Attachment 4

APPLICATIONS 161248-161253; 171059
(DAV 016-DAV 023)

Project Site Alternatives

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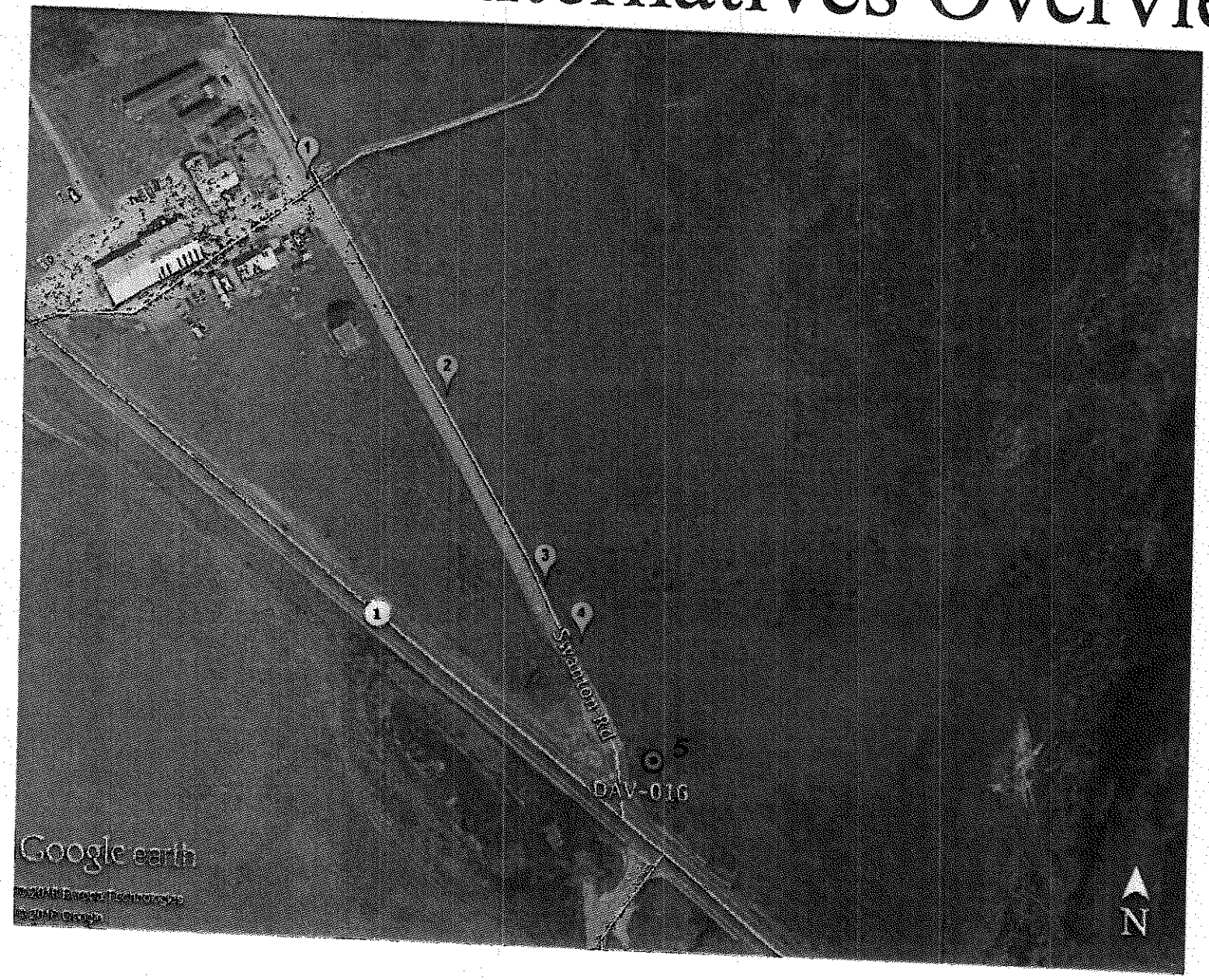
CROWN CASTLE

DAV-016 DESIGN/SITE ALTERNATIVES

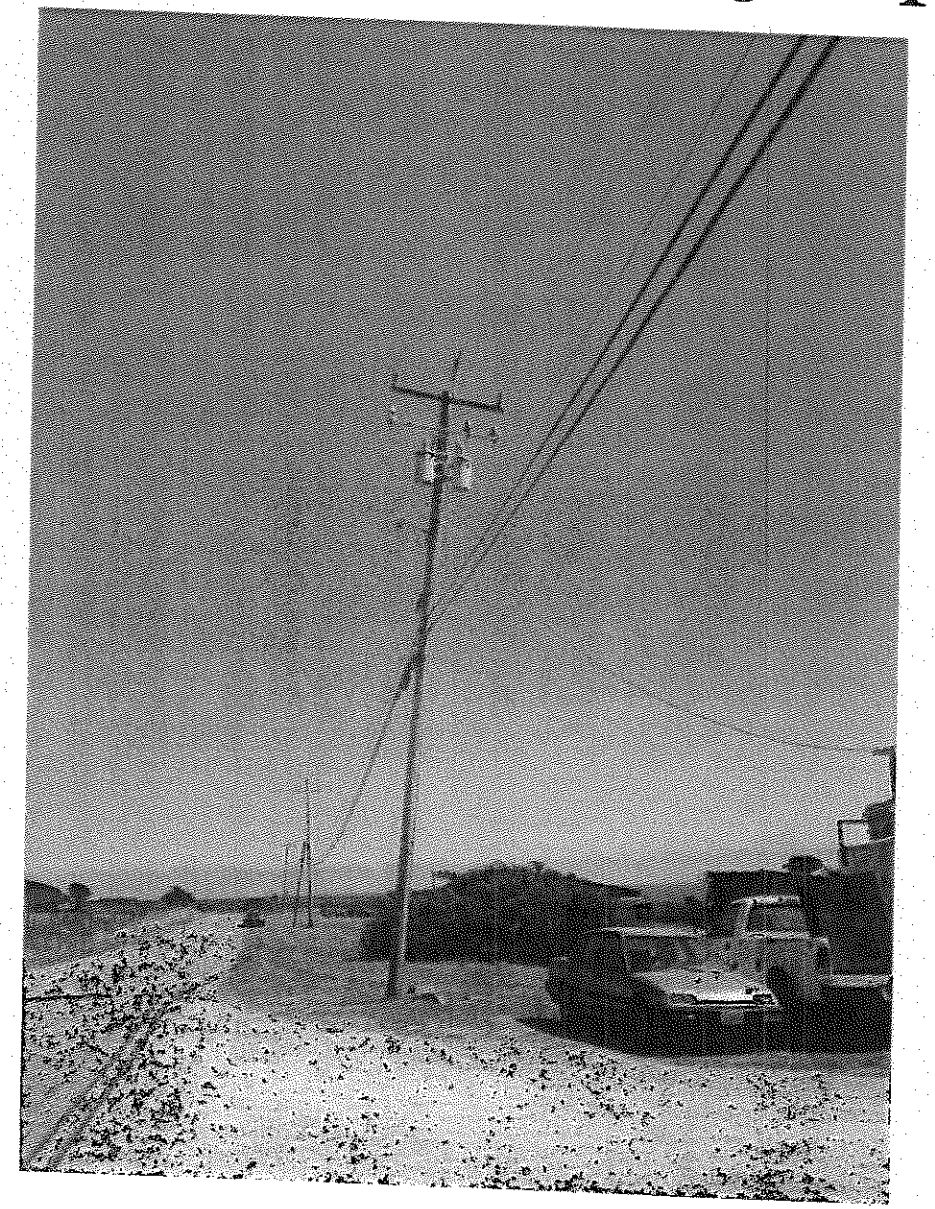
DAV-016 – .25 MILE RADIUS

DAV-016 – ZONING

DAV-016 – Alternatives Overview

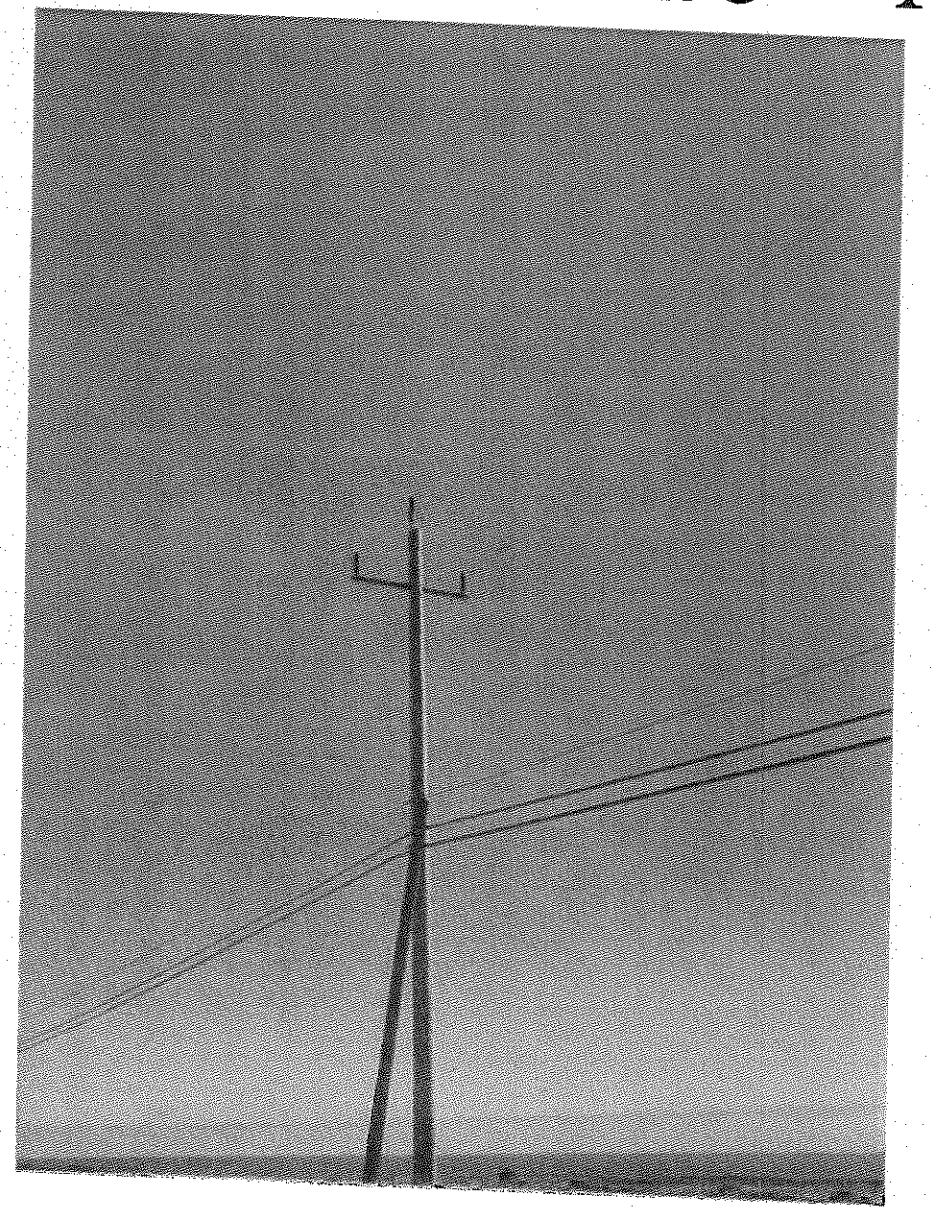


DAV-016 – Alternative 1



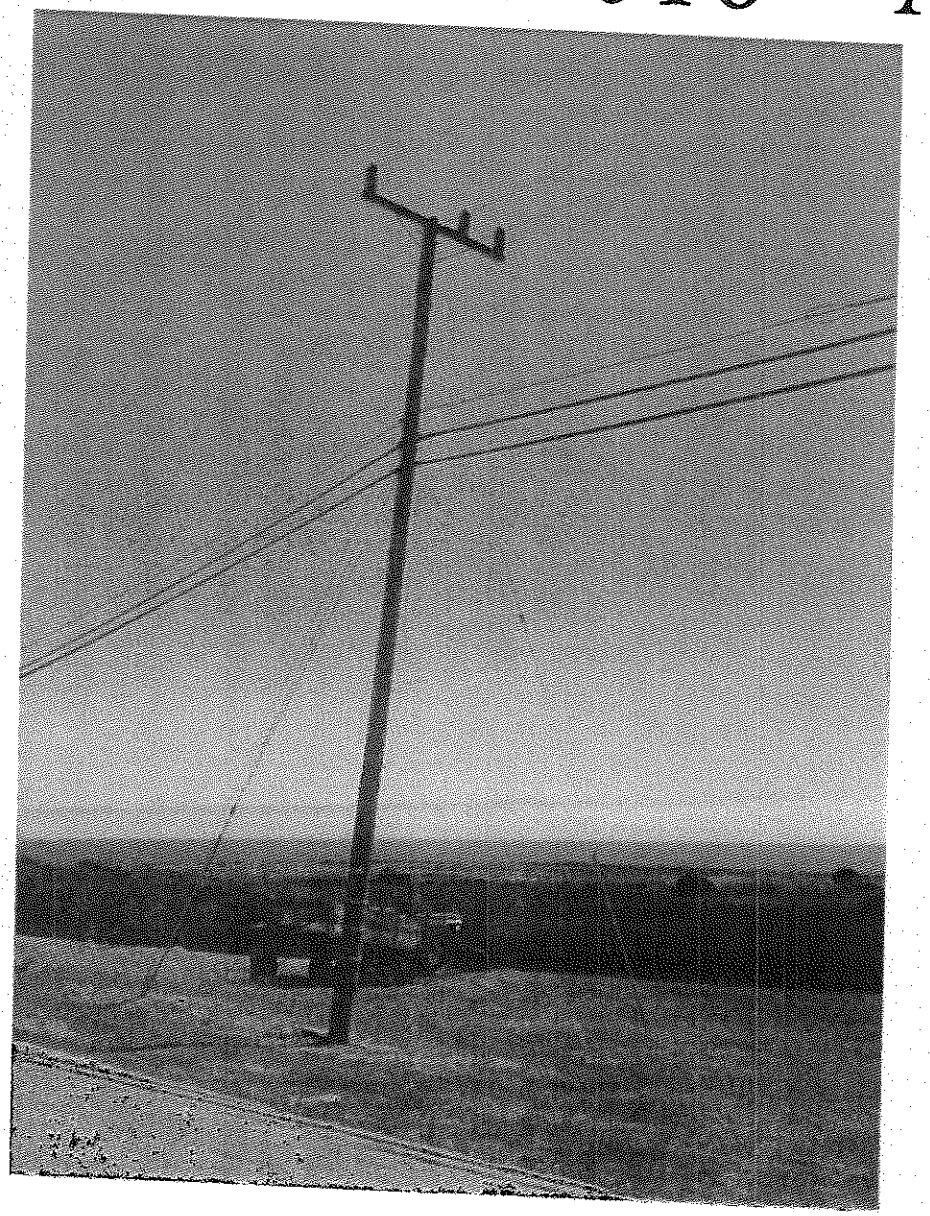
Facility located in Swanson Berry Farm Parking lot, Pole has (2) transformers located on pole, would not be allowed to place stand-off antennas on pole due to fact we would impede the existing climbing space per GO95 Regulations.

DAV-016 – Alternative 2



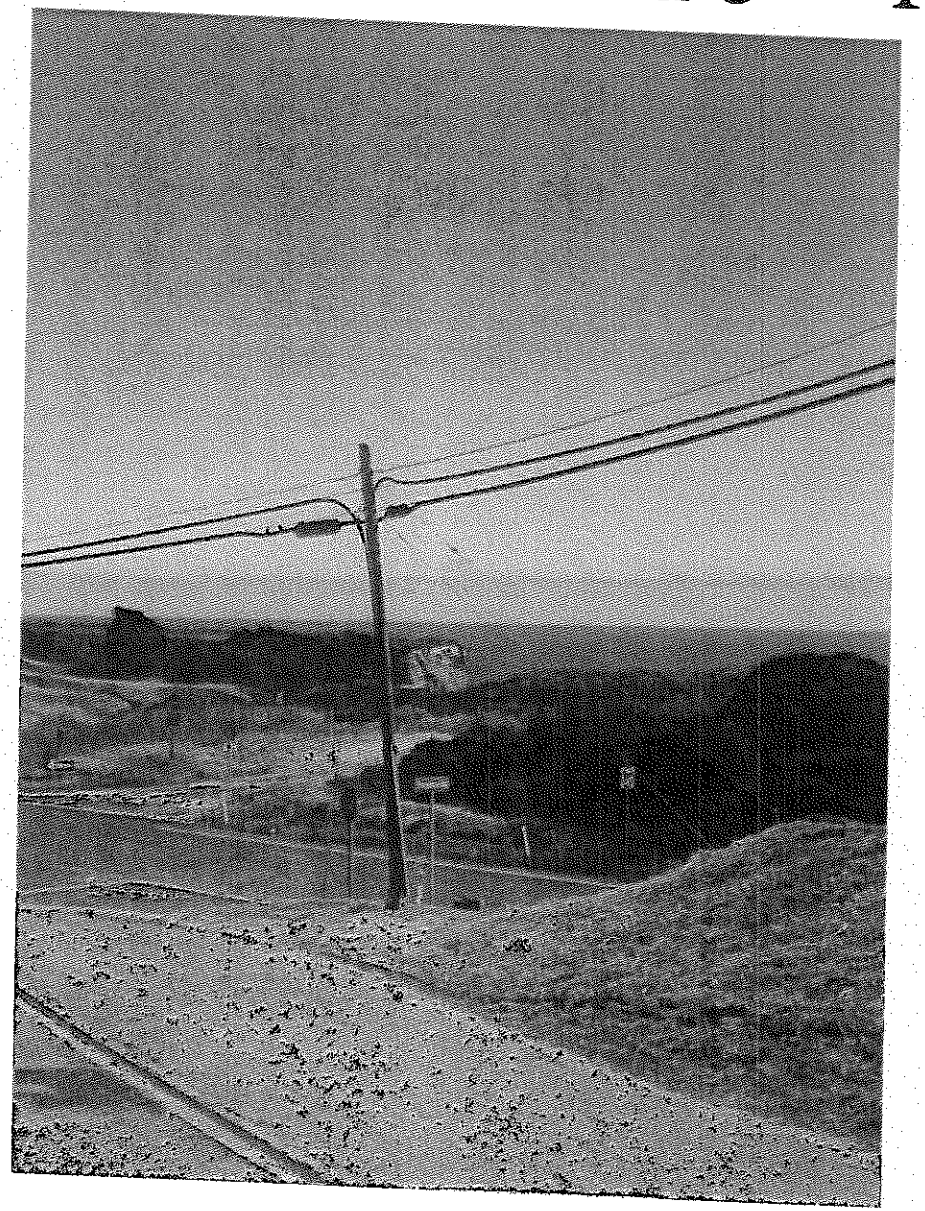
Pole was ultimately off Highway (1) and did not link up with existing network site. Also, pole has structural issues as evident by existing "support pole" installed.

DAV-016 – Alternative 3



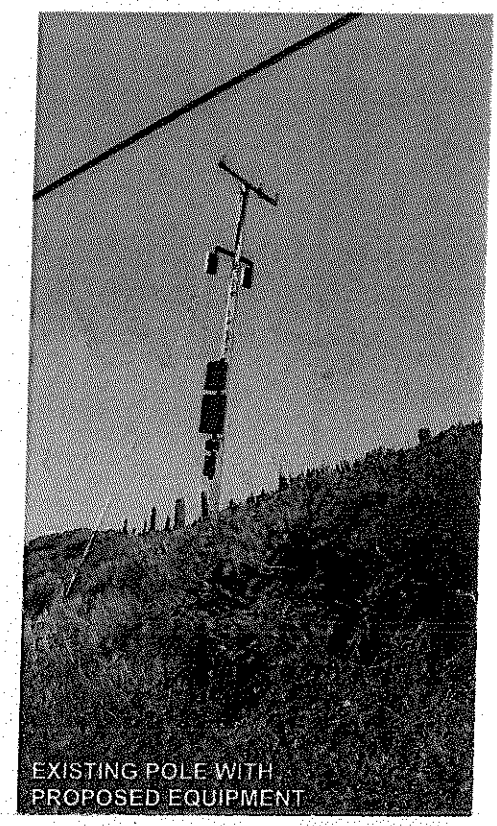
This location was our original candidate, but Planning advised this would not be preferred due to location, and within prohibited zone per Ordinance.

DAV-016 – Alternative 4

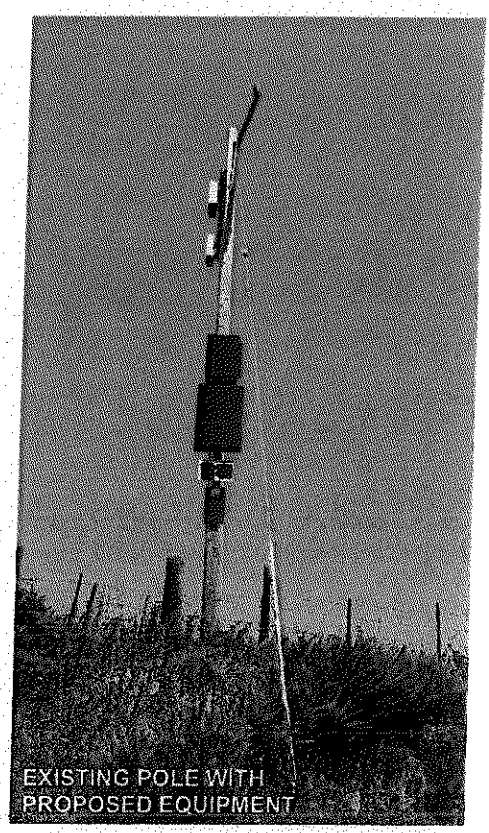


Ultimately this location would work from an RF standpoint, due to proximity to Highway 1, the issue is future access, limiting our ability to maintain the facility. Additionally a (N) pole would have to be installed, and we feel based on location it would create additional visual impact.

