion sensor which should reduce nighttime lighting impacts. **Less than significant impacts** expected.

e. The project would not increase shading on public open space. **No impact.**

2.2 Agricultural Resources

Would the project

	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a-c. The subject parcel is zoned for agricultural uses with Class II and III soils. The parcel is not under an active Williamson Act contract. Since the construction of Interstate 680 in the 1970's, there is no evidence that the 2.8-acre parcel was used for crops or grazing land, this could be due to the size and location of the parcel near the freeway. The property is zoned Agricultural-20, which allows a wireless communications facility with an approved use permit. The proposed facility will not lead to the conversion of adjacent agricultural property to non-agricultural use. **No impacts** to agricultural resources are anticipated.

2.3 Air Quality

Checklist Items: Would the project	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is classified as non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Expose sensitive receptors to substantial pollutant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

concentrations?

- e. Create objectionable odors affecting a substantial number of people?

Discussion:

a-e. The project site is in a rural area of Solano County and is managed by the Bay Area Air Quality Management District. The project will have no impacts on implementation of the applicable air quality plans established by the BAAQMD. Once the facility is established, the site will remain unmanned. Service technicians will visit the site on a monthly basis. No other site visits are anticipated. The amount of traffic will have no impact on the air quality for the specific parcel or general area. The proposed telecommunication facility would not cause a substantial increase of new emissions, additional pollutant concentrations, or objectionable odors and **no impacts** to air quality are expected.

2.4 Biological Resources

Checklist Items: Would the project	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Have a substantial adverse effect on any aquatic, wetland, or riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act including, but not limited to, marsh, vernal pool, coastal, etc., through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Discussion:

a The project site was disturbed during the construction of Interstate 680 in the early 1970's. The property is located within the Secondary Management Area of the Suisun Marsh. However, the Solano County General Plan did not designate this area as a priority habitat area per Figure RS-2 possibly due to its previous disturbance and proximity to the freeway. **No impacts** expected.

b-f. The proposed project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, impede the use of native wildlife nursery sites, conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, or conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. **No impact.**

2.5 Cultural Resources

Checklist Items: Would the project	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of an historical resource as defined in CEQA Guidelines §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a-d. There are no structures proposed for removal, historical or otherwise. The proposed telecommunications facility will be located on grounds that were previously disturbed during construction of Interstate 680 and Marshview and Goodyear Roads. No changes in archaeological, paleontological or geologic resources are anticipated. State law (Section 7050.5 of the California Health and Safety Code) dictates that any human remains found during construction activities shall be reported to the proper official(s). Therefore, **no impacts** are anticipated.

2.6 Geology and Soils

Checklist Items: Would the project	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a.				
1) Rupture of a known earthquake fault, as described on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, differential settlement, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a-i,ii. The Public Health and Safety Chapter of the General Plan indicates that the area is near the Green Valley Fault which runs north/south along I-680 thru the Cordelia and Green Valley areas of Fairfield. Rupture of this fault or any fault, could expose people or structures to potential substantial adverse effects and strong ground shaking. However, properly designed structures, using the current Uniform Building Code requirements, should reduce any damage from ground shaking and impacts are considered to be **less than significant**.

a.iii & c. Figure HS-9 (Liquefaction Potential) of the Health and Safety chapter in the General Plan, shows the subject property to be located within an area of medium liquefaction potential. A geotechnical study will be required for any building permit approval to ensure the foundation for the monopole and equipment cabinets meet the required standards for the soil conditions on site. Thus impacts are anticipated to be **less than significant**.

a.iv. The project site is not located in an area known for landslides, per Solano County General Plan Figure HS-8 – Landslide Stability. **No impact.**

b. The placement of the cell block foundation for the monopole and equipment cabinets will require a minimal amount of surface displacement and should not result in a substantial loss of topsoil. **No impacts** are expected.

d. As noted above, the site specific geotechnical studies would be required at the time of building permit application. This would verify the absence or presence of potentially expansive soils and any mitigation necessary. Therefore, impacts are expected to be **less than significant.**

e. The communications facility is unmanned and will not require the installation of a waste water disposal system. No impacts to soils with regard to septic systems are anticipated. **No impact.**

2.7 Greenhouse Gas Emissions

Checklist Items: Would the project	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a. No one single project can have a significant impact on greenhouse gas emissions (GhG) as the impact of GhG emissions is considered to be global in nature. **No impact.**

b. As proposed, the project should not conflict with goals and policies of the Solano County Plan which are intended to reduce or indirectly reduce GhG emissions. Nor would the project conflict with the County's recently adopted Climate Action Plan (June 2011). **Less than significant impact.**

2.8 Hazards and Hazardous Materials

Checklist Items: Would the project	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

d.	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f.	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g.	Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h.	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a-d. The project site is not listed on a list of hazardous materials site and the applicant has indicated that no hazardous materials will be stored on the property. The applicant is required to submit a report to the FCC indicating compliance of the proposed facility with appropriate guidelines limiting human exposure to radio frequency electromagnetic fields. A study was conducted by Hammett & Edison, Inc. (Appendices 6.4) which concluded that the proposed project would comply with the prevailing standards for limiting public exposure to radio frequency energy and the proposal would not cause a significant impact on the environment. **No impacts** are anticipated.

e-f. The project is located within Zone C of the Travis Air Force Base Land Use Compatibility Plan. Per the Travis Air Force Airport Land Use Table 1, because the height of the proposed monopole is not greater than 100', the site is not required to be reviewed by the Solano Airport Land Use Commission. The proposed monopole is also below the height of the Federal Aviation Requirements Part 77 surface area height requirements as shown in Figure 3. The site is unmanned and no people are expected to be effected by the proposed project; therefore, **no impact** should occur.

g-h. The project would not impair the implementation or physically interfere with an emergency response or evacuation plan. The project site is not located in an area of high fire risk and should not expose people or structures to a significant risk of loss. **No impact**.

2.9 Hydrology and Water

Checklist Items: Would the project	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on-or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on-or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g. Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h. Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j. Be subject to inundation by seiche, tsunamis, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion:

a-i. The project is an unmanned telecommunications facility and therefore poses no impact to groundwater since neither water wells nor septic systems are proposed. According to FEMA maps, the property is located within a 100-year flood zone (Zone AE) (Panel #06095C0463F – 08/03/2016). The 1189 square foot compound will be covered in ¾” crushed stone which is permeable. The monopole and equipment cabinets will be placed on foundation of cell blocks (441 square feet). These cell blocks sit on top of a prepared surface but are removable. The cell blocks are 7’ x 7’ and are 2’ thick. The 441 square foot foundation would not substantially alter the direction of storm water runoff; as a result, no impact is expected. The proposed construction would not violate any water quality standards or waste discharge requirements. No waste water is expected to be produced as part of this project. A **less than significant impact** to water quality or waste discharge is expected.

j. Per the Health and Safety Chapter of the Solano County General Plan, the proposed project is located in an area prone to inundation due to dam or levee failure, seiche, tsunami, or mudflow. The wireless facility is unmanned and is proposed to be built 2’ above the existing elevation and possibly more if through the building permit process, a higher elevation is required. Therefore, the project will have a **less than significant impact**.

2.10 Land Use and Planning

Checklist Items: Would the project	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a-c. The project would not divide an established community as the project is in a rural area of Solano County. The project site is zoned Agricultural (A-20) which allows wireless telecommunications facilities with an approved use permit. The General Plan designates the subject property as Agriculture. The project site is within the Secondary Management Area of the Suisun Marsh which requires approval of a marsh permit for the wireless facility. The applicant is applying for both the use permit and marsh development permit. The project, as proposed, will not conflict with any habitat conservation plan or natural community conservation plan. **No impacts** are expected.

2.11 Mineral Resources

Checklist Items: Would the project	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

residents of the state?

- b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Discussion:

a-b. There are no known mineral resources of value to the region in the project area and no locally important mineral resource recovery sites delineated in County documents. Therefore, no mineral resources will be lost and **no impacts** will occur.

2.12 Noise

Checklist Items: Would the project	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a. Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Exposure of persons to or generation of, excessive ground borne vibration or ground borne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a-d. There will be minor short term and long term noise associated with the proposed communications facility. Minor short-term noise will result from the operation of construction equipment and would continue until construction is completed in an estimated 30-45 days.

An Environmental Noise Analysis was conducted by Bollard Acoustical Consultants, Inc. dated June 21, 2016 (Appendices 6.6). The noise generated on the site would come from the equipment cabinets operating within the compound. The analysis studied the cabinets and air conditioning unit proposed to be used at the site. The study concluded that the sound level at nearest property line would be 51 dBLdn which is below the standards set forth by the Solano County General Plan for Agricultural Zoning (75 Ldn) and within the 65 dB Ldn limit stated in Section 28.70.10 of the Land Use Regulations of the Solano County Zoning Regulations. The proposed project will have a **less than significant impact** in regards to noise.

There may be a minor increase in long-term ambient noise level from the equipment cabinets. The equipment cabinets contain a fan component for cooling the equipment should the equipment begin to overheat. The need for the fans occurs mostly in the daytime hours when daytime temperatures are higher and rarely during the cooler evenings. The nearest residence is approximately 2600' from the edge of the compound. Per the Solano County General Plan, noise reduction reduces up to 6 decibels per doubling of distance from the point source. The predicted noise level would be less than 20 dB Leq which is less than the 50 dBLeq decibel limits as established by the General Plan and Zoning Regulations. Again, the proposed project would have a **less than significant impact**.

e-f. The project is located in Zone C of the Travis Airport Land Use Compatibility Plan; however, the site is unmanned and will not expose people to excessive noise. **No impact**.

2.13 Population and Housing

Checklist Items: Would the project	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a-c. The proposed project will not induce population growth directly or indirectly or construct infrastructure that could induce population growth. The project does not involve the displacement of homes or people or necessitate construction of more housing elsewhere. **No impact**.

2.14 Public Services

Checklist Items: Would the project	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
1) Fire Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) Other Public Facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

The project itself will have a minimal effect on public services.

(a 1-5) The Fire District has adequate facilities and this project does not require the need for new fire station facilities. The Sheriff's Department has adequate facilities and staff to serve the area. The project would not require the need for new schools or parks. Approval of this proposed project would have **no impact** on public services.

2.15 Recreation

Checklist Items: Would the project	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Physically degrade existing recreational resources?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a-c. The proposed project would not increase the number of use of existing parks or other recreational facilities, nor require the construction or expansion of new recreational facilities nor physically degrade existing recreational resources. **No impact.**

2.16 Transportation and Traffic

Checklist Items: Would the project	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with an applicable congestion management program, including, but not limited to level of service standard and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible land uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g. Conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a,b,e,f. After initial construction, the only vehicular traffic associated with the project would be routine monthly maintenance visits by service technicians. The addition of one visit per month by the cellular carrier would not represent an impact to Goodyear Road which is maintained by Solano County Public Works Engineering. This small increase in traffic would not have significant impacts on the existing traffic load and capacity of the street systems. There would be no impact to level of service standard, change in air traffic patterns, or impact to emergency access or parking capacity. The applicant has

designed a new driveway access from Goodyear Road. The gravel access road will be 15' wide and will provide parking and turning radius for a service vehicle as well as emergency vehicles. **No impact.**

c. The project is located near Travis Air Force Base but the height of the monopole is 50' and does not require further study by the Airport Land Use Commission. **No impact.**

g. The proposed project does not conflict with adopted policies, plans, or programs supporting alternative transportation. **No impact.**

2.16 Utilities and Service Systems

Checklist Items: Would the project	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g. Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a-g. Wastewater and potable water are not required for this telecommunications facility and this project will not generate any wastewater. Power and telephone service will be obtained from existing power poles located on the property via a proposed utility easement. All utilities will be located underground. **No impacts** are anticipated.

2.17 Mandatory Findings of Significance

Checklist Items: Would the project	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a. Does the project have the potential to (1) degrade the quality of the environment, (2) substantially reduce the habitat of a fish or wildlife species, (3) cause a fish or wildlife population to drop below self-sustaining levels, (4) threaten to eliminate a plant or animal community, (5) reduce the number or restrict the range of a rare or endangered plant or animal, or (6) eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a. The project will not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory.

b. The project will not have impacts that are individually limited, but cumulatively considerable.

c. The project will not have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly.

3.0 Agency Coordination and Public Involvement

3.1 Consultation and Coordination with Public Agencies

The Initial Study is being circulated for public comment.

3.2 Public Participation Methods

The Initial Study is available at the Solano County Department of Resource Management and online at the Department's Planning Services Division website at:

<http://www.solanocounty.com/depts/rm/documents/eir/default.asp>

Interested parties may contact the planner assigned to this project at the contact points provided below:

Karen Avery
Senior Planner
Planning Services Division
Resource Management Department
675 Texas Street Suite 5500
Fairfield, CA 94533

PHONE: (707) 784-6765
FAX: (707) 784-4805
EMAIL: kmavery@solanocounty.com

4.0 List of Preparers

This Initial Study was prepared by the Solano County Department of Resource Management. The following staff and consultants contributed to the preparation of this Initial Study:

Solano County Department of Resource Management Staff

5.0 Distribution List

State Agencies

Caltrans – District 4 Oakland
San Francisco Bay Conservation and Development Commission

County

Marsh Development Permit Contact List

6.0 Appendices

- 6.1 Initial Study, Part I – Use Permit application**
- 6.2 Assessor's Parcel Map**
- 6.3 Development Plans**
- 6.4 EMF Exposure Study – Hammet & Edison, Inc. – June 20, 2016**
- 6.5 Photo Simulations of Site**
- 6.6 Noise Analysis – Bollard Acoustical Consultants, Inc. – June 21, 2016**
- 6.7 Cell Block Design Information**

APPENDICES

6.1

Project Support Statement Rev. 1
Verizon Wireless

Site Name: Hwy 680 Cygnus
Location: NW Corner of Marshview Rd. and Goodyear Rd., Fairfield, CA
APN: 0046-110-28

Introduction

Verizon Wireless is seeking to improve communications service to residences, businesses, public services, and area travelers in Solano County, California. Verizon maintains a strong customer base in Solano County and strives to improve coverage for both existing and potential customers. The proposed facility is needed to bring coverage to Highway 680 between two other Verizon sites along this highway named “Hwy 680/Goldhill” to the north and “Hwy 680/Parish” to the south. This project will expand Verizon’s existing network and improve call quality, signal strength, and wireless connection services in Solano County. The improved wireless service will benefit residents, local businesses, public services, and roadway safety throughout the region.

Location/Design

Verizon Wireless proposes building a new wireless telecommunication facility at the northwest corner of Marshview Road and Goodyear Road along I-680 near Fairfield. The property is located in the Exclusive Agriculture (A-20) zone. The surrounding area consists of similarly zoned (A-20) parcels. The Suisun Marsh is to the east of the area, but the subject parcel is not within the boundaries of the Marsh Preservation zone. According to Jaime Michaels, Principal Permit Analyst of the San Francisco Bay Area Conservation and Development Commission (BCDC), the subject parcel is in the secondary management area and BCDC does not have permitting authority over this project. The parcel is 2.80 acres and is currently being used as a vacant lot. The facility will consist of a new 50’ slimline monopole and associated ground equipment installed in an undeveloped area in the southwest quadrant of the parcel. There are no dwellings in the vicinity of this site. The facility is located within ¾ of a mile of Interstate 680, which is designated as a scenic highway in the Solano County General Plan.

Project Description

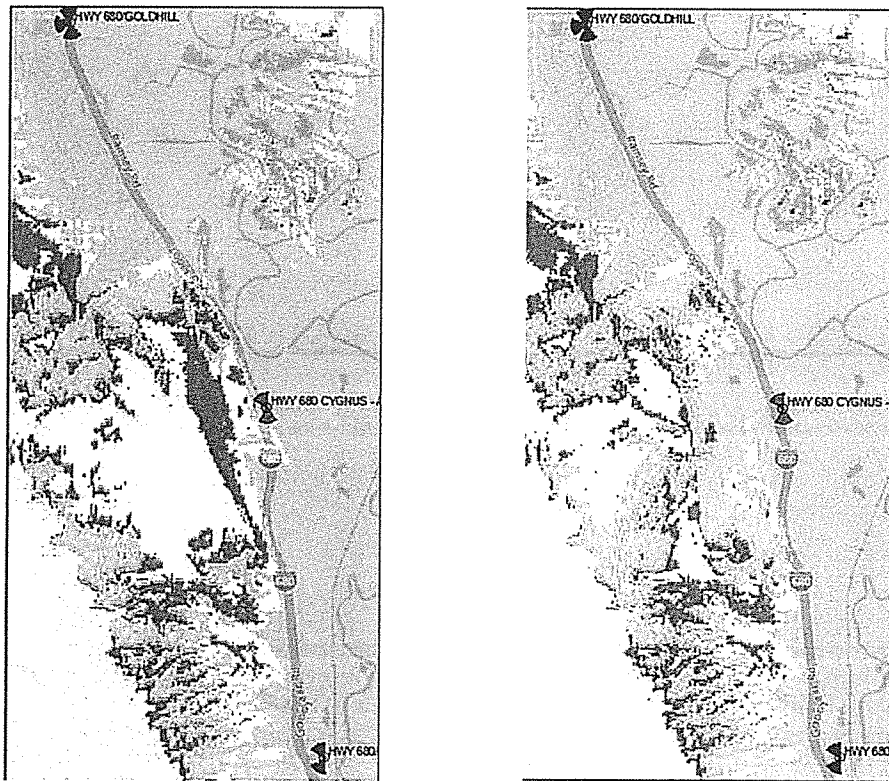
The proposed facility consists of four (4) Verizon Wireless panel antennas with associated equipment mounted on a new 50’ monopole painted green. The 33’ x 33’ lease area will have a 9’ tall chain link fence with green privacy slats at the perimeter to conceal all equipment from public view. The fence will be topped with barbed wire and will have a locking gate. The lease area will contain all equipment for the facility at the base of the monopole structure, including outdoor equipment cabinets. All ground equipment will be installed on a 21’ x 21’ concrete pad of cell blocks to raise the equipment 2’ above ground level to accommodate the base flood elevation. The unmanned facility will be continuously electronically monitored to provide enhanced wireless network coverage 24 hours a day, 7 days a week.

A previously submitted design for this site included a 65’ tall monopole with 6 panel antennas installed with a 62’ centerline height. This design was considered by the County but rejected due to concerns about the visual impact in the CEQA analysis based on the proximity to I-680. In response to these concerns, the currently proposed 50’ tall slimline monopole reduced the overall

height and number of antennas, as well as minimizing the distance from the pole to the antennas. A total of four antennas are divided into two centerlines with two antennas each, further minimizing the profile of this monopole. These changes are proposed in order to satisfy the visual impact component of CEQA review that caused concern with the previous design. Due to the proximity of the facility to I-680, a designated scenic highway in the Solano County General Plan, a lower overall height of 50' is proposed as a compromise to be closer to the zone maximum height while still filling a significant coverage gap in this area.

Facility Need and Coverage Maps

Below, please see the comparison of the two maps. The first map shows the target area currently lacking wireless coverage on the Verizon Wireless network. The second map show what the coverage will be like upon activation of the proposed facility. The uncolored areas show poor or no coverage, the area shown in red shows some outdoor and indoor coverage, the area marked in yellow shows some indoor coverage and good outdoor coverage, and the area marked in green indicates good indoor, in-car, and outdoor coverage. Please note that much of the red and yellow areas are replaced by green following activation of the proposed facility along the targeted section of I-680.



As shown in these coverage maps, the target area (map center, labeled “Hwy 680 Cygnus”) is filled with much more green, indicating far greater indoor and in car coverage along in the area surrounding the proposed facility, especially along I-680, providing much better coverage for travelers along this busy highway. Some areas that were red are now yellow, indicating new in-car service where previously there was none. Two other existing Verizon Wireless facilities are marked on the map as “Hwy680/Goldhill” to the north and “Hwy680/Parrish” to the south.

Larger versions of these coverage maps are provided with this application.

Public Benefits of Improved Wireless Service

Modern life has become increasingly dependent upon wireless communications. Wireless access is critical to many facets of everyday life, such as safety, recreation, and commerce. This site will allow current and future Verizon Wireless customers to have access to wireless services in the areas shown on the Coverage Maps included in this application. Additionally, this site will serve as a backup to the existing landline service in the area and will provide improved wireless communication, which is essential to first responders, community safety, local businesses and area residents. As a backup system to traditional landline phone service, mobile phones have proven to be extremely important during natural disasters and other catastrophes.

Aesthetic Impacts

The previously proposed facility included a 65' tall monopole with 6 antennas at one centerline height. This was the height determined necessary by the Verizon Wireless RF Engineer for the signal to reach the intended service area and to provide redundancy in the event of an outage of other facilities in the area. CEQA Review by Solano County based including the scenic highway component found that the justification of redundancy was insufficient to compensate for the visual impact caused by the 65' height.

Due to this, the County rejected the 65' design and the Verizon Wireless RF Engineer redesigned the facility to have a lower height of 50' with split centerlines and only 4 total antennas. The proposed 50' tall facility height complies with the County's development standards for wireless facilities in the A-20 zoning designation, and has been designed at its minimum functional height, and is also closer to the zone height maximum imposed by the General Plan due to its proximity to the scenic I-680 corridor. Please see Site Plans included in this application for elevation drawings and the included photosimulations.

Statement of Commitment to Allow Collocation

The proposed facility has been designed in a manner that will structurally accommodate additional antennas and/or future collocation. Verizon Wireless welcomes other carriers to collocate on their facilities whenever possible.

Safety Benefits of Improved Wireless Service

Verizon Wireless offers its customers multiple services such as voice calls, text messaging, mobile email, picture/video messaging, mobile web, navigation, broadband access, V CAST, and E911 services. Mobile phone use has become an extremely important tool for first responders and serves as a back-up system in the event of a natural disaster.

Construction Schedule

The construction of the facility will be in compliance with all local rules and regulations. The crew size will range from two to ten individuals. The construction phase of the project will last approximately two months and will not exceed acceptable noise levels.

Lighting

Unless tower lighting is required by the FAA the only lighting on the facility will be a shielded downward tilted manually operated light by the door within the fenced area.

Compliance with FCC Standards

This project will not interfere with any TV, radio, telephone, satellite, or other signals. Any interference would be against federal law and a violation of Verizon Wireless's FCC license. An RF report verifying compliance with FCC guidelines is included with this submittal.

Notice of Actions Affecting Development Permit

In accordance with California Government Code Section 65945(a), Verizon Wireless requests notice of any proposal to adopt or amend the: general plan, specific plan, zoning ordinance, ordinance(s) affecting building or grading permits that would in any manner affect this development permit. Any such notice may be sent to 2009 V Street, Sacramento.

RECEIVED



DEPARTMENT OF RESOURCE MANAGEMENT
PLANNING SERVICES APPLICATION FORM

NOV 03 2017

(707) 784-6765 Phone
(707) 784-4805 Fax

675 Texas Street Suite 5500, Fairfield, CA 94533

COUNTY OF SOLANO
RESOURCE MANAGEMENT www.solanocounty.com

- Application Type: New Extension (maps) Minor Revision Map Modification
- | | | |
|---|---|--|
| <input type="checkbox"/> Administrative Permit (AD) | <input type="checkbox"/> Minor Use Permit (MU) | <input type="checkbox"/> Sign Permit (SGN) |
| <input type="checkbox"/> Architectural Review (AR) | <input type="checkbox"/> Mobilehome Storage Permit (MH) | <input checked="" type="checkbox"/> Use Permit (U) |
| <input type="checkbox"/> General Plan Amendment (G) | <input type="checkbox"/> Mutual Agreement (MA) | <input type="checkbox"/> Variance (V) |
| <input type="checkbox"/> Major Subdivision (S) | <input type="checkbox"/> Performance Standards (PS) | <input type="checkbox"/> Waiver (WA) |
| <input checked="" type="checkbox"/> Marsh Development Permit (MD) | <input type="checkbox"/> Policy Plan Overlay (PP) | <input type="checkbox"/> Zone Text Amendment (ZT) |
| <input type="checkbox"/> Minor Subdivision (MS) | <input type="checkbox"/> Rezone (Z) | |

FOR OFFICE USE ONLY

Application No: U-17-09 MR# _____ Hrg: AD ZA PO BOS Date Filed: 11/3/17 Plnr: M
MD-17-02

Project Name: Verizon Wireless "Hwy 680 Cygnus"

Subject Site Information

Site Address: NW corner of Marshview Rd and Goodyear Rd city: Fairfield State: CA Zip: _____

Assessor's Parcel Number (s): 0046-110-280 Size (sq. ft/acre): 2.80 acres

Preferred Property Access by Staff: OK to access Call applicant before access Call owner before access

Contact Information

Property Owner Name: Seth Parish

Contact Name: Seth Parish Phone: (707) 486-1412 Email: _____

Mailing Address: P.O. Box 6 City: Benicia State: CA Zip: 94510-0006

Architect/Engineer/Land Surveyor Company Name: MST Architects, Inc.

Contact Name: Manuel S. Tsihlias Phone: (916) 341-0405 Email: manuel@mstarchitects.com

Mailing Address: 801 Alhambra Blvd., Suite 2 City: Sacramento State: CA Zip: 95816

Applicant/Company Name: Cellco Partnership (Delaware) dba Verizon Wireless, c/o Complete Wireless Consulting, Inc.

Contact Name: Benjamin Merritt Phone: (916) 747-0624 Email: bmerritt@completewireless.net

Mailing Address: Complete Wireless Consulting, 2009 V Street City: Sacramento State: CA Zip: 95818

Other Contacts:

Name: _____ Phone: _____ Email: _____

Mailing Address: _____ City: _____ State: _____ Zip: _____

3 Williamson Act Contract

A. Is any portion of the property under Williamson Act Contract? Yes No

If yes, Contract No. _____ please provide a copy.

If yes, has a Notice of Non-Renewal been filed? Yes No

If yes, please provide a copy.

B. Are there any agricultural conservation, open space or similar easements affecting the use of the project site? (such easements do not include Williamson Act contracts)

Yes No *if yes, please list and provide a copy.*

4 Additional Background Information

A. Does the proposal propose the demolition or alteration of any existing structures on the subject site?

Yes No *If yes, please describe in the project narrative.*

B. List any permits that are required from Solano County and/or other local, state, federal agencies (i.e. building permit, Department of Fish and Game permits, etc.)

FCC registration, Solano County building permit

C. List any known previously approved projects located on the property (i.e. Use Permit, Parcel Maps, etc). Identify the project name, type of project and date of approval.

N/A

D. List any known professionally prepared reports for the project (i.e. biological survey, traffic study, geologic, hazardous materials, etc.)

RF compliance report, acoustic study

E. Does the project involve Housing and Urban Development (HUD) federal funding? Yes No
Is HUD funding anticipated? Yes No

If yes, indicate the type of funding (i.e. CDBG grant, HOME, Investment Partnership Program, etc), funding amount, whether awarded or application pending and fiscal year of award or application request.

H. Is this part of a larger project? If yes, please explain. Yes No

Facility will connect with the larger Verizon Wireless network

5 Existing Conditions

Describe in general the project site and surrounding properties as they presently exist; including but not limited to, information on existing land uses, unique physical and topographic features, soil stability, plants and animals, cultural, historical, or scenic aspects, and any other information which would assist the Department in understanding the project's environmental setting. Clear, representative color photographs may be submitted to show the project area. Draw in property boundaries on the photographs.

A. Project site:

The project site is currently undeveloped. The terrain is slightly elevated. The planned lease area is located at the southern end of the property.

B. Surrounding properties:

Undeveloped, parcels border Hwy 680

C. Existing use of land:

Undeveloped

D. Describe number and type of existing structures:

	Type/Number	Square Feet
Residential		
Agricultural		
Commercial		
Industrial		
Other	0	

E. Describe existing vegetation on site, including number and type of existing trees.

Grassy areas with a few deciduous trees along borders of parcel.

F. If in agricultural use, describe type of use or crop (cattle, sheep, hay, vegetables, fruit, etc).

Q. List and describe the nature and location of all existing easements serving or affecting the property, including access, utility, and other public or private easements (see deed or recent preliminary title report).

Please see Site Plans.

R. List and describe any freestanding and attached signage on the property. Describe the dimensions, area and height. Include the location on the site plan.

None

6 Proposed Changes to the Site

A. Topography and grading (attach copy of grading plan showing existing and proposed topography and drainage patterns.) N/A, no grading is proposed.

- i. Percent of site previously graded: _____%.
- ii. Project area (area to be graded or otherwise disturbed): _____sq. ft./acres.
- iii. Estimate amount of soil to be moved (cut and/or fill):
 _____Less than 50 cubic yds³ _____ More than 50 cubic yds³ _____ More than 1000 cubic yds³
- iv. Estimate amount of soil to be:
 Imported _____yd³ Exported _____yd³ Used on site _____yd³.