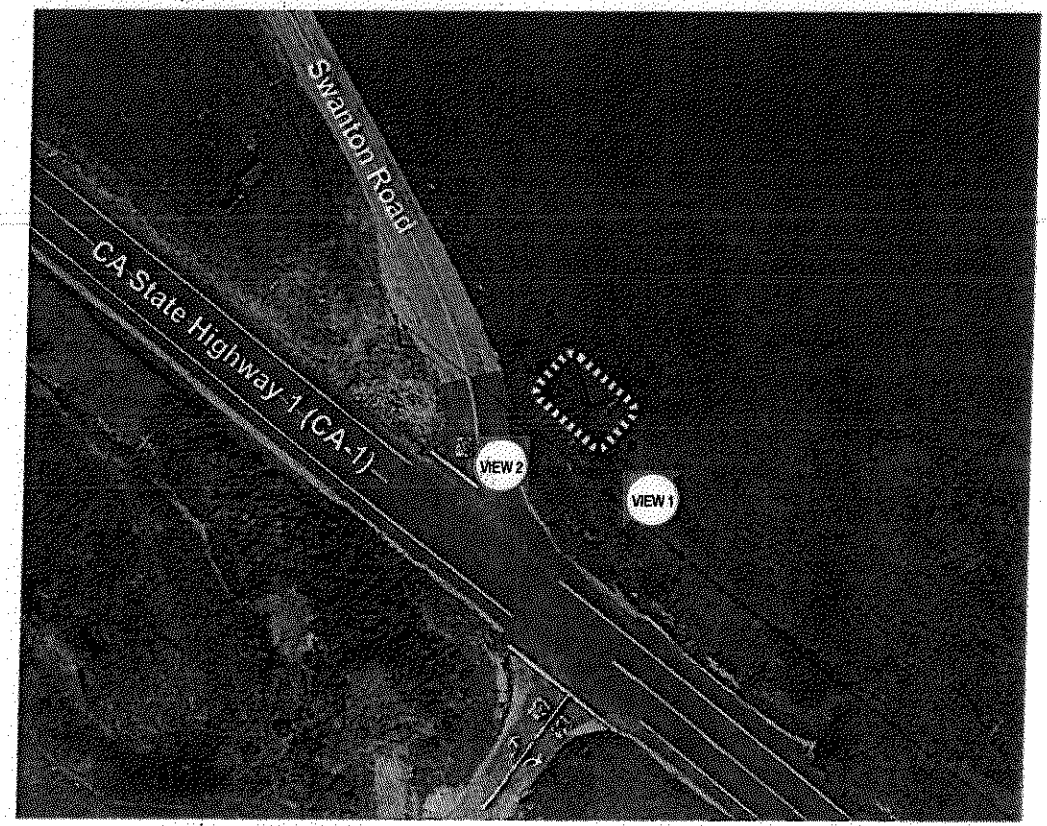
APPLICATION 161248 (DAV 016)
Site Alternative 5



View 1 Looking Northwest



View 2 Looking Northeast from CA-1



AERIAL MAP

CROWN CASTLE

DAV-016M

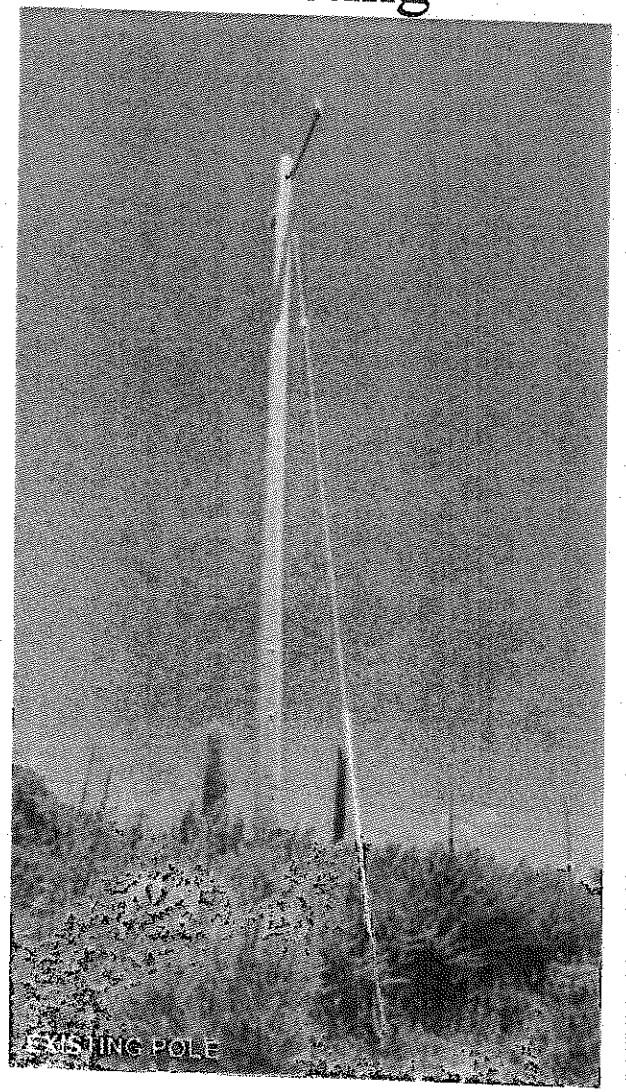
870' SE of 25 Swanton Rd.
Davenport, CA

07/12/2016

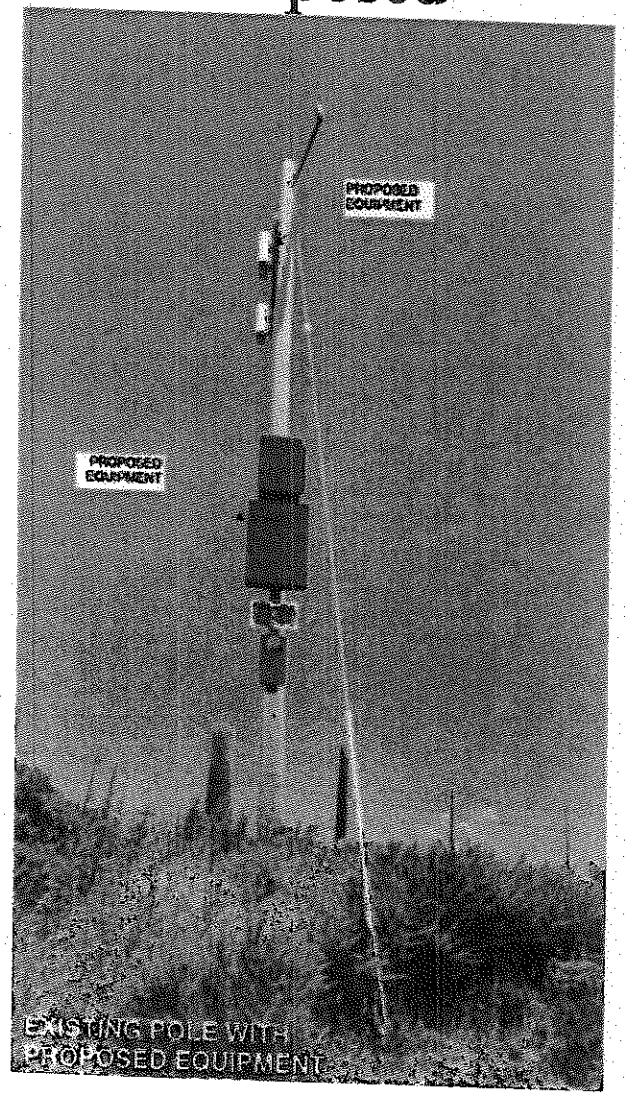
PHASE 3 COMMUNICATIONS
224 N 27TH ST, SUITE 8, SAN JOSE, CA 95116
PH (408) 946 - 9011 FAX (408) 946 - 0672
WWW.P3COM.NET

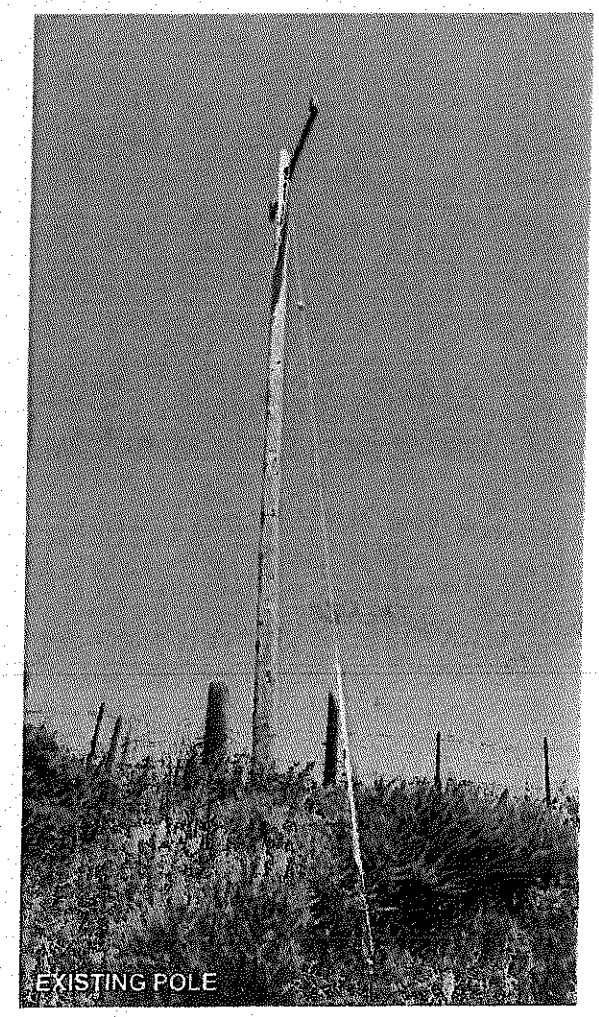
DAV-016 PHOTOSIMS

Existing

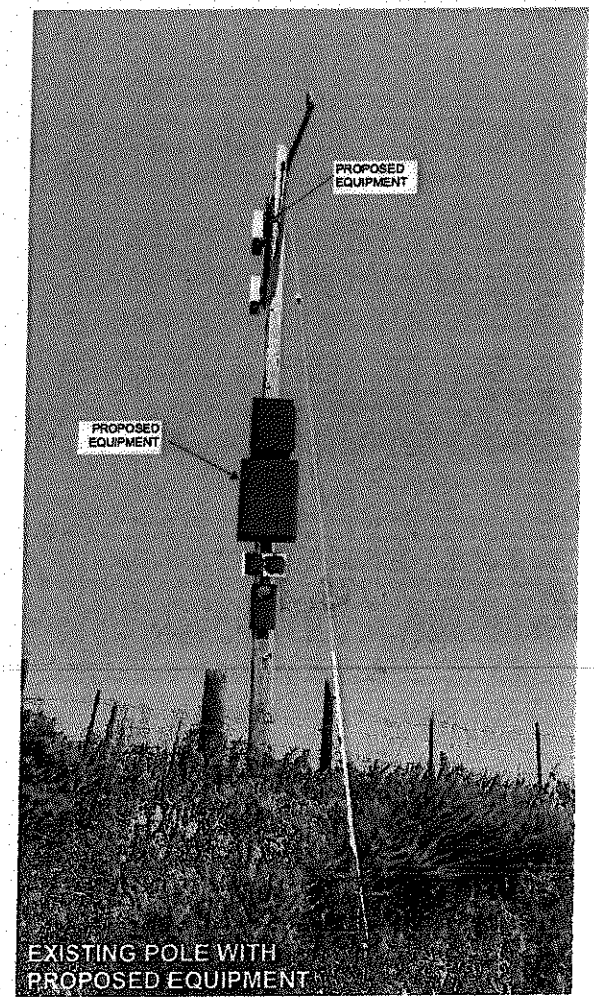


Proposed





EXISTING POLE



EXISTING POLE WITH PROPOSED EQUIPMENT

CROWN CASTLE

DAV-016M

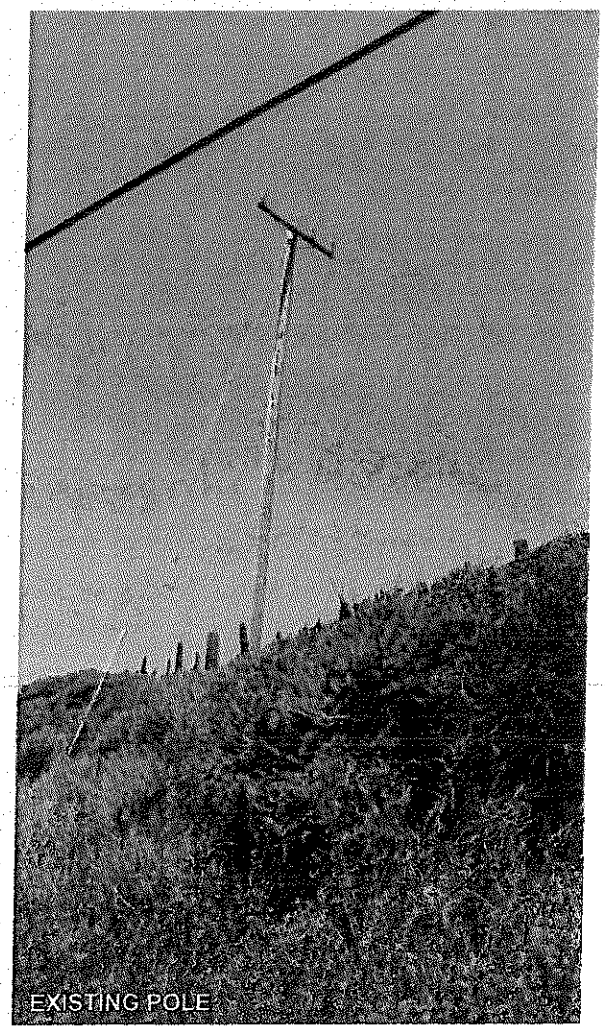
870' SE of 25 Swanton Rd.
Davenport, CA

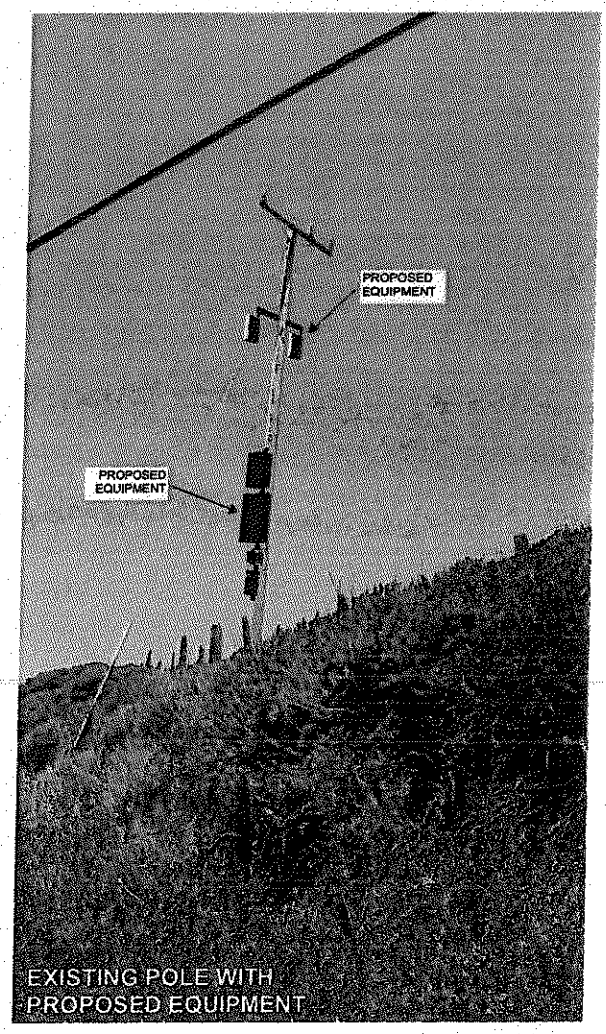
07/12/2016

Looking Northwest

View 1

PHASE 3 COMMUNICATIONS
224 N 27TH ST, SUITE 5, SAN JOSE, CA 95116
PH (408) 946 - 9911 FAX (408) 946 - 0672
WWW.P3COM.NET





CROWN CASTLE

DAV-016M

870' SE of 25 Swanton Rd.
Davenport, CA

07/12/2016

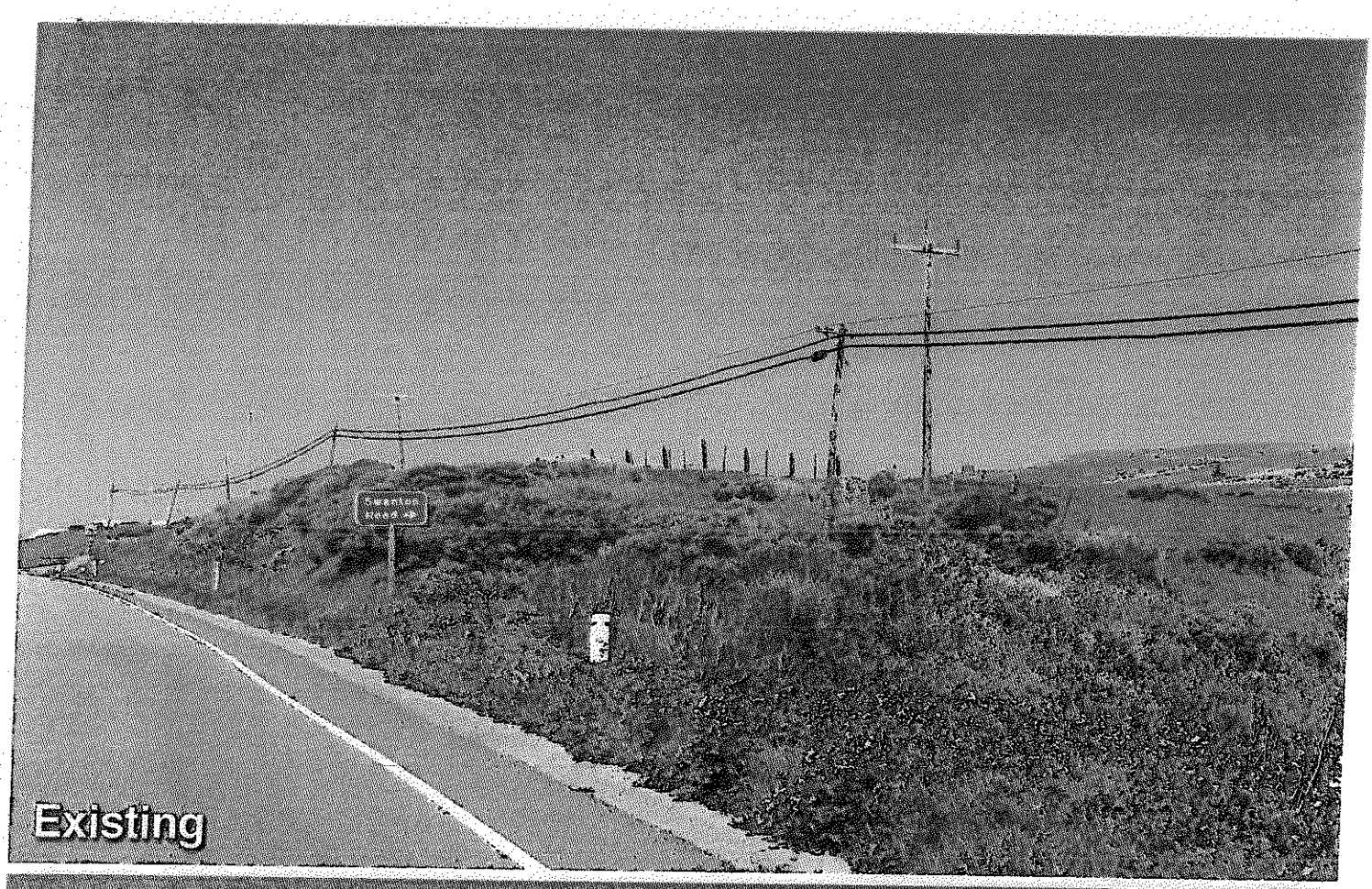
Looking Northeast from CA-1

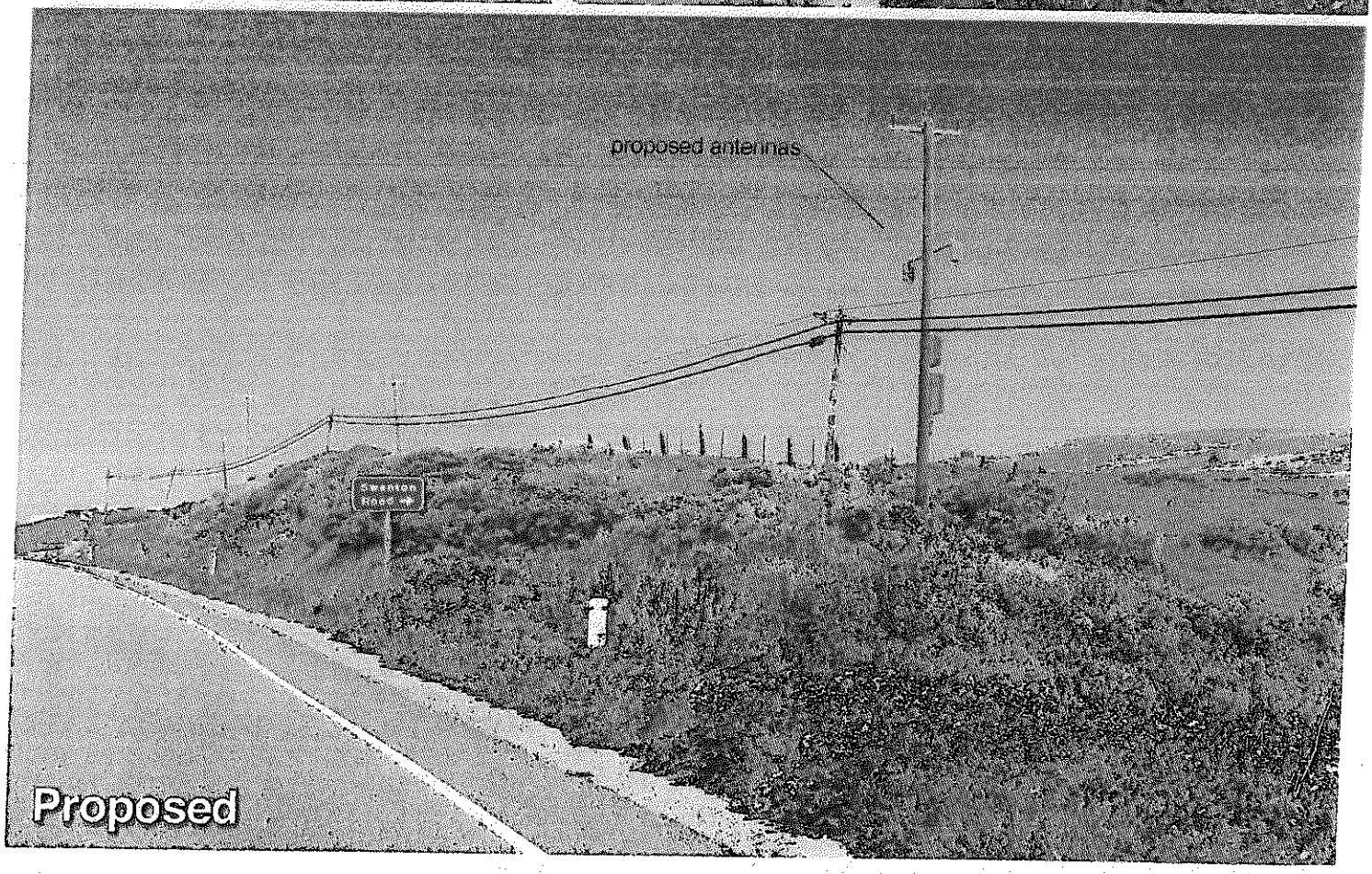
View 2

PHASE 3 COMMUNICATIONS
224 N 27TH ST, SUITE B, SAN JOSE, CA 95116
PH (408) 946 - 9611 FAX (408) 946 - 9672
WWW.P3COM.NET

APPLICATION 161248 (DAV 016)

Preferred site: Visual Simulation of Pole-Mounted Alternative





CROWN CASTLE

DAV-016m3 Pole Mounted Option

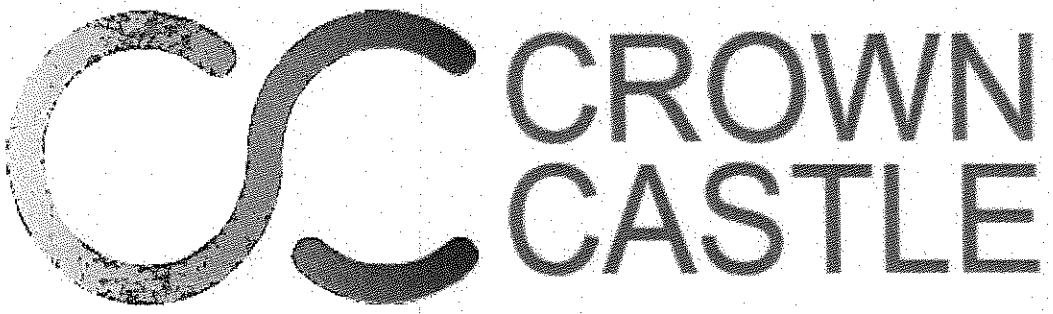
Southeast of Hwy 1 / Davenport Landing Road
Davenport, CA

Looking Northwest from Hwy 1

9/16/17

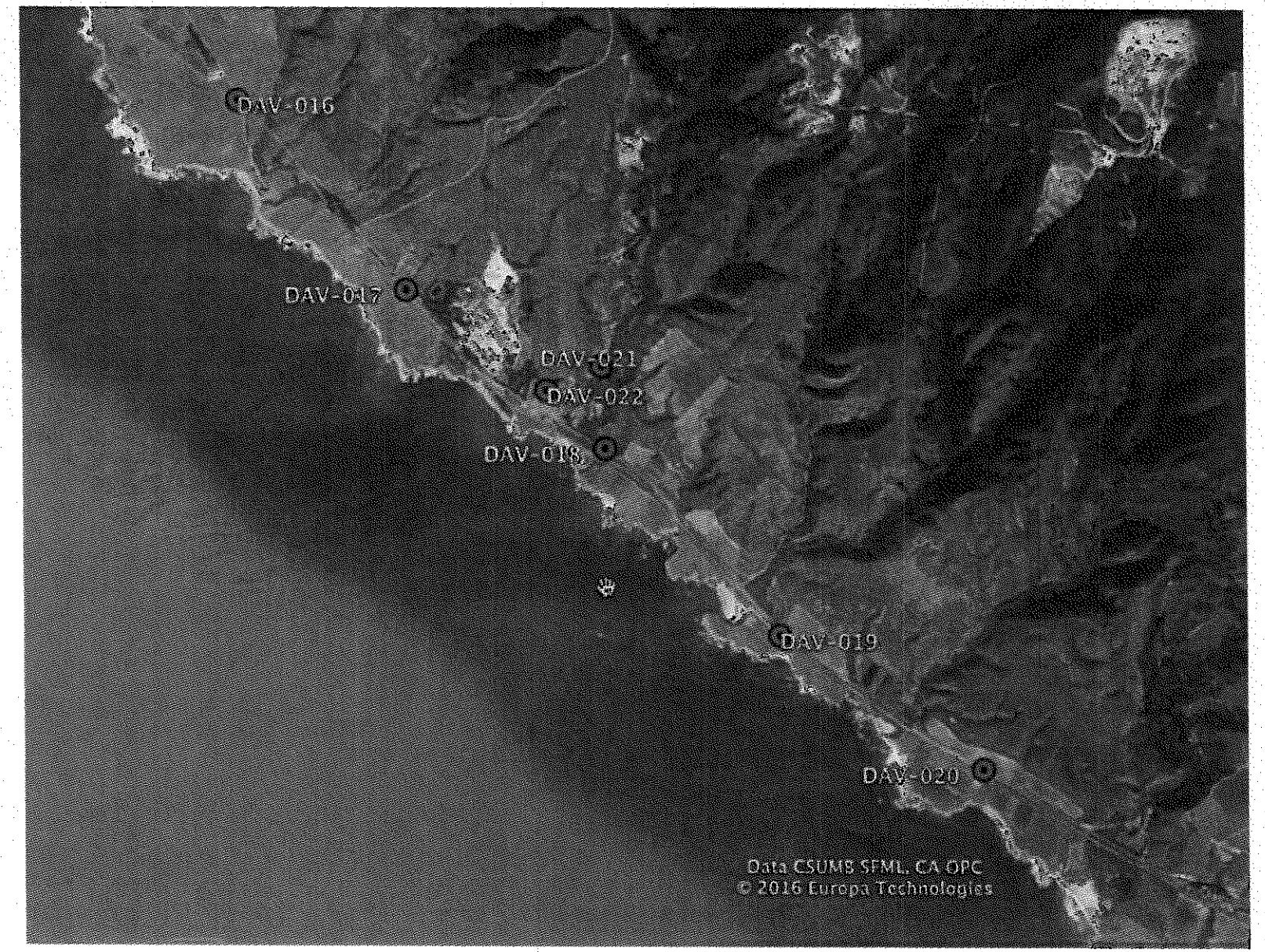
View #1

Applied Imagination 510 914-0500



DAV-017 DESIGN/SITE ALTERNATIVES

DAV-016-022 NODE LOCATIONS



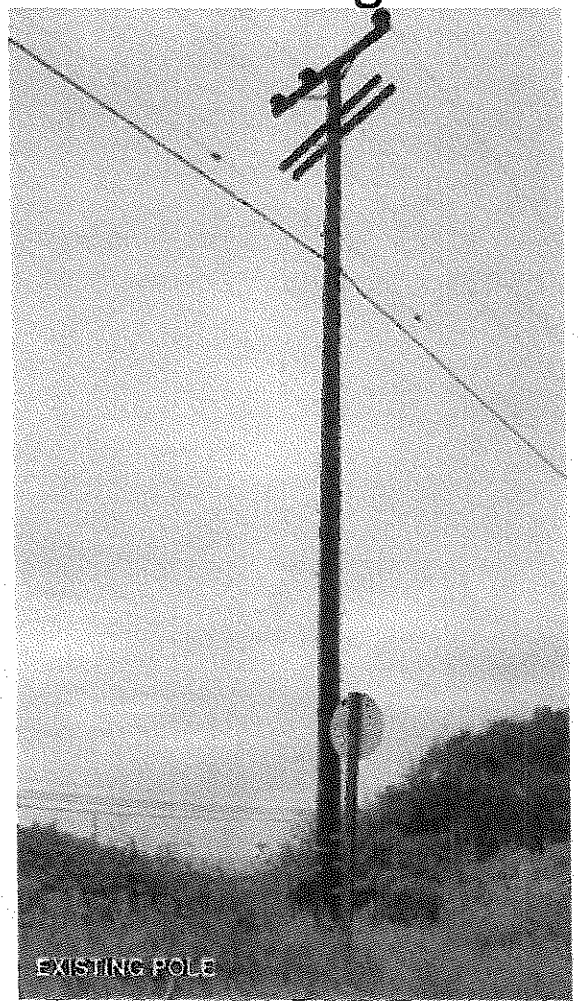
DAV-017 OVERVIEW

DAV-017 – .25 MILE RADIUS

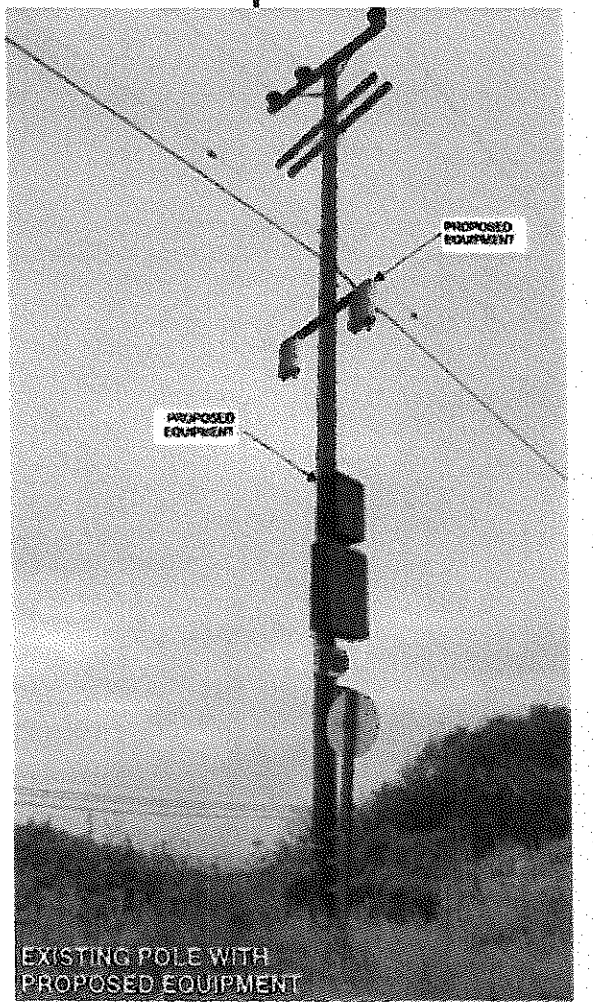
DAV-017 – ZONING

DAV-017 PHOTOSIMS

Existing

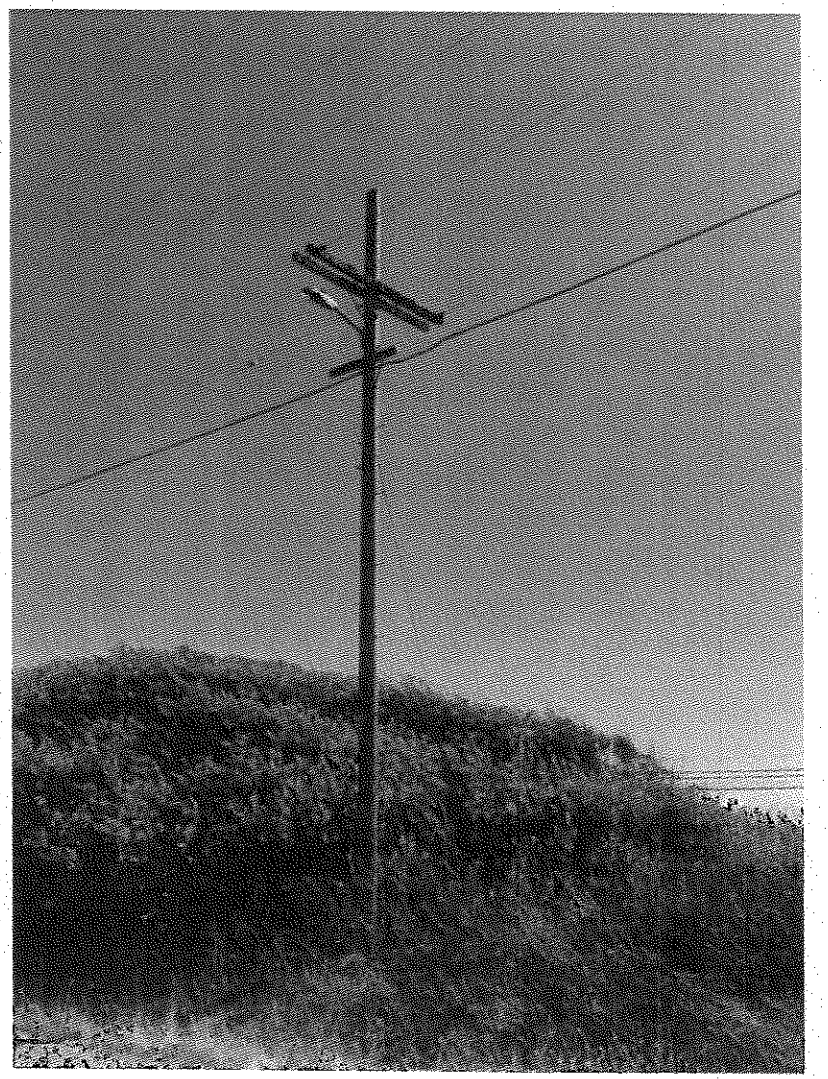


Proposed



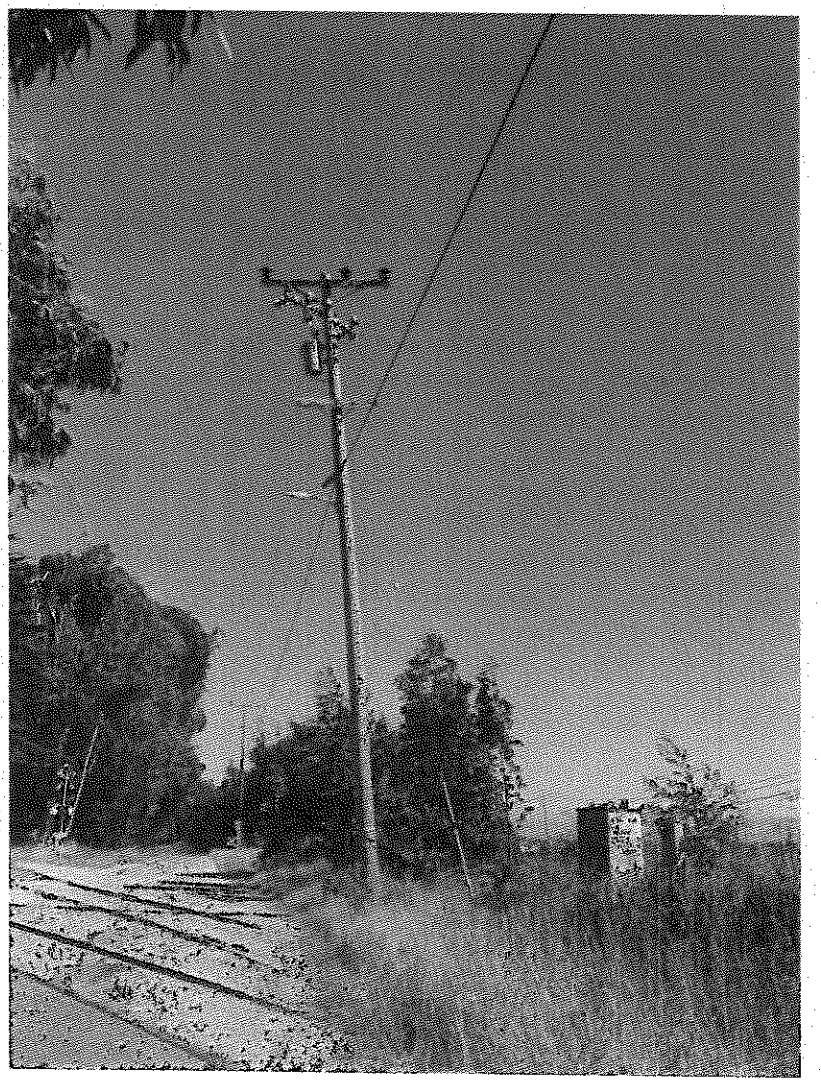
DAV-017 – Alternatives Overview

DAV-017 – Alternative 1



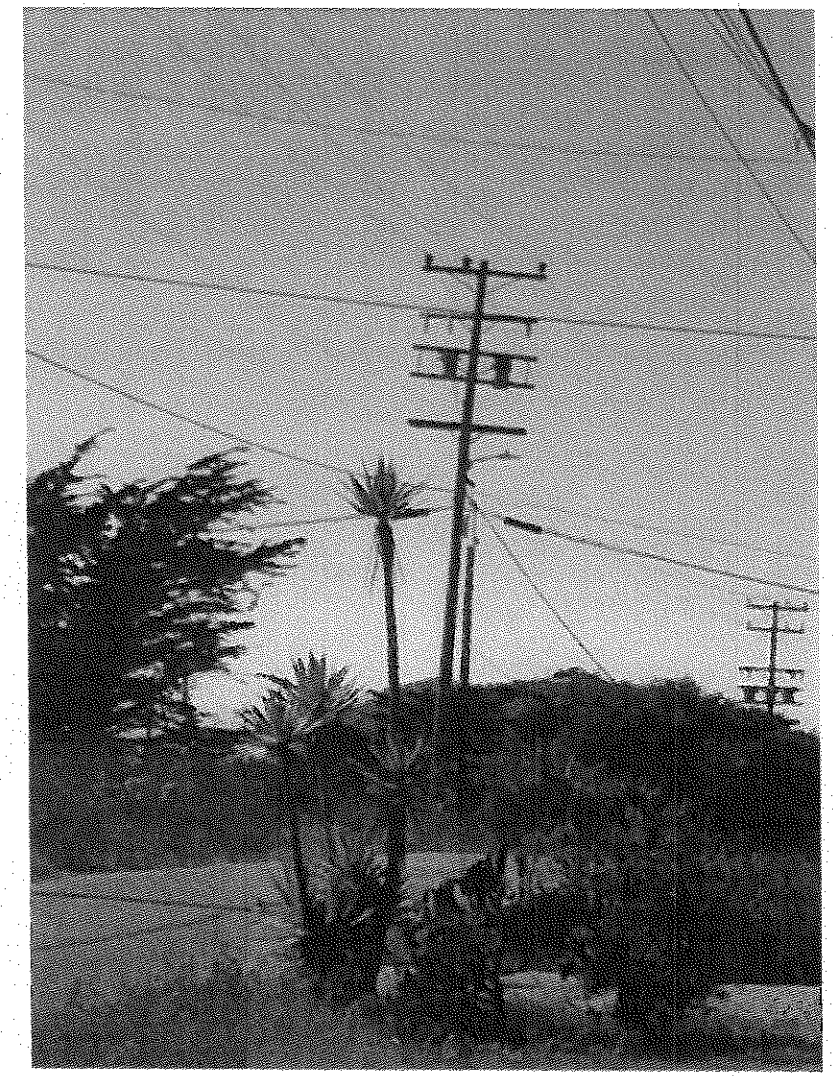
This location would be ideal, and closer to the residential area which ultimately we want to cover however, based on LORI it falls within a residential zone, and would not be supported as presented. We determined there were other viable candidates outside the R district.

DAV-017 – Alternative 2

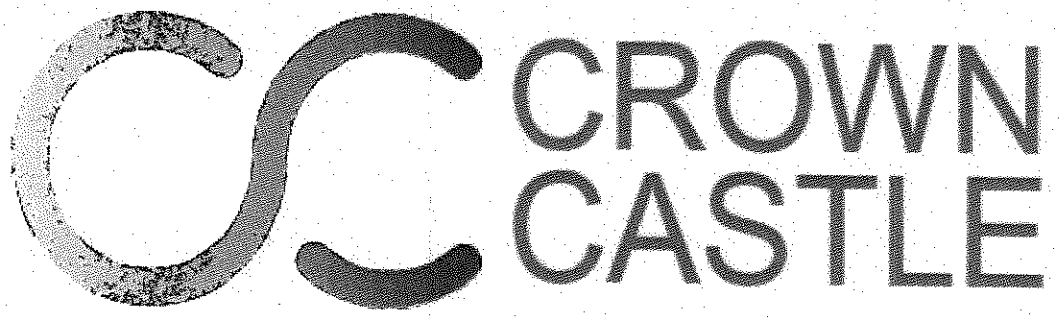


This pole has an existing transformer and a primary riser, and would violate GO95 requirements. There was also a series of Railroad "switch" gear near this location, and could pose an issue when we bring in utilities.