B. Number, size and type of trees, and type and quantity of vegetation to be removed. (size of trees = diameter at 4ft. above grade)
No trees will be removed or disturbed in the construction of this project.

C. Number, type and use of existing structures to be removed, and removal schedule:
None

D. Describe proposed fencing and/or visual screening (landscaping):
The facility will be a painted monopole, and all equipment will be contained within outdoor equipment cabinets, and surrounded by a fence.

E. Proposed access to project site (road name, driveway location, etc.):
Proposed wide access easement (Please see Site Plans)

F. Proposed source and method of water supply:
N/A

G. Proposed method of sewage disposal (specify agency if public sewer):
N/A

G. Slope of property:

Flat or sloping (0 - 6% slope) 2.80 acres
 Rolling (7 - 15% slope) _____ acres
 Hilly (16 - 24% slope) _____ acres
 Steep (> 24% slope) _____ acres

H. Describe existing drainage conditions on site. Indicate direction of surface flows, adjacent parcels affected.
N/A, proposed facility will not interfere with existing drainage

I. Describe land uses on adjacent parcels (specify types of crops if agricultural).

North	Undeveloped	South	Marshview Rd, Undeveloped
East	Goodyear Rd, Suisun Marsh	West	Hwy 680 off-ramp, Undeveloped

J. Distance to nearest residence(s) or other adjacent use(s): 7,303 ft (ft/mi)

K. Describe and indicate location of any power lines, water mains, pipelines or other transmission lines which are located on or adjacent to the property.

Power lines across Goodyear Rd from parcel. Existing streetlight on southwestern corner of parcel.

L. Describe number and location of natural creeks or water courses through or adjacent to the property. Specify names (if any). Indicate whether ephemeral (brief flows following rains), intermittent (seasonal flows during wet season), or perennial (year-round flows).

None

M. Describe number and location of man-made drainage channels through or adjacent to the property. Specify names, if any.

None

N. Identify and describe any on-site or adjacent marshes, wetlands, vernal pools, wet meadows, riparian (i.e. dependant on water bodies) vegetation, etc.:

None

O. Are there any unique, sensitive, rare, threatened, or endangered animals, plants, or habitats on the project site or located in close proximity which may be affected by the project?

Yes _____ No X Don't Know _____ If yes, please list:

P. Describe existing vehicle access(s) to property:

Goodyear Rd

H. Provisions for solid/hazardous waste disposal (specify company or agency if applicable):

N/A

I. List hazardous materials or wastes handled on-site:

Diesel fuel will be stored on-site for standby generator.

J. Duration of construction and/or anticipated phasing:

Construction will take approximately two months.

K. Will the proposed use be affected by or sensitive to existing noise in the vicinity? If so, describe source (e.g. freeway, industrial) and distance to noise source.

No.

7 Proposed Site Utilization

A. RESIDENTIAL PROJECTS

1. Number of structures: Single Family: _____ Multi-family: _____ Accessory: _____

If multi-family, number of units: _____ Maximum height: _____

2. Signage: Freestanding: _____ Dimension(s): _____ Area: _____ (sq.ft)

Attached/Wall: _____ Dimensions(s): _____ Area: _____ (sq.ft)

B. NON-RESIDENTIAL PROJECTS (Commercial, Industrial, Agricultural, Other)

1. Lot coverage:

Building coverage: 2,500 sq. ft lease area (sq.ft) Surfaced area: _____ (sq.ft)

Landscaped or open space: _____ (sq.ft)

2. Total floor area: _____ (sq.ft)

3. Number of stories: _____ Maximum height: 80' (ft.)

4. Proposed hours of operation:

Days: 7 days per week, 24 hours per day

From: _____ a.m./p.m to _____ a.m./p.m

Year round: Yes No

Months of operation: from _____ through _____

5. Proposed construction schedule: TBD
Daily construction schedule: from _____ a.m./p.m. to _____ a.m./p.m.
Days of construction: _____
6. Will this project be constructed in phases? Describe:
No, construction should last approximately two months.
7. Maximum number of people using facilities:
At any one time: Varies depending on number of Verizon users in the area.
Throughout day: _____
8. Total number of employees: 0, facility will be unmanned
Expected maximum number of employees on site: A technician will visit site 1-2 times per month
During a shift: 0 During day: 0
9. Number of parking spaces proposed: 0
10. Maximum number of vehicles expected to arrive at site:
At any one time: 0 day: 0
11. Radius of service area: Facility will provide Verizon 4G LTE service throughout southeastern Solano County. Please see Coverage Maps.
12. Type of loading/unloading facilities:
N/A
13. Type of exterior lighting proposed:
Hooded and down-tilted security lights outside equipment cabinets.
14. Describe all anticipated noise-generating operations, vehicles or equipment on-site.
Standby generator will run once per week for 15 minutes for maintenance purposes, and air conditioning units on equipment shelter will run as needed. Please see Acoustic Study.
15. Describe all proposed uses which may emit odors detectable on or off-site.
N/A
16. Describe all proposed freestanding and wall signage. Include the dimensions, area and height.
Warning signs and emergency contact information will be provided at site. Please see Site Plans and RF study.

8 Environmental Checklist

Indicate the following items applicable to the project or its effects. Discuss in Section 9 all items checked "Yes" or "Maybe". **Attach additional sheets as necessary.**

	YES	MAYBE	NO
A. Change in existing natural features including any bays, tidelands, lakes, streams, beaches, natural landforms or vegetation.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B. Change in scenic views or vistas from existing residential areas, public lands or roads.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
C. Change in scale, pattern or character of general area of project.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D. Increased amounts of solid waste or litter.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
E. Dust, ash, smoke, fumes or odors on site or in vicinity.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
F. Change in ground water quality or quantity.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
G. Alteration of existing drainage patterns, or change in surface water quantity or quality.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
H. Change in existing noise or vibration levels.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> <i>Acoustic Study provided.</i>
I. Construction on filled land or construction or grading on slopes of 25% or more.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
J. Storage, use or disposal of materials potentially hazardous to man or wildlife, including gasoline and diesel fuel. (See Environmental Health Division for assistance or information).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <i>Diesel fuel for standby generator.</i>
K. Increase in demand for public services (police, fire, water, sewer, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
L. Increase in fossil fuel consumption (electricity, natural gas, oil, etc.).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <i>Diesel fuel for standby generator.</i>
M. Change in use of or access to an existing recreational area or navigable stream.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
N. Change in traffic or vehicular noise on road system in immediate vicinity.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
O. Increased hazards for vehicles, bicycles or pedestrians.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
P. Removal of agricultural or grazing lands from production.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Q. Relocation of people.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

9 Additional Information by Applicant

In order to make this application COMPLETE, please submit any additional data, information or special study reports that may be necessary to determine whether the project may have significant effect on the environment or to evaluate any adverse impacts, and to determine how they may be mitigated. Add additional pages as necessary.

10 Information Verification - Signed by Owner and Applicant

Owner and Applicant must sign below certifying that all information is to the best of his/her knowledge true and correct.

If the applicant is not the owner of record of all property included in this application, the signature given below is certification that the owners of record have knowledge of and consent to the filing of this application and supporting information. Additionally, the undersigned does hereby authorize representatives of the County to enter upon the above mentioned property for inspection purposes. This certification acknowledges that if the project exceeds double that of the application fee, applicants are subject to the hourly billing rate of staff time. You will be notified if the project is approaching this threshold.

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this initial evaluation to the best of my ability, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Owner signature: Date: 10-16-15

PRINTED NAME: Seth Parish

Owner signature: _____ Date: _____

PRINTED NAME: _____

Applicant signature: Date: 11/3/17

PRINTED NAME: Benjamin Merritt, Land Use Planning Specialist, Complete Wireless Consulting, Inc.

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Planning Permit Fee(s)	Environmental Review Fees
U 17 09 \$ 6216	Initial Study \$ 1046.75
MD 17 02 \$ 783	Archaeological Study (Sonoma State NWIC) \$ 75
- - - \$ -	Negative Declaration \$ 2177
- - - \$ -	CA Fish and Games (ND or EIR) \$ 3298.75
- - - \$ -	Initiate EIR \$ -
Total \$ 6999	Mitigation Monitoring Plan \$ -
	Total \$ 5515
Total Fees Paid (P + E) \$ 6999 + 3298.75	Receipt No.: <u>1052044</u> DATE: <u>3298.75</u>

Fish & game - not paid

10,297.75pd

Staff verify: Zoning: _____ GP Land Use & Consistency: _____

Comments: _____ Staff/Date: _____

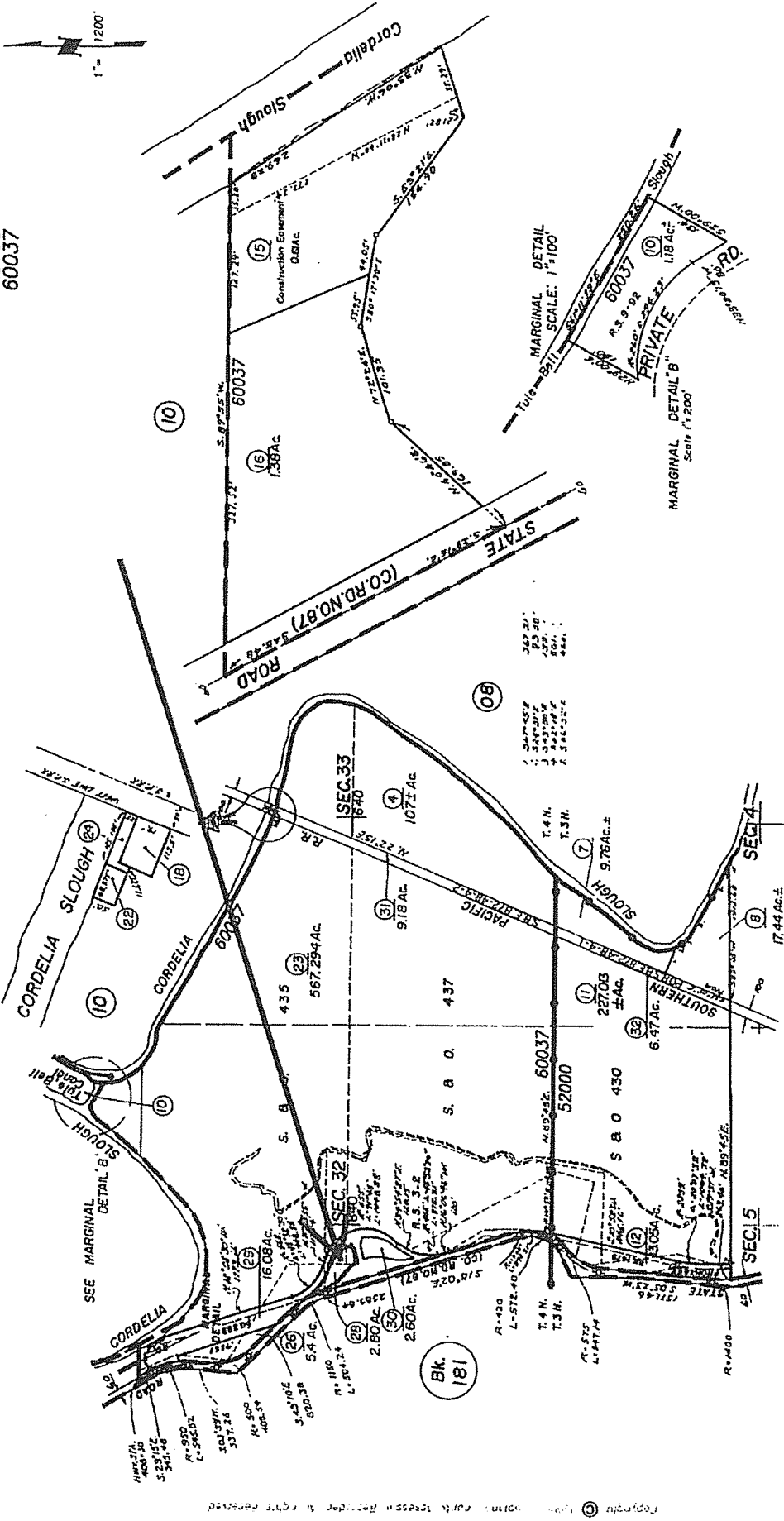
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6.2

Tax Area Code
52000
60037

T.3 & 4N., R.2W., M.D.B.& M.

46-11



NOTE: This map is for assessment purposes only. It is not intended to define legal boundary rights or imply compliance with land division laws.

REVISION	DATE	BY
1	9-15-08	Cr
2	10-26-09	CJ

Assessor's Map Bk. 46 Pg. 11
County of Salano, Calif.

08-10

Assessor's Block Numbers Shown in Ellipses, Assessor's Parcel Numbers Shown in Circles

6.3

Z0 DRAWING SIGN - OFF

DATE: _____ TIME: _____ CVC-PLEASE RETURN BY: _____



SIGNATURE _____ DATE _____

SITE ACQUISITION: _____ DATE _____

PLANNING: _____ DATE _____

CONSTRUCTION: _____ DATE _____

MANAGEMENT: _____ DATE _____

CONSTRUCTION: _____ DATE _____

REAL ESTATE: _____ DATE _____

RF ENGINEER: _____ DATE _____

EQUIPMENT ENGINEER: _____ DATE _____

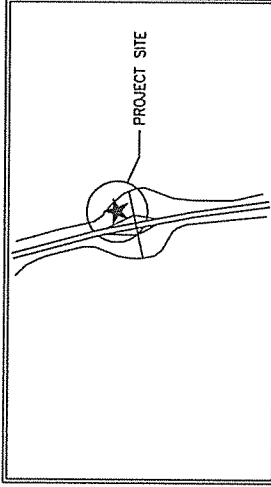
HWY ENG./TRANSPORT: _____ DATE _____

OTHER (IF APPLICABLE): _____ DATE _____

verizon

2785 Mitchell Drive, Walnut Creek, CA 94598

HWY 680 CYGNUS
 GOODYEAR ROAD
 FAIRFIELD, CA 94534
 APN: 0046-110-280
 LOCATION #: 299954



LOCATION PLAN

INDEX OF DRAWINGS

- 1. T1.1
- 2. C1
- 3. A2.1
- 4. A2.2
- 5. A2.3
- 6. A2.4

DIRECTIONS

- FOR ALL VERIZON SERVICE @ 2785 MITCHELL DRIVE, WALNUT CREEK, CA 94598:
1. HEAD NORTHEAST ON MITCHELL DR TOWARD OAK CROVE RD
 2. TURN LEFT ONTO OAK CROVE RD
 3. TURN LEFT ONTO OAK CROVE RD ON LEFT ONTO TREAT BLVD
 4. TURN RIGHT ONTO BUCKARKE AVE
 5. USE THE LEFT LANE TO TAKE THE INTERSTATE 680 N RAMP
 6. MERGE ONTO I-680 N
 7. TAKE THE RIGHT FORK TO STAY ON I-680 N (PARTIAL TOLL ROAD)
 8. KEEP LEFT AT THE FORK TO CONTINUE ON I-680 (PARTIAL TOLL ROAD)
 9. TAKE EXIT 65 FOR WASHINGTON RD
 10. TURN RIGHT ONTO WASHINGTON RD
 11. TURN LEFT ONTO GOODYEAR RD
 12. DESTINATION WILL BE ON THE LEFT

PROJECT DIRECTORY

APPLICANT: VERIZON WIRELESS
 2785 MITCHELL DRIVE
 WALNUT CREEK, CA 94598

LANDLORD:
 S. ED PAVENA, ET AL
 2785 MITCHELL DRIVE
 WALNUT CREEK, CA 94598

ARCHITECT:
 MARCEL S. TSHILAS
 1320 RIVER PARK DRIVE
 SACRAMENTO, CA 95815
 916-597-8930
 marcel@marcelstshilas.com

CONSTRUCTION MANAGER:
 MARK CASEY
 VERIZON WIRELESS CONSULTING, INC.
 5300 Y STREET
 SACRAMENTO, CA 95818
 916-598-7945
 mcasey@completeelectronics.net

PROJECT SUMMARY

ASSESSOR'S PARCEL NUMBER: 0046-110-280

JURISDICTION: SOLANO COUNTY

COORDINATE: S-2 (UNMANNED TELECOMMUNICATIONS FACILITY) u (TOWER)

TYPE OF CONSTRUCTION: V-9

ZONING: A-20 (EXCLUSIVE AGRICULTURE)

CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE BUILDING STANDARDS ADMINISTRATION (BSA) REGULATIONS AND THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT. THE FOLLOWING CODES ARE TO BE CONSIDERED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

2016 CALIFORNIA BUILDING STANDARDS CODE, TITLE 24, CALIFORNIA CODE OF REGULATIONS EFFECTIVE JANUARY 1, 2017

- PART 1 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE
- PART 2 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE
- PART 2.5 CALIFORNIA RESIDENTIAL BUILDING CODE
- PART 3 CALIFORNIA ELECTRICAL CODE
- PART 4 CALIFORNIA MECHANICAL CODE
- PART 5 CALIFORNIA MECHANICAL CODE
- PART 6 CALIFORNIA ENERGY CODE
- PART 7 CALIFORNIA ENERGY CODE
- PART 8 CALIFORNIA HISTORICAL BUILDING CODE
- PART 9 CALIFORNIA HISTORICAL BUILDING CODE
- PART 10 CALIFORNIA FIRE CODE
- PART 11 CALIFORNIA GREEN BUILDING STANDARDS CODE
- PART 12 CALIFORNIA REFERENCE STANDARDS CODE

LOCAL COUNTY OR CITY ORDINANCES

ACCESSIBILITY REQUIREMENTS: THIS FACILITY IS UNMANNED AND NOT FOR HUMAN OCCUPANCY. ACCESSIBILITY REQUIREMENTS DO NOT APPLY IN ACCORDANCE WITH THE 2016 CBC 119-201.5, AND 119-202.4 EXCEPTION 1.

PROJECT DESCRIPTION

- PROPOSED VERIZON WIRELESS UNMANNED TELECOMMUNICATIONS FACILITY, INCLUDING:
- A 33'-0"X33'-0" LEASE AREA.
 - A FENCE & LEASE AREA PERMETER.
 - OUTDOOR EQUIPMENT CABINETS.
 - POWER & TELCO UTILITIES BROUGHT TO FACILITY.
 - A CABLE ICE BRIDGE.
 - ANTENNAS W/ASSOCIATED TOWER MOUNTED EQUIPMENT MOUNTED ON A PROPOSED SQUARE MONOPOLE PAINTED DARK GREEN.

PROJECT MILESTONES

03/31/2016	SITE ZONING DOCUMENTS
04/12/2016	50% ZONING DOCUMENTS REV 1
05/13/2016	100% ZONING DOCUMENTS
03/15/2018	100% ZONING DOCUMENTS REV 1
04/05/2018	100% ZONING DOCUMENTS REV 2
XX/XX/XXXX	90% CONSTRUCTION DOCUMENTS
XX/XX/XXXX	100% CONSTRUCTION DOCUMENTS

COMPLETE

MST ARCHITECTS
 1515 14TH STREET, SACRAMENTO, CA 95811
 916-442-1234
 www.mstarchitects.com

Verizon

HWY 680 CYGNUS
 GOODYEAR ROAD
 FAIRFIELD, CA 94534

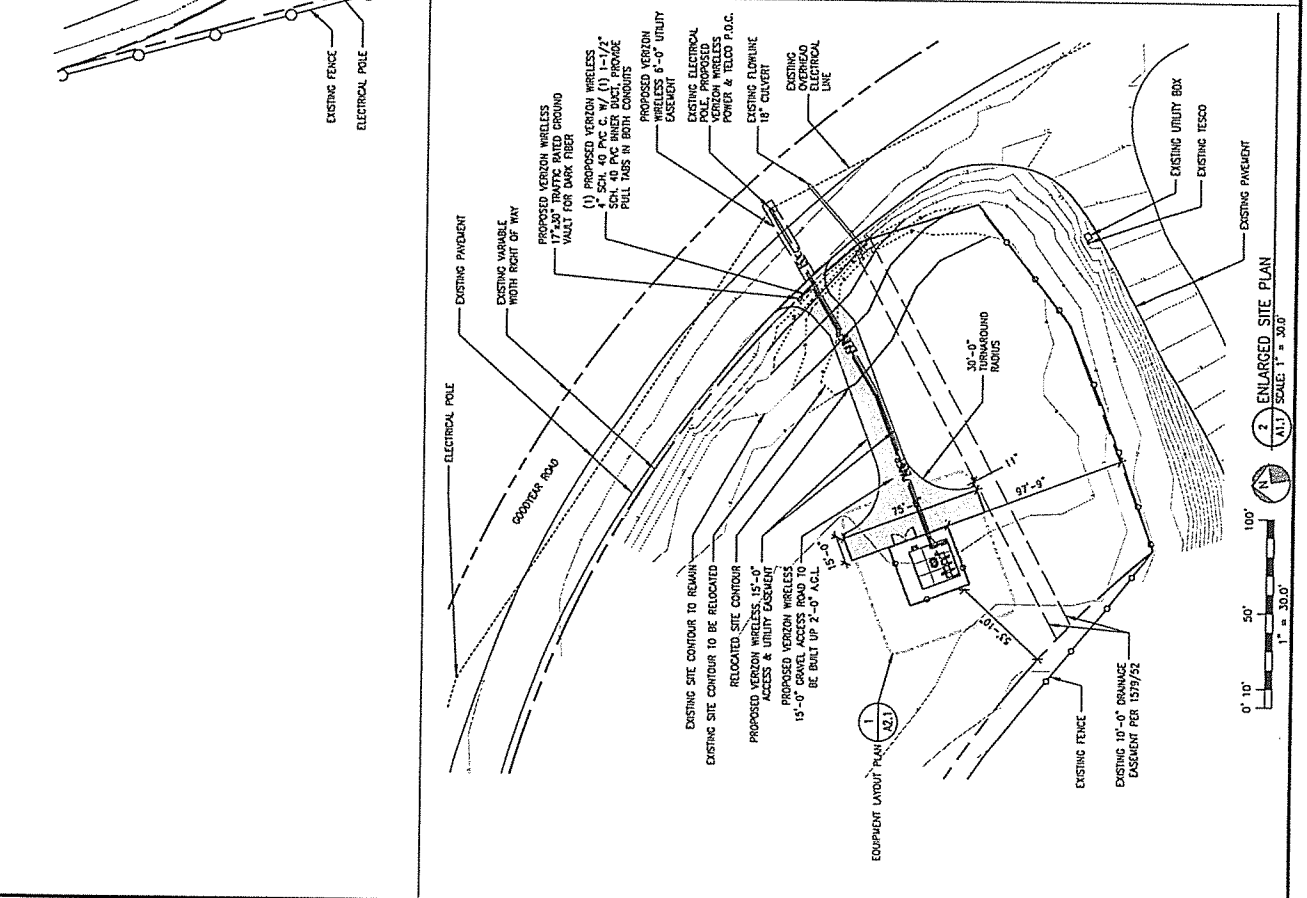
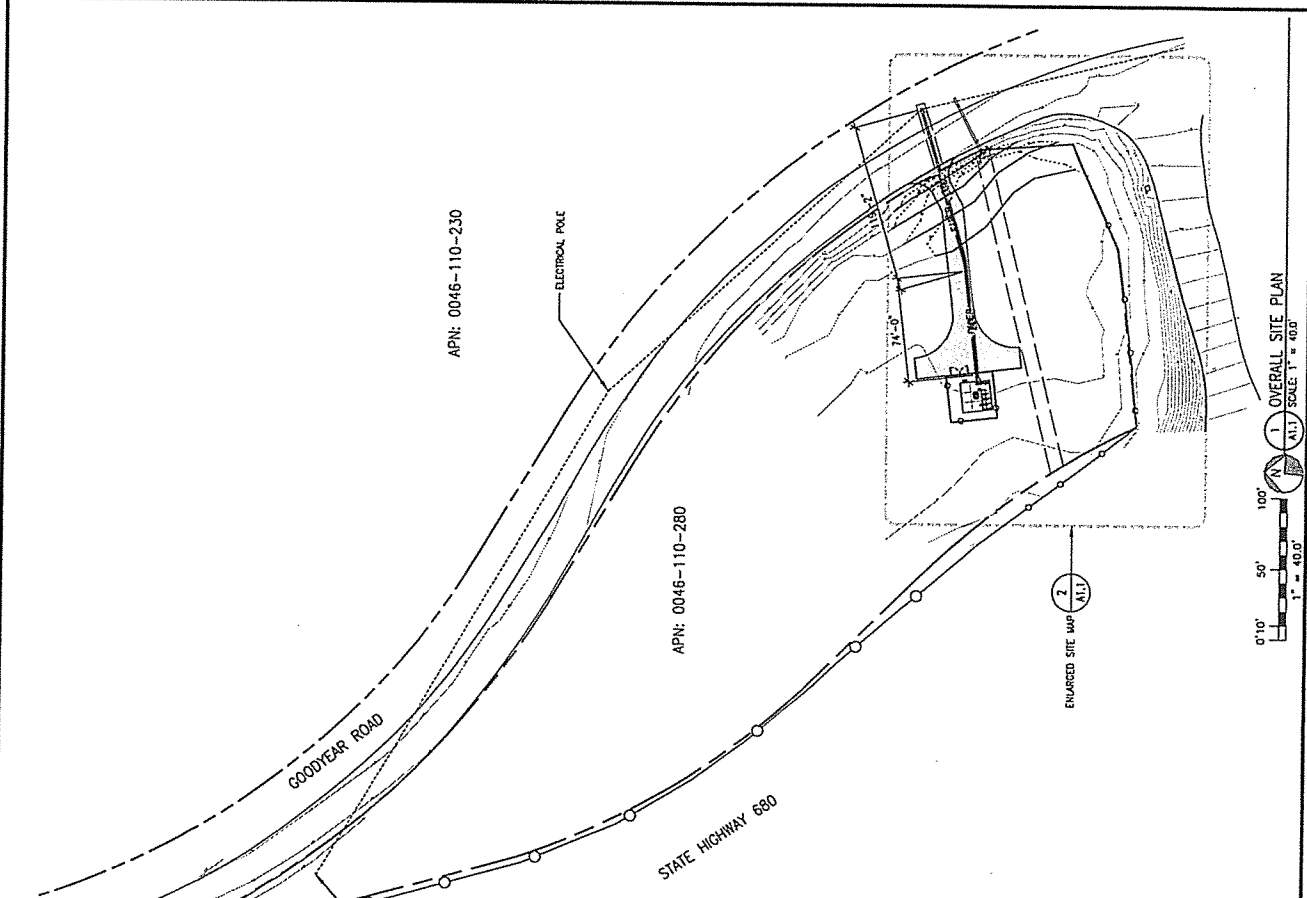
SHEET TITLE: TITLE SHEET, LOCATION PLAN, PROJECT DATA

Revisions:

Drawn By: u
 Checked By: m
 Scale as Shown
 Date: 10/09/17

JOB NO. 16177

T1.1



MST ARCHITECTS
 1120 New Ave, Suite 200, San Francisco, CA 94115
 415.774.7600
 www.mstarchitects.com

COMPLETE
 Wireless Consulting, Inc.

THE CLIENT HAS REVIEWED AND APPROVED THIS PLAN FOR CONSTRUCTION AND HAS AUTHORIZED THE ARCHITECT TO PROCEED WITH THE PROJECT. THE ARCHITECT ASSUMES NO LIABILITY FOR THE ACCURACY OR COMPLETION OF THIS PLAN. THE ARCHITECT HAS NOT CONDUCTED ANY SURVEYING OR FIELD WORK AND HAS NOT VISITED THE SITE TO VERIFY THE EXISTING CONDITIONS OR THE ACCURACY OF THE INFORMATION PROVIDED. THE ARCHITECT HAS NOT CONDUCTED ANY SURVEYING OR FIELD WORK AND HAS NOT VISITED THE SITE TO VERIFY THE EXISTING CONDITIONS OR THE ACCURACY OF THE INFORMATION PROVIDED.

Verizon
 HWY 680 CRYMUS
 GOODYEAR ROAD
 FARFIELD, CA 94534

EQUIPMENT LAYOUT PLAN

SHEET TITLE:

DATE	DESCRIPTION

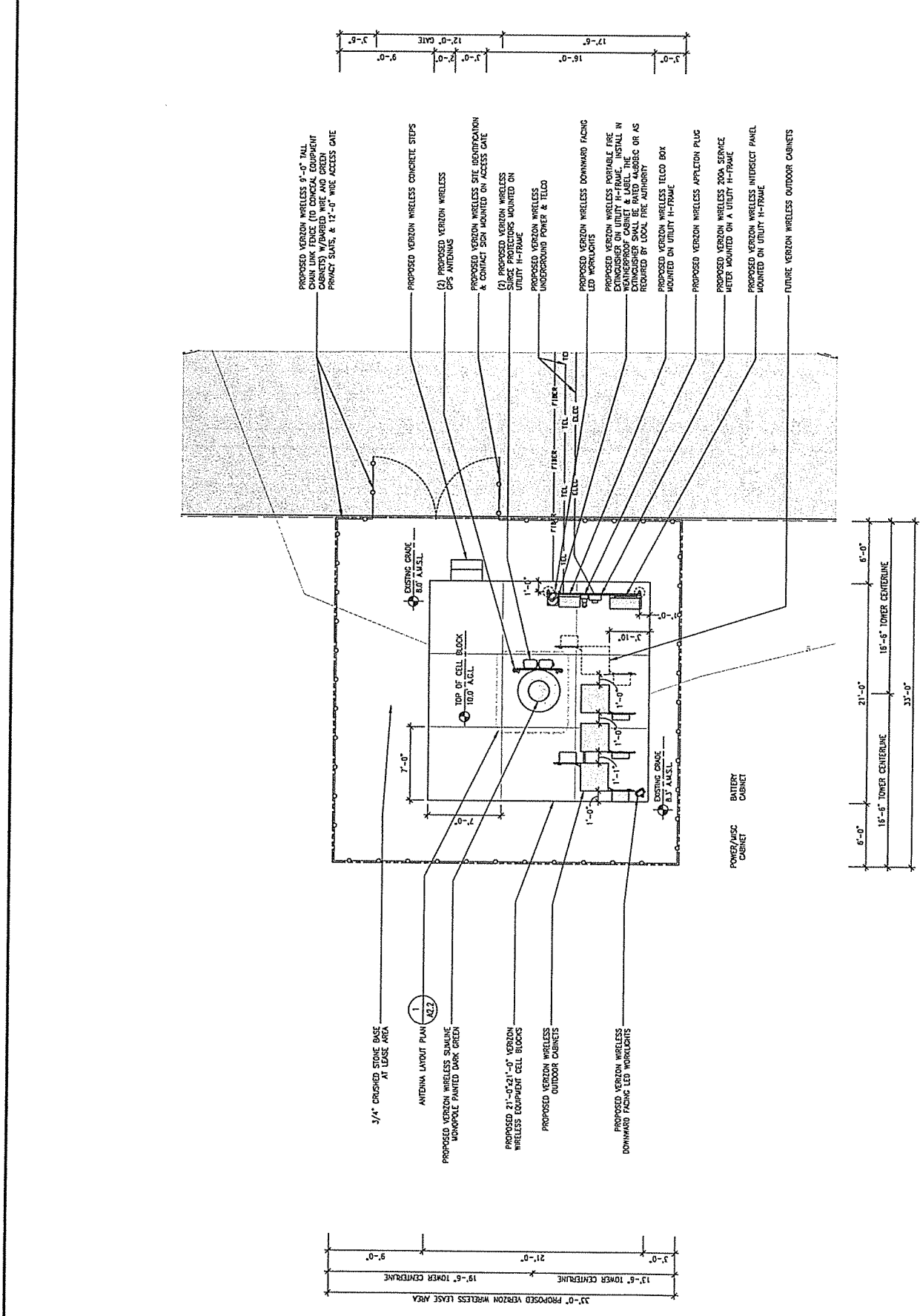
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DATE	DESCRIPTION

DATE	DESCRIPTION

JOB No. 183107

A2.1



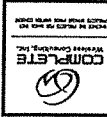
0' 1" 5' 10'


1/4" = 1'-0"

EQUIPMENT LAYOUT PLAN

1 18-2

SCALE 1/4" = 1'-0"


MST ARCHITECTS
 1159 Foothill Blvd., Suite 100
 San Dimas, CA 91773
 (909) 391-1111
 www.mstarchitects.com


Verizon
 HWY 680 CYNUS
 GOODFAR ROAD
 FAIRFELD, CA 94534
 SHEET TITLE: ANTENNA LAYOUT PLAN

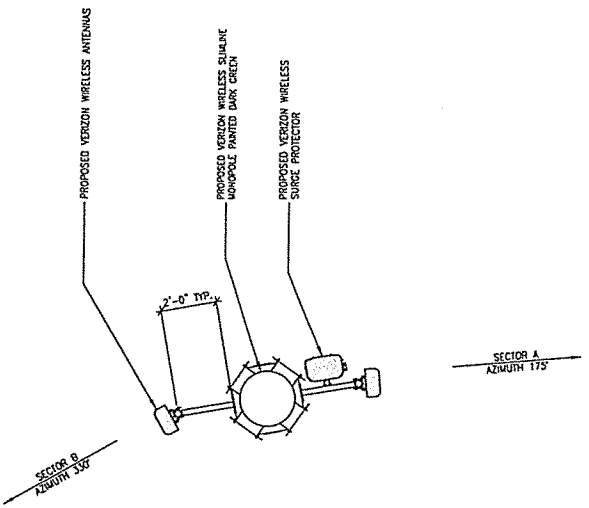
SHEET NO. _____
 DATE _____
 DRAWN BY _____
 CHECKED BY _____
 SCALE: AS SHOWN
 DATE: 04/17/18

PROJECT NO. 182.0172
 PROJECT NAME: _____
 CLIENT: _____
 LOCATION: _____
 SCALE: 1/2" = 1'-0"

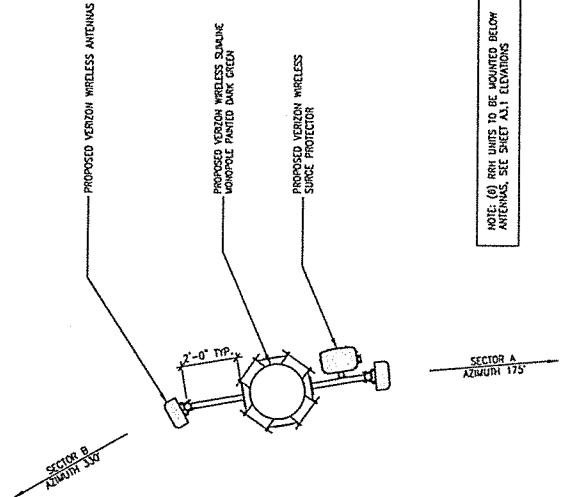
A2.2

EQUIPMENT SCHEDULE (PRELIMINARY & SUBJECT TO CHANGE)

EQUIPMENT	DESCRIPTION	SECTOR A	SECTOR B	TOTAL
ANTENNA	TO BE DETERMINED	2	2	4
RRH	TO BE DETERMINED	2	2	4
SURGE PROTECTOR/HYBRID	FWDP DC3315 / HYBRID TRUNK CABLE	2/2		2/2
COAXIAL CABLE	N/A	0	0	0

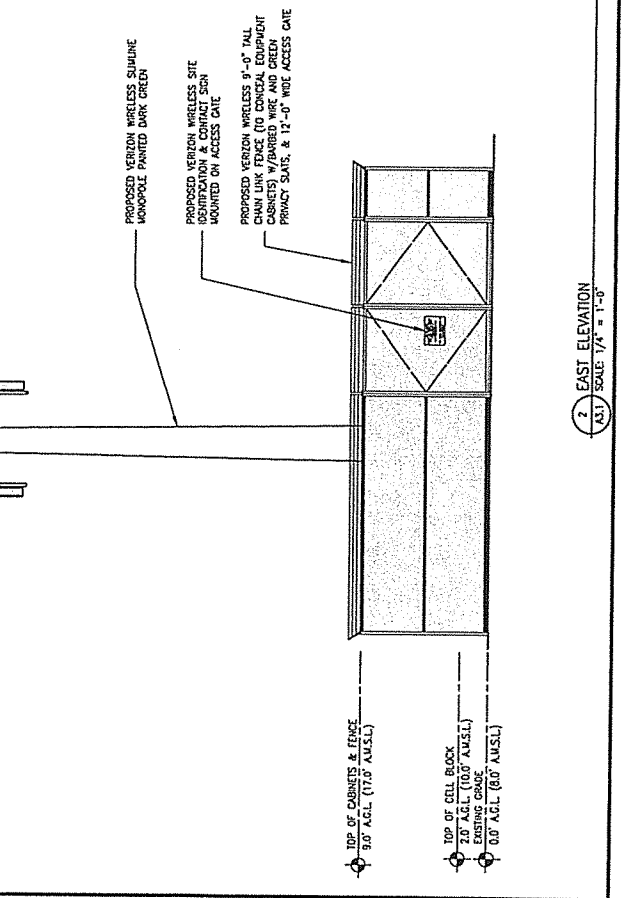
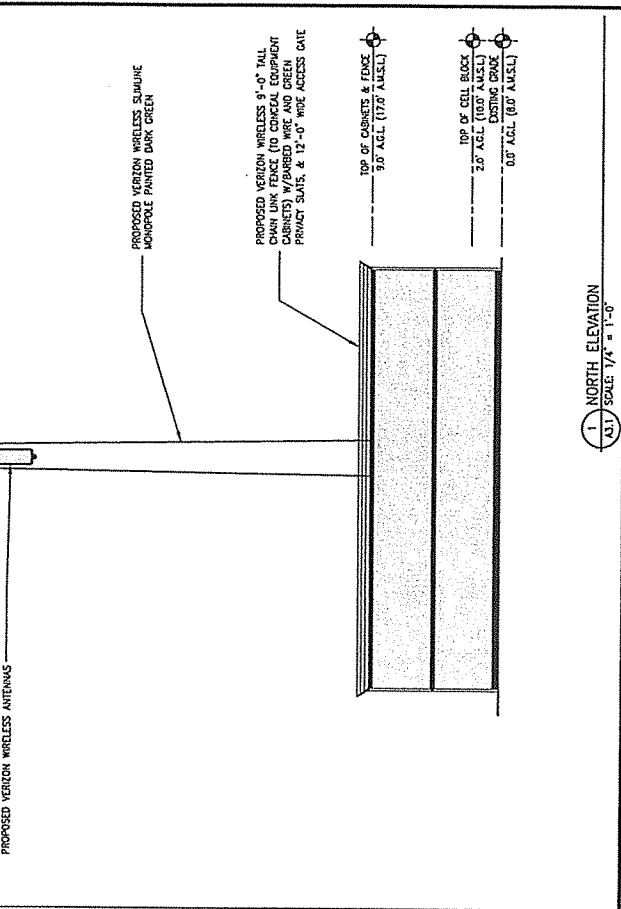
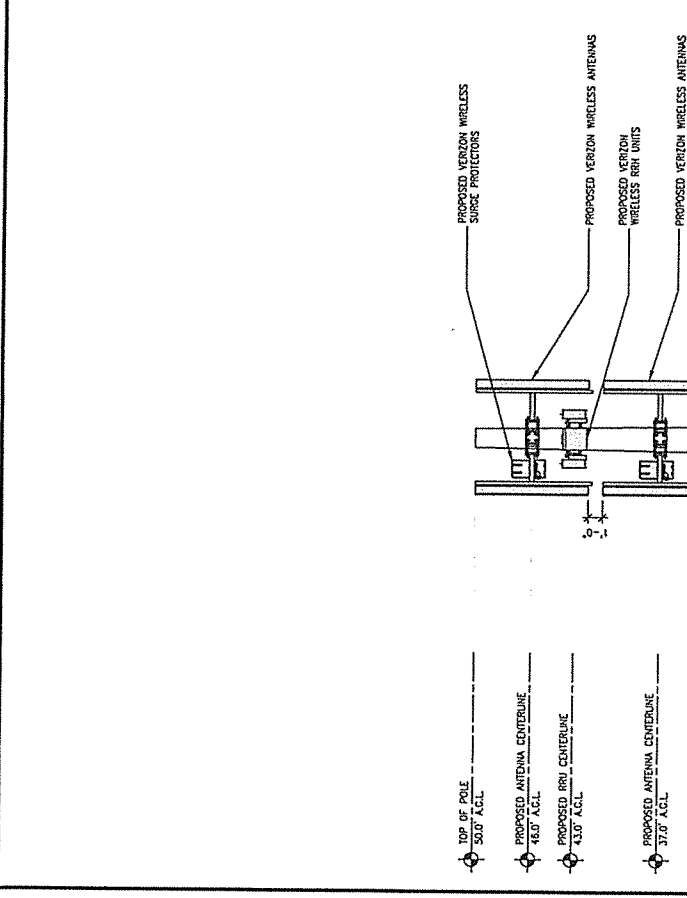
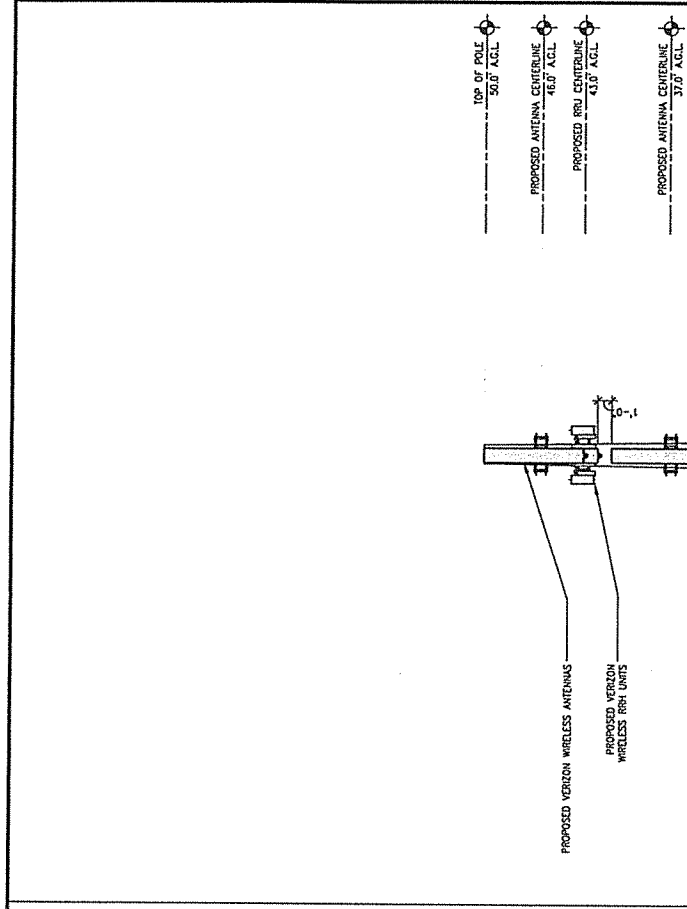


1 ANTENNA LAYOUT PLAN @ 47'-0" A.G.L.
 2/2 SCALE: 1/2" = 1'-0"



NOTE: RRH UNITS TO BE MOUNTED BELOW ANTENNAS. SEE SHEET A-1 FOR DETAILS.

1 ANTENNA LAYOUT PLAN @ 37'-0" A.G.L.
 2/2 SCALE: 1/2" = 1'-0"



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

2 EAST ELEVATION
 SCALE: 1/4" = 1'-0"

6.4

**Verizon Wireless • Proposed Base Station (Site No. 2999954 “Highway 680 Cygnus”)
Goodyear Road • Fairfield, 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. 2999954 “Highway 680 Cygnus”) proposed to be located at Goodyear Road in Fairfield, 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 pole to be sited near the Marshview Road interchange with Interstate 680 in unincorporated Solano County, at Goodyear Road near Fairfield. The proposed operation will, together with the existing base station near the site, comply with the FCC guidelines limiting public exposure to RF energy.

Prevailing Exposure Standards

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

Wireless Service	Frequency Band	Occupational Limit	Public Limit
Microwave (Point-to-Point)	5–80 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



**Verizon Wireless • Proposed Base Station (Site No. 2999954 “Highway 680 Cygnus”)
Goodyear Road • Fairfield, California**

small antenna for reception of GPS signals is also required, mounted with a clear view of the sky. Because of the short wavelength of the frequencies assigned by the FCC for wireless services, the antennas require line-of-sight paths for their signals to propagate well and so are installed at some height above ground. The antennas are designed to concentrate their energy toward the horizon, with very little energy wasted toward the sky or the ground. This means that it is generally not possible for exposure conditions to approach the maximum permissible exposure limits without being physically very near the antennas.

Computer Modeling Method

The FCC provides direction for determining compliance in its Office of Engineering and Technology Bulletin No. 65, “Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radio Frequency Radiation,” dated August 1997. Figure 2 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 MST Architects, Inc., dated May 5, 2016, it is proposed to install six Andrew Model SBNHH-1D65C directional panel antennas on a new 65-foot steel pole to be sited in an open area near the on-ramp from Marshview Road to the northbound lanes of Interstate 680, near Goodyear Road south of Fairfield. The antennas would employ no downtilt, would be mounted at an effective height of about 62 feet above ground, and would be oriented in groups of three toward 175°T and 330°T. The maximum effective radiated power in any direction would be 14,140 watts, representing simultaneous operation at 4,240 watts for AWS, 3,890 watts for PCS, 3,360 watts for cellular, and 2,650 watts for 700 MHz service.

Presently located on a utility pole about 370 feet to the southeast are similar antennas for use by T-Mobile. For the limited purpose of this study, the transmitting facilities of that carrier are assumed to be as follows:

Service	Maximum ERP	Antenna Model	Downtilt	Height
AWS	4,400 watts	Ericsson AIR21	2°	23 ft
PCS	2,200	Ericsson AIR21	2	23
700 MHz	1,800	Andrew LNX-6514DS	2	23

**Verizon Wireless • Proposed Base Station (Site No. 2999954 "Highway 680 Cygnus")
Goodyear Road • Fairfield, California**

Study Results

For a person anywhere at ground, the maximum RF exposure level due to the proposed Verizon operation by itself is calculated to be 0.026 mW/cm², which is 2.9% of the applicable public exposure limit. The maximum calculated cumulative level at ground, for the simultaneous operation of both carriers, is 8.5% of the public exposure limit. It should be noted that these results include several "worst-case" assumptions and therefore are expected to overstate actual power density levels. There are no buildings within 1,000 feet of the proposed location.

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 near Goodyear Road in Fairfield, 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

June 20, 2016



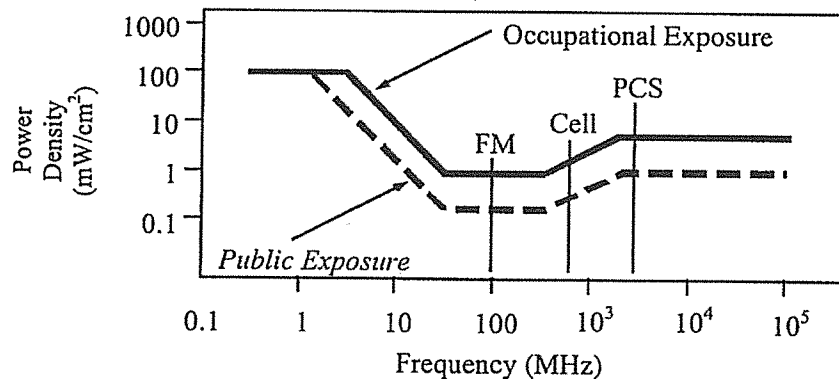
HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
SAN FRANCISCO

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:

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

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

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



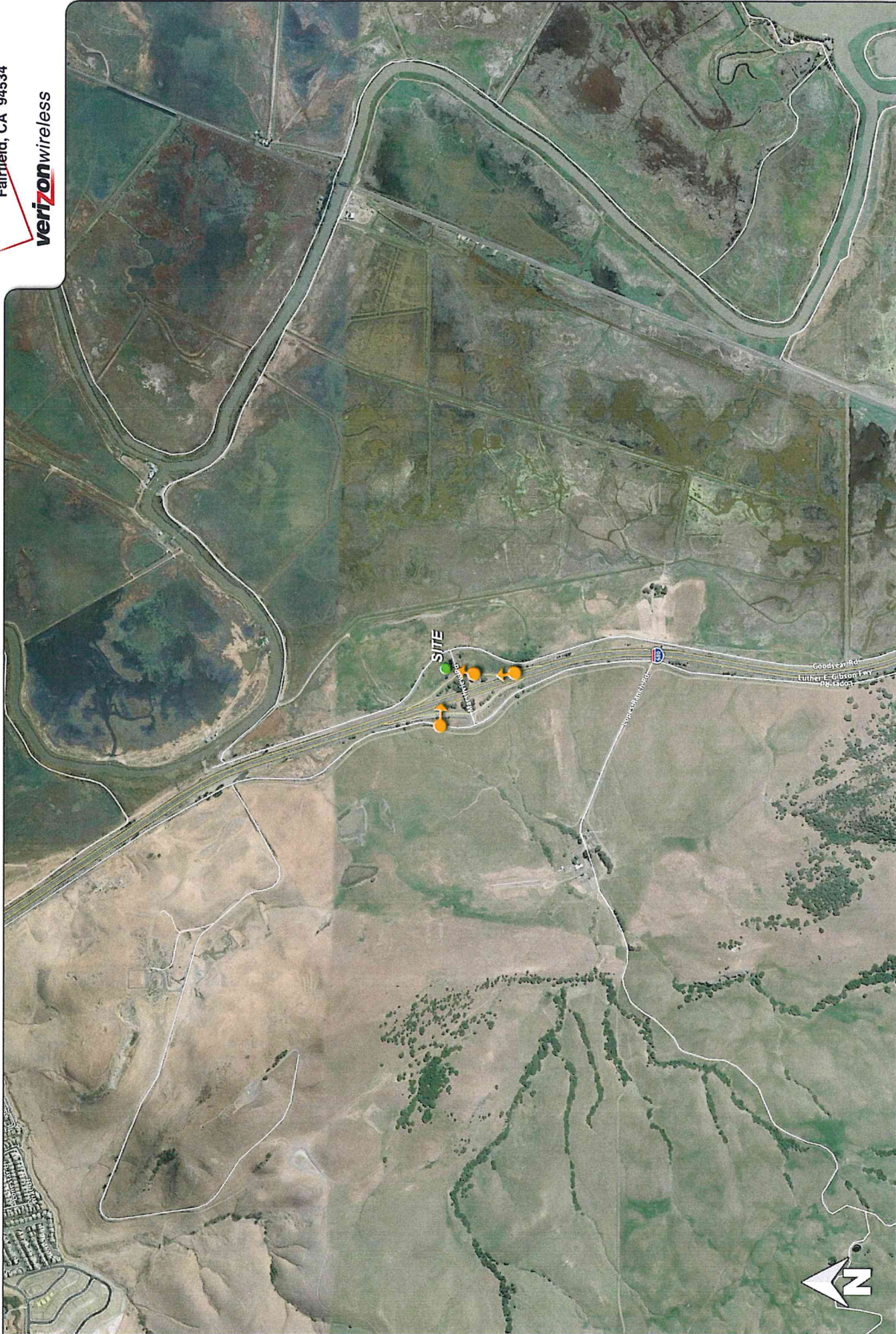
6.5

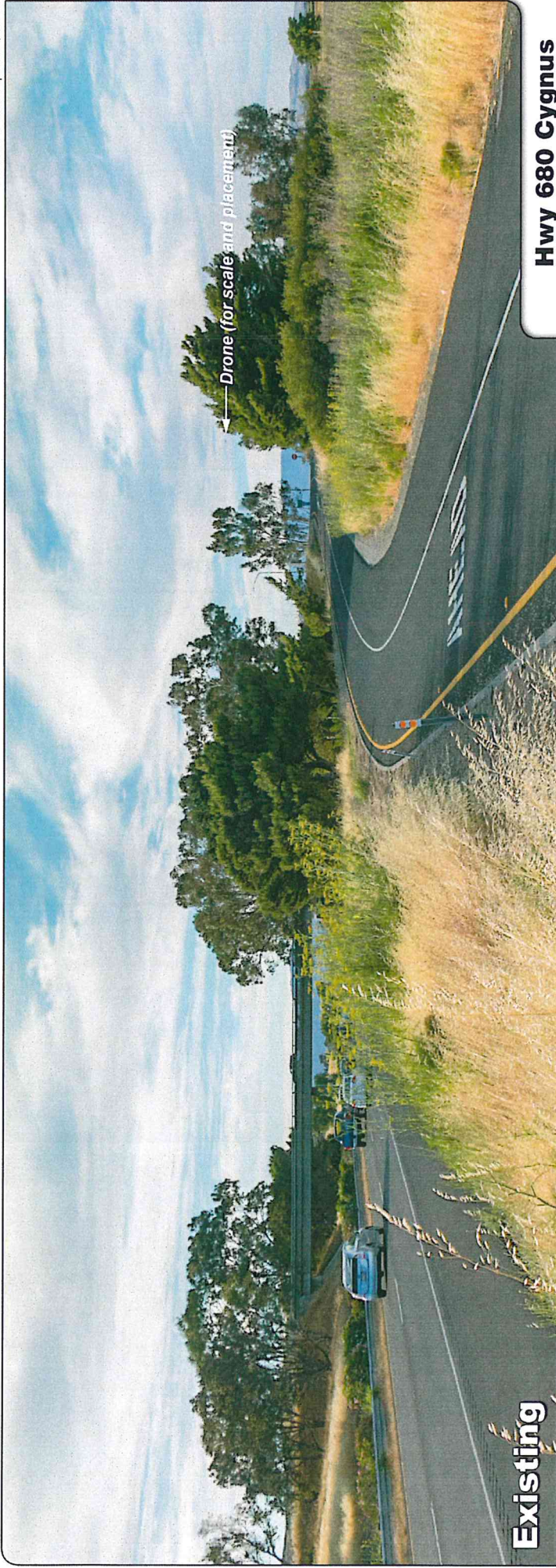
Hwy 680 Cygnus

Goodyear Road
Fairfield, CA 94534



Aerial photograph showing the viewpoints for the photosimulations.

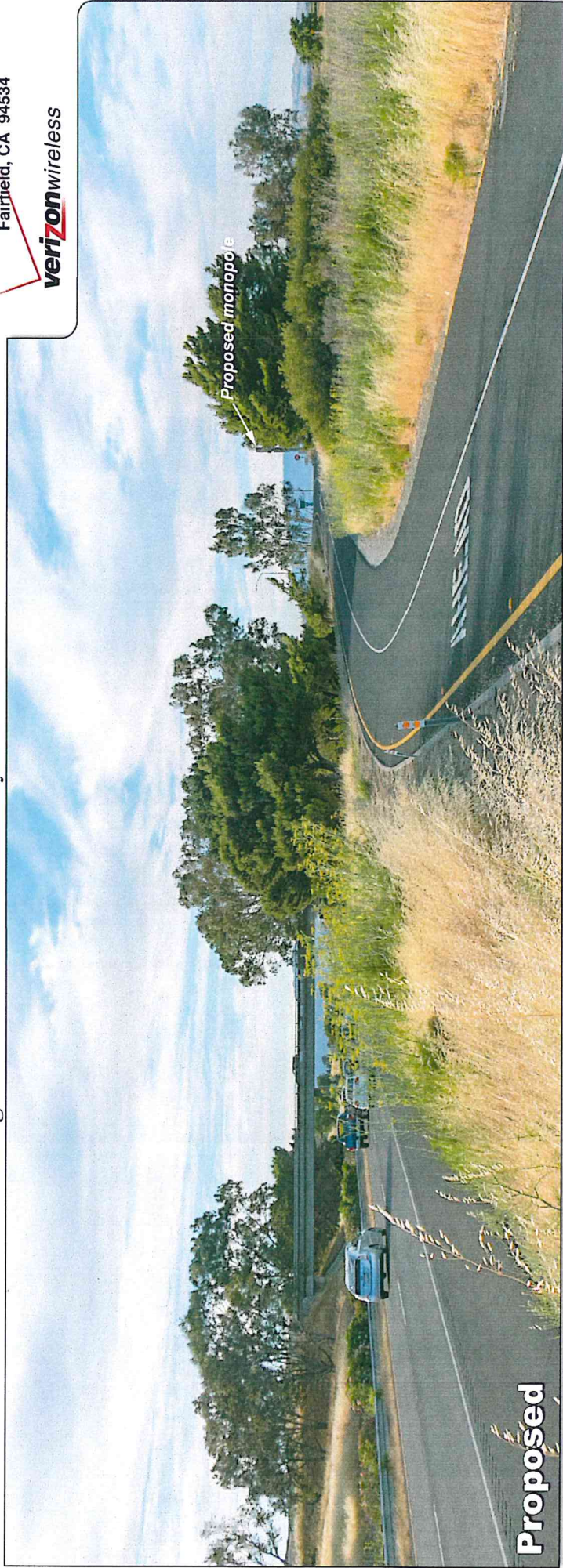


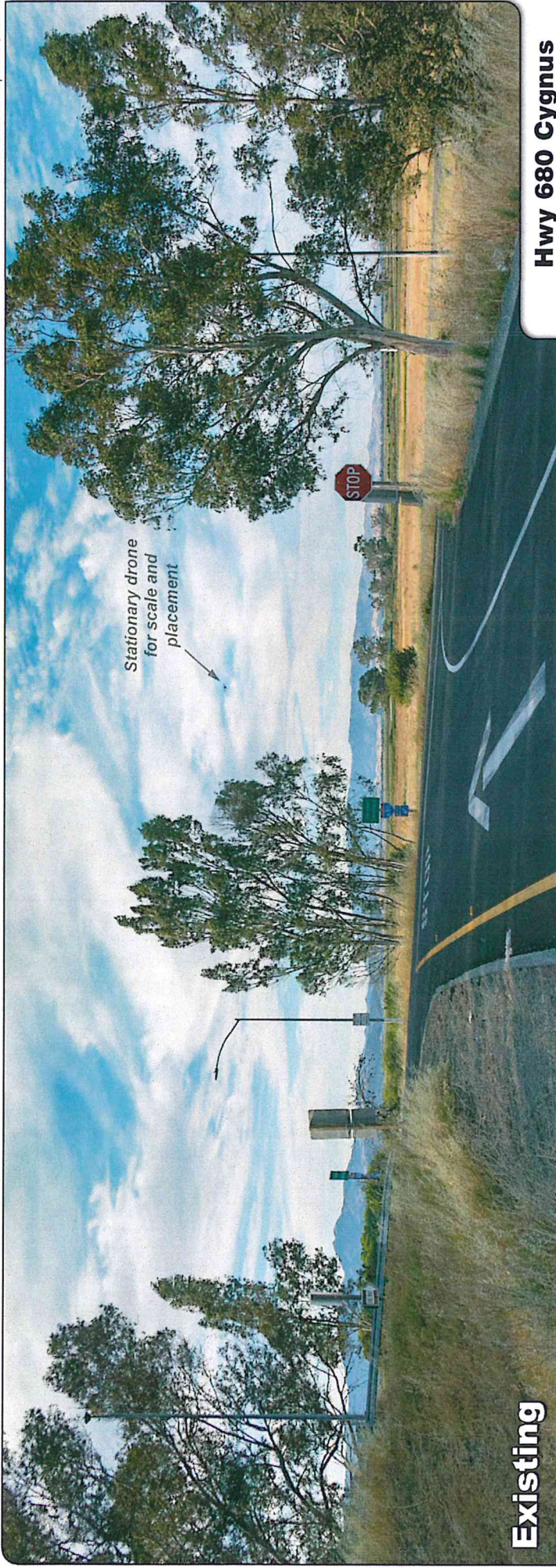


Photosimulation of the view looking north from northbound Hwy 680 at the Marshview Road exit.