DAV-017 – Alternative 3

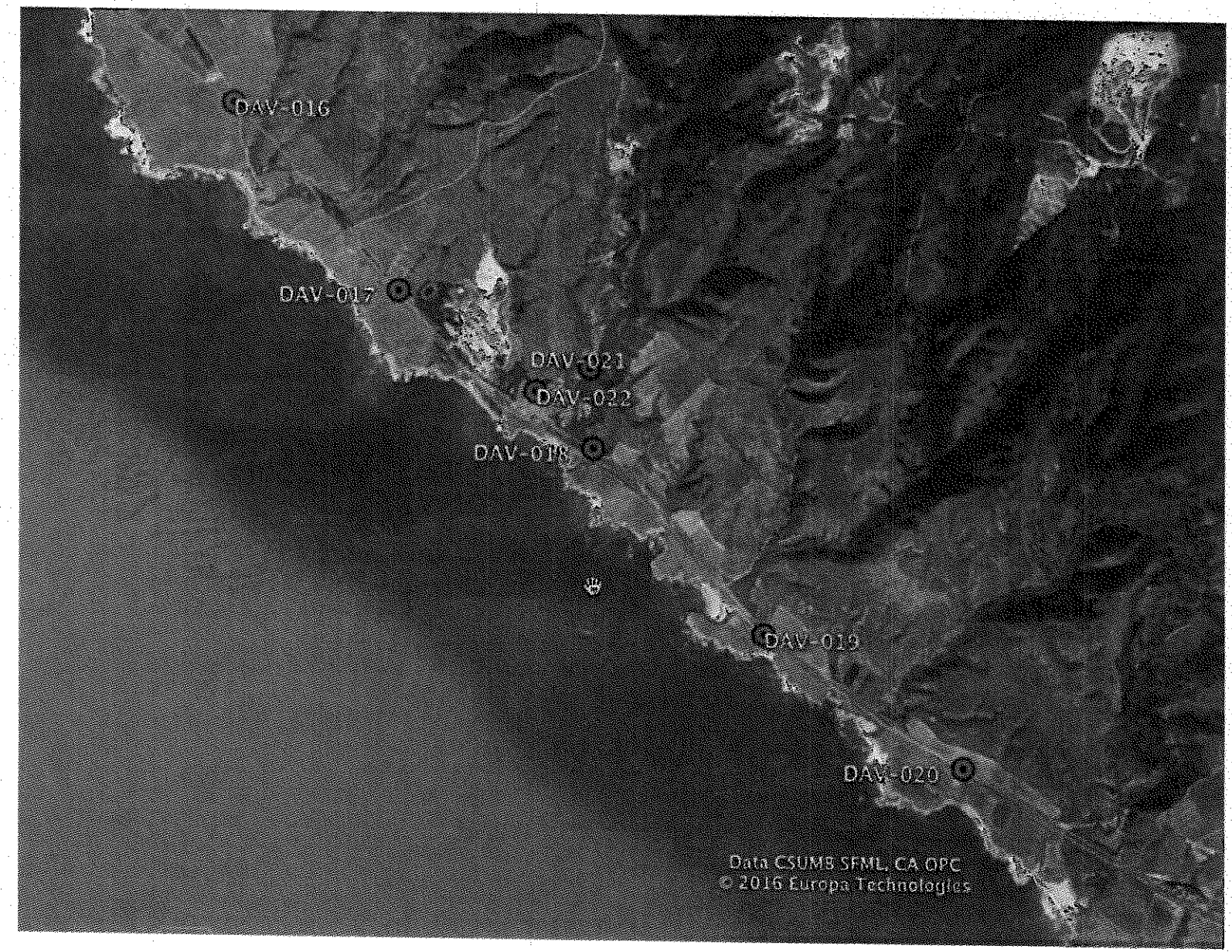


This location was ultimately just too busy, there are (4) tiers, (2) transformers, and a primary riser to prevent us from adhering to GO95 climbing space requirements.



DAV-018 DESIGN/SITE ALTERNATIVES

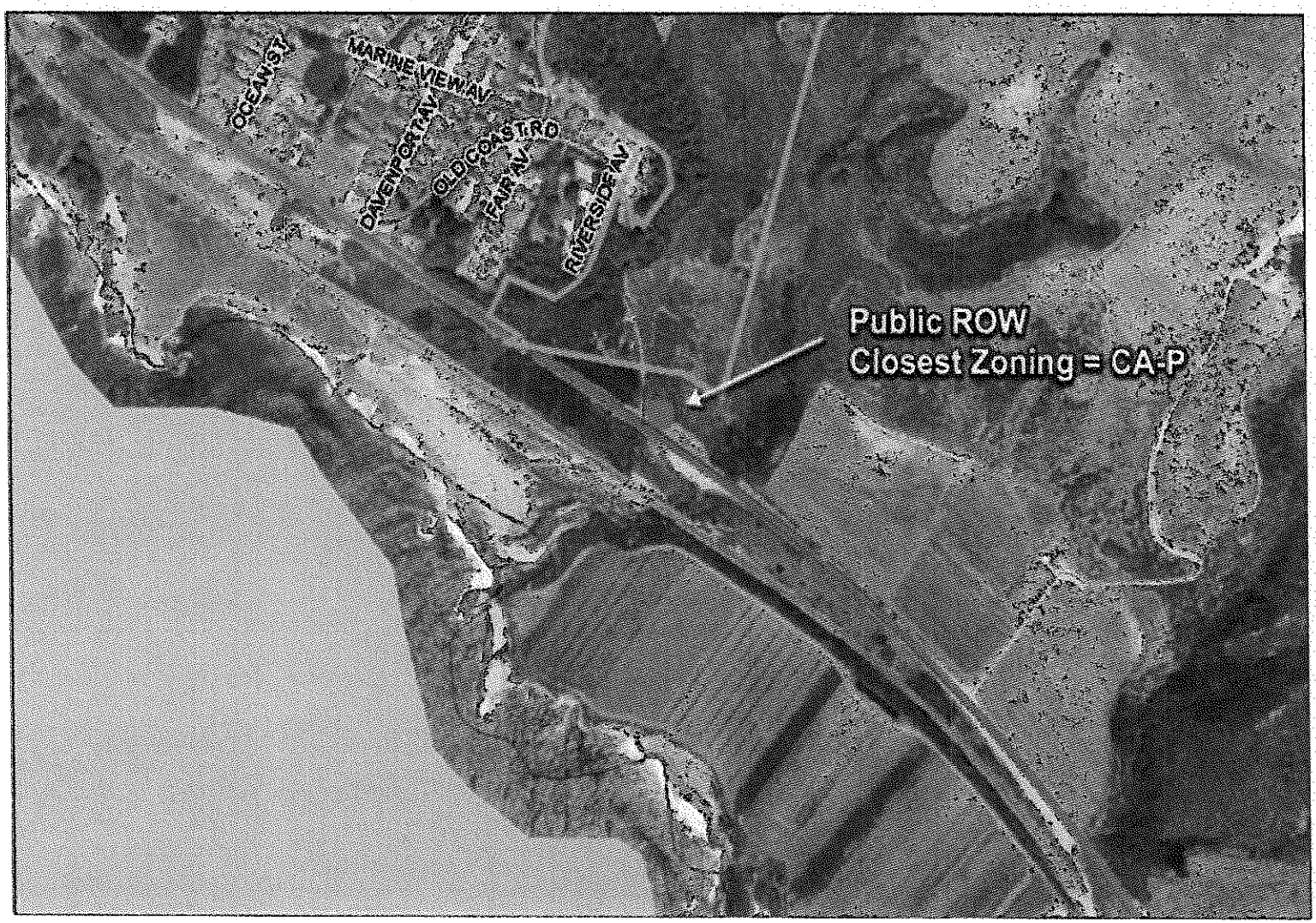
DAV-016-022 NODE LOCATIONS



DAV-018 OVERVIEW

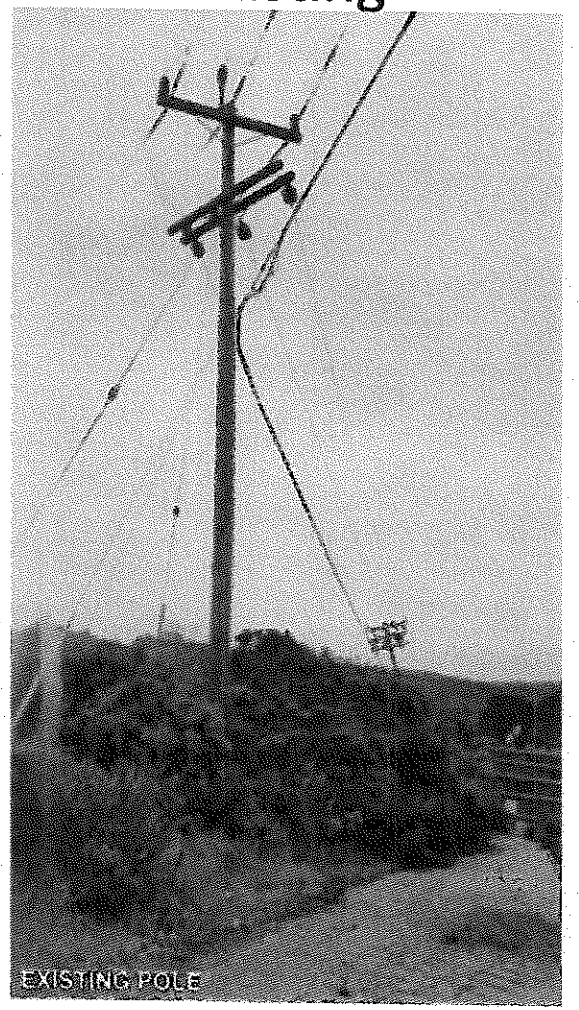
DAV-018 – .25 MILE RADIUS

DAV-018 – ZONING

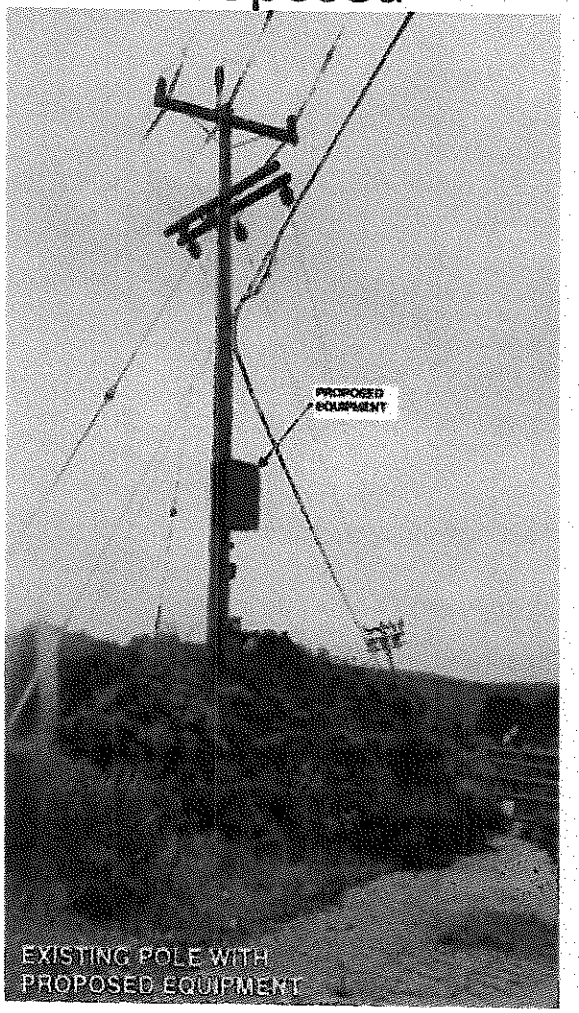


DAV-018 PHOTOSIMS

Existing

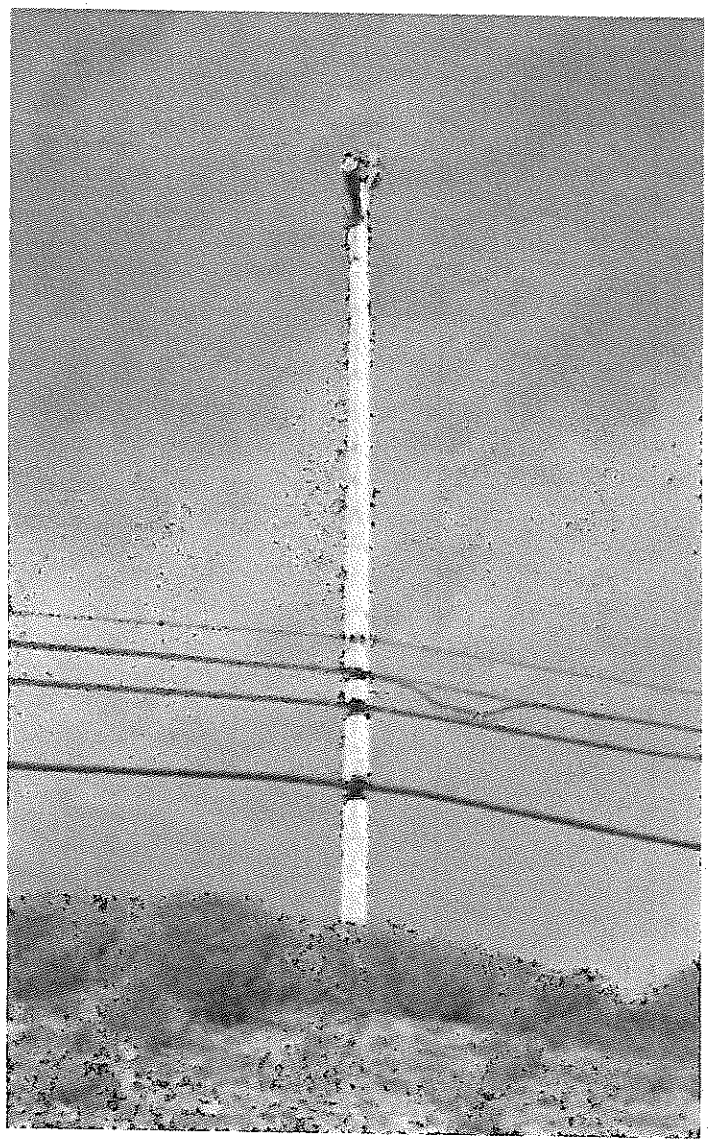


Proposed



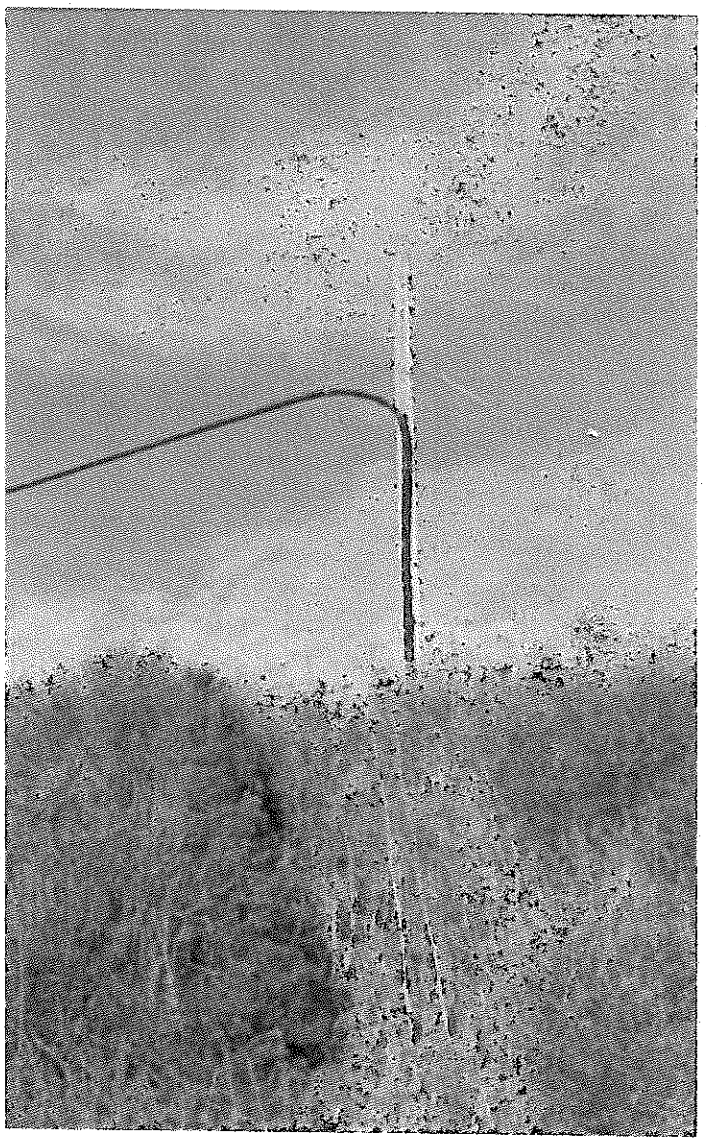
DAV-018 – Alternatives Overview

DAV-018 – Alternative 1



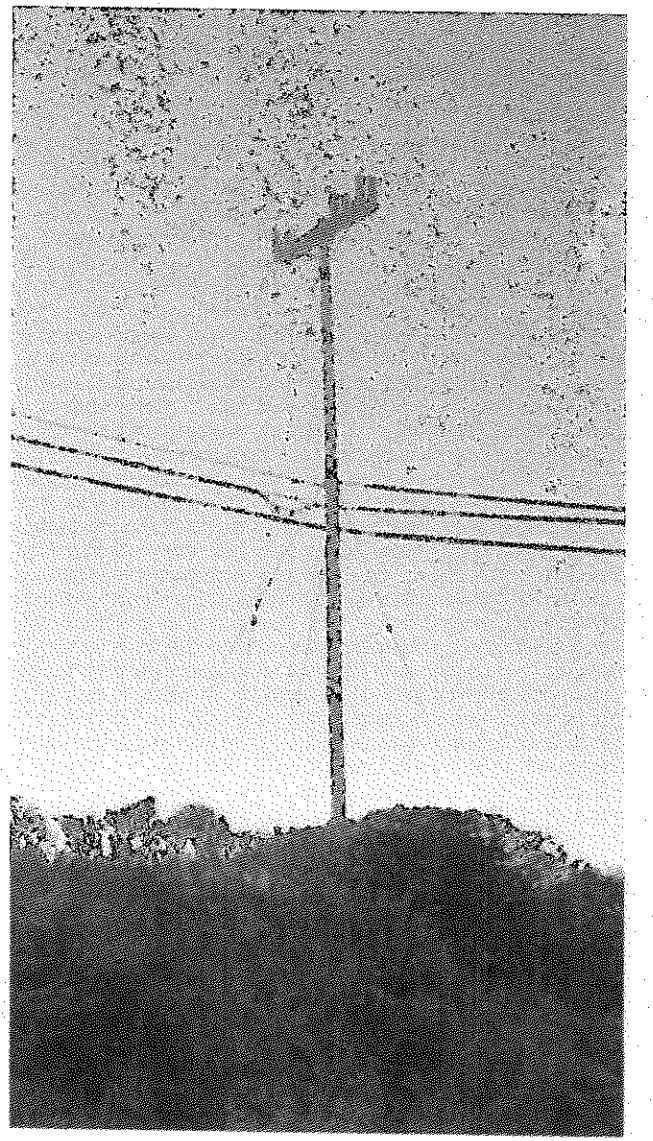
This location would be slight further South than the primary candidate, and we had an issue determining a location to bring in power, which ultimately comes from the primary candidate. Less impact by using primary location.

DAV-018 – Alternative 2



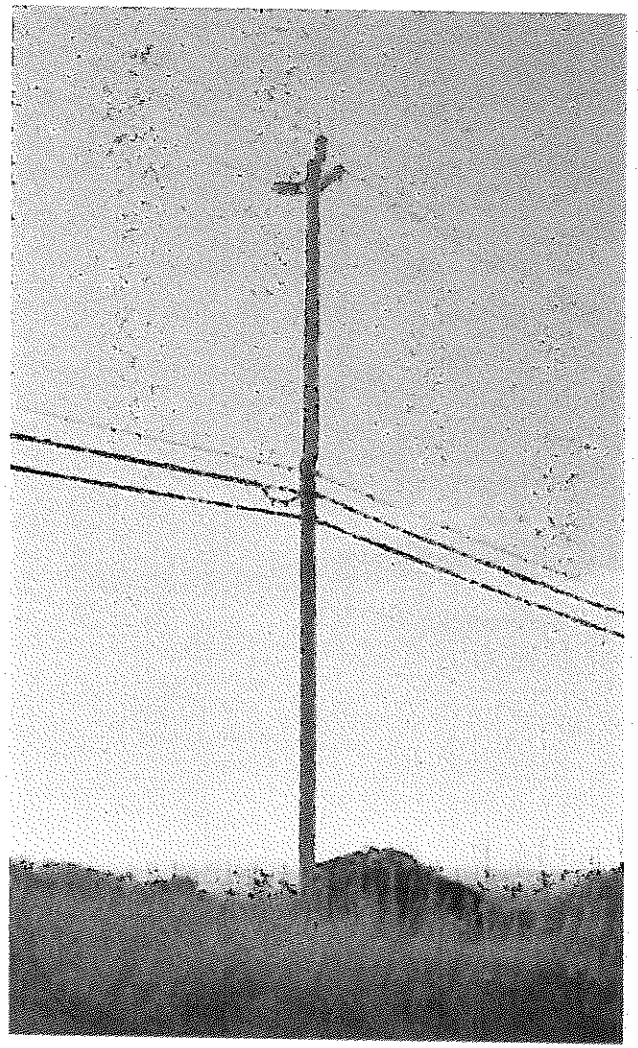
Site would allow for a clean installation, however this location is not controlled by the JPA, thus eliminating the location as a viable candidate.

DAV-018 – Alternative 3



Site is too far South for us to use, would require an additional site to the North, versus the primary candidate which meets our coverage objectives

DAV-018 – Alternative 4



Site is way too far South for us to use, would require an additional site to the North, versus the primary candidate which meets our coverage objectives.