Hwy 680 Cygnus

Goodyear Road
Fairfield, CA 94534

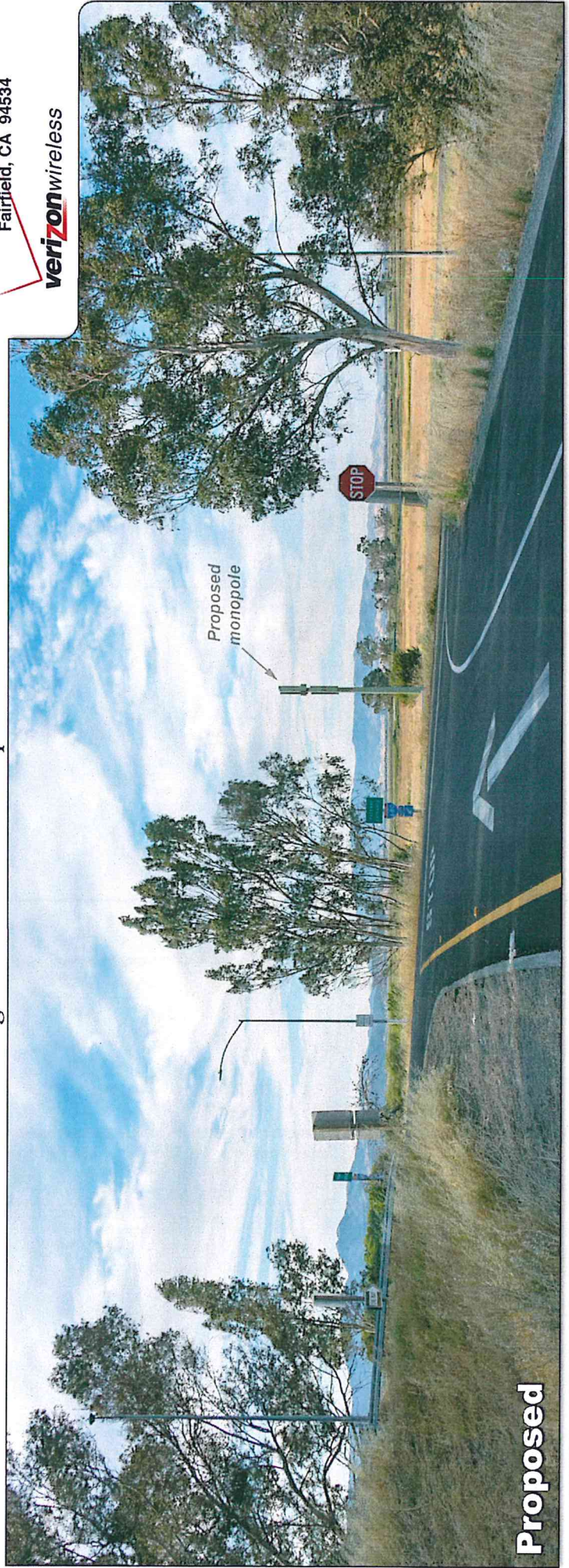




Existing

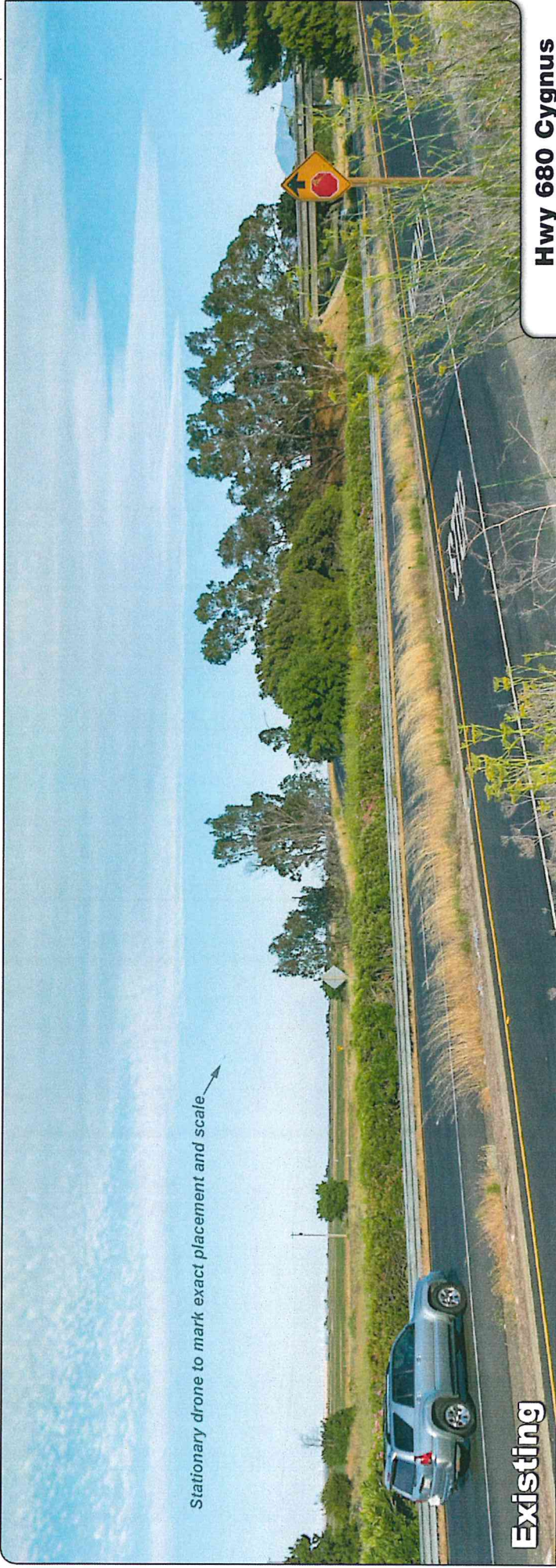
Hwy 680 Cygnus
Goodyear Road
Fairfield, CA 94534

Photosimulation of the view looking north from the offramp at Marshview Road.



Proposed



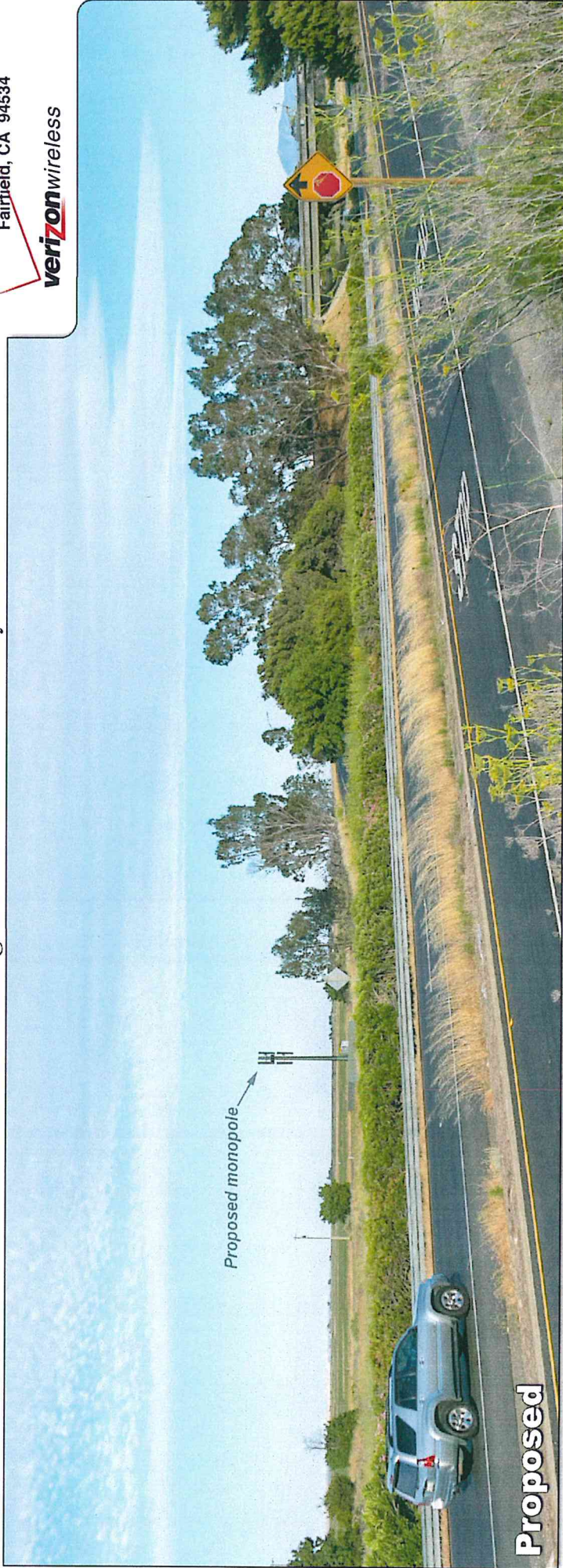


Stationary drone to mark exact placement and scale

Existing

Hwy 680 Cygnus
Goodyear Road
Fairfield, CA 94534
verizonwireless

Photomontage of the view looking southeast from across Hwy 680.



Proposed monopole

Proposed

6.6

Environmental Noise Analysis

Hwy 680 Cygnus Cellular Facility

Solano County, California

BAC Job # 2015-237

Prepared For:

Complete Wireless Consulting

Attn: Ms. Kim Le
2009 V Street
Sacramento, CA 95818

Prepared By:

Bollard Acoustical Consultants, Inc.



Paul Bollard, President

June 21, 2016



Introduction

The Hwy 680 Cygnus Verizon Wireless Unmanned Telecommunications Facility Project (project) proposes the construction of a monopole tower, and the installation of outdoor equipment cabinets inside a fenced area located on Goodyear Road (APN: 0046-110-280) in Fairfield, California (Solano County). The outdoor equipment cabinets have been identified as the primary noise sources associated with the project. Please see Figure 1 for the general site location. The studied site design is dated May 13, 2016.

Bollard Acoustical Consultants, Inc. has been contracted by Complete Wireless Consulting, Inc. to complete an environmental noise assessment regarding the proposed project cellular equipment operations. Specifically, the following addresses daily noise production and exposure associated with operation of the project outdoor equipment cabinets.

Please refer to Appendix A for definitions of acoustical terminology used in this report. Appendix B illustrates common noise levels associated with various sources.

Criteria for Acceptable Noise Exposure

Solano County General Plan Public Health & Safety Element

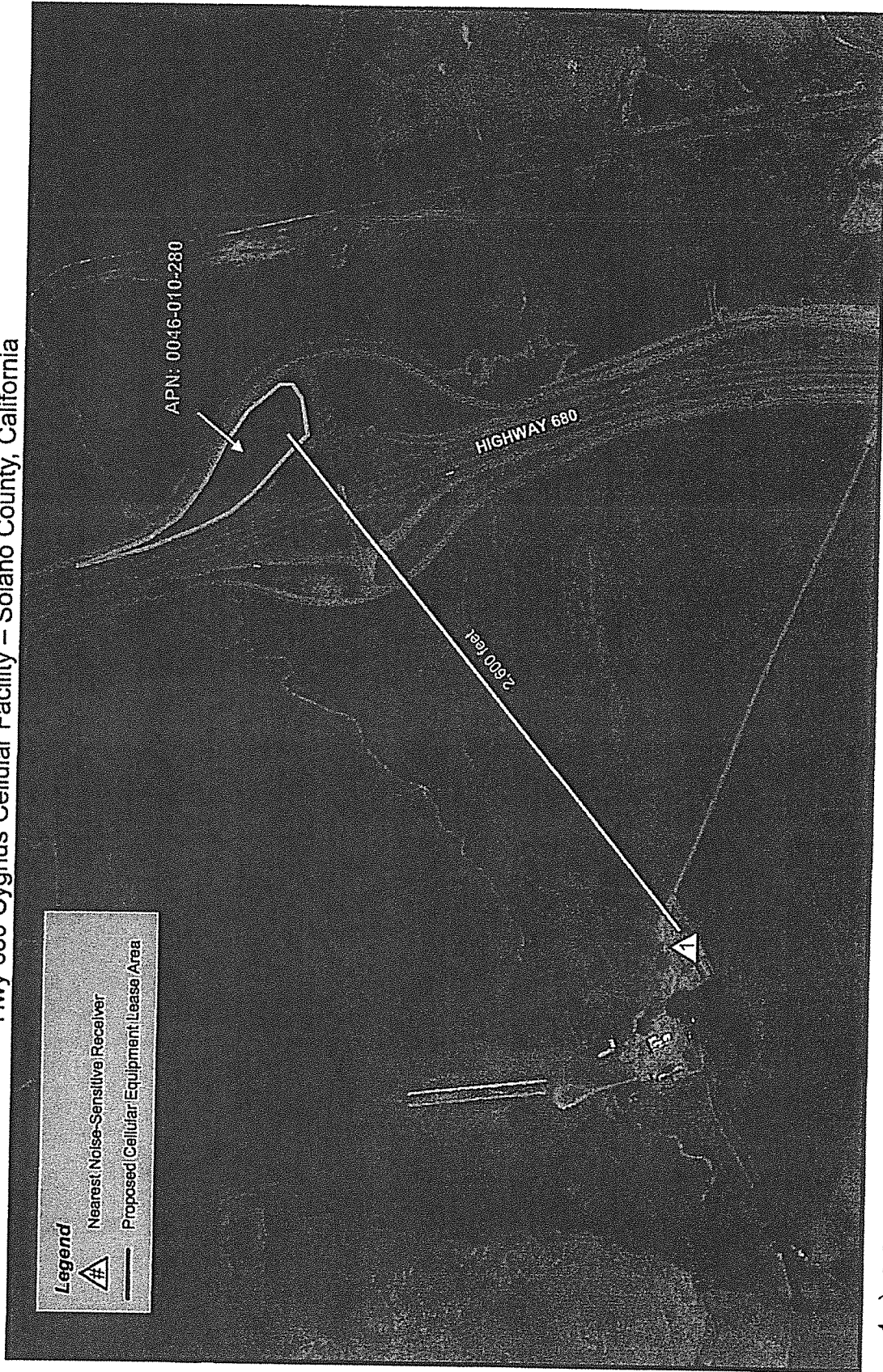
The Solano County General Plan Public Health & Safety Chapter contains a noise section that establishes acceptable noise level limits for non-transportation (stationary) noise sources, such as those proposed by the project. The County's non-transportation noise level standards applied to residential land uses are provided below in Table 1. The General Plan requires that the noise level standards set forth below in Table 1 be applied at the common outdoor activity areas (e.g., backyards) of the residential land uses.

Table 1 Noise Level Standards for Non-Transportation Noise Sources – Residential Land Uses Solano County Noise Element of the General Plan		
Noise Level Descriptor	Daytime 7 a.m. to 10 p.m.	Nighttime 10 p.m. to 7 a.m.
Hourly L_{eq} , dB	55	50
Maximum Level (L_{max}), dB	70	65
Source: Solano County General Plan, Public Health & Safety Element		

Solano County Code

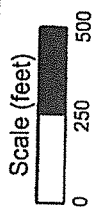
Section 28.70.10(B)(1)(b) of the Solano County Code, which pertains to general development standards applicable to all uses in every zoning district, requires that all uses of land shall not generate noise that exceeds 65 dBA L_{dn} at any property line.

Figure 1
Proposed Cellular Equipment Lease Area & Distance to Nearest Noise-Sensitive Receiver
Hwy 680 Cygnus Cellular Facility – Solano County, California



Legend

- Nearest Noise-Sensitive Receiver
- Proposed Cellular Equipment Lease Area



Section 28.81(D)(10) of the Solano County Code, which pertains to noise generation of wireless communications facilities, reads as follows:

All wireless communication facilities shall be designed to minimize noise. If a facility is located in or within 100 feet of a residential district, noise attenuation measures shall be included to reduce noise levels to a maximum exterior noise level of 50 L_{dn} at the facility site's property lines.

Noise Standards Applied to the Project

The Solano County General Plan non-transportation (stationary) noise level standards seen in Table 1 were applied to the project. In addition to the general plan noise level standards, the Solano County Code, Section 28.70.10(B)(1)(b), property line noise level standard of 65 dB L_{dn} was applied at the nearest property line. Compliance with the 65 dB L_{dn} noise level standard at the nearest property line would ensure compliance at all other property lines.

The proposed facility is located within and adjacent to agriculturally zoned land (A 20 Exclusive Agriculture). The nearest residential district is located over a mile away to the northwest. Because the facility is located well in excess of 100 feet from the nearest residential district, Section 28.81(D)(10) of Solano County Code was not applied to the project.

Project Noise Generation

The project proposes the installation of three equipment cabinets within the lease area illustrated on Figure 1. Specifically, the cabinets assumed for the project are as follows: one Ericsson eNB RBS6101, one Charles Industries 48V Power Plant and one miscellaneous cabinet cooled by a McLean Model T-20 air conditioner. The cabinets and their respective reference noise levels are provided in Table 2. The manufacturer's noise level data specification sheets for the proposed equipment cabinets are provided as Appendix C.

Table 2 Reference Noise Level Data of Proposed Equipment Cabinets			
Equipment	Number of Cabinets	Reference Noise Level, dB	Reference Distance, feet
Ericsson eNB RBS6101	1	53	5
Charles Industries 48V Power Plant	1	60	5
McLean T-20	1	66	5

Notes: Manufacturer specification sheets provided as Appendix C.

Predicted Facility Noise Levels at Nearby Sensitive Receptor

Assessment Relative to Solano County General Plan:

The project parcel and the adjacent parcels are zoned agricultural (A 20 Exclusive Agriculture) which are not typically considered sensitive to noise. The proposed cellular facility maintains a separation of approximately 2,600 feet from the outdoor activity area of the nearest noise-sensitive receptor, identified as receiver 1 (APN:0180-130-010) on Figure 1. Assuming standard spherical spreading

loss (-6 dB per doubling of distance), project-equipment noise exposure at the closest receiver was calculated and the results of those calculations are presented below in Table 3.

Table 3 Summary of Project-Related Noise Exposure at Nearest Noise-Sensitive Receptor Hwy 680 Cygnus Verizon Wireless Telecommunications Facility Project		
Nearest Noise Sensitive Receptor ¹	Distance from Cellular Equipment (feet) ²	Predicted Cabinet Noise Levels (L _{eq} , dBA) ³
1	2,600	<20
Notes: ¹ Receptor location and distance are shown on Figure 1. ² Predicted equipment noise levels were applied at outdoor activity areas of nearest noise-sensitive receptors. ³ The three equipment cabinets were conservatively assumed to be in operation concurrently.		

Because the proposed equipment cabinets could potentially be in operation during nighttime hours, the operation of the cabinets would be subject to the County's nighttime noise level standard of 50 dB L_{eq}. As shown in Table 3, the predicted equipment cabinet noise levels of less than 20 dB L_{eq} at the outdoor activity areas of the nearest noise-sensitive receiver locations would satisfy the Solano County 50 dB L_{eq} nighttime noise level standard. As a result, no additional noise mitigation measures would be warranted for this aspect of the project.

Assessment Relative to Solano County Code:

The proposed project equipment maintains a separation of approximately 65 feet from the nearest property line to the west. To predict cellular facility noise emissions relative to the Solano County Code 65 dB L_{dn} noise standard at the nearest property line, the number of hours per day the equipment would be in operation must be known. For the purpose of this analysis, the equipment cabinets were conservatively assumed to be operating continuously for 24 hours.

Assuming standard spherical spreading loss (-6 dB per doubling of distance), the project-equipment noise exposure at the nearest property line was calculated to be 51 dB L_{dn}. As a result, no additional noise mitigation measures would be warranted for the project.

Conclusions

Based on the equipment noise level data and analyses presented above, project-related equipment noise exposure is expected to satisfy the Solano County General Plan noise exposure limits applied at the outdoor activity areas of the nearest noise-sensitive land uses. In addition, project-related equipment noise exposure is expected to satisfy the Solano County Code noise exposure limits applied at the nearest property line. As a result, no additional noise mitigation measures would be warranted for this project.

This concludes our environmental noise assessment for the proposed Hwy 680 Cygnus Cellular Facility in Solano County, California. Please contact BAC at (916) 663-0500 or paulb@bacnoise.com with any questions or requests for additional information.

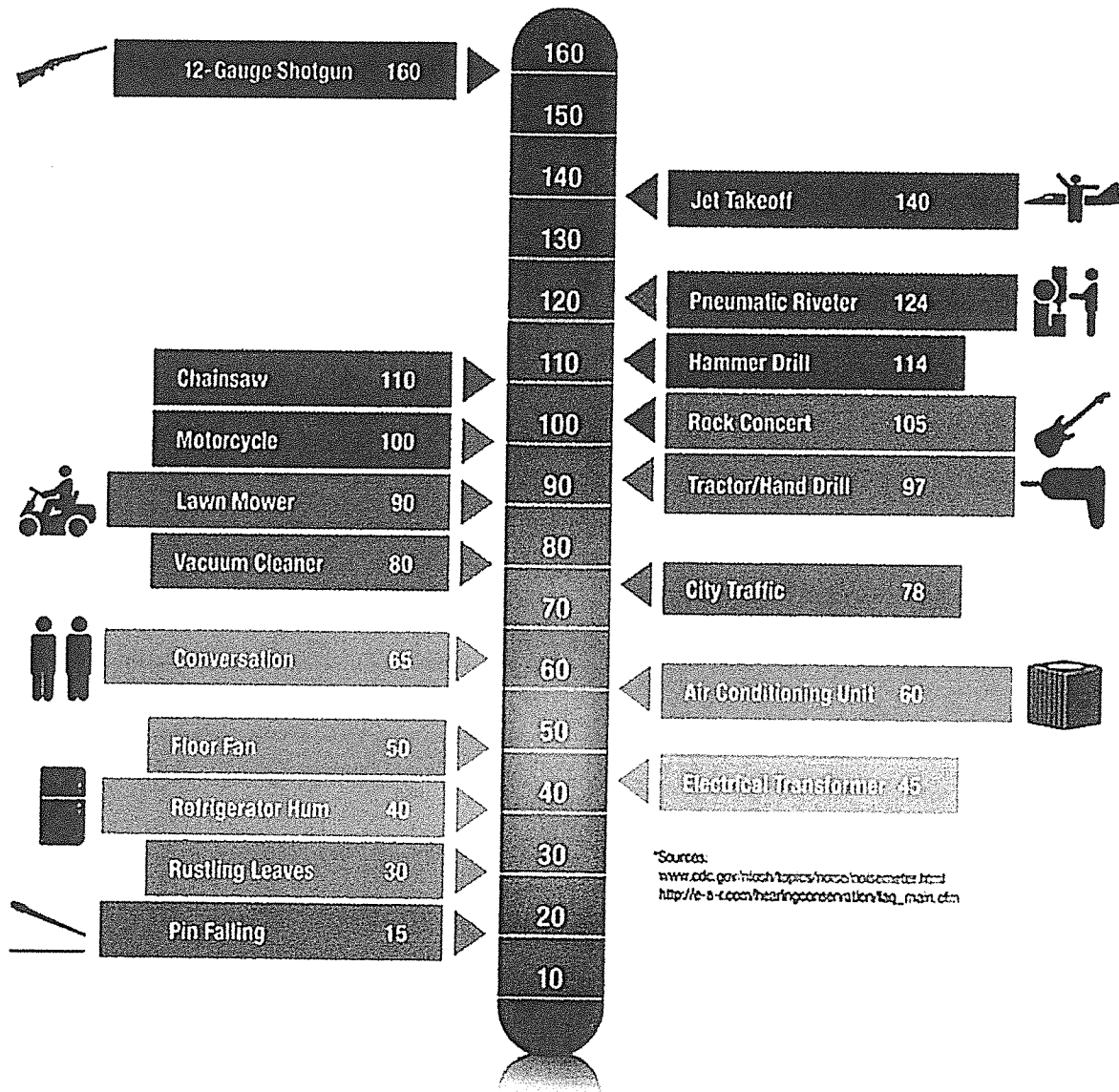
Appendix A
Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
L_{dn}	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
L_{max}	The highest root-mean-square (RMS) sound level measured over a given period of time.
Loudness	A subjective term for the sensation of the magnitude of sound.
Masking	The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.
Noise	Unwanted sound.
Peak Noise	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the Maximum level, which is the highest RMS level.
RT₆₀	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 sabin.
SEL	A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy of the event into a 1-s time period.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.



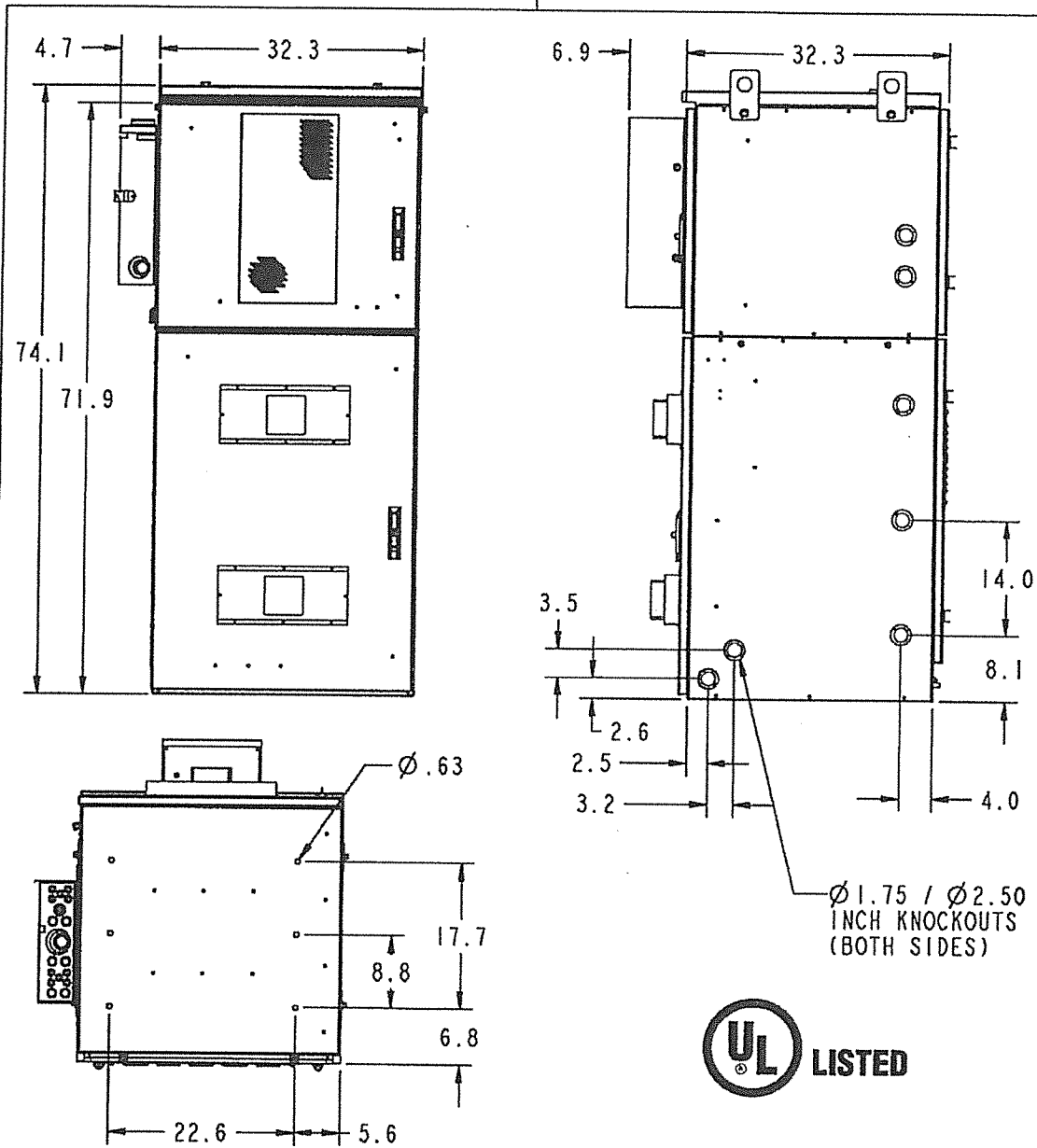
Appendix B

Typical A-Weighted Sound Levels of Common Noise Sources Decibel Scale (dBA)*



*Sources:
www.ehc.gov/health/topics/noise/noiseindex.html
http://e-s-cc.com/hearingconservation/faq_main.cfm

Appendix C-1



WEIGHT WITH BATTERIES:
2296 LBS.

WEIGHT WITHOUT BATTERIES:
760 LBS.

MAX NOISE LEVEL:
55-60dB

NorthStar NSB-170FT batteries
at 128 lbs each, Qty 12

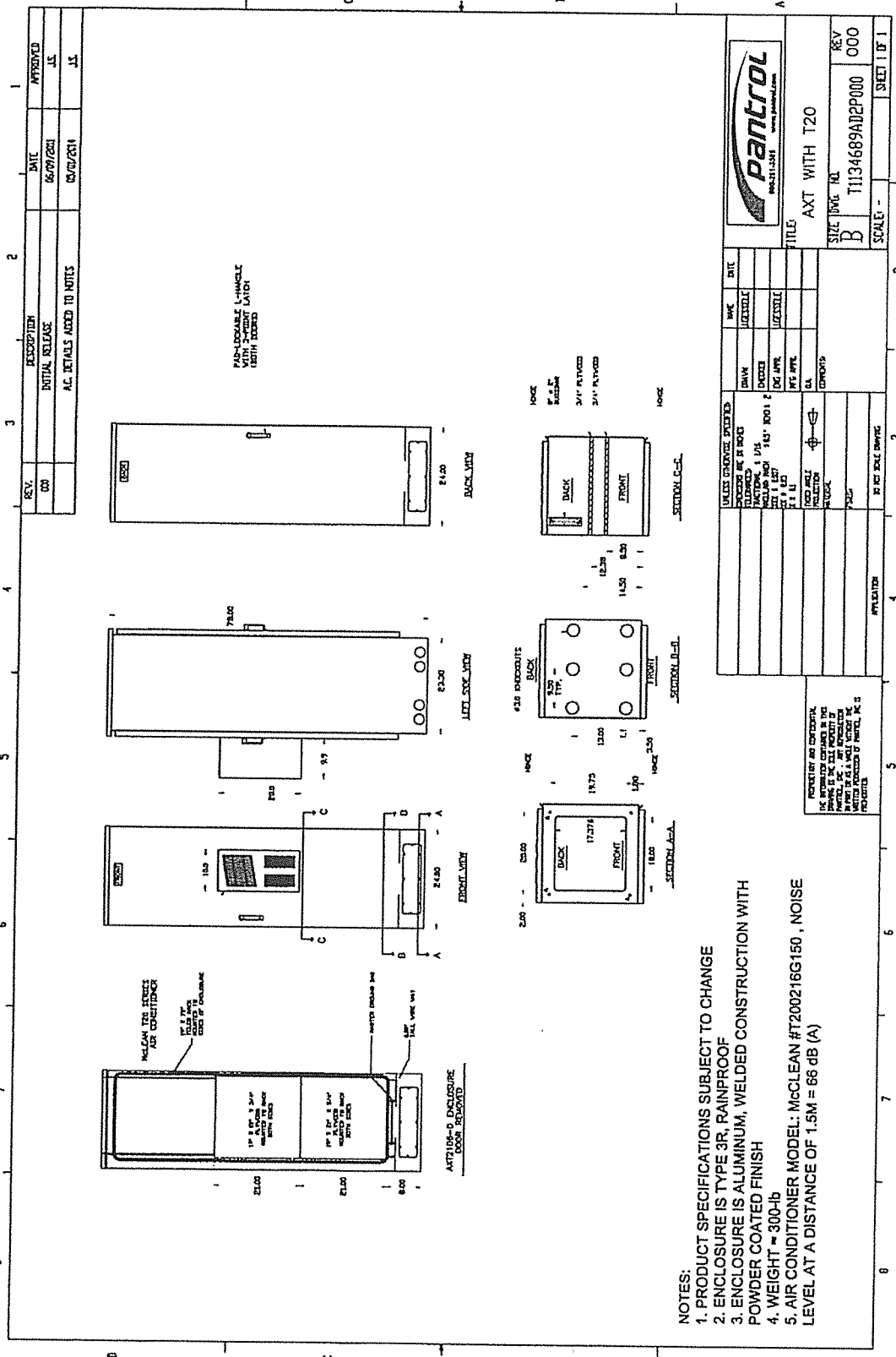
CHARLES PART #
CUBE-SS4C215XC1

Charles Industries Ltd.
Telecommunications Group
Charles Center, 340 Apple Drive
Hilltop Meadows, IL 60444
Telephone: 647-846-4338

Verizon Wireless
Large Site Support Enclosure

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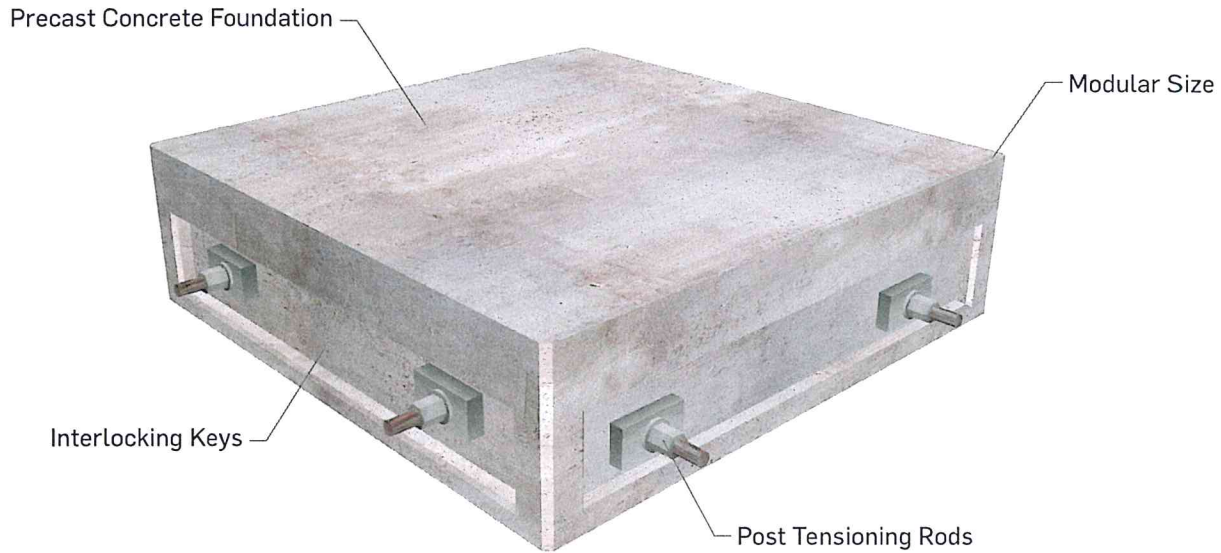
Appendix C-2



- NOTES:**
1. PRODUCT SPECIFICATIONS SUBJECT TO CHANGE
 2. ENCLOSURE IS TYPE 3R, RAINPROOF
 3. ENCLOSURE IS ALUMINUM, WELDED CONSTRUCTION WITH POWDER COATED FINISH
 4. WEIGHT = 300-lb
 5. AIR CONDITIONER MODEL: McCLEAN #T200216G150 , NOISE LEVEL AT A DISTANCE OF 1.5M = 66 dB (A)

6.7

CELL BLOCKS® FOUNDATION SYSTEM



A PRECAST FOUNDATION SYSTEM DESIGNED FOR THE WIRELESS INDUSTRY

Oldcastle Precast CELL BLOCKS are a precast, post-tensioned foundation system designed specifically for the wireless communications industry. CELL BLOCKS foundations accommodate monopoles, towers, power/telco pedestals, shelters, equipment cabinets, precast walls, chain link fencing and stairs. Since they are deployed at grade level and do not penetrate the soil, CELL BLOCKS can be used at contaminated and environmentally or archaeologically sensitive sites. CELL BLOCKS eliminate the need for concrete trucks and drilling rigs, making them ideal for remote sites.

APPLICATIONS

- > Monopoles or towers
- > Shelter or cabinets
- > Power and battery units
- > Radar dishes

FEATURES

- Engineered per site providing stamped drawings
- Deployed at grade level
- Manufactured in a controlled environment
- Can easily be disassembled, moved and re-installed

BENEFITS

- Savings-development/design/permitting
- May not require soil reports
- Predictability in construction
- Sustainable - can be repurposed



For more information please contact **Phil Colflesh** at the National Sales Office (888) 965-3227 or send an email to phil.colflesh@oldcastle.com.

CELL BLOCKS-EASY INSTALLATION

Pre-engineered CELL BLOCKS require minimal site preparation. Block fabrication runs concurrently with the permitting process, facilitating aggressive construction schedule reductions. Typically, the foundation, shelter, and monopole (or lattice) are deployed in a single day. Once the blocks are post tensioned on day of installation, the foundation is full strength. No time delay for curing time associated with traditional methods. CELL BLOCKS are widely accepted by regulatory agencies.



Z D DRAWING SIGN - OFF

DATE: _____ TIME: _____ X CMC-PLUSE RETURN DR: _____



SIT ACQUISITION: _____ SIGNATURE: _____ DATE: _____

PLANNING: _____ SIGNATURE: _____ DATE: _____

CONSTRUCTION: _____ SIGNATURE: _____ DATE: _____

MANAGEMENT: _____ SIGNATURE: _____ DATE: _____

CONSTRUCTION: _____ SIGNATURE: _____ DATE: _____

ISAL ESTABLISH: _____ SIGNATURE: _____ DATE: _____

RF ENGINEER: _____ SIGNATURE: _____ DATE: _____

EQUIPMENT ENGINEER: _____ SIGNATURE: _____ DATE: _____

LAW ENG./TRANSPORT: _____ SIGNATURE: _____ DATE: _____

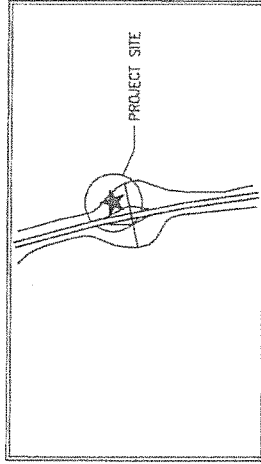
OTHER (IF APPLICABLE): _____ SIGNATURE: _____ DATE: _____

verizon

2785 Mitchell Drive, Walnut Creek, CA 94598

HWY 680 CYGNUS

GOODYEAR ROAD
FAIRFIELD, CA 94534
APN: 0046-110-280
LOCATION #: 299954



LOCATION PLAN

DIRECTIONS

1. FROM VERIZON OFFICE, 2785 MITCHELL DRIVE, WALNUT CREEK, CA 94598
2. HEAD NORTHWEST ON MITCHELL OR TOWARD OAK GROVE RD
3. TURN LEFT ONTO OAK GROVE RD
4. TURN RIGHT ONTO HWY 680
5. USE THE LEFT LANE TO TAKE THE INTERSTATE 680 N RAMP
6. WEAVE ONTO I-680 N
7. TAKE THE RIGHT LANE TO GET ON I-680 N (FUTURE TRAIL RAMP)
8. KEEP LEFT AT THE JUNCTION TO CONTINUE ON I-680 (FUTURE TRAIL RAMP)
9. TAKE EXIT 65 FOR WASHINGTON RD
10. TURN LEFT ONTO WASHINGTON RD
11. TURN LEFT ONTO GOODYEAR ROAD
12. DESTINATION WILL BE ON THE LEFT

INDEX OF DRAWINGS

1. 21.1
 2. 21.1
 3. 21.1
 4. 21.1
 5. 21.1
 6. 21.1
- TITLE SHEET, LOCATION PLAN, PROJECT DATA
OVERALL SITE PLAN
EQUIPMENT LAYOUT PLAN
CONSTRUCTION DOCUMENTS
PROJECT MILESTONES

PROJECT DIRECTORY

APPLICANT:
VERIZON WIRELESS
1000 VERIZON WAY
WALNUT CREEK, CA 94598

CONSTRUCTION MANAGER:
MARK COOK
VERIZON WIRELESS CONSULTING, INC.
2000 V STREET
SACRAMENTO, CA 95818
mccook@comcast.net

ARCHITECT:
MST ARCHITECTS, INC.
1520 KEVIN PARK DRIVE
SACRAMENTO, CA 95815
mst@mstarchitects.com

LANDSCAPE ARCHITECT:
S. ED WATSON, ET AL.
1000 VERIZON WAY
WALNUT CREEK, CA 94598

PROJECT SUMMARY

ASSESSOR'S PARCEL NUMBER: 0046-110-280

ASSISTANT: SIOGARD COUNTY

ACCURACY: S-2 (UNIMPROVED TELECOMMUNICATIONS FACILITY) 4 (TOWER)

TYPE OF CONSTRUCTION: 4-B

ZONING: A-20 (EXCLUSIVE AGRICULTURE)

CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITY. NOTHING IN THESE PLANS IS TO BE CONSIDERED TO PRELUD WORK NOT CONFORMING TO THESE CODES:

2016 CALIFORNIA BUILDING STANDARDS CODE, TITLE 24, CALIFORNIA CODE OF REGULATIONS EFFECTIVE JANUARY 1, 2017

PART 1 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE
PART 2 CALIFORNIA BUILDING CODE
PART 3 CALIFORNIA ELECTRICAL CODE
PART 4 CALIFORNIA MECHANICAL CODE
PART 5 CALIFORNIA PLUMBING CODE
PART 6 CALIFORNIA FIRE AND LIFE SAFETY CODE
PART 7 CALIFORNIA HISTORICAL BUILDING CODE
PART 8 CALIFORNIA HISTORICAL LANDMARKS CODE
PART 9 CALIFORNIA GREEN BUILDING STANDARDS CODE
PART 10 CALIFORNIA GREEN BUILDING STANDARDS CODE
PART 11 CALIFORNIA GREEN BUILDING STANDARDS CODE
PART 12 CALIFORNIA RETROFITTING STANDARDS CODE

LOCAL COUNTY OR CITY ORDINANCES

ACCESSIBILITY REQUIREMENTS: THIS FACILITY IS UNIMPROVED AND NOT FOR PUBLIC HAZARD. ACCESSIBILITY NOT REQUIRED IN ACCORDANCE WITH THE 2016 CBC 11B-203.5, AND 11B-202.4 EXCEPTION 7

PROJECT DESCRIPTION

- PROPOSED WIRELESS UNIMPROVED TELECOMMUNICATIONS FACILITY INCLUDING:
- A 33'-0"X31'-0" LEASE AREA
 - A FENCE & LEASE AREA PERMITS
 - OUTDOOR EQUIPMENT CABINETS
 - POWER & TELL UTILITIES BROUGHT TO FACILITY
 - A CABLE ICE BRIDGE
 - WIRELESS W/ACCESSORY TOWER MOUNTED EQUIPMENT MOUNTED ON A PROPOSED SINGLE BUNGARIE PAVED DATA CENTER

PROJECT MILESTONES

01/21/2016 50% TOWER DOCUMENTS
02/12/2016 100% TOWER DOCUMENTS REV 1
07/15/2016 100% TOWER DOCUMENTS REV 1
01/05/2018 100% TOWER DOCUMENTS REV 2
02/02/2020 60% CONSTRUCTION DOCUMENTS
02/02/2020 100% CONSTRUCTION DOCUMENTS

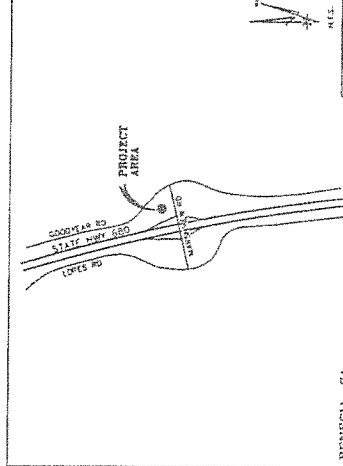
MST ARCHITECTS
1520 KEVIN PARK DRIVE
SACRAMENTO, CA 95815
916.486.1111
mst@mstarchitects.com

VERTIZON
HWY 680 CYGNUS
GOODYEAR ROAD
FAIRFIELD, CA 94534

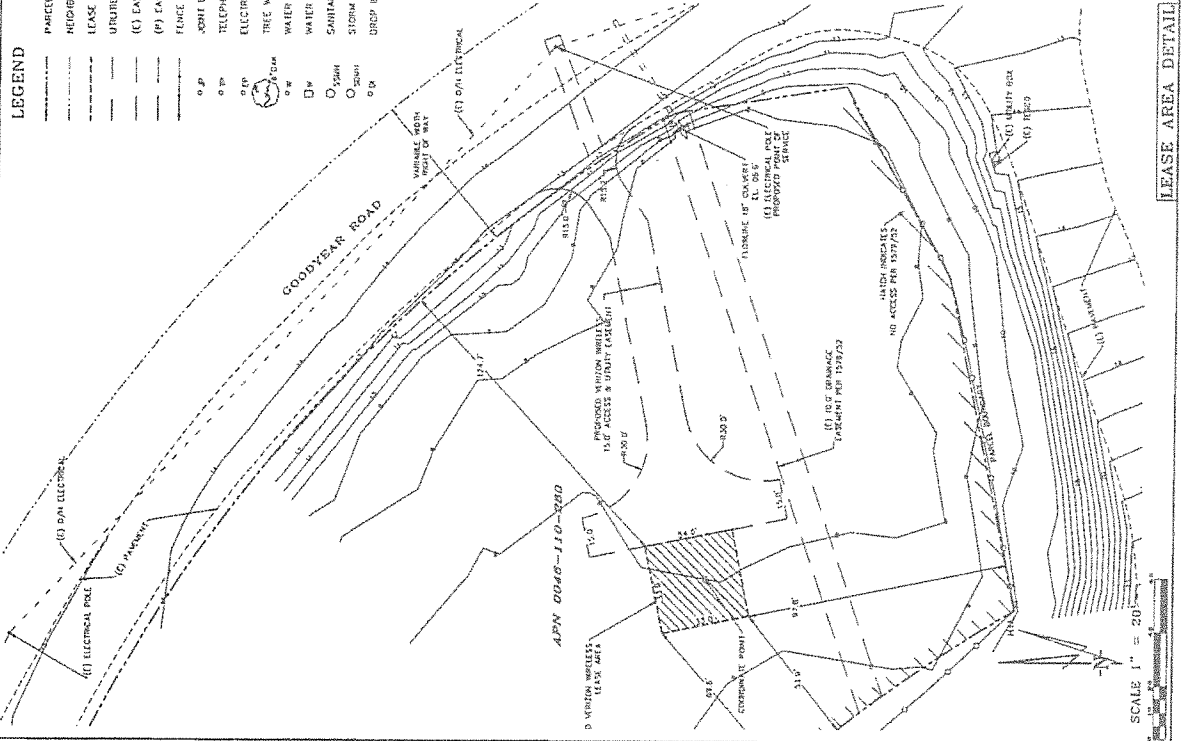
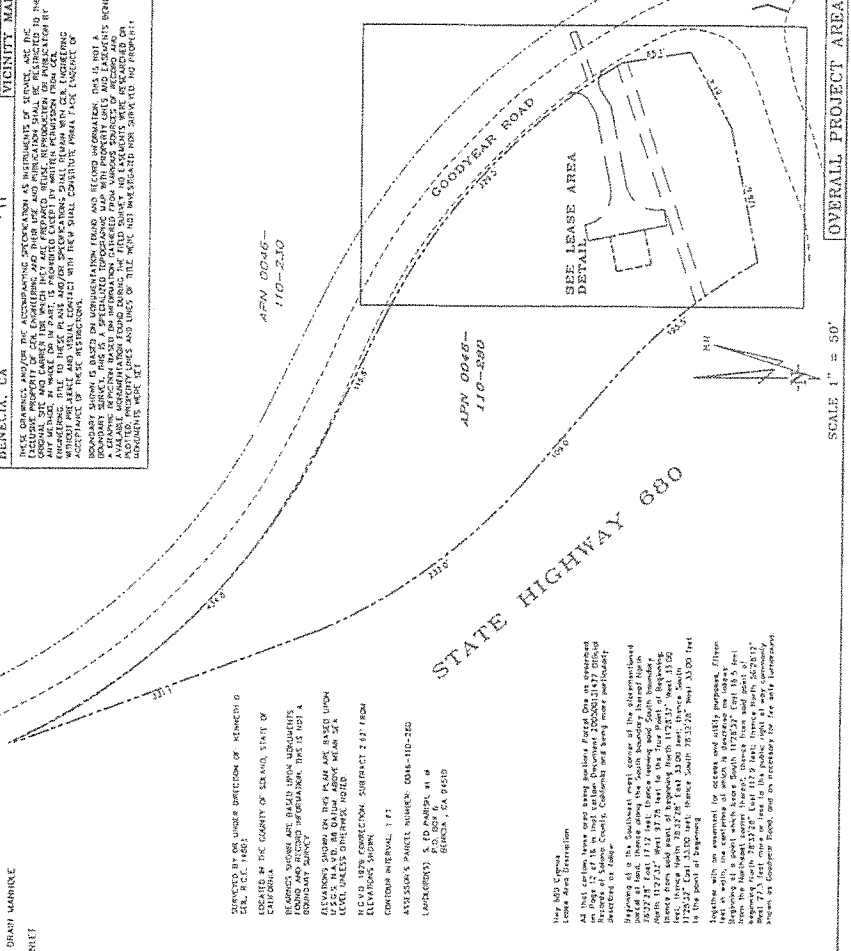
SHEET TITLE
TITLE SHEET, LOCATION PLAN, PROJECT DATA

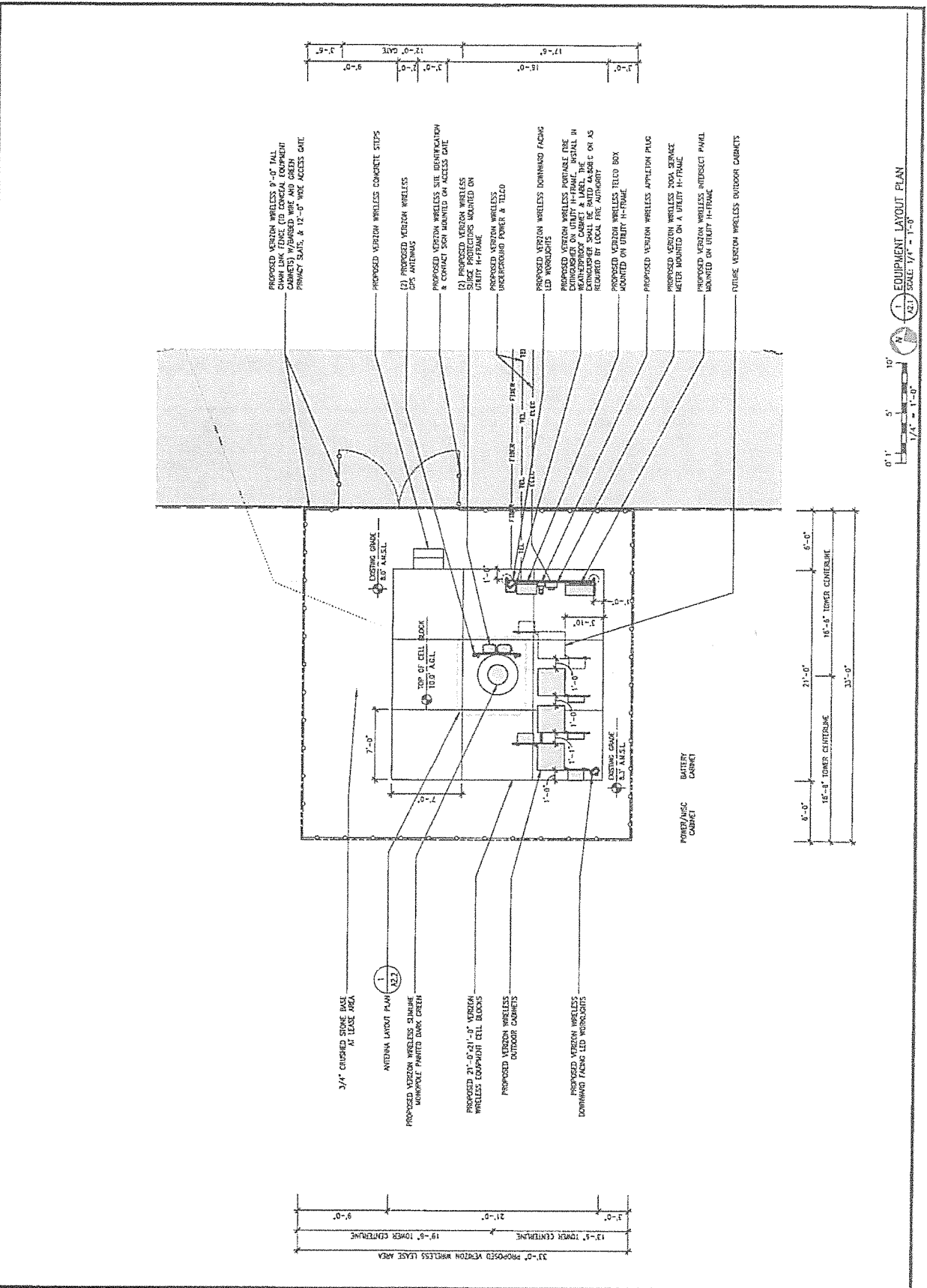
T1.1


DATE: 02/12/2016
DRAWN BY: [Name]
CHECKED BY: [Name]
SCALE: AS SHOWN
SHEET NO. 12 OF 12




LEGEND
 --- PARCEL BOUNDARY
 --- NEIGHBORING PARCEL BOUNDARY
 --- LEASE AREA BOUNDARY
 --- UTILITIES
 --- (C) EASEMENTS
 --- (P) EASEMENTS
 --- FENCE LINE
 --- JOINT UTILITY POLE
 --- TELEPHONE POLE
 --- ELECTRICAL POLE
 --- TREE WITH DIAMETER BREAST HEIGHT (DBH)
 --- WATER VALVE
 --- WATER BOX
 --- SANITARY SEWER MANHOLE
 --- STORM DRAIN MANHOLE
 --- DRAIN INLET
 --- VARIABLE WIDTH RIGHT OF WAY
 --- (R) DRAIN INTERVAL
 --- (E) ELECTRICAL POLE
 --- (E) TELEPHONE POLE
 --- (E) SANITARY SEWER MANHOLE
 --- (E) STORM DRAIN MANHOLE
 --- (E) WATER VALVE
 --- (E) WATER BOX
 --- (E) SANITARY SEWER MANHOLE
 --- (E) STORM DRAIN MANHOLE
 --- (E) DRAIN INLET
 --- (E) VARIABLE WIDTH RIGHT OF WAY
 --- (E) (R) DRAIN INTERVAL
 --- (E) (C) EASEMENT
 --- (E) (P) EASEMENT
 --- (E) FENCE LINE
 --- (E) JOINT UTILITY POLE
 --- (E) TELEPHONE POLE
 --- (E) ELECTRICAL POLE
 --- (E) TREE WITH DIAMETER BREAST HEIGHT (DBH)
 --- (E) WATER VALVE
 --- (E) WATER BOX
 --- (E) SANITARY SEWER MANHOLE
 --- (E) STORM DRAIN MANHOLE
 --- (E) DRAIN INLET





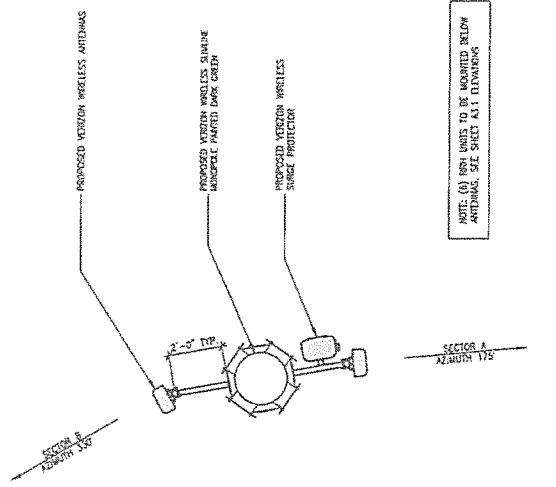
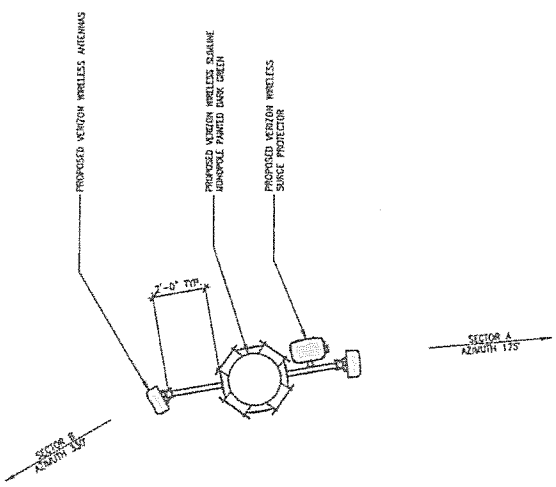

MST ARCHITECTS
 1110 North Bay Street, Suite 200
 San Mateo, CA 94401
 Tel: 650.593.8800
 Fax: 650.593.8801
 www.mstarchitects.com


Verizon
 HRY 680 CHNUS
 DOORFEAR ROAD
 FAIRFIELD, CA 94534
 SHEET TITLE: ANTENNA LAYOUT PLAN

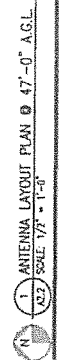
A2.2
 1 ANTENNA LAYOUT PLAN @ 47'-0" A.G.L.
 SCALE: 1/2" = 1'-0"
 1 ANTENNA LAYOUT PLAN @ 37'-0" A.G.L.
 SCALE: 1/2" = 1'-0"

EQUIPMENT SCHEDULE (PRELIMINARY & SUBJECT TO CHANGE)

EQUIPMENT	DESCRIPTION	SECTOR A	SECTOR B	TOTAL
ANTENNA	TO BE DETERMINED	2	2	4
PSU	TO BE DETERMINED	2	2	4
SURGE PROTECTOR/PSU	RAYCOM DC3115 / HYBRID TRUNK CABLE	2/2	0	2/2
COAXIAL CABLE	N/A	0	0	0



NOTE: (1) PSU UNITS TO BE MOUNTED BELOW ANTENNAS. SEE SHEET A1.1 FOR DETAILS.