CROWN CASTLE

DAV-019 DESIGN/SITE ALTERNATIVES

DAV-016-022 NODE LOCATIONS

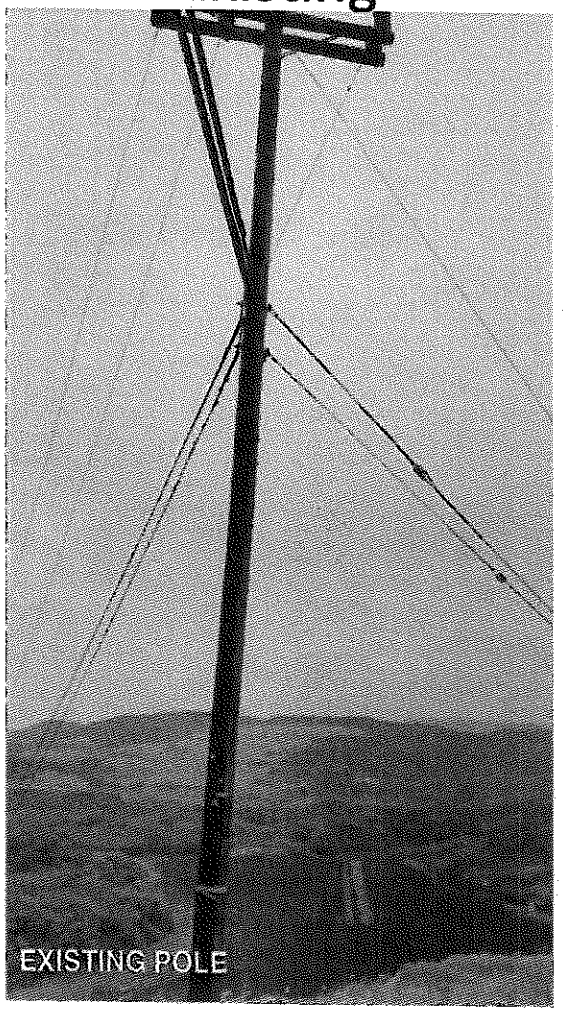
DAV-019 OVERVIEW

DAV-019 – .25 MILE RADIUS

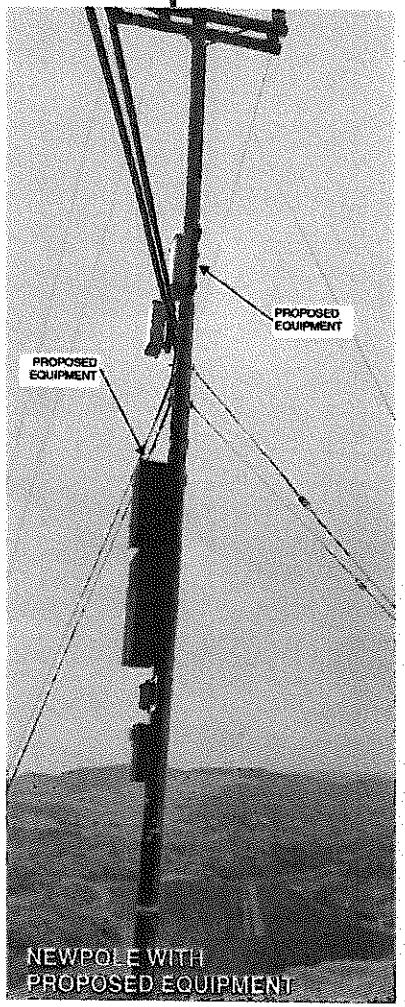
DAV-019 – ZONING

DAV-019 PHOTOSIMS

Existing

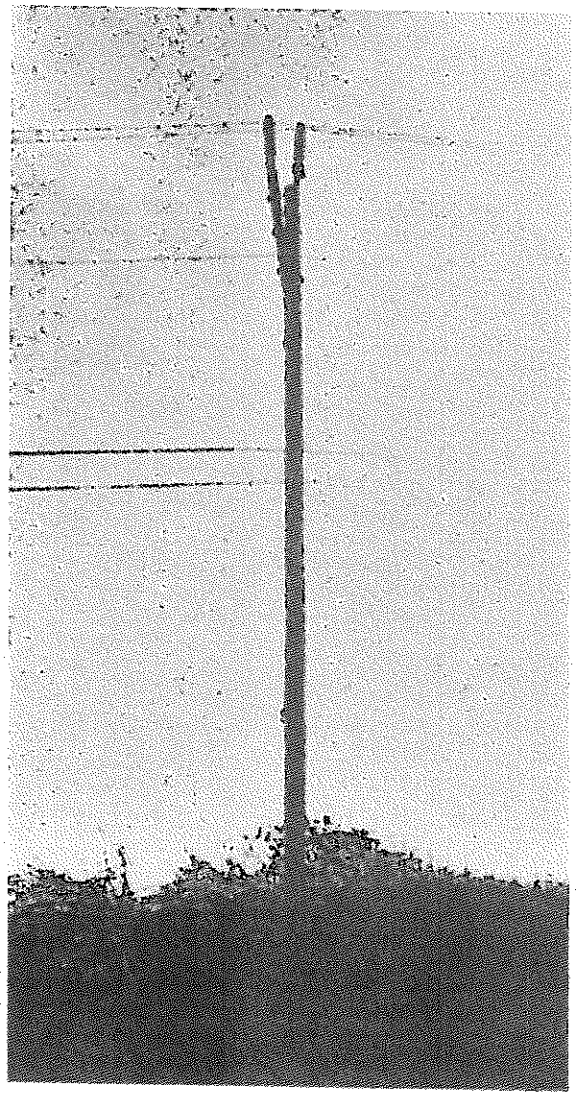


Proposed



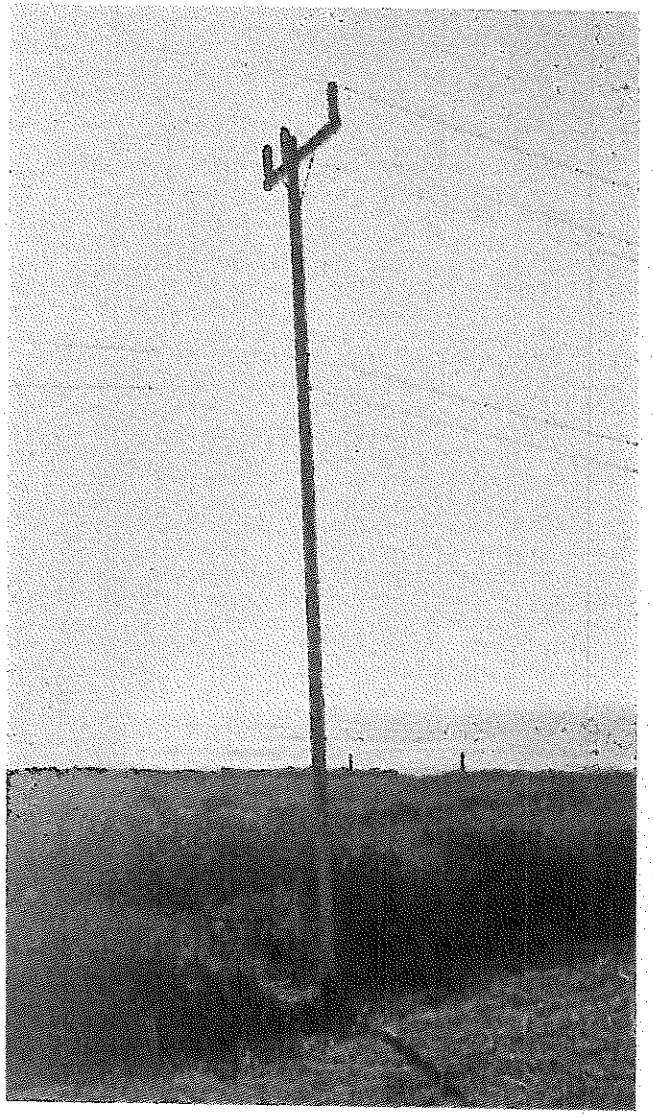
DAV-019 – Alternatives Overview

DAV-019 – Alternative 1



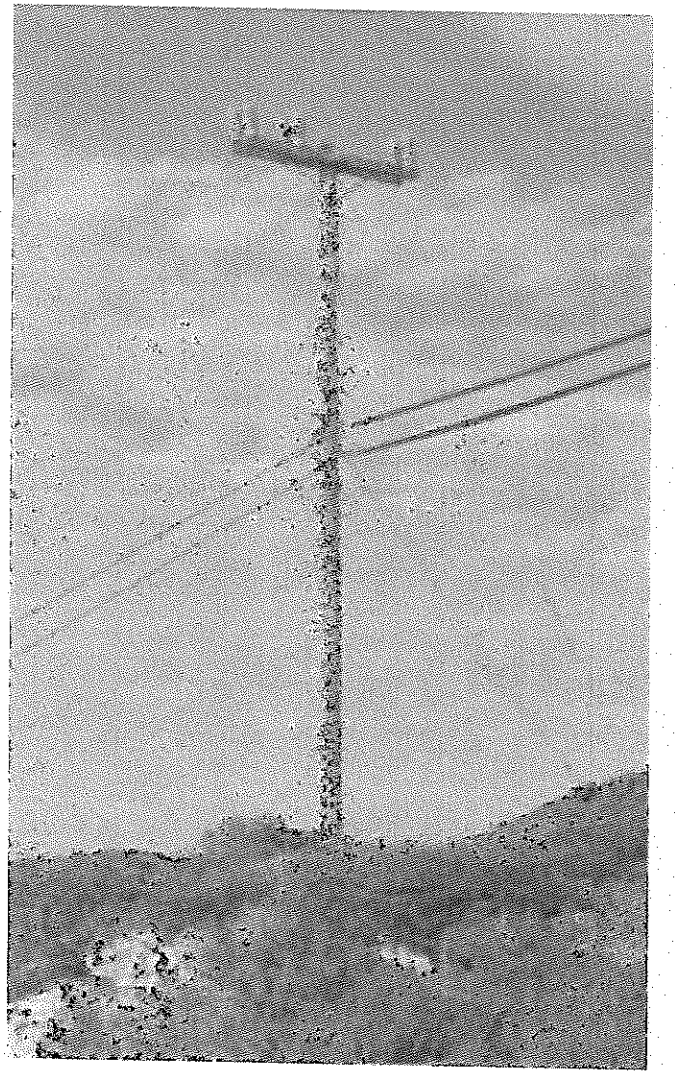
Pole would be feasible from a "construction standpoint", but this location is on the Coastal side of Highway 1, thus prohibited

DAV-019 – Alternative 2



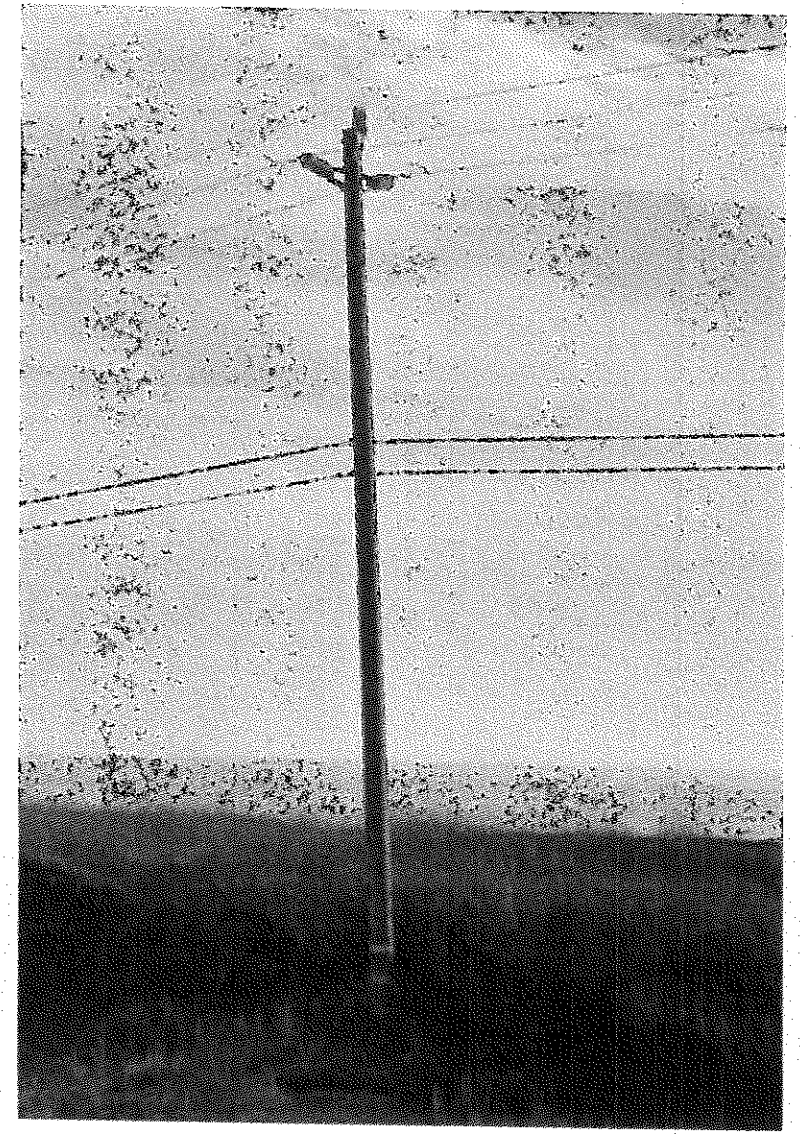
Pole would be feasible from a "construction standpoint", but this location is on the Coastal side of Highway 1, thus prohibited

DAV-019 – Alternative 3



Location would work for RF, however there is a primary riser located on the pole, and 6 "insulators" which impacts our antenna placement.

DAV-019 – Alternative 4



Pole would be feasible from a "construction standpoint", but this location is on the Coastal side of Highway 1, thus prohibited