MST ARCHITECTS
 1515 W. 14th St. Suite 100
 San Mateo, CA 94401
 (650) 351-1000
 www.mstarchitects.com

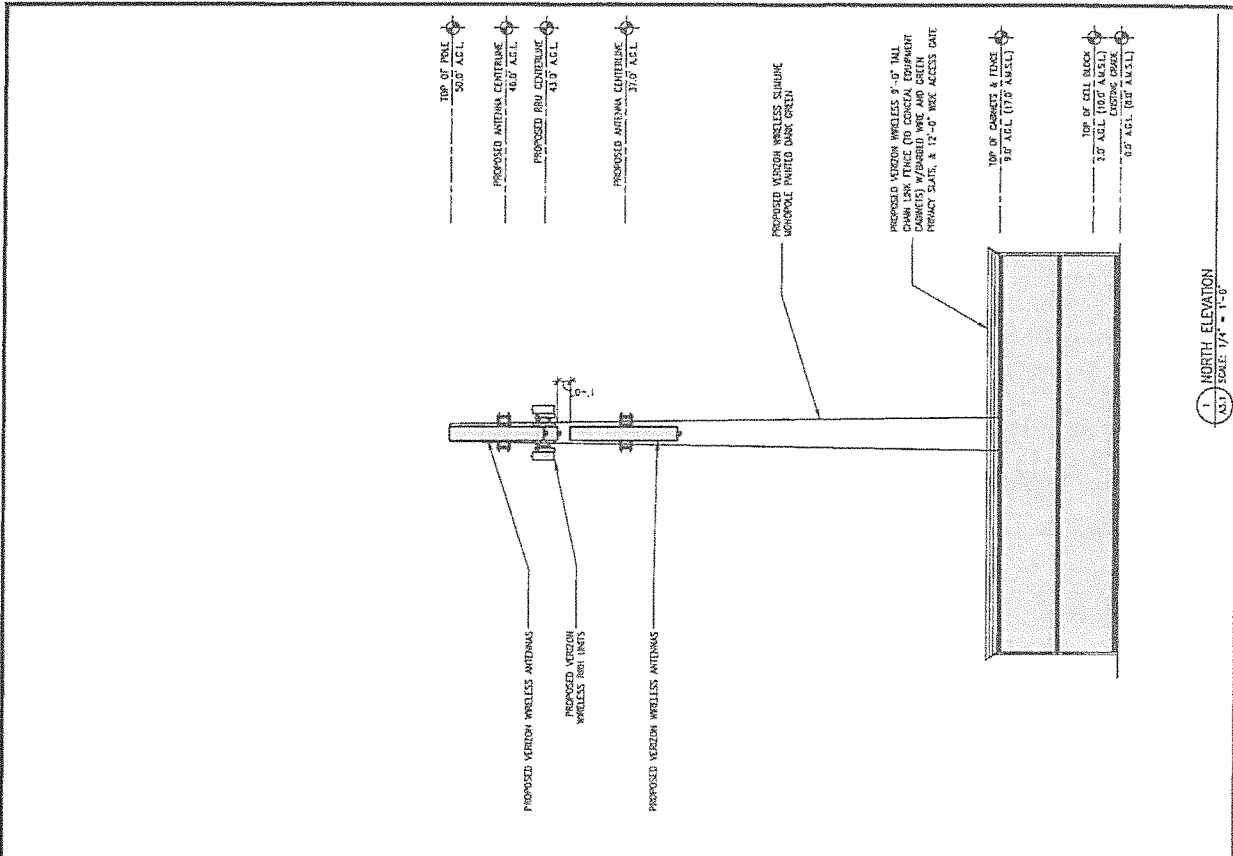
CONSULTS
 Project: 1515 W. 14th St. Suite 100
 Date: 08/11/17

Verizon
 HWY 680 CORNER
 GOODYEAR ROAD
 FARMED, CA 94534

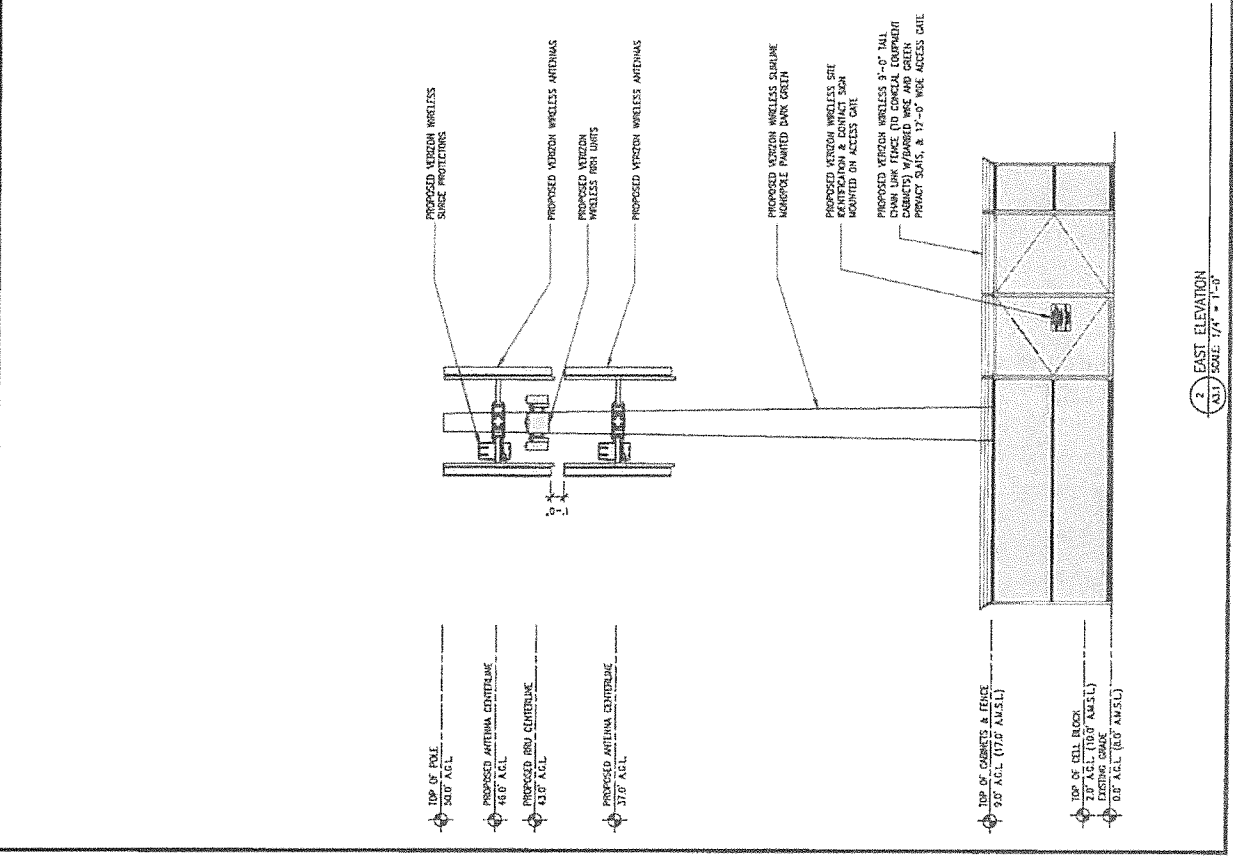
PROJECT ELEVATIONS

REVISIONS	
NO.	DATE
1	08/11/17
2	08/11/17
3	08/11/17
4	08/11/17
5	08/11/17
6	08/11/17
7	08/11/17
8	08/11/17
9	08/11/17
10	08/11/17

A3.1



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



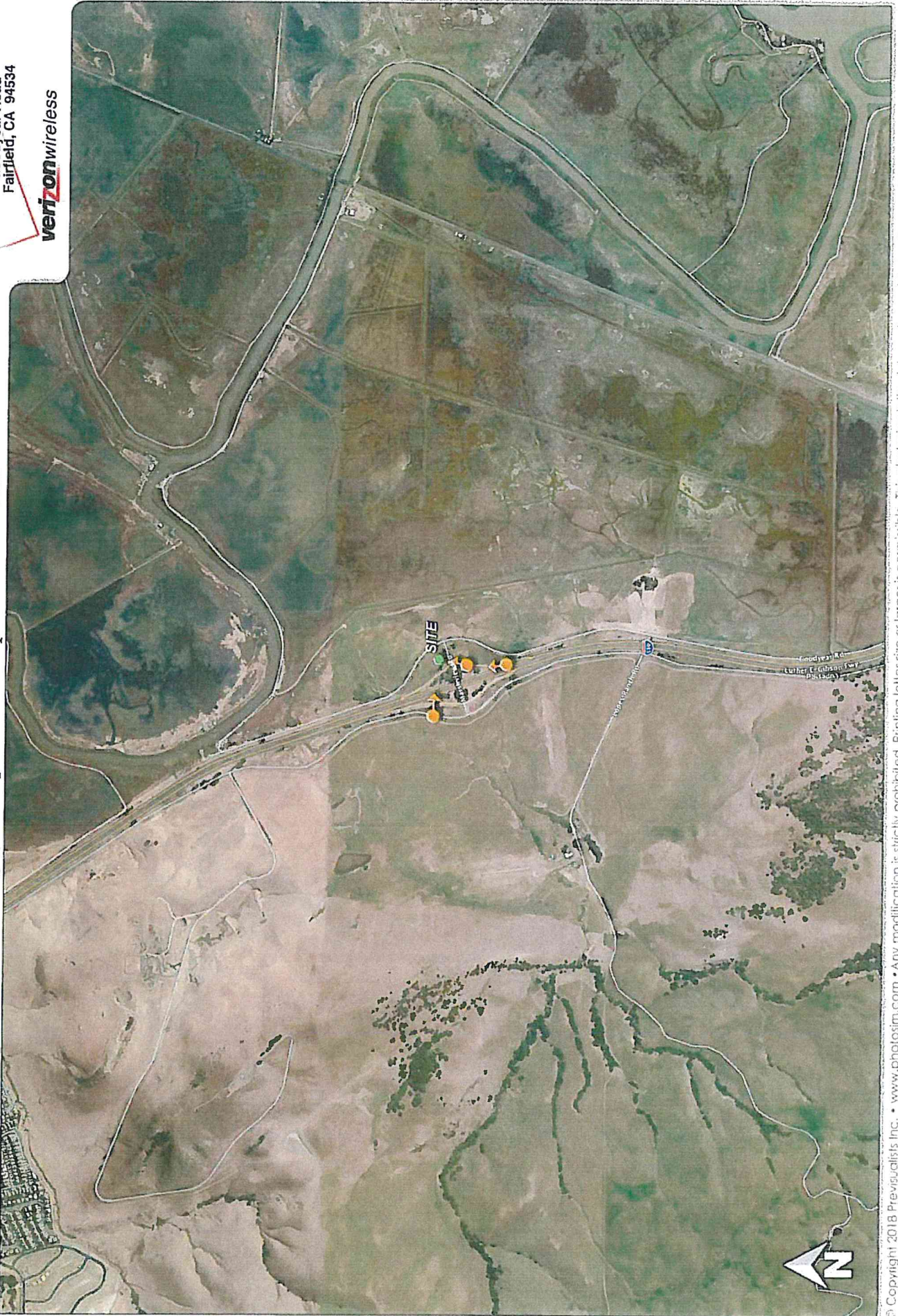
2 EAST ELEVATION
 SCALE: 1/4" = 1'-0"

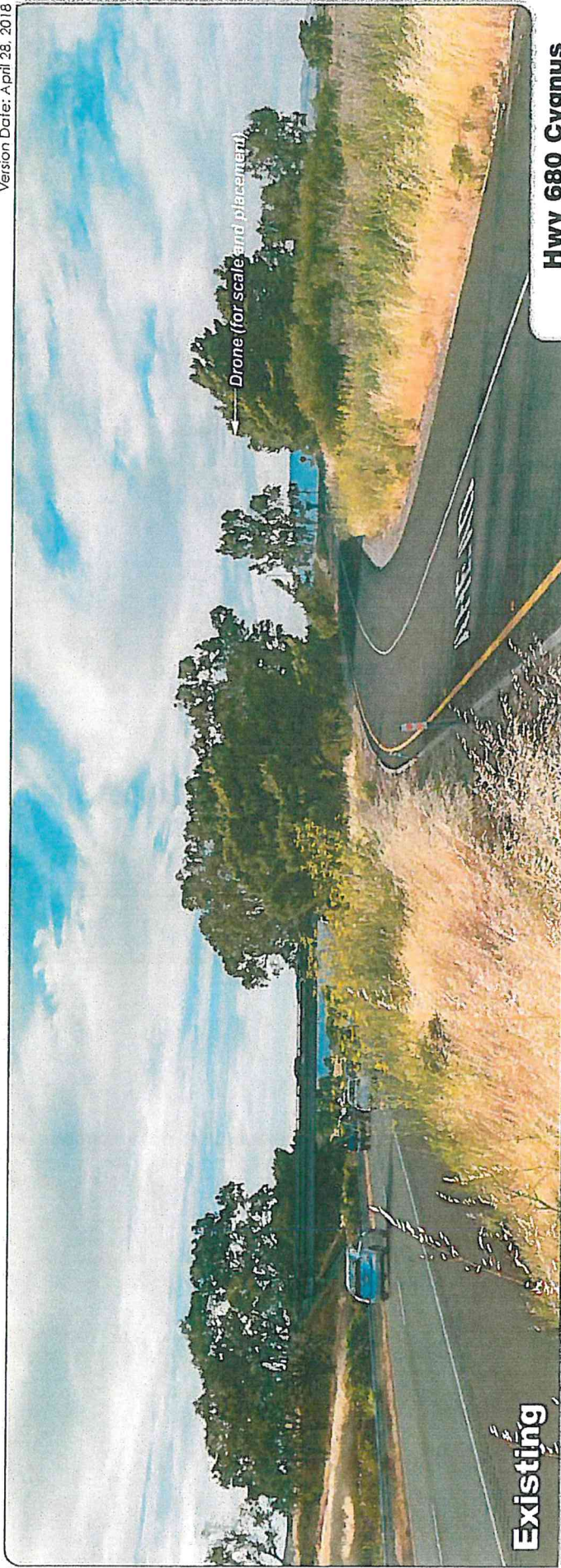
Hwy 680 Cygnus

Goodyear Road
Fairfield, CA 94534



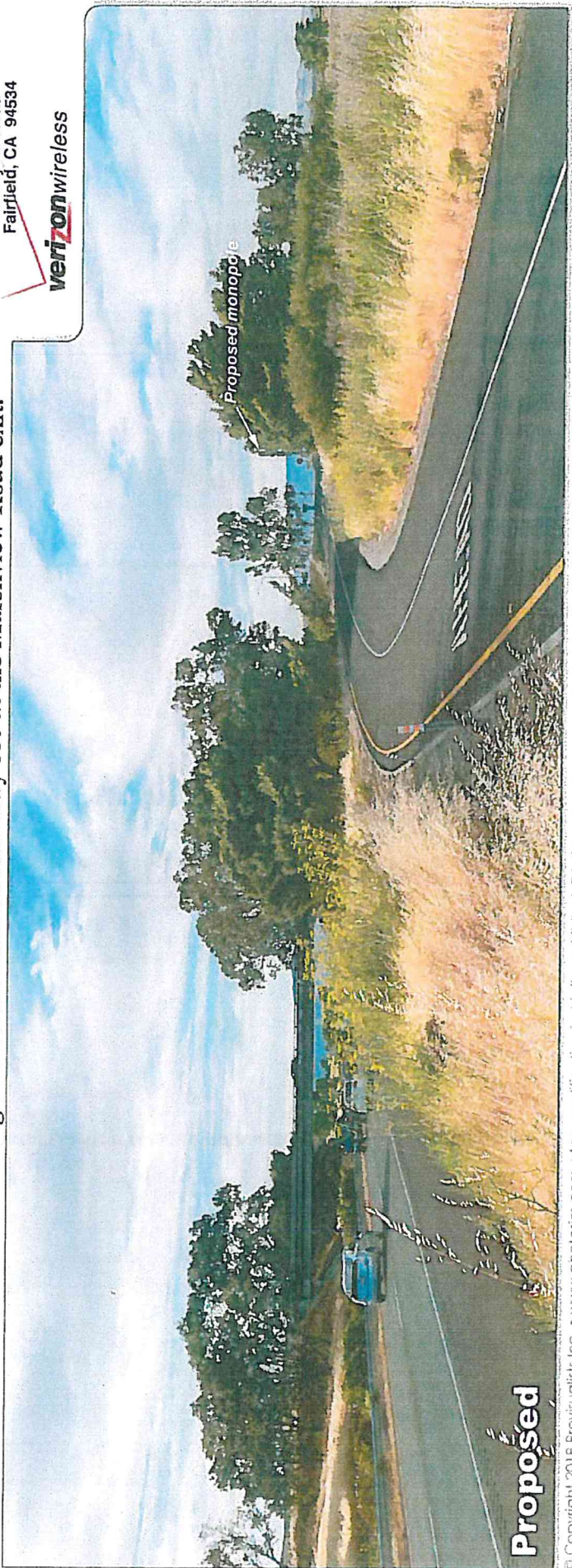
Aerial photograph showing the viewpoints for the photosimulations.

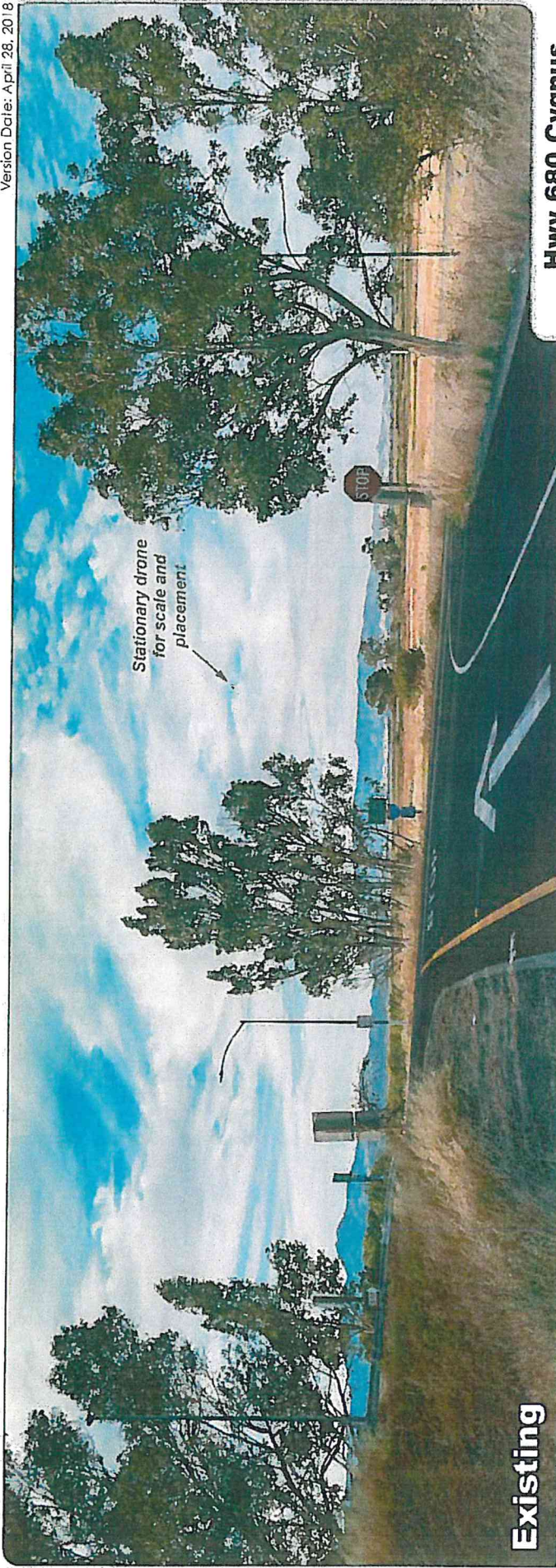




Photosimulation of the view looking north from northbound Hwy 680 at the Marshview Road exit.

Hwy 680 Cygnus
Goodyear Road
Fairfield, CA 94534
verizonwireless





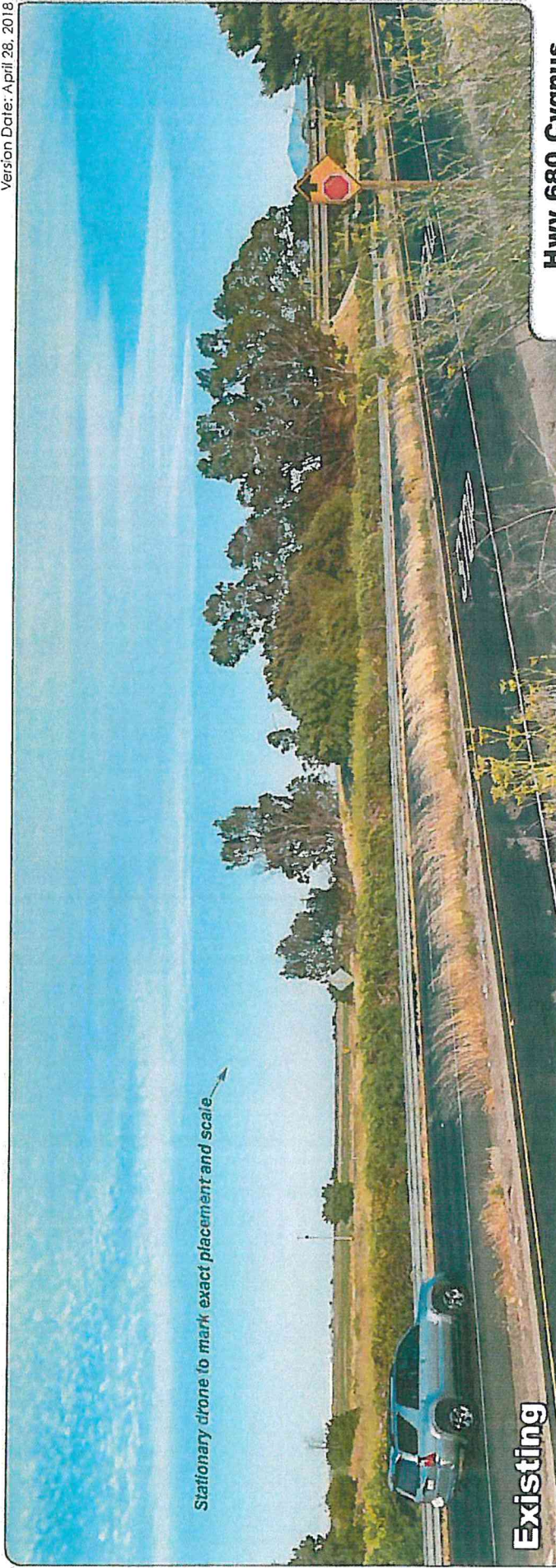
Existing

Hwy 680 Cygnus
Goodyear Road
Fairfield, CA 94534
verizonwireless

Photomontage of the view looking north from the offramp at Marshview Road.



Proposed



Existing

Hwy 680 Cygnus

Goodyear Road
Fairfield, CA 94534



Photomontage of the view looking southeast from across Hwy 680.



Proposed

**Verizon Wireless • Proposed Base Station (Site No. 299954 “Highway 680 Cygnus”)
Goodyear Road • Fairfield, 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. 299954 “Highway 680 Cygnus”) proposed to be located at Goodyear Road near Fairfield, 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 pole to be sited near the Marshview Road interchange with Interstate 680, south of Fairfield. The proposed operation will, together with the existing base station near the site, comply with the FCC guidelines limiting public exposure to RF energy.

Prevailing Exposure Standards

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

<u>Wireless Service</u>	<u>Frequency Band</u>	<u>Occupational Limit</u>	<u>Public Limit</u>
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



**Verizon Wireless • Proposed Base Station (Site No. 299954 “Highway 680 Cygnus”)
Goodyear Road • Fairfield, California**

small antenna for reception of GPS signals is also required, mounted with a clear view of the sky. Because of the short wavelength of the frequencies assigned by the FCC for wireless services, the antennas require line-of-sight paths for their signals to propagate well and so are installed at some height above ground. The antennas are designed to concentrate their energy toward the horizon, with very little energy wasted toward the sky or the ground. This means that it is generally not possible for exposure conditions to approach the maximum permissible exposure limits without being physically very near the antennas.

Computer Modeling Method

The FCC provides direction for determining compliance in its Office of Engineering and Technology Bulletin No. 65, “Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radio Frequency Radiation,” dated August 1997. Figure 2 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 MST Architects, Inc., dated March 15, 2018, it is proposed to install four CommScope Model SBNHH-1D65C directional panel antennas on a new 50-foot steel pole to be sited in an open area near the on-ramp from Marshview Road to the northbound lanes of Interstate 680 in unincorporated Solano County, about 5 miles south of the junction between Interstates 80 and 680. The antennas would employ no downtilt, would be mounted at effective heights of about 37 and 46 feet above ground, and would be oriented in stacked pairs toward 175°T and 330°T. The maximum effective radiated power in any direction would be 35,020 watts, representing simultaneous operation at 11,490 watts for AWS, 10,000 watts for PCS, 6,610 watts for cellular, and 6,920 watts for 700 MHz service.

Presently located on a utility pole about 370 feet to the southeast are similar antennas for use by T-Mobile. For the limited purpose of this study, the transmitting facilities of that carrier are assumed to be as follows:

<u>Operator</u>	<u>Service</u>	<u>Maximum ERP</u>	<u>Antenna Model</u>	<u>Downtilt</u>	<u>Height</u>
T-Mobile	AWS	4,400 watts	Ericsson AIR21	2°	23 ft
	PCS	2,200	Ericsson AIR21	2	23
	700 MHz	1,800	Andrew LNX-6514DS	2	23



**Verizon Wireless • Proposed Base Station (Site No. 299954 “Highway 680 Cygnus”)
Goodyear Road • Fairfield, California**

Study Results

For a person anywhere at ground, the maximum RF exposure level due to the proposed Verizon operation by itself is calculated to be 0.012 mW/cm², which is 12% of the applicable public exposure limit. The maximum calculated cumulative level at ground, for the simultaneous operation of both carriers, is 13% of the public exposure limit. It should be noted that these results include several “worst-case” assumptions and therefore are expected to overstate actual power density levels. There are no buildings within 1,000 feet of the proposed location, based on aerial photographs from Google Maps.

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 near Goodyear Road in Fairfield, 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, 2019. 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, P.E.

707/996-5200

May 24, 2018



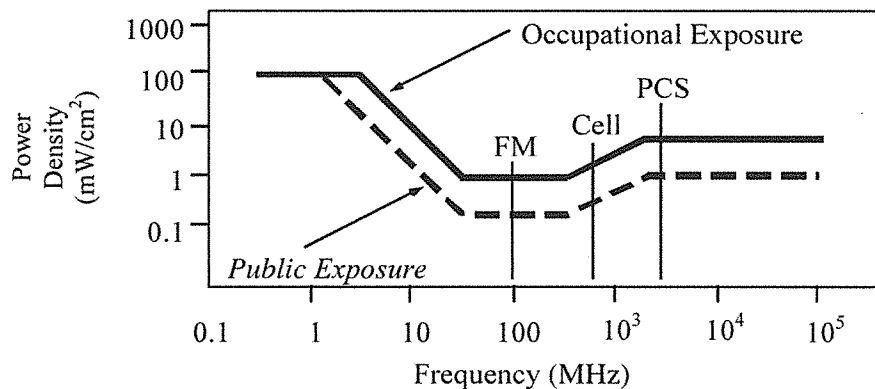
HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
SAN FRANCISCO

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.



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.

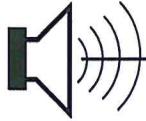
OET-65 gives this formula for calculating power density in the far field of an individual RF source:

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





June 11, 2018

Complete Wireless Consulting, Inc.
Janet Carmickle
2009 V Street
Sacramento, CA 95818

Subject: Revised Noise Analysis for the Highway 680 Cygnus Cellular Facility located in Fairfield (Solano County), California

The Highway 680 Cygnus Verizon Wireless Unmanned Telecommunications Facility Project (project) proposes the construction of a monopole tower, and the installation of outdoor equipment cabinets inside a fenced area located on Goodyear Road (APN: 0046-110-280) in Fairfield (Solano County), California.

A noise study for this project was previously completed by Bollard Acoustical Consultants, Inc. (BAC) on June 21, 2016. The contents of the noise study included an analysis of outdoor equipment cabinet noise levels relative to the Solano County General Plan and County Code noise criteria. This noise study, which was based on project site plans dated May 13, 2016, concluded that project-related equipment noise exposure would satisfy the applicable Solano County General Plan and Municipal Code noise criteria at the nearest noise-sensitive uses.

On May 30, 2018, Bollard Acoustical Consultants, Inc. was contracted by Complete Wireless Consulting, Inc. to complete a revision to the previous noise study (dated June 21, 2016) based on the revised project site plans (dated April 5, 2018). However, because there are no identified changes to the location or configuration of the proposed noise-generating equipment in the revised site plans, it has been determined that a revised noise study is not warranted. Specifically, the results and conclusions identified in the previous noise study (dated June 21, 2016) are still valid, and a revised noise study based on the project site plans dated April 5, 2018 is not warranted for this project.

Please contact me at (916) 663-0500 or dariog@bacnoise.com if you have any questions or require additional information.

Sincerely,

Bollard Acoustical Consultants, Inc.

Dario Gotchet
Consultant

Environmental Noise Analysis

Hwy 680 Cygnus Cellular Facility

Solano County, California

BAC Job # 2015-237

Prepared For:

Complete Wireless Consulting

Attn: Ms. Kim Le
2009 V Street
Sacramento, CA 95818

Prepared By:

Bollard Acoustical Consultants, Inc.



Paul Bollard, President

June 21, 2016



Introduction

The Hwy 680 Cygnus Verizon Wireless Unmanned Telecommunications Facility Project (project) proposes the construction of a monopole tower, and the installation of outdoor equipment cabinets inside a fenced area located on Goodyear Road (APN: 0046-110-280) in Fairfield, California (Solano County). The outdoor equipment cabinets have been identified as the primary noise sources associated with the project. Please see Figure 1 for the general site location. The studied site design is dated May 13, 2016.

Bollard Acoustical Consultants, Inc. has been contracted by Complete Wireless Consulting, Inc. to complete an environmental noise assessment regarding the proposed project cellular equipment operations. Specifically, the following addresses daily noise production and exposure associated with operation of the project outdoor equipment cabinets.

Please refer to Appendix A for definitions of acoustical terminology used in this report. Appendix B illustrates common noise levels associated with various sources.

Criteria for Acceptable Noise Exposure

Solano County General Plan Public Health & Safety Element

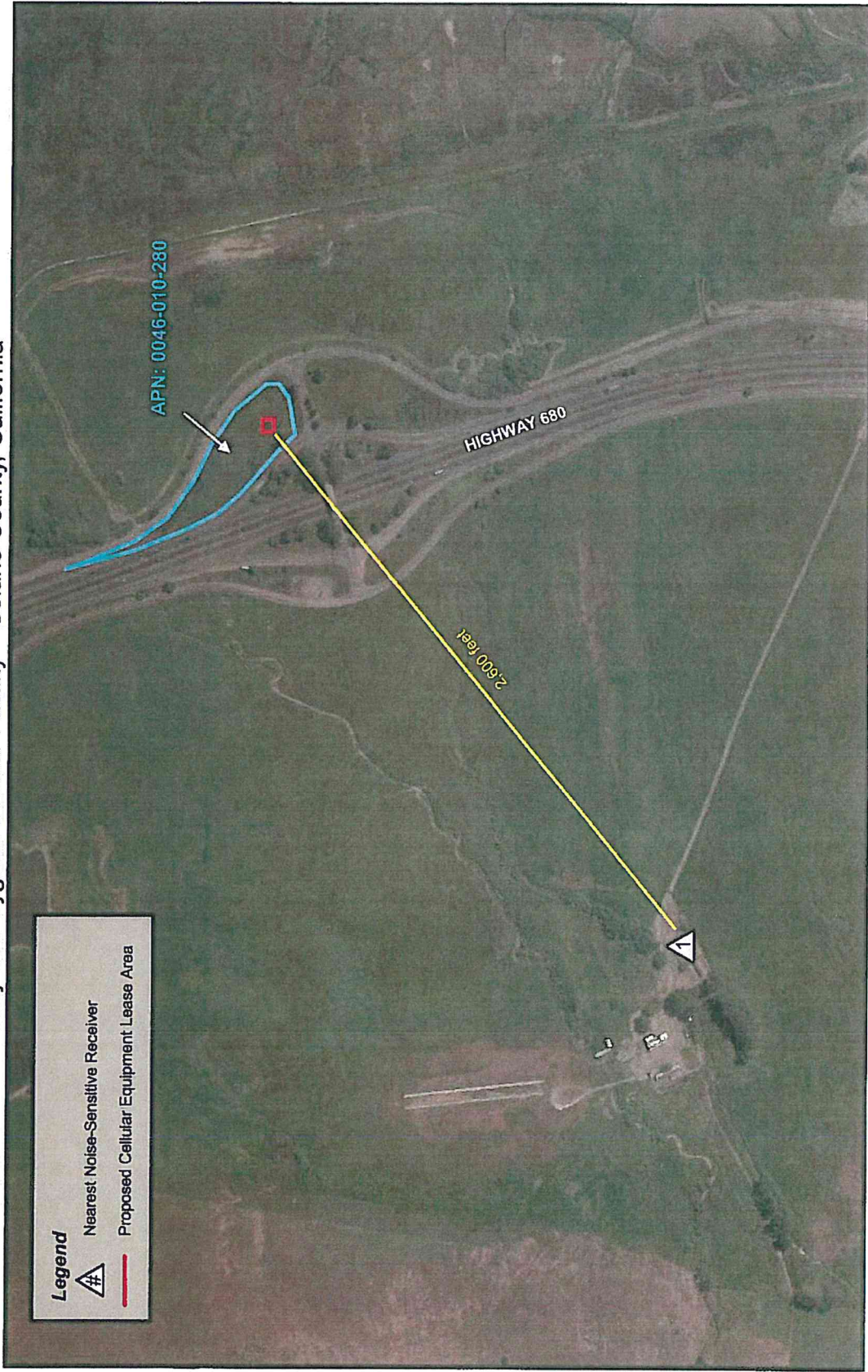
The Solano County General Plan Public Health & Safety Chapter contains a noise section that establishes acceptable noise level limits for non-transportation (stationary) noise sources, such as those proposed by the project. The County's non-transportation noise level standards applied to residential land uses are provided below in Table 1. The General Plan requires that the noise level standards set forth below in Table 1 be applied at the common outdoor activity areas (e.g., backyards) of the residential land uses.

Table 1 Noise Level Standards for Non-Transportation Noise Sources – Residential Land Uses Solano County Noise Element of the General Plan		
Noise Level Descriptor	Daytime 7 a.m. to 10 p.m.	Nighttime 10 p.m. to 7 a.m.
Hourly L_{eq} , dB	55	50
Maximum Level (L_{max}), dB	70	65
Source: Solano County General Plan, Public Health & Safety Element		

Solano County Code

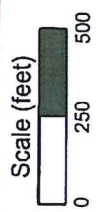
Section 28.70.10(B)(1)(b) of the Solano County Code, which pertains to general development standards applicable to all uses in every zoning district, requires that all uses of land shall not generate noise that exceeds 65 dBA L_{dn} at any property line.

Figure 1
Proposed Cellular Equipment Lease Area & Distance to Nearest Noise-Sensitive Receiver
Hwy 680 Cygnus Cellular Facility – Solano County, California



Legend

- Nearest Noise-Sensitive Receiver
- Proposed Cellular Equipment Lease Area



Section 28.81(D)(10) of the Solano County Code, which pertains to noise generation of wireless communications facilities, reads as follows:

All wireless communication facilities shall be designed to minimize noise. If a facility is located in or within 100 feet of a residential district, noise attenuation measures shall be included to reduce noise levels to a maximum exterior noise level of 50 L_{dn} at the facility site's property lines.

Noise Standards Applied to the Project

The Solano County General Plan non-transportation (stationary) noise level standards seen in Table 1 were applied to the project. In addition to the general plan noise level standards, the Solano County Code, Section 28.70.10(B)(1)(b), property line noise level standard of 65 dB L_{dn} was applied at the nearest property line. Compliance with the 65 dB L_{dn} noise level standard at the nearest property line would ensure compliance at all other property lines.

The proposed facility is located within and adjacent to agriculturally zoned land (A 20 Exclusive Agriculture). The nearest residential district is located over a mile away to the northwest. Because the facility is located well in excess of 100 feet from the nearest residential district, Section 28.81(D)(10) of Solano County Code was not applied to the project.

Project Noise Generation

The project proposes the installation of three equipment cabinets within the lease area illustrated on Figure 1. Specifically, the cabinets assumed for the project are as follows: one Ericsson eNB RBS6101, one Charles Industries 48V Power Plant and one miscellaneous cabinet cooled by a McLean Model T-20 air conditioner. The cabinets and their respective reference noise levels are provided in Table 2. The manufacturer's noise level data specification sheets for the proposed equipment cabinets are provided as Appendix C.

Table 2 Reference Noise Level Data of Proposed Equipment Cabinets			
Equipment	Number of Cabinets	Reference Noise Level, dB	Reference Distance, feet
Ericsson eNB RBS6101	1	53	5
Charles Industries 48V Power Plant	1	60	5
McLean T-20	1	66	5

Notes: Manufacturer specification sheets provided as Appendix C.

Predicted Facility Noise Levels at Nearby Sensitive Receptor

Assessment Relative to Solano County General Plan:

The project parcel and the adjacent parcels are zoned agricultural (A 20 Exclusive Agriculture) which are not typically considered sensitive to noise. The proposed cellular facility maintains a separation of approximately 2,600 feet from the outdoor activity area of the nearest noise-sensitive receptor, identified as receiver 1 (APN:0180-130-010) on Figure 1. Assuming standard spherical spreading

loss (-6 dB per doubling of distance), project-equipment noise exposure at the closest receiver was calculated and the results of those calculations are presented below in Table 3.

Table 3 Summary of Project-Related Noise Exposure at Nearest Noise-Sensitive Receptor Hwy 680 Cygnus Verizon Wireless Telecommunications Facility Project		
Nearest Noise Sensitive Receptor ¹	Distance from Cellular Equipment (feet) ²	Predicted Cabinet Noise Levels (L _{eq} , dBA) ³
1	2,600	<20
Notes: ¹ Receptor location and distance are shown on Figure 1. ² Predicted equipment noise levels were applied at outdoor activity areas of nearest noise-sensitive receptors. ³ The three equipment cabinets were conservatively assumed to be in operation concurrently.		

Because the proposed equipment cabinets could potentially be in operation during nighttime hours, the operation of the cabinets would be subject to the County's nighttime noise level standard of 50 dB L_{eq}. As shown in Table 3, the predicted equipment cabinet noise levels of less than 20 dB L_{eq} at the outdoor activity areas of the nearest noise-sensitive receiver locations would satisfy the Solano County 50 dB L_{eq} nighttime noise level standard. As a result, no additional noise mitigation measures would be warranted for this aspect of the project.

Assessment Relative to Solano County Code:

The proposed project equipment maintains a separation of approximately 65 feet from the nearest property line to the west. To predict cellular facility noise emissions relative to the Solano County Code 65 dB L_{dn} noise standard at the nearest property line, the number of hours per day the equipment would be in operation must be known. For the purpose of this analysis, the equipment cabinets were conservatively assumed to be operating continuously for 24 hours.

Assuming standard spherical spreading loss (-6 dB per doubling of distance), the project-equipment noise exposure at the nearest property line was calculated to be 51 dB L_{dn}. As a result, no additional noise mitigation measures would be warranted for the project.

Conclusions

Based on the equipment noise level data and analyses presented above, project-related equipment noise exposure is expected to satisfy the Solano County General Plan noise exposure limits applied at the outdoor activity areas of the nearest noise-sensitive land uses. In addition, project-related equipment noise exposure is expected to satisfy the Solano County Code noise exposure limits applied at the nearest property line. As a result, no additional noise mitigation measures would be warranted for this project.

This concludes our environmental noise assessment for the proposed Hwy 680 Cygnus Cellular Facility in Solano County, California. Please contact BAC at (916) 663-0500 or paulb@bacnoise.com with any questions or requests for additional information.

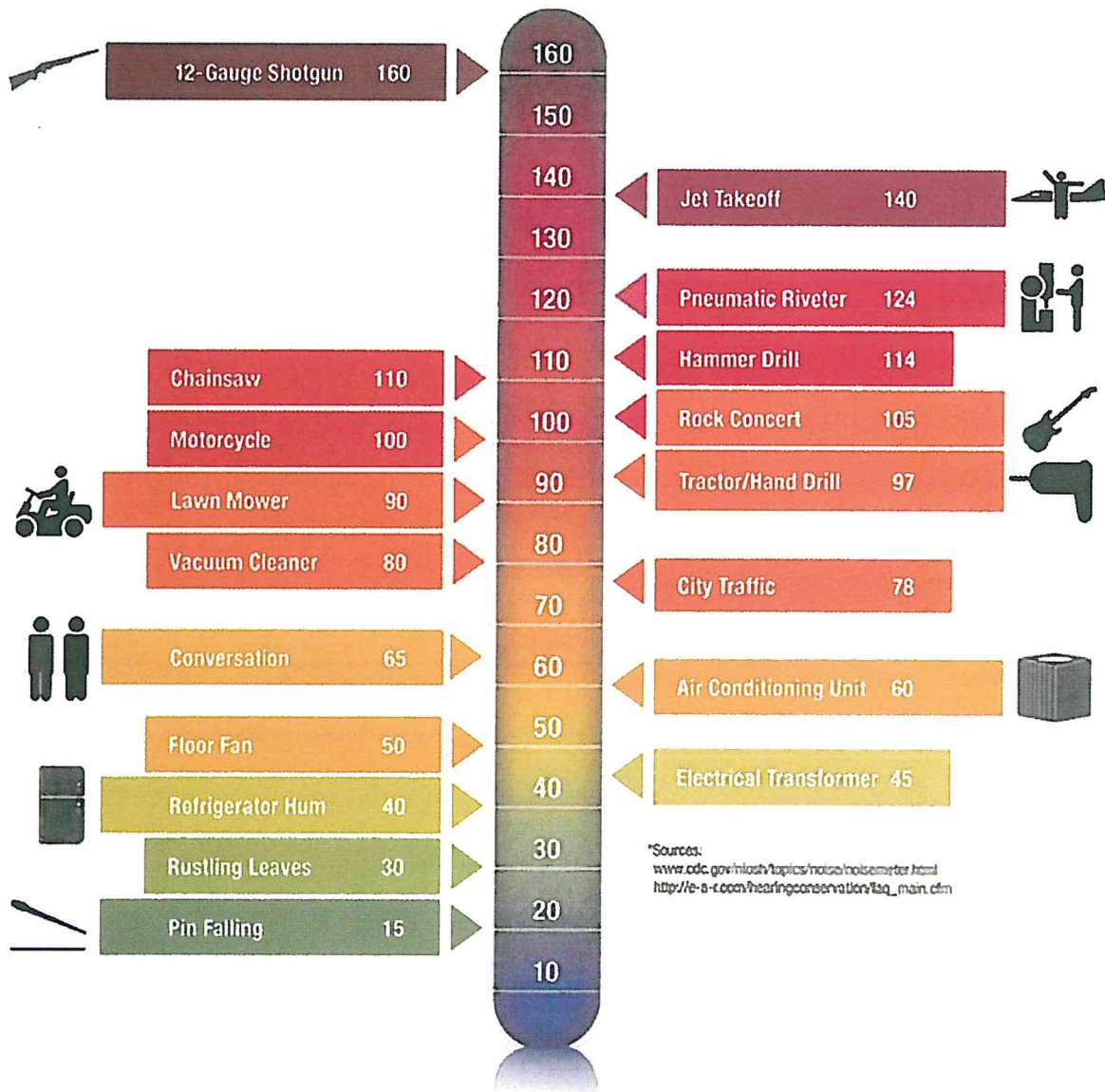
Appendix A Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
L_{dn}	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
L_{max}	The highest root-mean-square (RMS) sound level measured over a given period of time.
Loudness	A subjective term for the sensation of the magnitude of sound.
Masking	The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.
Noise	Unwanted sound.
Peak Noise	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the Maximum level, which is the highest RMS level.
RT₆₀	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 sabin.
SEL	A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy of the event into a 1-s time period.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.



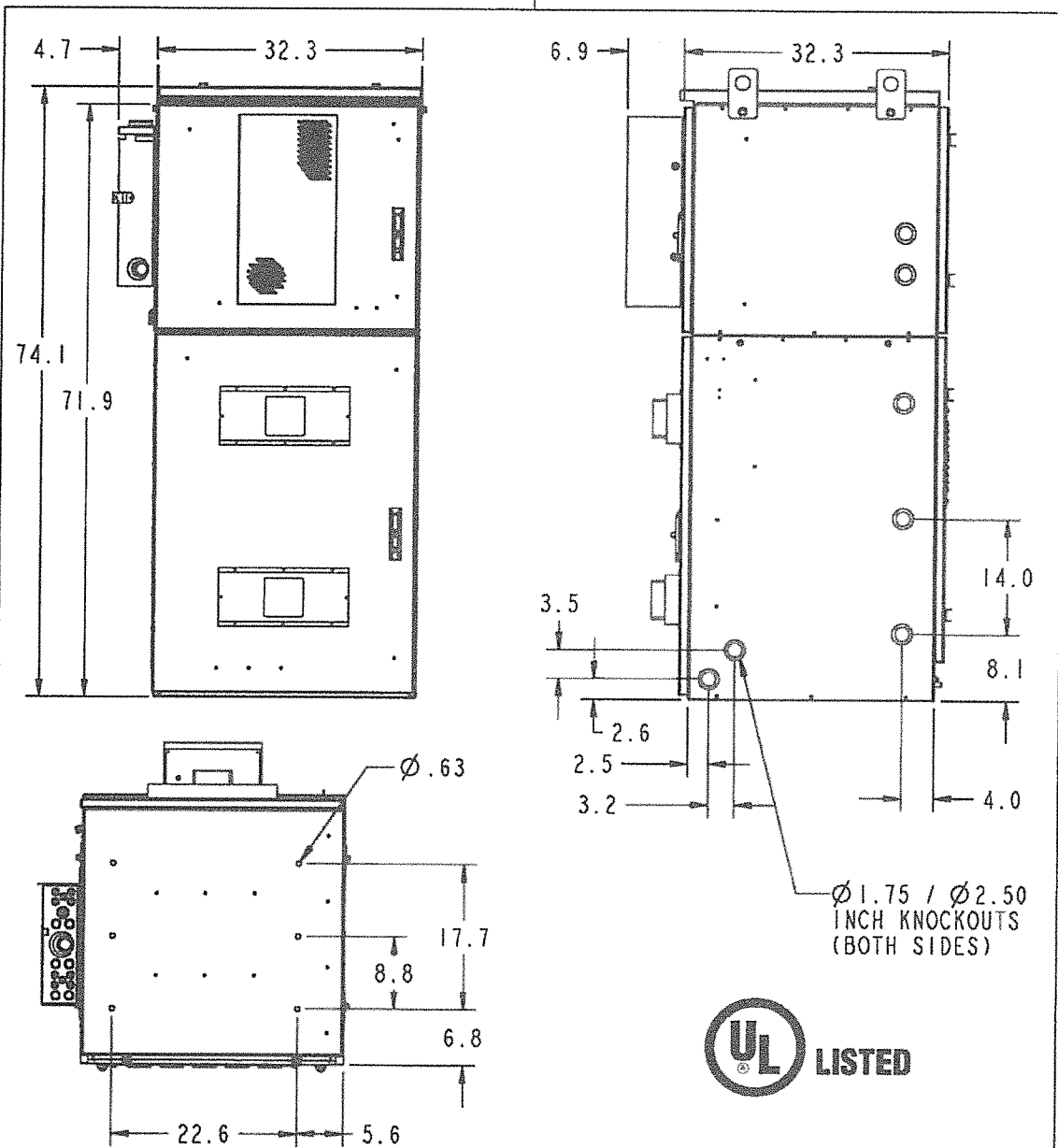
Appendix B

Typical A-Weighted Sound Levels of Common Noise Sources Decibel Scale (dBA)*



*Sources:
www.cdc.gov/niosh/topics/noise/noisemeter.html
http://e-a-c.com/hearingconservation/faq_main.cfm

Appendix C-1



WEIGHT WITH BATTERIES:
2296 LBS.

NorthStar NSB-170FT batteries
at 128 lbs each, Qty 12

WEIGHT WITHOUT BATTERIES:
760 LBS.

MAX NOISE LEVEL:
55-60dB

CHARLES PART #
CUBE-SS4C215XC1

Charles
Charles Industries Ltd.
Telecommunications Group
Charles Center, 3620 Apple Drive
Tolling Woodson, IL 60068
Telephone: 847-605-6328

THIS IS THE PROPERTY OF CHARLES INDUSTRIES LTD. AND SHALL NOT BE REPRODUCED, COPIED OR USED IN ANY MANNER DETRIMENTAL TO THEIR INTERESTS.

Verizon Wireless
Large Site Support Enclosure



Agenda Submittal

Agenda #:	2	Status:	PC-Regular
Type:	PC-Document	Department:	Planning Commission
File #:	PC 18-027	Contact:	Mike Yankovich, 707.784.6765
Agenda date:	6/21/2018	Final action:	
Title:	PUBLIC HEARING to consider an ordinance amending Chapter 28 of the Solano County Code to define the short-term rental of a dwelling as a “vacation house rental” and to authorize such land use, subject to an administrative or minor use permit, within the Agricultural, Rural Residential and Watershed Zoning Districts. (Project Planner: Michael Yankovich)		

Governing body:

District:

Attachments:

- [A - Vacation House Rental AdminMinor061418Ord1](#)
- [B - Vacation House Rental Admin061418Ord 2](#)
- [C - Map - Overallmap](#)
- [C - Map - A-20](#)
- [C - Map - ASV-20](#)
- [C - Map - RR](#)
- [C - Map - A-40 \(2\)](#)

Date	Ver.	Action By	Action	Result
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RECOMMENDATION:

The Planning Division of the Department of Resource Management recommends that the Planning Commission conduct a public hearing to consider two ordinances addressing Vacation House Rentals in the unincorporated area of the county.

BACKGROUND

At the May 17th meeting of the Planning Commission, staff presented information on the subject of vacation house rentals that included six different options for the Commission’s consideration. The information covered subjects such as Airbnb/VRBO in Solano County, Transit Occupancy Tax, public service calls resulting from the land use, standards currently being used by other jurisdictions, and similar land uses. Nine individuals testified with six supportive of allowing vacation house rentals and three opposed. Following a discussion period, the commission directed staff to prepare an ordinance that would fall in the middle, Options 3 (Administrative permit) and 4 (Minor Use permit), of the regulatory options scheme.

DISCUSSION

Staff has prepared two ordinances for the Commission’s consideration. The first follows a suggestion that was made at the last commission meeting where vacation house rentals could be grouped into hosted and unhosted rentals. A hosted rental is a vacation house rental where the property owner remains on the property during the vacation house rental period. An unhosted rental is where the property owner does not reside on the property during the vacation house rental period. The assumption is that since the property owner is on site during the vacation house rental period, any issues with tenants and neighbors could be addressed within a fairly short time period. As a result, the level of regulation required for a hosted rental

would potentially be less than that required of an unhosted rental.

Ordinance 1 (Attachment A)

As proposed, the first ordinance would have nine general requirements that would apply to both, hosted and unhosted rentals. The general requirements address items such as development standards, overnight occupancy, parking, transient occupancy tax, and online advertisements. In addition, the hosted rentals would also have two specific requirements while the unhosted rental would include three specific requirements.

The application submittal process for a hosted rental would be an Administrative permit while the unhosted rental would be a minor use permit. A hosted rental application process would involve the submittal of an administrative permit that the Director of Resource Management shall administratively approve if all standards and requirements of Chapter 28 and elsewhere in the Code are satisfied. The unhosted rental application process would involve the submittal of a minor use permit which requires a public hearing before the Zoning Administrator.

As mentioned in the May 17th Planning Commission meeting, the vacation rental listings that staff were able to identify on Airbnb and VRBO were generally whole house rentals and located in the western portion of the county, primarily in the Pleasants-Vaca-Lagoon Valley, Suisun Valley, Green Valley and Western Hills agricultural regions of the county. The zone districts associated with these agricultural regions include: Exclusive Agriculture, A-20 and A-40; Suisun Valley Agricultural, A-SV, ATC, ATC-NC; Rural Residential, RR 2.5, RR-5, and RR-10; and Watershed, W-160.

Staff has reviewed the zone districts for compatibility with vacation rentals and recommends that the Planning Commission consider the following: Exclusive Agriculture, A-20; Suisun Valley Agricultural, A-SV, ATC, ATC-NC; and Rural Residential, RR 2.5, RR-5, and RR-10 (See Maps). Staff does not recommend including Exclusive Agriculture, A-40 and Watershed (W-160) at this time. The reasons Watershed is not recommended is that the Watershed district includes areas characterized by slope instability, fire hazards and the unavailability of water and public services. The reason A-40 is not recommended is that the vast majority of A-40 zoned property is located in Dixon Ridge Agricultural Region in the eastern area of the county. The A-40 zoned area along the western part of the county is located along Pleasants Valley Road from Interstate 80 north to property south of Cantelow Road. Staff is conducting further research and may have an update at the meeting.