CROWN CASTLE

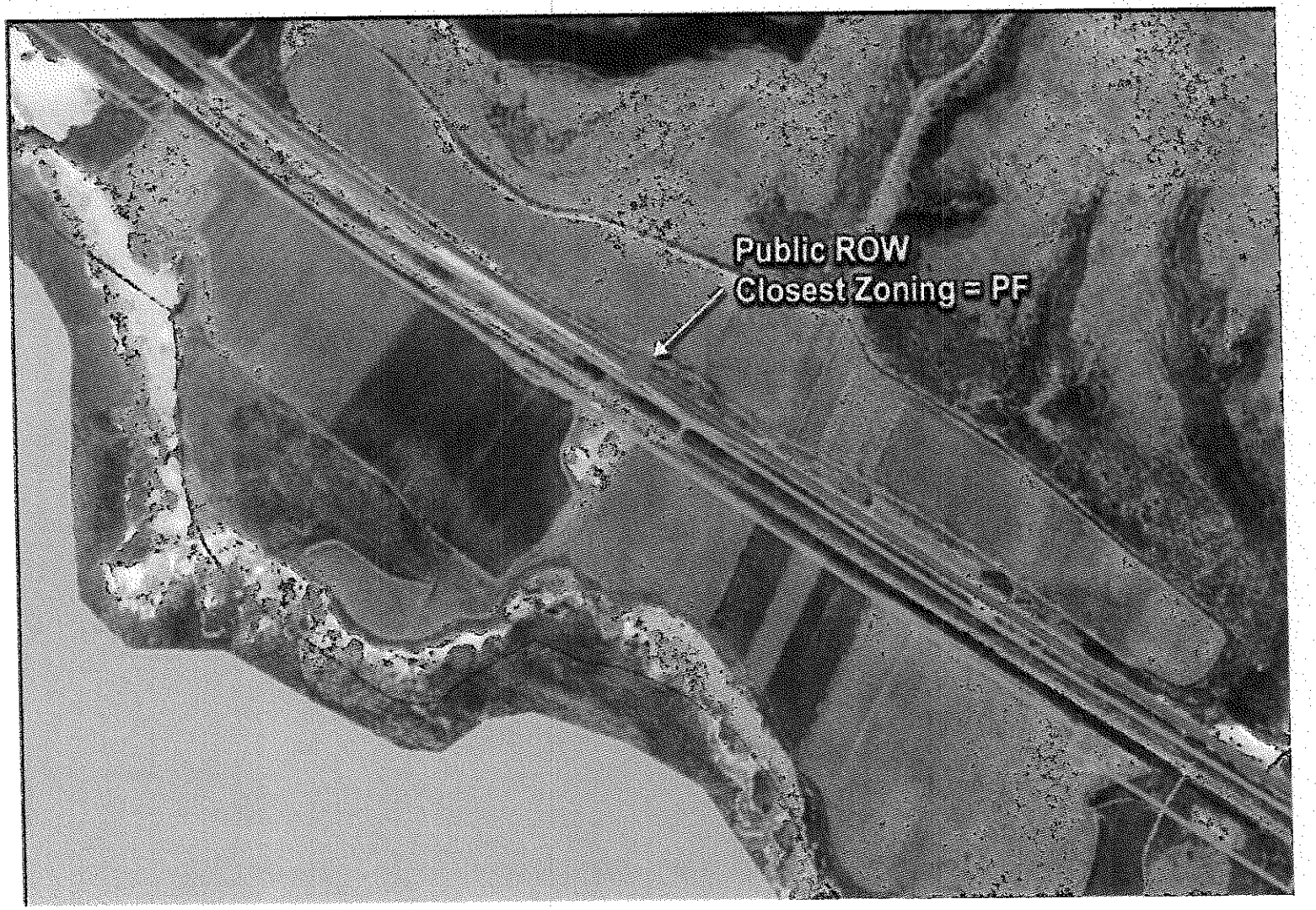
DAV-020 DESIGN/SITE ALTERNATIVES

DAV-016-022 NODE LOCATIONS

DAV-020 OVERVIEW

DAV-020 – .25 MILE RADIUS

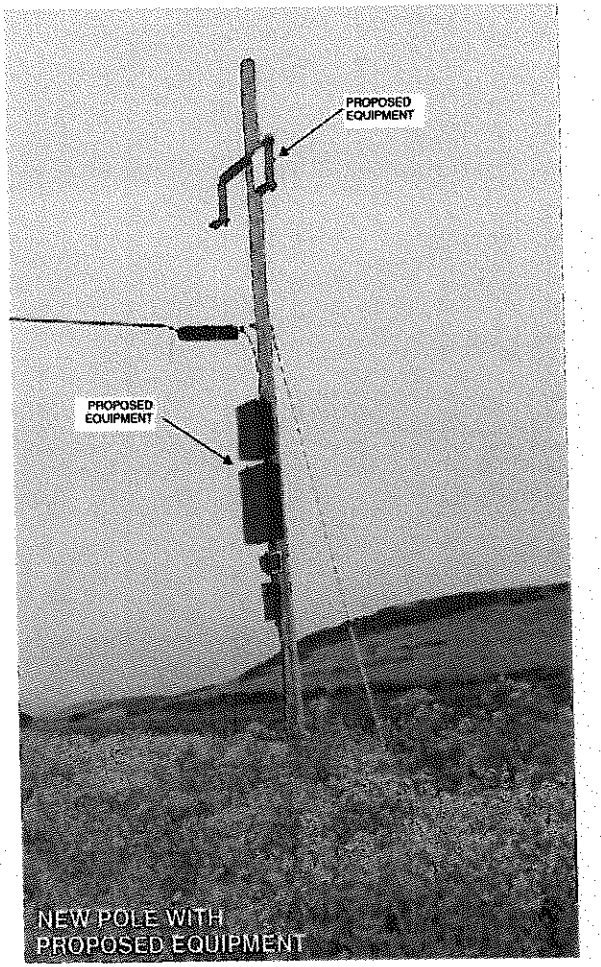
DAV-020 – ZONING



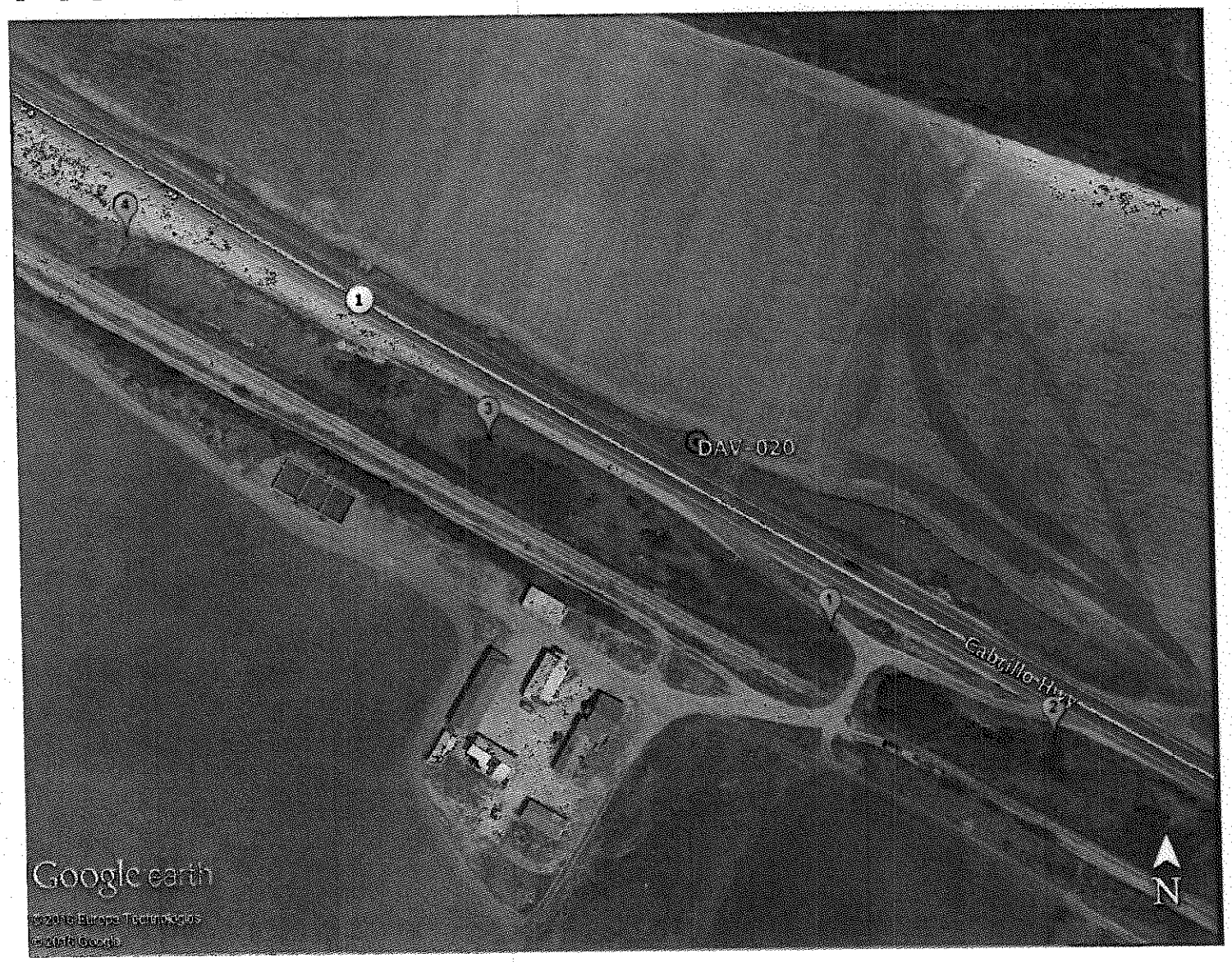
DAV-020 PHOTOSIMS

Existing

Proposed



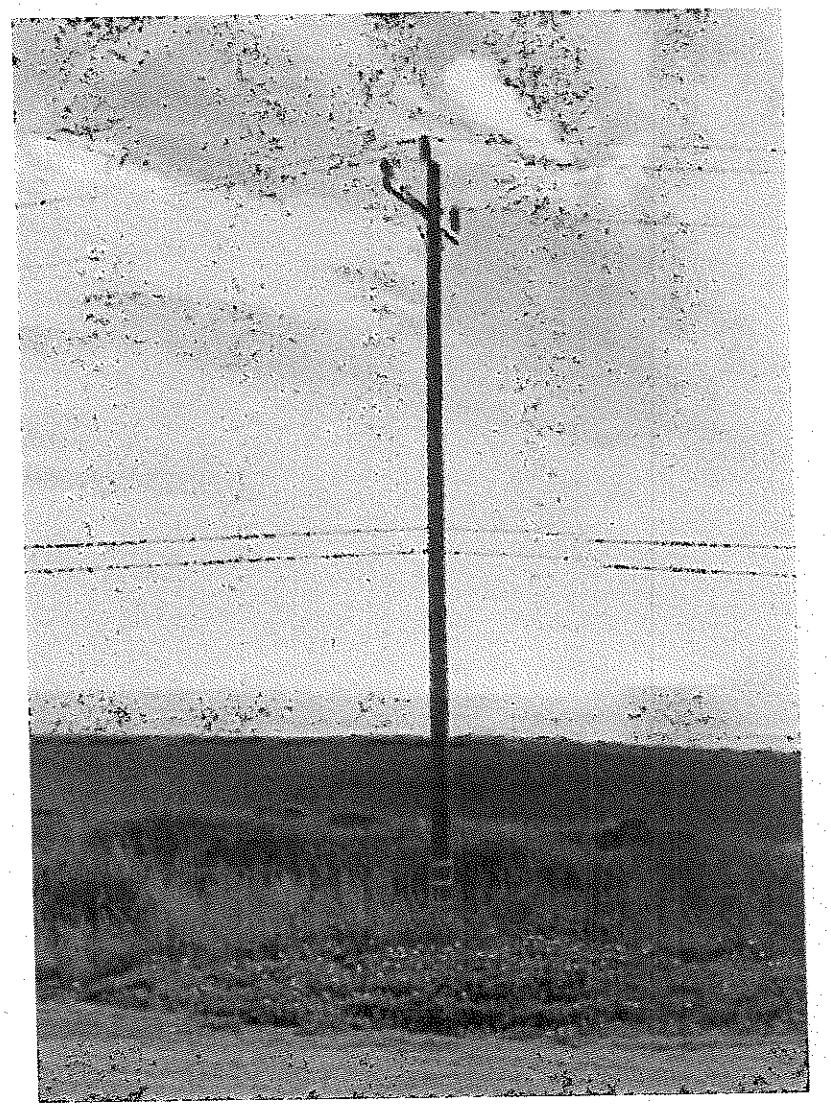
DAV-020 – Alternatives Overview



DAV-020 – Alternative 1

Pole would be feasible from a "construction standpoint", but this location is on the Coastal side of Highway 1, thus prohibited.

DAV-020 – Alternative 2

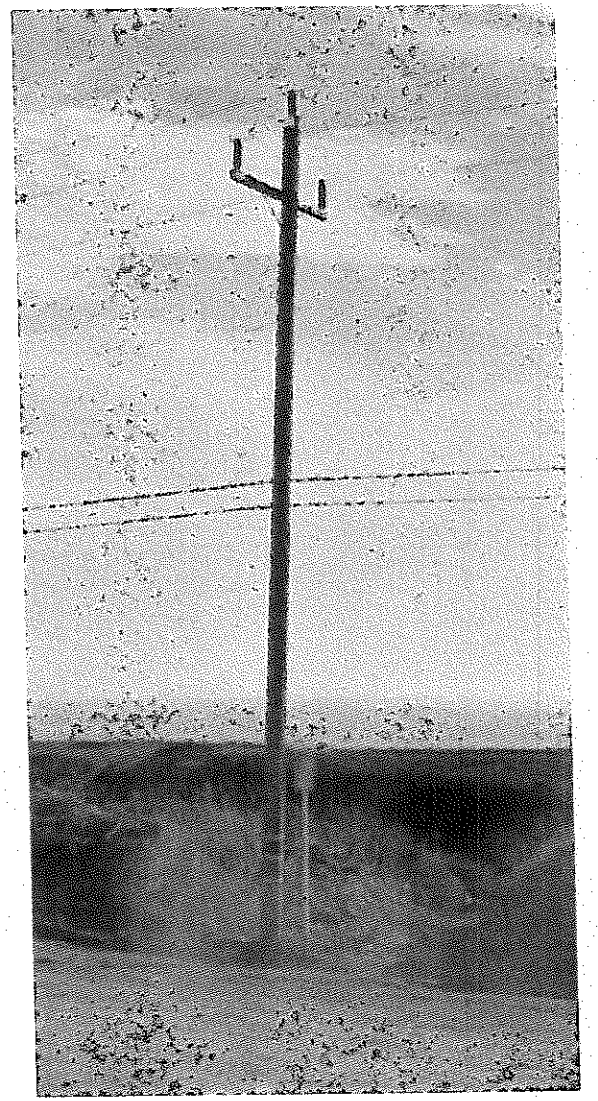


Pole would be feasible from a "construction standpoint", but this location is on the Coastal side of Highway 1, thus prohibited.

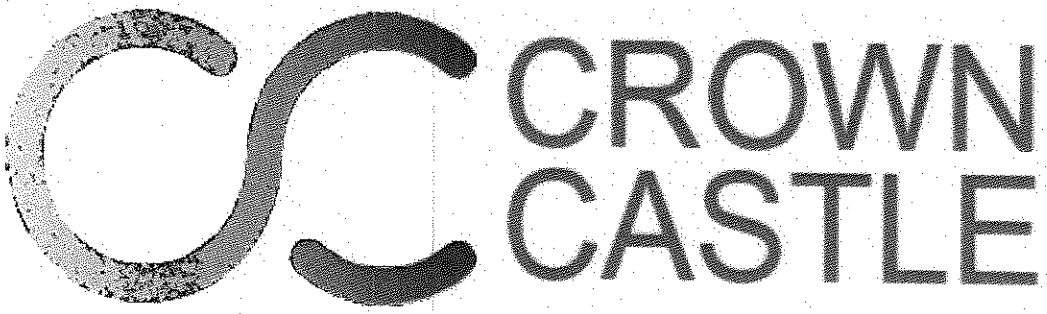
DAV-020 – Alternative 3

Pole would be feasible from a "construction standpoint", but this location is on the Coastal side of Highway 1, thus prohibited. Also adjacent to a residential property.

DAV-020 – Alternative 4

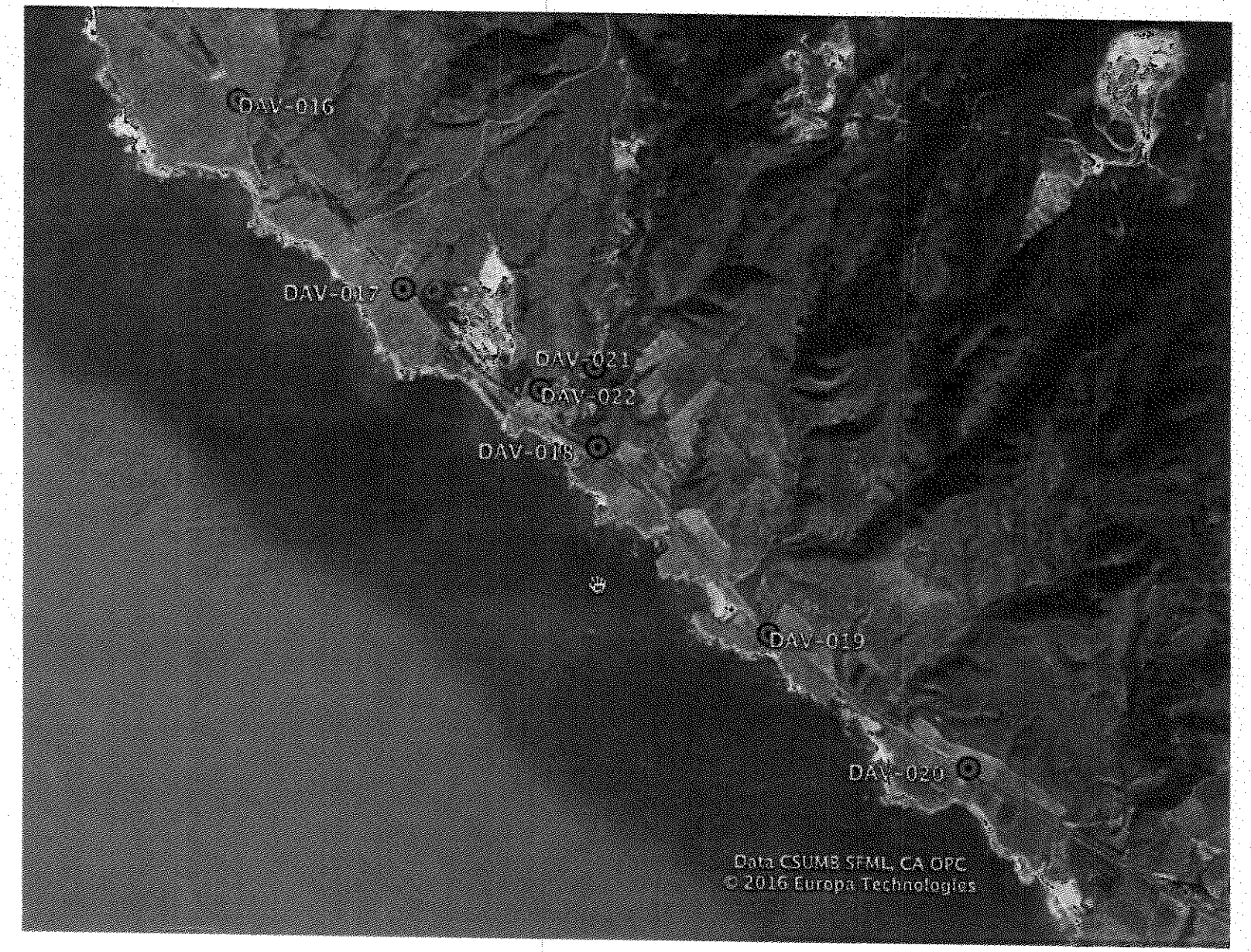


Pole would be feasible from a "construction standpoint", but this location is on the Coastal side of Highway 1, thus prohibited.



DAV-021 DESIGN/SITE ALTERNATIVES

DAV-016-022 NODE LOCATIONS



CROWN CASTLE

05/13/2017

Verizon Davenport
(gap btwn nodes 4-5)

DAV-022m2

The Foundation for a Wireless World.

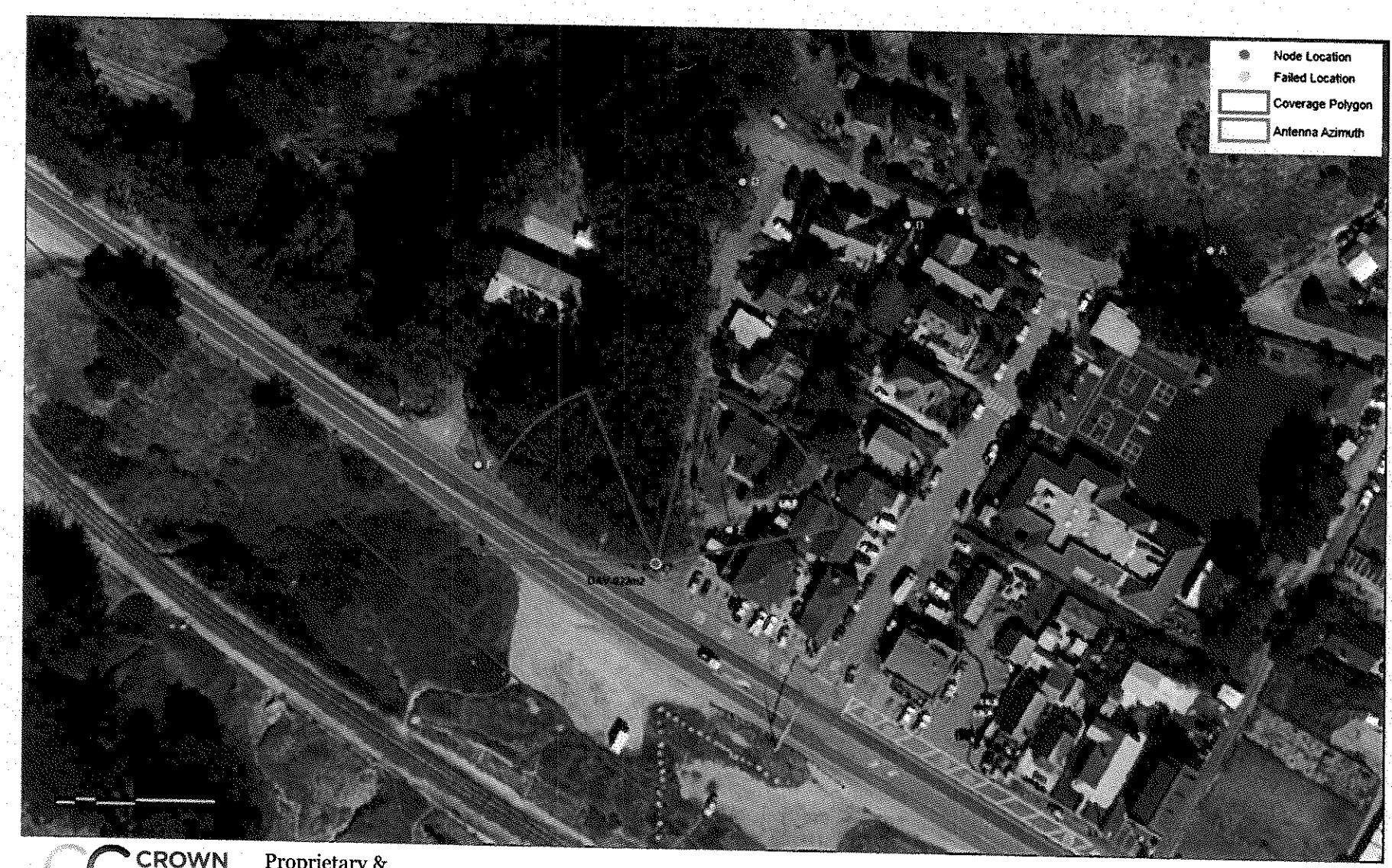
Summary

- All the nodes will be transmitting LTE 700 MHz and CDMA 850 MHz.
- Only DAV-018, DAV-021m and DAV-022m2 will be transmitting LTE 2100 MHz inside the town of Davenport. These nodes will provide capacity to the network.
- Page 3, shows a map with failed locations that were survey before for DAV-022m2. See comments below for each location.

Node ID	Latitude	Longitude	Comments
A	37.012428	-122.194342	Utility Pole: County discourage this location to proximity to the Pacific Elementary School.
B	37.012472	-122.195187	Utility Pole: County discourage this location to proximity to residents. Access would be an issue.
C	37.012507	-122.195041	Utility Pole: Next to Gas lines.
D	37.012561	-122.195649	New Pole: County discourage this location because it's across resident's rooms.
E	37.011786	-122.195680	Utility Pole: Private property. No room for ground equipment and would block view of residents.
F	37.011919	-122.196384	Utility Pole: Does not meet coverage objective. Also, the utility pole has a disconnect switch.

- Benchmark data is only available for the following frequency:
  - Page 4: 700 MHz LTE
- Currently there's no 700 MHz coverage.
- Pages 5 thru 13 show CW results for DAV-022m2 for each frequency. The below setup is the same for LTE 700 MHz, CDMA 850 MHz and LTE 2100 MHz.
  - Page 5: Shows DAV-022m2 ON and all the other nodes OFF.
  - Page 6: Shows DAV-022m2 OFF and all the other nodes ON.
  - Page 7: Shows DAV-022m2 ON and all the other nodes ON.

Failed Locations



CW Results – DAV-022m2

700 MHz Band (LTE Benchmark)

Current Coverage

CW Results – DAV-022m2

700 MHz Band (LTE)

DAV-022m2 ON and all the other nodes OFF.

CW Results – DAV-022m2

700 MHz Band (LTE)

DAV-022m2 OFF and all the other nodes ON.

CW Results – DAV-022m2

700 MHz Band (LTE)

DAV-022m2 ON and all the other nodes ON.

CW Results – DAV-022m2

850 MHz Band (CDMA)

DAV-022m2 ON and all the other nodes OFF.

CW Results – DAV-022m2

850 MHz Band (CDMA)

DAV-022m2 OFF and all the other nodes ON.

CW Results – DAV-022m2

850 MHz Band (CDMA)

DAV-022m2 ON and all the other nodes ON.

CW Results – DAV-022m2

2100 MHz Band (LTE)

DAV-022m2 ON and all the other nodes OFF.

CW Results – DAV-022m2

2100 MHz Band (LTE)

DAV-022m2 OFF and all the other nodes ON.

CW Results – DAV-022m2

2100 MHz Band (LTE)

DAV-022m2 OFF and all the other nodes ON.

Thank You

FOR FURTHER INFORMATION
PLEASE CONTACT:

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Attachment 5

APPLICATIONS 161248-161253; 171059
(DAV 016-DAV 023)

Biotic Report

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Biological Resource Assessment

Davenport Gap Telecommunications Project
Santa Cruz County, California

August 2017

Prepared for:

Crown Castle
695 River Oaks Parkway
San Jose, CA 95134
Contact: Sharon James
Phone: (408) 468-5553

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Summary

The Davenport Gap Communications Project is situated just both to the north and south of the Town of Davenport, Santa Cruz County, California. This project is being undertaken to continue to provide telecommunications services to the local area through the replacement of an existing communications system. Synthesis Planning was retained by Crown Castle International to perform this Biological Resources Assessment for the proposed project.

Seven (7) vegetation communities were observed within the study area and include the following: 1) *Salix lasiolepis* shrubland alliance or arroyo willow thickets; 2) *Eucalyptus (globulus, camaldulensis)* semi-natural woodland stands or Eucalyptus groves; 3) *Baccharis pilularis* shrubland alliance or coyote bush scrub; 4) *Artemisia californica* shrubland alliance or California sagebrush scrub; 5) non-native grassland; 6) ruderal vegetation; 7) agricultural land. As part of this Biological Resource Assessment, we also evaluated the potential for occurrence of special-status plant species and special-status wildlife species.

Steelhead are known to occur within San Vicente Creek. No impacts to the species were identified at this time.

California red-legged frog have been reported in the proposed project area, including in the immediate vicinity of the DAV-019m project site (CNDDB 2017).

There is a high potential for nesting avian species to occur within the project area.

Best Construction Practices and Avoidance and Minimization Measures as well as Mitigation Measures to prevent take of individuals discussed above are included in this report.

List of Acronyms and Abbreviations

BRA	Biological Resource Assessment
CCC	California Coastal Commission
CCI	Crown Castle International
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Base
CNPS	California Native Plant Society
CRF	California red-legged frog
CSC	California Species of Concern
USACE	US Army Corps of Engineers
FESA	Federal Endangered Species Act
MBTA	Migratory Bird Treaty Act
NMFS	National Marine Fisheries Service
NPDES	National Pollution Discharge Elimination System
OHWM	Ordinary High Water Mark
RWQCB	Regional Water Quality Control Board
SWPPP	Stormwater Pollution Prevention Plan
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
UTM	Universal Trans Mercator
WHR	Wildlife Habitat Relationships

1.0 Introduction

The purpose of this Biological Resource Assessment is to provide technical information and to review the Davenport Gap Telecommunications Project proposed study area, located in and around Davenport, Santa Cruz County (Appendix A, Figures 1 and 2). This project is being undertaken to continue to provide telecommunications services to the local area through the replacement of an existing communications system. Synthesis Planning prepared this Biological Resources Assessment (BRA) to provide sufficient detail to determine the potential effects of the proposed project on federally- and state-listed wildlife and plant species. This BRA was conducted to determine the potential for special-status vegetation communities, plant and animal species to occur within the project study area, and to identify the limitations to potential development of the project. The BRA is prepared in accordance with legal requirements found in Section 7 (a)(2) of the Endangered Species Act (16 U.S. C 1536(c)) and also provides information required for an Initial Study/Mitigated Negative Declaration as part of the California Environmental Quality Act (CEQA) review for the project. The document presents technical information upon which later decisions regarding project affects are developed.

1.1 Reason for the Project

The project is being undertaken to continue to provide telecommunications services to the local area. Crown Castle International (CCI) already has an existing communications system in the local area. However, that system relies on a number of antennas that are currently installed on a tall smokestack currently located on the Cemex Cement Plant property. This property is currently under plans to be redeveloped, and the cement plant will be removed in its entirety, including the tall smokestack. With the loss of the smokestack, CCI will have to relocated its antennas to other locations to cover the local area. After a long process of determining the best locations, CCI arrived at the seven (7) locations analyzed in this report.

1.2 Project Sponsor

The project is proposed by CCI. The contact person is:

Name: Sharon James
Address: Crown Castle
695 River Oaks Parkway
San Jose, CA 95134
Phone: (408) 468-5553

1.3 Project Description

1.3.1 Location

The proposed project study area is situated along Highway 1 both south and north of the Town of Davenport. The project sites are found both on the east and west side of State Highway 1

(see Appendix A, Figures 1 and 2). The project area is located in Sections 29, 32, and 33 of the Davenport 7.5- minute topographic quadrangle, and Sections 3, 4, and 11 of the Santa Cruz 7.5-minute topographic quadrangle. The project sites are located within Township 10S and Range 3W, and Township 11S and Range 3W. Surrounding land uses consist of mainly agriculture, residential and pastures.

1.3.2 Proposed Action

The project is being undertaken to continue to provide telecommunications services to the local area. Crown Castle International (CCI) already has an existing communications system in the local area. However, that system relies on a number of antennas that are currently installed on a tall smokestack currently located on the Cemex Cement Plant property. This property is currently under plans to be redeveloped, and the cement plant will be removed in its entirety, including the tall smokestack. With the loss of the smokestack, CCI will have to relocated its antennas to other locations to cover the local area. The following project description describes the installation of seven (7) new nodes and ancillary equipment to replace the existing communications system.

DAV-016m3 Node

The proposed project consists of installation of a new wooden utility pole that will replace an existing 32-foot tall wooden utility pole. The new pole will measure approximately 40 feet above ground level. The pole will be installed by PG&E, or a private contractor approved to conduct such work, in the project area. A handheld power auger will be used to drill a new hole for the wooden pole. Workers will access the site from Swanton Road. A helicopter, or crane temporarily positioned at the eastern shoulder of State Highway 1, will be used to lift and place the new pole. Soil will then be backfilled into the hole and compacted. Crown Castle would then install communications equipment on the newly installed wooden pole. The equipment would be installed by workers climbing the pole. Equipment to be installed would include a support arm mounted in line with direction of Hwy 1 with two (2) antennas painted to match the new wood pole. A PG&E power meter and other equipment would be installed on a H-Frame screened with a grape stake fence just to the north of the pole, and native vegetation would be planted to provide further screening of the equipment. The equipment on the H-frame will be connected via electrical and fiber-optic cable installed under the ground surface via trenching from the new wooden pole and an existing wooden Telco located approximately 30 feet to the southeast.

DAV-017 Node

The proposed project consists of the installation of a support arm mounted in line with the direction of Cement Plant Road with two (2) antennas, radio equipment, and a meter panel (all painted to match existing wooden pole) on the west side of the existing utility pole. Additionally, a 2 feet x 3 feet vault box would be installed underground using a backhoe approximately 3 feet north of the existing utility pole. Approximately 3 feet of electrical and

fiber-optic cable would be installed under the ground surface via trenching. The equipment would be installed on the pole using a bucket truck.

DAV-018 Node

The proposed project consists of installation of a new wooden utility pole that will replace an existing 35-foot tall wooden utility pole. The new pole will measure approximately 43 feet above ground level. The pole will be installed by PG&E, or a private contractor approved to conduct such work in the project area. A handheld power auger will be used to drill a new hole for the wooden pole. A helicopter will be used to lift and place the new pole. Soil will then be backfilled into the hole and compacted. Crown Castle would then install communications equipment on the newly installed wooden pole. A crane, temporarily positioned at the eastern shoulder of State Highway 1, will be used to lift all equipment to the site. The equipment would be will be installed on the pole by workers climbing the pole. Equipment to be installed would include a support arm mounted in line with direction of Hwy 1 with two (2) antennas painted to match the new wood pole. A ground mounted equipment cabinet with a meter panel would be installed on a concrete pad and painted green, or an approved color, to match surrounding vegetation (top and sides). The concrete for the pad will be pumped from the shoulder of State Highway 1. The equipment cabinet would be installed approximately 40 feet to the northeast of the wooden utility pole. The ground mounted equipment cabinet would be connected via electrical and fiber-optic cable installed under the ground surface via trenching to the proposed node location (40 feet of trenching). Electrical equipment will be installed on an existing wooden pole approximately 130 feet northwest of the site just off of Old Coast Road. The equipment will be installed using a bucket truck parked on Old Coast Road and will be painted to match the existing pole or an approved color. There will be no ground disturbance at this pole. Power to the site will be transmitted via overhead lines.

DAV-019m Node

The proposed project consists of installation of a new wooden utility pole that will replace an existing 32-foot tall wooden utility pole. The new pole will measure approximately 43 feet above ground level. The pole will be installed by PG&E, or a private contractor approved to conduct such work in the project area. A handheld power auger will be used to drill a new hole for the wooden pole. A helicopter will be used to lift and place the new pole. Soil will then be backfilled into the hole and compacted. Crown Castle would then install communications equipment on the newly installed wooden pole. A crane, temporarily positioned at the eastern shoulder of State Highway 1, will be used to lift all equipment to the site. The equipment would be will be installed on the pole by workers climbing the pole. Equipment to be installed would include a support arm mounted in line with direction of Hwy 1 with two (2) antennas painted to match the new wood pole. A ground mounted equipment cabinet with a meter panel would be installed on a concrete pad and painted green, or an approved color, to match surrounding vegetation (top and sides). The concrete for the pad will be pumped from the shoulder of State Highway 1. The equipment cabinet would be installed approximately 52 feet to the east of the wooden utility pole and located on remnants of the existing pavement of the Old Coast Road.

The ground mounted equipment cabinet would be connected via electrical and fiber-optic cable installed under the ground surface via trenching.

DAV-020m Node

The proposed project consists of installation of a 5 feet tall pole top extension mounted on an existing 26 foot tall wooden utility pole with antennas mounted above it to approximately 32 feet. Crown Castle would then install communications equipment on the pole and extension using and bucket truck. Equipment to be installed would include two (2) antennas on the top of the extended pole and a meter panel, electrical disconnect, and battery backup cabinet on the pole, all painted to match the color of the wood pole. A raised concrete pad, painted to match surrounding vegetation, with an inset equipment vault, would be placed approximately 7 feet northwest of the pole. The proposed concrete pad would measure 6 feet by 17.5 feet. The inset vault would measure approximately 4 feet by 6 feet. And has with two ventilation grates each approximately 3.5 feet x 3.5 feet. In addition, a 3 feet wide gravel apron would be installed around the vault pad. Twelve 5 feet tall bollards, painted yellow, would be also installed surrounding the vault pad. A back hoe will be used to excavate the vault area and a small crane positioned on the shoulder of Hwy 1 will be used to place the vault. Underground conduits would be installed between the proposed inset vault and the extended pole, and from the extend pole to an existing pole on the south side of State Highway 1. This installation would be achieved through both trenching and boring.

DAV-021m Node

The proposed project consists of installation of a 5 feet tall pole top extension mounted on an existing 25-foot tall wooden utility pole with antennas mounted above it to approximately 34 feet. Crown Castle would then install communications equipment on the pole a bucket truck. Equipment to be installed would include two (2) antennas on the top of the extended pole. The antennas and pole top extension would be painted green, or an approved color, to match the color of the surrounding foliage. In addition, associated radio and electrical equipment would be installed on the pole and painted to match the pole. A 2 feet by 3 feet underground vault box would be installed approximately 3 feet northwest of the existing wood pole. In addition, underground conduits, achieved through trenching, would be installed under San Vicente Street approximately 29 feet northwest to an existing wooden utility pole on which electrical equipment will be added. The equipment will be painted to match the pole. An existing sign on the antenna pole and an existing sign on the power pole, both in violation of PG&E safety rules, will be removed per PG&E direction and placed on new posts approximately 6 feet to the west of each pole.

DAV-022m2 Node

The proposed project consists of installation of a new wooden utility pole that will measure 43 feet tall above ground level. The pole will be installed by a private contractor approved to conduct such work in the project area. A backhoe will be used to drill a new hole for the

wooden pole. A bucket truck crane will be used to lift and place the new pole. Soil will then be backfilled into the hole and compacted. Crown Castle would then install communications equipment on the newly installed wooden pole. The equipment would be installed using a bucket truck. Equipment to be installed would include a two (2) antennas. The antennas and the upper portion of the pole will be painted an approved color to match the surrounding foliage. A ground mounted equipment cabinet would be installed on a concrete pad with a meter panel painted brown, or an approved color, approximately 70 feet northwest of the new wood pole. The ground mounted equipment cabinet would be connected via electrical and fiber-optic cable installed under the ground surface via trenching. A 2 feet by 3 feet underground vault box would be installed approximately 7 feet northwest of the new wood pole. The proposed node would be connected via cables installed under the ground surface via trenching, 4 feet of fiber-optic cable to the proposed underground vault box and via electric cable to the PG&E connection point.

Staging Areas and Fueling

Storage areas for contractor equipment and materials will be determined prior to project construction activities. CCI, with the assistance of a biologist, will review the local project area and locate staging areas that are in previously disturbed areas that will not have potential to affect wildlife habitat or species. All staging areas must be approved by the County prior to use. In addition, to prevent contamination of fuel into sensitive habitats, including streams and wetlands, the following measures will apply:

- The use or storage of petroleum-powered equipment shall be accomplished in a manner to prevent the potential release of petroleum materials into waters of the State and U.S.,

- Areas for fuel storage, refueling and servicing of construction equipment must be located in an upland location,

- Wash sites must be located in upland locations to ensure wash water does not flow into the stream channel or adjacent wetlands.

- All construction equipment must be in good working condition, showing no signs of fuel or oil leaks. All questionable motor oil, coolant, transmission fluid, and hydraulic fluid hoses, fittings and seals shall be replaced. The mechanical equipment shall be inspected on a daily basis to ensure no leaks. All leaks shall be repaired in the equipment staging area or other suitable location prior to resumption of construction activity.

- Oil absorbent and spill containment materials shall be located on site when mechanical equipment is in operation within 100 feet of waterway. If a spill occurs, no additional work shall occur in-channel until, 1) the mechanical equipment is inspected by the contractor and the leak has been repaired, 2) the spill has been contained, and 3) CDFW and NMFS are contacted and have evaluated the impacts of the spill.

1.3.3 Construction Scheduling

The estimated time period for construction is 120 working days for the whole project. Work will begin as soon as all regulatory clearances and permits are obtained.

1.3.4 Operations and Maintenance

The facilities would be constructed to current construction-industry standards and codes.

1.3.5 Construction Best Management Practices

Construction BMPs will be incorporated in the construction of the project and include, but are not limited to, the following:

- To avoid debris contamination into drainages and other sensitive wildlife habitats, silt fence or other sediment control devices will be placed around construction sites to contain spoils from construction excavation activities.

- Surveys for special-status species (i.e., plants, amphibians, birds, bats) by qualified biologists shall be conducted at the appropriate times before construction starts to determine occupancy at the site. If no special-status species are found, no further action other than the Best Management Practices identified above are required. If individuals are found, including plants or nesting birds, a buffer zone around the species or nest will be required at a sufficient distance to prevent take of individual plants, or until after the nesting season.

- Due to the potential for special-status species to occur, move through, or into the project area, an on-site biological monitor, shall at a minimum, check the ground beneath all equipment and stored materials each morning before construction starts to prevent take of individuals. All pipes or tubing 4 inches or greater shall be sealed by the relevant contractor with tape at both ends to prevent animals from entering the pipes at night. All trenches and other excavations shall be backfilled the same day they are opened, or shall have an exit ramp built into the excavation to allow animals to escape.

- Environmental Awareness Training shall be presented to all personnel working in the field on the proposed project site. Training shall consist of a brief presentation in which biologists knowledgeable of endangered species biology and legislative protection shall explain endangered species concerns. Training shall include a discussion of special-status plants and sensitive wildlife species. Species biology, habitat needs, status under the Endangered Species Act, and measures being incorporated for the protection of these species and their habitats shall also be discussed.

- Project site boundaries shall be clearly delineated by stakes and /or flagging to minimize

inadvertent degradation or loss of adjacent habitat during project operations. Staff and/or its contractors shall post signs and/or place fence around the project site to restrict access of vehicles and equipment unrelated to drilling operations.

1.4 AVOIDANCE AND MINIMIZATION MEASURES

The above measures will benefit other fish, amphibian and aquatic reptile species present on the site.

2.0 Study Methodology

This Biological Resource Assessment used the best available scientific and commercial data to evaluate the potential effects to biological resources from the proposed project. Literature review, aerial imagery and field surveys informed the descriptions of the vegetation communities, identification of present and past occurrences of special-status species in the vicinity of the proposed project, and the assessment of habitats for special-status animal species.

2.1 Literature Search

Information on special-status plant species was compiled through a review of the literature and database searches. Database searches for known occurrences of special-status species focused on the Davenport, Felton, and Santa Cruz U.S. Geologic Service 7.5-minute topographic quadrangles. The following sources were reviewed to determine which special-status plant and wildlife species have been documented in the vicinity of the project site:

- U.S. Fish and Wildlife Service (USFWS) quadrangle species lists (USFWS 2017)
- USFWS list of special-status animals for Sonoma County (USFWS 2017)
- California Natural Diversity Database records (CNDDB) (CNDDB 2017)
- California Department of Fish and Wildlife's (CDFW) Special Animals List (CDFW 2017)
- State and Federally Listed Endangered and Threatened Animals of California (CDFW 2017)
- California Native Plant Society (CNPS) Electronic Inventory records (CNPS 2017)
- Santa Cruz County General Plan Update 1994
- CDFG publication "California's Wildlife, Volumes I-III" (Zeiner et al. 1990)

The USFWS electronic list of Endangered and Threatened Species was queried electronically (www.fws.gov/sacramento/es_spp_lists-overview.htm). We also reviewed the CalFish IMAPS Viewer (www.calfish.org/DataandMaps/CalFishGeographicData), developed by CDFW Biogeographic Branch for analysis of fisheries.

The CDFW BIOS website and the *California Essential Habitat Connectivity Project: A strategy for conserving a connected California* (Spencer et al. 2010) were reviewed for wildlife movement information. The CDFW BIOS website and the CNDDB were review for documented nursery sites. Other sources of information regarding reported occurrences include locations previously reported to the U.C Berkeley Museum of Vertebrate Zoology and the California Academy of Sciences.

2.2 Personnel and Survey Dates

Cord Hute, wildlife biologist of Synthesis Planning, conducted botanical and biological surveys of the 7 project sites on May 26, June 8, July 12, August 12, August 21, and August 31, 2017.

Mr. Hute analyzed on-site and buffer area habitats for suitability for California red-legged frog as well as for other special-status wildlife species and plant species during these surveys.

Mr. Hute and Mr. Tom Mahoney, botanist of Coast Range Biological, conducted additional botanical and biological surveys of the 7 project sites on August 12 and 31, 2017.

Analysis of aerial photographs was conducted of adjacent habitat that could provide terrestrial habitat for CRF, and ponds and water bodies that could provide potential breeding habitat for CRF but from which have not been reported in the CNDDB. Habitats within 1.0 mile were evaluated for their potential to provide connectivity between sites for CRF.

2.3 Impact Assessment Methodology

We examined the on-site vegetation communities, present and past occurrence locations of federally and state listed species and federal and state species of concern within close proximity of the proposed project areas, and habitats for special-status plant and animal species. Based on the current site conditions, we evaluated the potential for occurrence on the site for special-status biological resources and used the project description to determine any potential direct or indirect effects.

We based our determination of whether the proposed project may result in adverse impacts to federally-listed special-status species, based on guidelines established by the USFW under Section 7(a) of the Federal Endangered Species Act (FESA), in which a project that may have an adverse effect impact on listed biological resources must be assessed. FESA states that, "each federal agency shall...insure that any *action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an "agency action") is not likely to jeopardize the continued existence of any endangered or threatened or result in the destruction or adverse modification of habitat of such species." Thus, components of the proposed project were deemed to have an adverse impact on special-status biological resources if they could result in effects as described in the above statement to any listed species or its habitat.

We based our determination of whether the proposed project may result in adverse impacts to State special-status species based on CEQA, the CDFW and the CNPS guidelines for special status plants and animals.

We also evaluated potential impacts from the project to habitats not occupied by species but for which habitats occurred.

3.0 Environmental Baseline

The project area is located within the North Coast Bioregion (Welsh 1994), a bioregion that encompasses the area from southwestern Oregon to southern Monterey County and contains the southern extent of the mixed hardwood forest with redwood. The North Coast Bioregion is delineated by the Pacific Ocean on the west and the Coast Ranges Mountains on the east and encompasses those lands west of the highest ridgeline dividing areas that drain directly into the Pacific Ocean from those areas that drain toward the interior (Welsh 1994). Habitats within this bioregion include both mesic (moist) habitats, such as freshwater marsh, and xeric (dry) habitats, such as chaparral, and are typical of a Mediterranean type climate. Average rainfall in the area is 40 inches (NCRCD 2004).

3.1 Wetlands and Waters of the U.S. and State

No wetlands or creek drainages were observed within the seven (7) proposed project sites during our surveys. San Vicente Creek is located southeast of the proposed DAV-021m project site and shows as a blue-line creek on the Davenport USGS quadrangle. San Vicente Creek has a well- developed and dense cover by willows and alders. This community type corresponds to the *Salix lasiolepis* shrubland alliance or arroyo willow thickets as described in *The Manual of California Vegetation* (Sawyer et. al. 2009). Please see Section 3 for a more detailed descriptions of this and other vegetation communities. The width of the creek at the ordinary high water mark was not observable due to the dense canopy cover by willows and alders. According to the San Vincente Creek Stream Habitat Assessment Report (CDFW 2013), San Vicente Creek is a F3 channel type for 5,932 feet of the stream surveyed in Reach 1, which starts at the Pacific Ocean and includes the portion of the creek within the study area.

San Vicente Creek qualifies as jurisdictional waters of the U.S. as defined by the U.S. Army Corps (USACE). The bed, bank and riparian vegetation along the creeks would be under the jurisdiction of the California Department of Fish and Wildlife (CDFW), Regional Water Quality Control Board (RWQCB) and the California Coastal Commission (CCC). Santa Cruz County has setbacks for riparian areas and wetlands (Santa Cruz County General Plan Chapter 5 dated 12/6/94).

3.2 Vegetation Communities

Seven vegetation community types were observed within the study area. Where appropriate vegetation community types are described using The Manual of California Vegetation (Sawyer, et. al. 2009). Vegetation types observed were: 1) *Salix lasiolepis* shrubland alliance or arroyo willow thickets; 2) *Eucalyptus (globulus, camaldulensis)* semi-natural woodland stands or Eucalyptus groves; 3) *Baccharis pilularis* shrubland alliance or coyote bush scrub; 4) *Artemisia californica* shrubland alliance or California sagebrush scrub; 5) non-native grassland; 6) ruderal vegetation; and 7) agricultural land.

1. *Salix lasiolepis* shrubland alliance or arroyo willow thicket occurs to the east of the DAV-

021m Project site within the buffer area. This vegetation community has a willow riparian canopy with herbaceous wetland plants such as rushes (*Juncus* spp.) and sedges (*Carex* ssp.) as understory species and qualifies as a wetland. Red alder (*Alnus rubra*), shining willow (*Salix lasiandra*) and Sitka willow (*Salix sitchensis*) were observed as part of the tree canopy. Other plant species noted included native blackberry *(Rubus ursinus*), non-native Himalayan blackberry (*Rubus armeniacus*), stinging nettles (*Urtica dioica*), manroot (*Marah fabaceus*), common horsetail (*Equisetum arvense*), calla lily (*Zantedeschia aethiopica*), and German ivy (*Delairea odorata*). The County of Santa Cruz identifies all riparian communities as sensitive natural communities in their General Plan (1994).

2. *Eucalyptus (globulus, camaldulensis*) semi-natural woodland stands or Eucalyptus grove was observed to the east of the DAV-022m2 within the project buffer area. Blue gum or *Eucalyptus globulus* was the dominant species observed in this habitat type. Typically there is very little herbaceous understory in this community type, which was the case for the project.

3. *Baccharis pilularis* shrubland alliance or coyote bush scrub (Sawyer et. al. 2009) occurs within portion of the project sites and buffer areas of the DAV-016m3, DAV-018, and DAV-019m project sites and represents the Northern (Franciscan) coastal scrub community type as described in *Preliminary descriptions of the terrestrial natural communities of California* by Robert Holland (1986). This community type is described as consisting of low, usually dense shrubs with scattered grassy openings. It typically occurs on windy exposed sites with shallow rocky soils. Plant species associated with this type include lizard tail (*Eriophyllum staechadifolium*), poison oak (*Toxicodendron diversilobum*), Douglas iris (*Iris douglasiana*), and seaside daisy (*Erigeron glaucus*).

4. *Artemisia californica* shrubland alliance or California sagebrush scrub (Sawyer et. al. 2009) occurs within portion of the project sites and buffer areas of the DAV-016m3, DAV-018, and DAV-019m. This is another coastal scrub community type and within the project area a co-dominant in this type is lizard tail. This type represents the Northern coastal bluff scrub community type as described in *Preliminary descriptions of the terrestrial natural communities of California* by Robert Holland (1986). This type consists of low, prostrate shrubs that form continuous mats. It occurs in areas exposed to nearly constant winds with high salt content. The soils are usually rocky and poorly developed. This type intergrades with costal prairie and northern coastal scrub in less exposed sites.