Ordinance 2 (Attachment B)

The second ordinance collapses the General and Specific Requirements in Ordinance 1 and places them under the general term Requirements for a total of 13 requirements. The application process would involve the submittal of an administrative permit that the Director of Resource Management shall administratively approve if all standards and requirements of Chapter 28 and elsewhere in the Code are satisfied.

Both ordinances address whole house rentals only. Staff will be addressing individual room and portions of a house later this year since changes to existing residential definitions are needed.

ENVIRONMENTAL REVIEW

The Zone Text Amendment is exempt from further environmental review under the General Rule Exemption of Section 15060(c)(2) of Title 14 of the California Code of Regulations because the project will not result in a direct or reasonably foreseeable indirect physical change in the environment.

Attachments:

Attachment A: Ordinance 1

Attachment B: Ordinance 2

Attachment C: Maps

ORDINANCE NO. 2018-

AN ORDINANCE AMENDING CHAPTER 28 OF THE SOLANO COUNTY CODE TO DEFINE THE SHORT-TERM RENTAL OF A DWELLING AS A “VACATION HOUSE RENTAL” AND TO AUTHORIZE SUCH LAND USE, SUBJECT TO EITHER AN ADMINISTRATIVE PERMIT OR A MINOR USE PERMIT, WITHIN THE A-20 EXCLUSIVE AGRICULTURAL, SUISUN VALLEY AGRICULTURAL, AND RURAL RESIDENTIAL ZONING DISTRICTS

The Board of Supervisors of the County of Solano ordains as follows:

SECTION I: DEFINITIONS

The following definitions related to transient lodging facilities are amended or added, in alphabetical order, to section 28.01 of the Solano County Code:

Guest house. Detached living quarters of a permanent type of construction, without a kitchen and accessory to the primary dwelling on the same building site. A guest house may not be rented, let, or leased separate from the primary dwelling, whether compensation be direct or indirect.

Vacation house rental. A dwelling that is offered, used, let, or hired out for compensation for periods of 30 consecutive days or less. Does not include an occasional home exchange or similar transient occupancy of a dwelling unit not involving the payment of monetary compensation to the property owner or resident. Includes any dwelling used pursuant to a time share plan or other similar form of co-ownership if any time share period or other entitlement to occupancy of the dwelling is limited to 30 days or less per year.

Vacation house rental-Hosted. A vacation house rental on a parcel with a primary and secondary dwelling where the property owner resides on the property in the non-rental dwelling.

Vacation house rental-Unhosted. A vacation house rental where the owner does not reside on the property.

SECTION II: ZONING DISTRICTS

Tables 28.21A, 28.23A, 28.31A, and 28.51A of the Solano County Code is amended, as shown on Exhibits ____ (to be prepared later), to authorize a Vacation House Rental-Hosted as a Tourist Use in the A-20, A-SV, ATC, ATC-NC, RR 2.5, RR 5 and RR-10 zoning districts, subject to an administrative permit, and to authorize a Vacation House Rental-Unhosted as a Tourist Use in the A-20, A-SV, ATC, ATC-NC, RR 2.5, RR 5, and RR-10 zoning districts subject to a minor use permit.

SECTION III: REGULATIONS ADDED

Section 28.75 of the Solano County Code is amended to add a new subsection 28.75.30, as follows:

28.75.30 Vacation House Rentals

A. General Requirements

Vacation house rentals shall comply with the following general standards:

1. A dwelling used as a vacation house rental shall meet all of the development standards for dwellings specified in subsection 28.72.10(A)(1) and in Table 28.21B, 28.23B, and 28.31B as applicable to the zoning district. If the dwelling includes a guest house, the guest house shall also meet those development standards.
2. Space used for overnight accommodations as part of a vacation house rental must be located entirely within a dwelling or a dwelling in combination with an approved guest house. Other accessory buildings, recreational vehicles, recreational vehicle parking space, or tents may not be used as a vacation house rental.
3. Overnight occupancy is limited to 2 persons per bedroom plus 2 additional persons, not to exceed a total of 10 persons.
4. Three off-street parking spaces shall be provided for all guests. On-street parking is prohibited for any property on which a vacation house is located.
5. A vacation house rental may not be advertised, offered, or used as a special events facility. Radios, televisions, or sound amplification equipment may not be used outdoors between 8:00 p.m. and 10:00 a.m. The owner is responsible for the nuisance behaviors of guests.
6. A dwelling or guest house may not be used as a vacation house rental if it is the subject of an enforcement action pursuant to any provision of this code.
7. Transient occupancy tax registration and payment are required, pursuant to Chapter 11 of this code. A business license is required, pursuant to Chapter 14 of this code.
8. The property shall be covered by commercial property insurance.
9. The property owner shall obtain the required permit and complete transient occupancy tax registration prior to advertising or operating the vacation

house rental. Online advertisements and /or listings for the vacation house rental shall include the following:

- a. Maximum occupancy, not including children under 3;
- b. Maximum number of vehicles;
- c. Notification that quiet hours must be observed between 8 p.m. and 10 a.m.;
- d. Notification that no outdoor amplified sound is allowed; and
- e. The Transient Occupancy Tax Certificate number for that property.

B. Specific Requirements

Vacation house rentals listed below shall comply with the general requirements in section 28.75.30(A) above and the following specific standards.

1. Vacation House Rental-Hosted

- a. A hosted vacation house rental requires the property owner to reside on the property during the vacation house rental period.
- b. Only one dwelling may be used as a vacation house rental and the property owner must reside in the other dwelling.

2. Vacation House Rental-Unhosted

- a. While a vacation house is rented, a manager shall be available twenty-four hours per day, seven days a week for the purpose of responding within forty-five minutes to complaints regarding the condition, operation, or conduct of occupants of the vacation house rental or their guests.
- b. A sign with the name of the property owner or manager and a current contact phone number shall be located near the front door of the dwelling unit.

SECTION IV:

All ordinance and parts of ordinances in conflict herewith are repealed.

SECTION V

The Board of Supervisors has made the following findings and declarations in regard to the zoning amendments:

1. These zoning amendments are in conformity with the Solano County General Plan.
2. The zoning amendment will not constitute a nuisance or be detrimental to the health, safety, comfort, or general welfare of the people of the County or be detrimental to adjacent property or improvements in the neighborhood.
3. This ordinance is exempt from the California Environmental Quality Act pursuant to section 15061(b)(3) of the CEQA Guidelines. This ordinance will not permit the development of new dwelling units at locations not already allowed, and the ordinance imposes standards on vacation house rentals sufficient to ensure that the use of existing and new dwelling units as vacation house rentals will not have a greater adverse effect on the environment than the use of such structures as residences. Because the use of some dwelling units as vacation house rentals will require discretionary approval of a minor use permit, consideration of any potential site-specific impacts related to a particular location is properly deferred.
4. The use of a dwelling unit as a vacation house rental, as defined in this ordinance, is a commercial land use rather than as a residential land use and is not currently authorized by Chapter 28 of the Solano County Code. Therefore, this ordinance is amendatory to rather than declarative of existing law. Any use of a dwelling unit as a vacation house rental prior to the effective date of this ordinance or prior to the approval of a use permit pursuant to the regulations set forth in Section III of this ordinance shall not be considered a legal nonconforming land use.

SECTION VI

This ordinance will be effective thirty (30) days after its adoption.

SECTION VII

If any provision of this ordinance or the application thereof to any persons or circumstances is held invalid, such invalidity shall not affect other provisions or applications of the ordinance which can be given effect without the invalid provision or application, and to this end the provisions of this ordinance are hereby declared to be severable.

SECTION VIII

A summary of this ordinance shall be published once in the Daily Republic, a newspaper of general circulation in the County of Solano, not later than fifteen (15) days after the date of its adoption.

PASSED AND ADOPTED by the Solano County Board of Supervisors at its regular meeting on _____, 2018, by the following vote:

AYES: Supervisors _____

NOES: Supervisors _____

EXCUSED: Supervisors _____

John M. Vasquez, Chair
Solano County Board of Supervisors

ATTEST:
Birgitta E. Corsello, Clerk
Solano County Board of Supervisors

By: _____
Jeanette Neiger, Chief Deputy Clerk

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28.75.30 Vacation House Rentals

A. Requirements

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5. A vacation house rental may not be advertised, offered, or used as a special events facility. Radios, televisions, or sound amplification equipment may not be used outdoors between 8:00 p.m. and 10:00 a.m. The owner is responsible for the nuisance behaviors of guests.
6. A dwelling or guest house may not be used as a vacation house rental if it is the subject of an enforcement action pursuant to any provision of this code.
7. Transient occupancy tax registration and payment are required, pursuant to Chapter 11 of this code. A business license is required, pursuant to Chapter 14 of this code.
8. The property shall be covered by commercial property insurance.
9. The property owner shall obtain the required permit and complete transient occupancy tax registration prior to advertising or operating the vacation house rental. Online advertisements and /or listings for the vacation house rental shall include the following:
 - a. Maximum occupancy, not including children under 3;
 - b. Maximum number of vehicles;
 - c. Notification that quiet hours must be observed between 8 p.m. and 10 a.m.;

- d. Notification that no outdoor amplified sound is allowed; and
 - e. The Transient Occupancy Tax Certificate number for that property.
10. Only one dwelling per property may be used as a vacation house rental.
11. While a vacation house is rented, the property owner or manager shall be available twenty-four hours per day, seven days a week for the purpose of responding within forty-five minutes to complaints regarding the condition, operation, or conduct of occupants of the vacation house rental or their guests.
12. No exterior signage is allowed, except if the property owner or manager does not reside on site, then a sign with the name of the property owner or manager and a current contact phone number shall be located near the front door of the dwelling unit.

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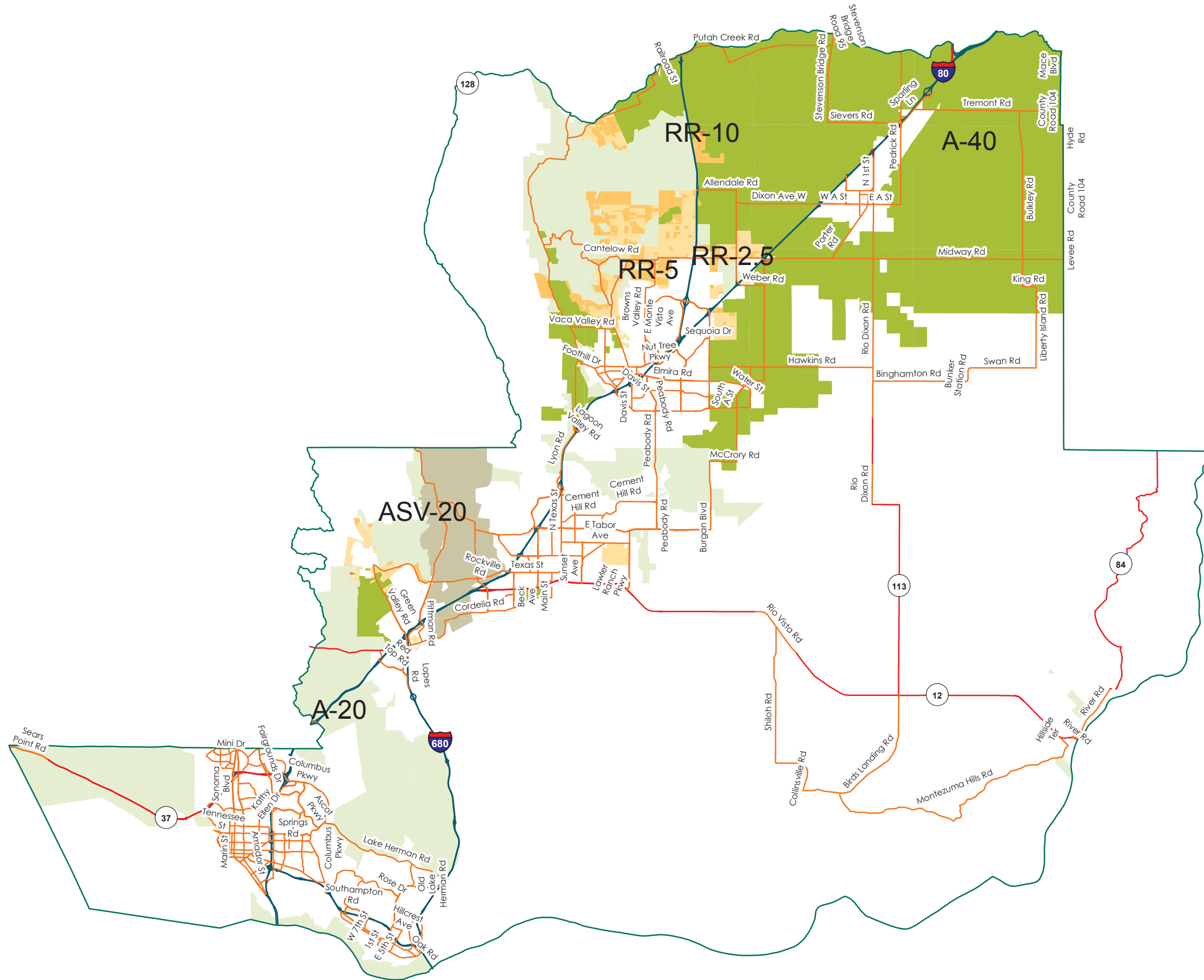
NOES: Supervisors _____

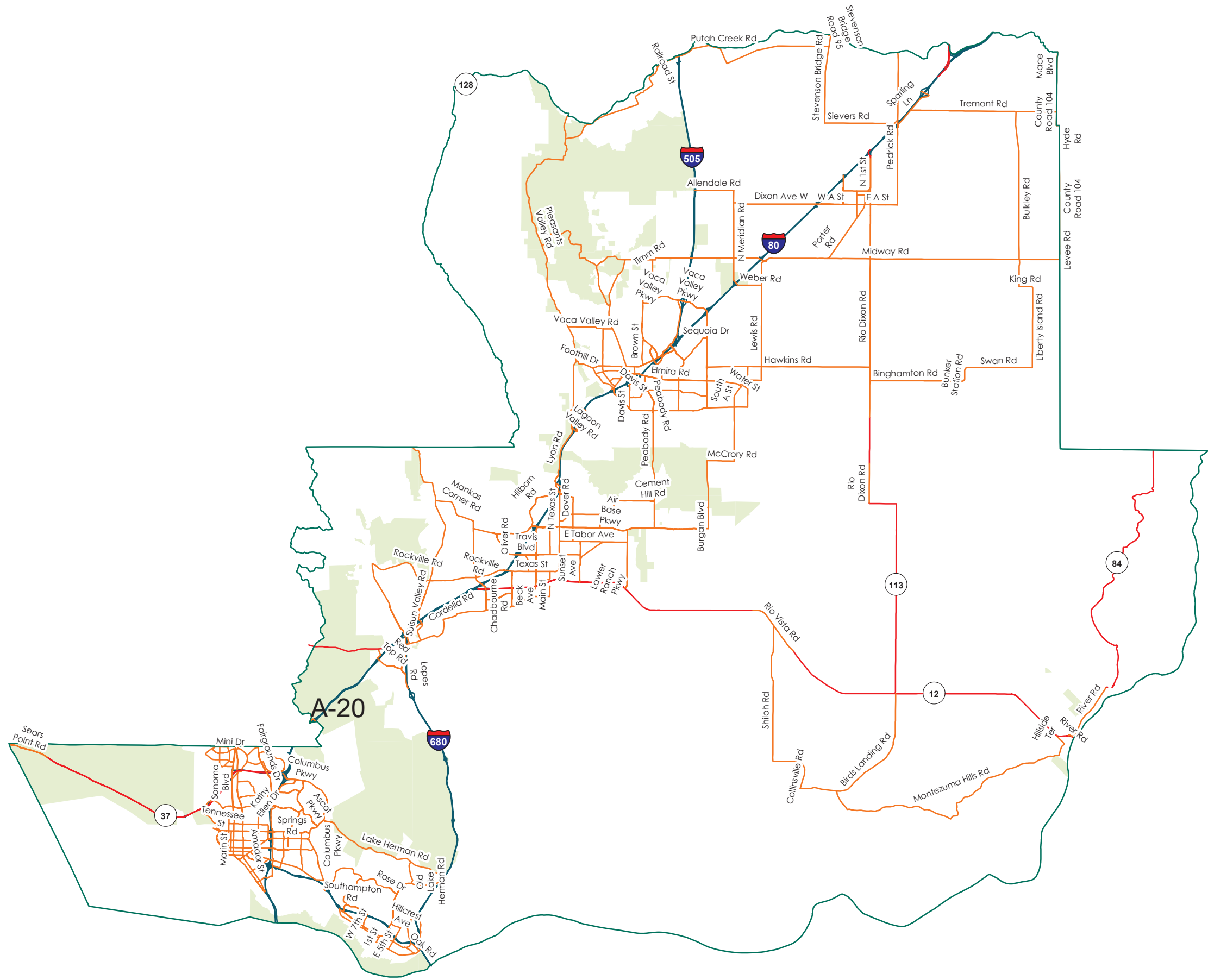
EXCUSED: Supervisors _____

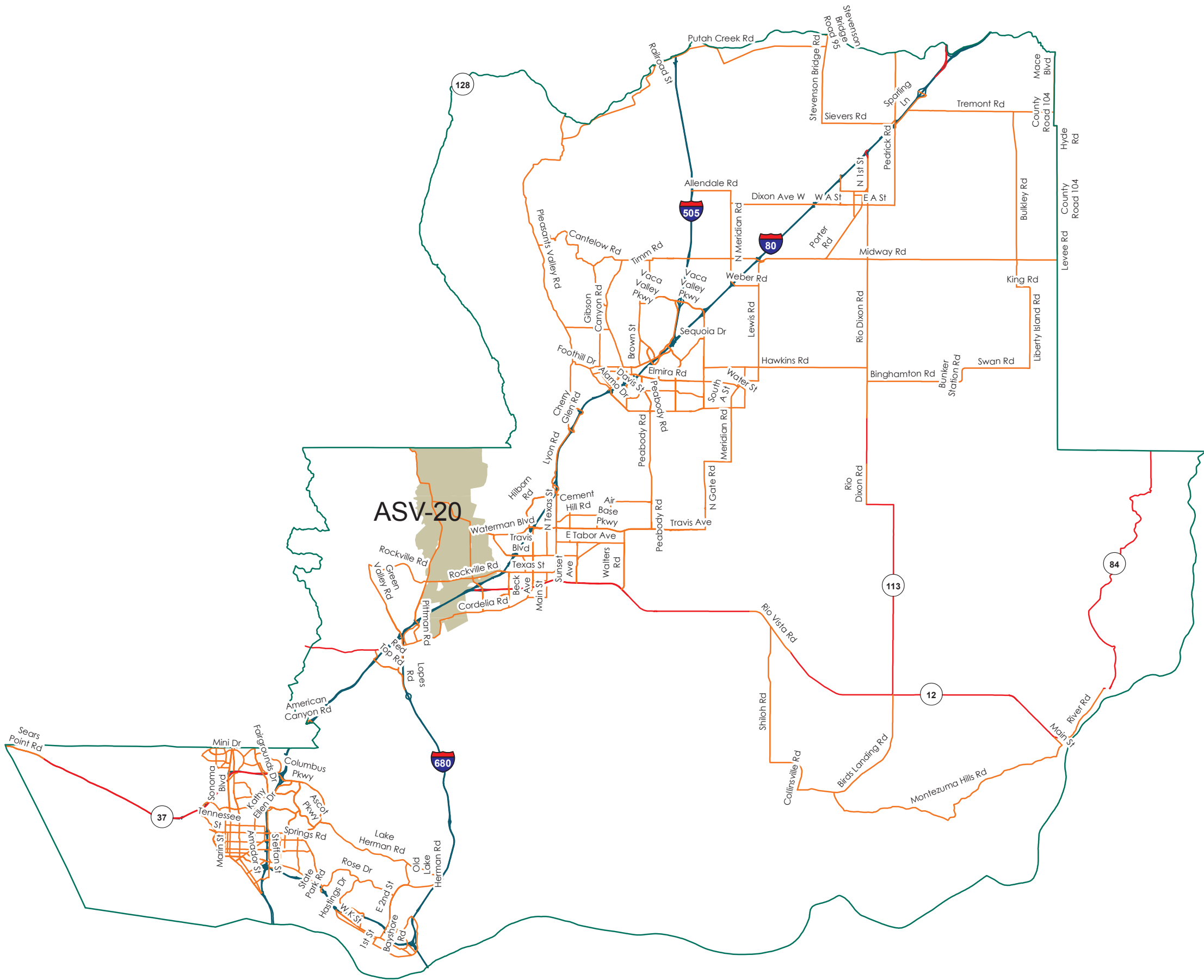
John M. Vasquez, Chair
Solano County Board of Supervisors

ATTEST:
Birgitta E. Corsello, Clerk
Solano County Board of Supervisors

By: _____
Jeanette Neiger, Chief Deputy Clerk

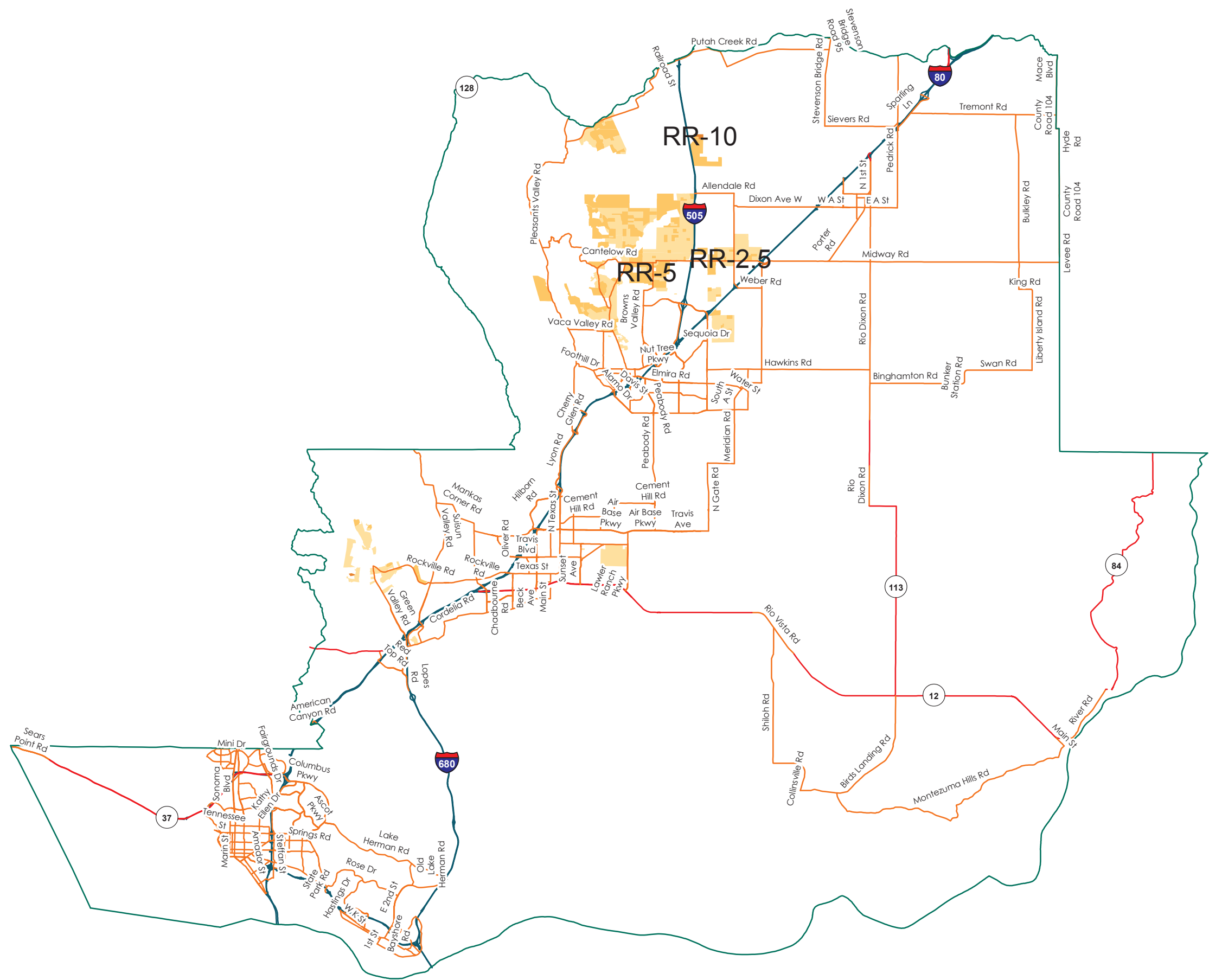


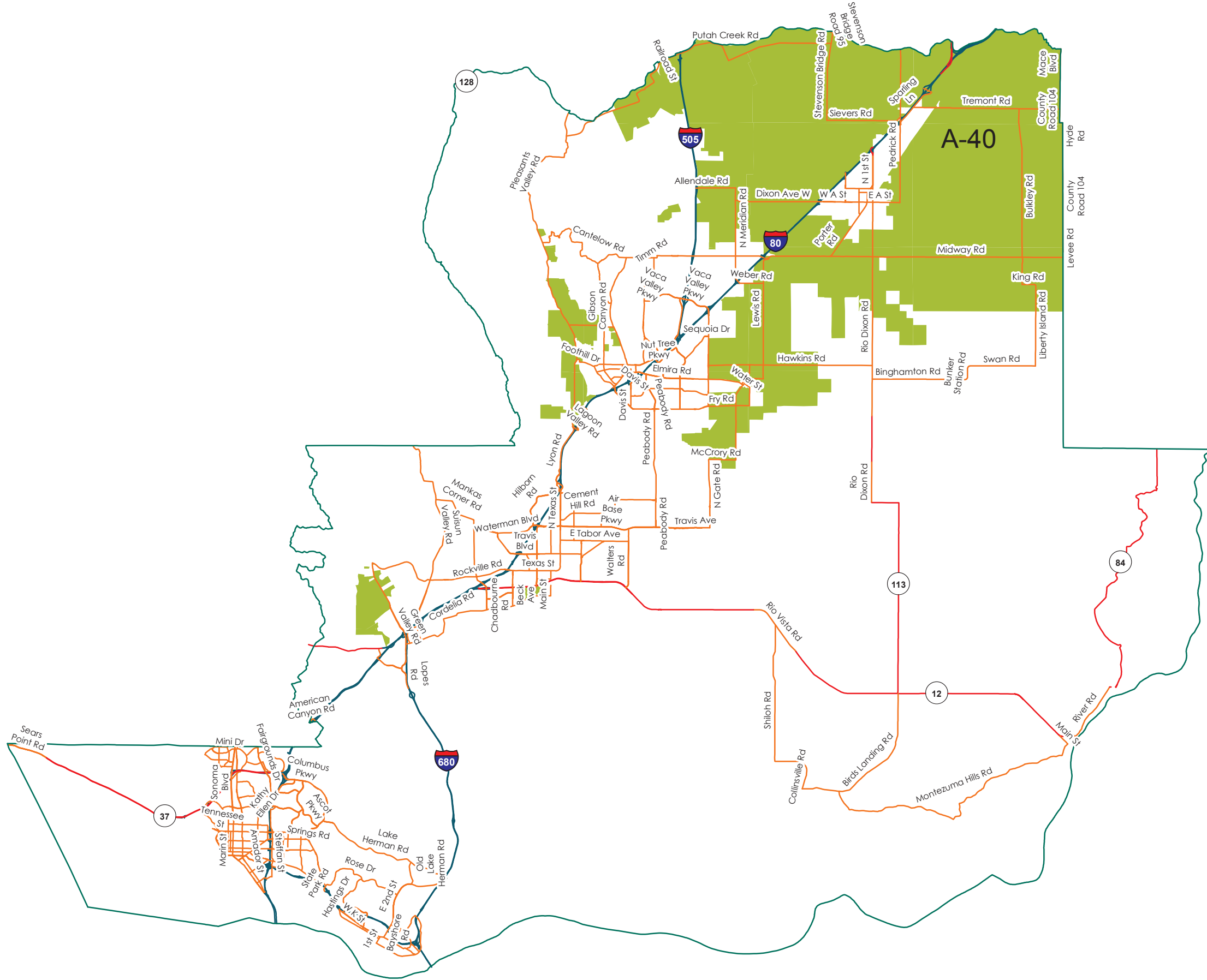




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