5. Non-native grassland was observed within portions of the project sites and buffer areas of the DAV-017, DAV-020m, and DAV-016m3 project sites. This vegetation type is comprised of non-native grasses and forbs and is a common type. Plant species associated with this type include wild oats (*Avena barbata, A. fatua*), soft chess (*Bromus hordaeceus*), ripgut brome (*Bromus diandrus*), ryegrass (*Festuca perennis*), Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), hare barley (*Hordeum murinum* ssp. *leporinum*), Harding grass (*Phalaris aquatica*), and velvet grass. Non-native weedy forbs associated with type include English daisy (*Bellis perennis*), Italian thistle (*Carduus pycnocephalus*), bristly ox-tongue (*Helminthotheca echioides*), English plantain (*Plantago lanceolata*), wild radish (*Raphanus*

sativus), and mallow (*Malva* sp.).

6. Ruderal vegetation was observed within portions of the project sites and buffer areas of the DAV-017, DAV-020m, DAV-021m, and DAV-022m2 project sites. This vegetation type is comprised mostly of non-native weedy herbaceous forb plants such as iceplant (*Carpobrotus chilensis, C. edulis*), wild radish, English plantain, cut-leaf plantain (*Plantago coronopus*), Bermuda buttercup (*Oxalis pescaprae*), Italian thistle, German ivy, mallow, and bristly ox-tongue.

7. Agricultural areas occur north of the DAV-020m and to the northwest and southeast of the DAV-019m project sites respectively. At the time of the site visits, these fields were generally fallow and had not been planted to any crop. Some of the fields were being disked and bare at the time of the site visit in preparation for planting. The majority of plants observed were weedy and invasive plant species including fennel (*Foeniculum vulgare*), mustard (*Brassica* sp.), Italian thistle (*Carduus pycnocephalus*), mallow (*Malva spp.*), milk thistle (*Silybum marianum*), wild oats (*Avena fatua*), and wild radish (*Raphanus sativus*).

3.3 Wildlife Habitats

Wildlife habitat classifications for this report is based on the California Department of Fish and Game's Wildlife Habitat Relationships (WHR) System (CDFG 1988) which places an emphasis on dominant vegetation, vegetation diversity and physiographic character of the habitat. The value of a site to wildlife is influenced by a combination of the physical and biological components of the immediate environment, and includes such features as type, size, and diversity of vegetation communities present and their degree of disturbance. As a plant community is degraded by loss of understory species, creation of openings, and a reduction in canopy area, a loss of structural diversity generally results. Degradation of the structural diversity of a community typically diminishes wildlife habitat quality, often resulting in a reduction of wildlife species diversity.

Vegetation communities are often classified based on the dominant plant species within the community. Wildlife habitats are typically distinguished by vegetation type, with varying combinations of plant species providing different resources for use by wildlife. As a result, wildlife habitats are often classified on a more inclusive manner of the structure of the habitat rather than the specifics of the plant species, resulting in several vegetation communities occurring under one type of wildlife habitat (Table 1).

The following is a discussion of existing wildlife habitats found within the proposed project sites and buffer areas, and the wildlife species they support.

Table 1: Vegetation Communities and Wildlife Habitat Corollary

Vegetation Community	Wildlife Habitat (WHR)
Arroyo Willow thickets	Valley foothill Riparian
Eucalyptus groves	Eucalyptus
Coyote bush scrub	Coastal scrub
California Sagebrush Scrub	
Non-native Grassland	Annual grassland
Ruderal Vegetation	Urban
Agricultural Land	Cropland

Valley-Foothill Riparian: This habitat supports insect diversity attractive to a variety of migratory birds and provides nesting habitat. Typically, diverse foraging substrates, such as foliage, bark and ground substrates, increase feeding availability. Birds that forage for insects in the leaves of plants include Bewick's wren (*Thryomanes bewickii*), and bushtit (*Psaltriparus minimus*). Bark-insect foraging species, such as downy woodpecker (*Picoides pubescens*), plain titmouse (*Parus inornatus*) and white-breasted nuthatch (*Sitta carolinensis*) forage for insects in the bark. There are a few species that are adapted to foraging for insects in flight, such as black phoebe (*Sayornis nigricans*), western wood pewee (*Contopus sordidulus*), orange-crowned warbler (*Vermivora celata*), and yellow-rumped warbler (*Dendroica coronata*). Amphibians and reptiles expected in this community include California slender salamander (*Batrachoseps attenuatus*), enssatina (*Ensatina eschscholtzii*), Pacific chorus frogs (*Pseudacris regilla*), arboreal salamanders (*Aneides lugubris*), California newt (*Taricha torosa*) and western pond turtle (Emys marmorata). Generalist omnivores are species such as the scrub jay (*Aphelocoma caerulescens*) that eat a variety of different foods, from insects to seeds to fruits. Although insects are the primary food source for most species in the riparian habitat, ground dwelling species, such as California quail (*Callipepla californica*) and California towhee (*Pipilo fuscus*), are also present in the riparian habitat feeding on seeds. Brush-pile houses created by the San Francisco ducky-footed woodrat (*Neotomas fuscipes*) were observed in this habitat. This type of habitat also provides forage and roosting habitat for bat species, including possibly forage habitat for red bat (*Lasiurus blosservillii*).

Eucalyptus Trees with Monterey Cypress Trees: These communities are usually monotypic, with only one species providing canopy and very little undergrowth due to the oils in eucalyptus leaves that hinder invertebrate presence. Structurally, these forests offer perching and nesting sites for a variety of avian species, including Anna's hummingbird that feed on the flower nectar and nest on the twigs within the eucalyptus. The loose bark of blue gum eucalyptus, and crevices and cracks in the bark provide foraging substrate and nest sites for some species. Species reported nesting in eucalyptus trees include brown creepers (*Certhia americana*), and American robin (*Turdus migratorius*), among others. The flowers of blue gum, red gum, and other species provide a bounty for many different birds during the winter and spring. Birds visit the flowers for the copious nectar, and to eat insects that are attracted to the flowers and

include yellow-rumped warbler and Townsend's warblers (*Setophaga townsendi*), ruby-crowned kinglet (*Regulus calendula*), house finch (*Haemorhous mexicanus*), chestnut-backed chickadee (*Poecile rufescens*), and several others. Eucalyptus trees of the size within the project area may provide key nest sites for raptors, such as red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), and great horned owl (*Bubo virginianus*).

Coastal Scrub: The sandy soils often associated with coastal scrub habitat provide ideal habitat for reptiles such as western rattlesnake (*Crotalus viridis*) and western fence lizards (*Sceloporus occidentalis*), which are common in the warm dry scrub community. Coastal scrub habitat, often interspersed with other habitats, provides foraging and nesting habitat for species that are attracted to edges of communities, including California quail (*Lophortyx californicus*), California thrasher (*Toxostoma redivivum*), mourning dove (*Zenaidura macroura*), and rufous-sided towhee (*Pipilo crissalis*). These birds forage among the leaf litter for invertebrates. Reptiles such as western fence lizard (*Sceloporus occidentalis*), western rattlesnake (*Crotalus viridis*) and western skink (*Eumeces skiltonianus*) also use this habitat.

Annual grassland: Grassland habitat provides both primary habitat, such as nesting and foraging, and secondary habitat, such as a movement corridor. Small species using this habitat as primary habitat include reptiles and amphibians, such as southern alligator lizard (*Gerrhonotus multicarinatus*), western fence lizard (*Sceloporus occidentalis*), and Pacific slender salamander (*Batrachoseps attenuatus*), which feed on invertebrates found within and beneath vegetation and boulders within the vegetation community. This habitat also attracts seed-eating and insect-eating species of birds and mammals. California quail (*Lophortyx californicus*), mourning dove (*Zenaidura macroura*), and meadowlark (*Sturnella neglecta*) are a few seed-eaters that nest and forage in grasslands. Insect-eaters such as scrub jays (*Aphelocoma coerulescens*) use the habitat for foraging only. Grasslands are important foraging grounds for aerial and ground foraging insect-eating bat species such as myotis (*Myotis* spp.) and pallid bat (*Antrozous pallidus*). A large number of other mammal species such as California vole (*Microtus californicus*), deer mouse (*Peromyscus maniculatus*), Botta's pocket gopher (*Thomomys bottae*), California ground squirrel (*Spermophilus beecheyi*) and brush rabbit (*Sylvilagus bachmani*) also forage and nest within grasslands.

Urban and landscape: Urban and landscaped areas provide little habitat for wildlife except for those species adapted to human habitation, such as European starlings (*Sturnus vulgaris*), and rock pigeons (*Columba livia*). These areas do not provide habitat for the larger mammalian species nor for predators, except as possible movement corridors.

Cropland: Agricultural lands generally do not provide the same habitat values for mammals, reptiles, and amphibians as they do for birds. The requirements of large herbivorous mammals for food and cover from predators and the elements in their territory, as well as those for suitable courting and pairing habitats are generally not met by agricultural uses. Agricultural fields, which generally consist of monocrops of a uniform height, do not provide the diversity of structural components needed for large herbivores. Food diversity is also not available for larger mammals, such as deer, which eat bark, and a variety of foliage, and berries. To obtain

this habitat diversity, the mammals would have to travel farther in large agricultural areas, which would decrease their energy efficiency.

3.4 WILDLIFE MOVEMENT CORRIDORS

The proposed project site is located within the Central Coast Ecoregion which supports a wide range of connectivity areas that include natural landscapes that act as corridors to allow for wildlife movement, as well as interstate connections that act as barriers to movement (Spencer et al. 2010). Wildlife movement includes migration (i.e., usually one way per season), inter-population movement (i.e., long-term genetic flow) and small travel pathways (i.e., daily movement corridors within an animal's territory). While small travel pathways usually facilitate movement for daily home range activities such as foraging or escape from predators, they also provide connection between outlying populations and the main corridor, permitting an increase in gene flow among populations. Barriers to movement include those structures that impede such movements, such as large scale development or major highways with no undercrossings. Roads cause habitat fragmentation because they break large habitat areas into smaller habitat patches that support fewer individuals, which can increase loss of genetic diversity and risk of local extinction. Additionally, roads may prevent access to essential physical or biological features necessary for breeding, feeding, or sheltering.

San Vicente Creek, which is located southeast of the proposed DAV-021m project site, is considered a movement corridor for fish, such as coho salmon, amphibians, such as California red-legged frog, and mammals, such as striped skunk. The intermittent drainages found in the general project area provide a corridor for terrestrial species. Based on the climate in this portion of Santa Cruz County, movements by amphibians are not just restricted to the drainages and creeks and all areas are considered occupied by amphibians at any time of the year.

4.0 Special-Status Species and Their Habitats

4.1 Regulatory Requirements

4.1.1 Federal Endangered Species Act (FESA)

To determine whether the proposed project may result in adverse effects to federally listed species, the criteria used was based on guidelines established by the USFW under Section 7(a) of the FESA, in which a project that may have an adverse effect on listed biological resources must be assessed. FESA (16 U.S. Code [USC 1531–1544) provides for the conservation of species that are Endangered or Threatened throughout all or a significant portion of their range, as well as the protection of habitats on which they depend.

Section 7 requires federal agencies to consult with USFWS or NMFS, or both, before performing any action (including actions such as funding a program or issuing a permit) that may affect listed species or designated Critical Habitat. The section 7 consultations are designed to assist Federal agencies in fulfilling their duty to ensure federal actions "do not jeopardize" the continued existence of a species or destroy or adversely modify Critical Habitat.

The USFWS defines temporary and permanent effects as areas denuded, manipulated, or otherwise modified from their pre-project conditions, thereby removing one or more essential components of a listed species' habitat as a result of project activities that include, but are not limited to, construction, staging, storage, lay down, vehicle access, parking, etc. According to the USFWS, temporary effects are limited to one construction season and, at a minimum, are fully restored to baseline habitat values or better within one year following initial disturbance. Permanent effects are not temporally limited and include all effects not fulfilling the criteria for temporary effects.

4.1.2 Federal Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (Title 16, United States Code [USC], Part 703) enacts the provisions of treaties between the United States, Great Britain, Mexico, Japan, and the Soviet Union and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. It establishes seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs (16 USC 703, 50 Code of Federal Regulations [CFR] 21, 50 CFR 10). Most actions that result in taking of, or the permanent or temporary possession of, a protected species constitute violations of the MBTA. The MBTA also prohibits destruction of occupied nests. The Migratory Bird Permit Memorandum (MBPM-2) dated April 15, 2003, clarifies that destruction of most unoccupied bird nests (without eggs or nestlings) is permissible under the MBTA; exceptions include nests of federally threatened or endangered migratory birds, bald eagles (*Haliaeetus leucocephalus*), and golden eagles (*Aquila chrysaetos*). USFWS is responsible for overseeing compliance with the MBTA.

4.1.3 California Endangered Species Act (CESA)

The California Endangered Species Act (CESA (FGC §§ 2050–2116) is administered by CDFW. The CESA prohibits the "taking" of listed species except as otherwise provided in state law. The CESA includes FGC Sections 2050–2116, and policy of the state to conserve, protect, restore, and enhance any endangered species or any threatened species and its habitat. The CESA requires mitigation measures or alternatives to a proposed project to address impacts to any State listed endangered, threatened or candidate species, or if a project would jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy. Section 86 of the FGC defines take as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Unlike the ESA, CESA applies the take prohibitions to species under petition for listing (state candidates) in addition to listed species. Section 2081 of the FGC expressly allows CDFW to authorize the incidental take of endangered, threatened, and candidate species if all of the following conditions are met:

- The take is incidental to an otherwise lawful activity.
- The impacts of the authorized take are minimized and fully mitigated.
- Issuance of the permit will not jeopardize the continued existence of the species.
- The permit is consistent with any regulations adopted in accordance with §§ 2112 and 2114 (legislature-funded recovery strategy pilot programs in the affected area).
- The applicant ensures that adequate funding is provided for implementing mitigation measures and monitoring compliance with these measures and their effectiveness.

The CESA provides that if a person obtains an incidental take permit under specified provisions of the ESA for species also listed under the CESA, no further authorization is necessary under CESA if the federal permit satisfies all the requirements of CESA and the person follows specified steps (FGC § 2080.1).

4.1.4 California Fish and Game Code

The California Constitution establishes the California Fish and Game Commission (Commission) (CA Constitution Article 4, § 20). The California Fish and Game Code (FGC) delegates the power to the Commission to regulate the taking or possession of birds, mammals, fish, amphibian and reptiles (FGC § 200). The Commission has adopted regulations setting forth the manner and method of the take of certain fish and wildlife in the California Code of Regulations, Title 14.

4.1.5 California Fish and Game Code- Species Protection

The FGC establishes CDFW (FGC § 700) and states that the fish and wildlife resources of the state are held in trust for the people of the state by and through CDFW (FGC § 711.7(a)). All licenses, permits, tag reservations and other entitlements for the take of fish and game

authorized by FGC are prepared and issued by CDFW (FGC § 1050 (a)).

Provisions of the FGC provide special protection to certain enumerated species such as:

§ 3503 protects eggs and nests of all birds.
§ 3503.5 protects birds of prey and their nests.
§ 3511 lists fully protected birds.
§ 3513 protects all birds covered under the federal Migratory Bird Treaty Act.
§ 3800 defines nongame birds.
§ 4150 defines nongame mammals.
§ 4700 lists fully protected mammals.
§ 5050 lists fully protected amphibians and reptiles.
§ 5515 lists fully protected fish species.

4.1.6 California Coastal Commission

The California Coastal Commission (CCC) November 16, 2006 workshop on the Definition and Delineation of Wetlands in the Coastal Zone (California Coastal Commission 2006) provides the following guidance related to the CCC definition of wetlands:

Coastal Act Section 30121 defines the term "wetland" as: "lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens. The Coastal Commission's regulations (California Code of Regulations Title 14 (14 CCR)) establish a "one parameter definition" that only requires evidence of a single parameter to establish wetland conditions:

> *Wetland shall be defined as land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent and drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salts or other substances in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deep-water habitats. (14 CCR Section 13577)*

The Commission's one parameter definition is similar to the USFWS wetlands classification system, which states that wetlands must have one or more of the following three attributes: (1) at least periodically the land supports predominantly hydrophytes; (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year.

As opposed to wetlands definitions, which describe the general parameters that must be shown to establish wetland conditions (hydrology, soils, and vegetation), the delineation of wetlands in the field typically requires substantial evidence of indicators, which are the physical, chemical, or biological features of an area that can be easily observed or assayed and that are usually correlated with the presence of a wetland parameter; and methodologies that guide the process of distinguishing wetland from non-wetland conditions. Such field tools are needed because the various characteristics of wetlands typically occur on physical gradients (i.e., wet to dry conditions, hydric to nonhydric soils, and hydrophytic to meso/xerophytic vegetation). The Coastal Commission's regulations acknowledge these distinctions by specifying some general decision rules for establishing the upland boundary of wetlands:

> *...the upland limit of a wetland shall be defined as:*
>
> *a. the boundary between land with predominantly hydrophytic cover and land with predominantly mesophytic or xerophytic cover;*
>
> *b. the boundary between soil that is predominantly hydric and soil that is predominantly nonhydric; or*
>
> *c. in the case of wetlands without vegetation or soils, the boundary between land that is flooded or saturated at some time during years of normal precipitation, and land that is not. (14 CCR Section 13577).*

The CCC and the local coastal plan typically requires a 100-foot setback from areas designated as wetlands or waters. This includes all riparian areas.

4.1.7 County of Santa Cruz

The Conservation and Open Space Element of the Santa Cruz County General Plan includes objectives and policies to protect biological resources which includes biological diversity, riparian corridors and wetlands, and aquatic and marine habitats. The objectives and policies applicable to the MBSST Network project are discussed below.

Objective 5.1. To maintain the biological diversity of the county through an integrated program of open space acquisition and protection, identification and protection of plant habitat and wildlife corridors and habitats, low-intensity and resource compatible land uses in sensitive habitats and mitigations on projects and resource extraction to reduce impacts on plant and animal life.

Policy 5.1.2. Definition of Sensitive Habitat. An area is defined as a sensitive habitat if it meets one or more of the following criteria:

a) Areas of special biological significance as identified by the State Water Resources

Control Board.

b) Areas which provide habitat for locally unique biotic species/communities. Including coastal scrub, maritime chaparral, native rhododendrons and associated Elkgrass, mapped grasslands in the coastal zone and sand parkland; and Special Forests including San Andreas Live Oak woodlands, Valley Oak, Santa Cruz Cypress, indigenous Ponderosa Pine, indigenous Monterey Pine, and ancient forests.

c) Areas adjacent to essential habitat of rare, endangered or threatened species as defined in (e) and (f) below.

d) Areas which provide habitat for Species of Special Concern as listed by the California Department of Fish and Game in the Special Animals list, Natural Diversity Database.

e) Areas which provide for rare or endangered species which meet the definition of Section 15380 if the California Environmental Quality Act guidelines.

f) Areas which provide habitat for rare, endangered or threatened species as designated by the State Fish and Game Commission, United States Fish and Wildlife Service or California Native Plant Society.

g) Nearshore reefs, rocky intertidal areas, seacaves, islets, offshore rocks, kelp beds, marine mammal hauling grounds, sandy beaches, shorebird roosting, resting and nesting area, cliff nesting areas and marine, wildlife or educational/research reserves.

h) Dune plant habitats.

i) All lakes, wetlands, wetlands, estuaries, lagoons, streams and rivers.

j) Riparian corridors.

(Appendix B of the General Plan contains a list of the specific habitats and/or species)

Policy 5.1.4. Sensitive Habitat Protection Ordinance. Implement the protection of sensitive habitats by maintaining the existing Sensitive Habitats Protection ordinance. The ordinance identifies sensitive habitats, determines the uses which are allowed in and adjacent to sensitive habitats, and specifies required performance standards for land in or adjacent to these areas. Any amendments to this ordinance shall require a finding that sensitive habitats shall be afforded equal or greater protection by the amended language.

Policy 5.2.1. Designation of Riparian Corridors and Wetlands. Designate and define the following areas as Riparian Corridors:

a) 50 feet from the top of a distinct channel or physical evidence of high water mark of a perennial stream;

b) 30 feet from the top of a distinct channel or physical evidence of highwater mark of an intermittent stream as designated on the General Plan maps and through field inspection of undesignated intermittent and ephemeral streams;

c) 100 feet of the high water mark of a lake, wetland, estuary, lagoon, or natural body of standing water;

d) The landward limit of a riparian woodland plant community; e) Wooded arroyos within urban areas.

Designate and define the following areas as Wetlands:

Transitional areas between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is covered by shallow water periodically or permanently. Examples of wetlands are saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.

The US Army Corps of Engineers, and other federal agencies utilize a "unified methodology" which defines wetlands as "those areas meeting certain criteria for hydrology, vegetation, and soils."

Policy 5.2.3. Activities within Riparian Corridors and Wetlands. Development activities, land alteration and vegetation disturbance within riparian corridors and wetlands and required buffers shall be prohibited unless exception is granted per the Riparian Corridor and Wetlands Protection ordinance. As a condition of riparian exception, require evidence of approval for development from the US Army Corps of Engineers, California Department of Fish and Game, and other federal or state agencies that may have regulatory authority within riparian corridors and wetlands.

4.2 Special-Status Species Reviewed

For the purposes of this Biological Resources Assessment, special-status species include those that are federally listed as Endangered, Threatened or Proposed for federal listing (candidate) under the USFWS. Other species also evaluated in this Biological Assessment include non-listed federal and California Special Species of Concern (CSC) and those species that fall under the jurisdiction of the USFWS such as the Migratory Bird Treaty Act (MBTA) and the CDFW, such as CEQA Section 15380(d).

Impacts to special-status species were assessed if: (1) those species occurred in habitats similar

to those of the project sites and buffer areas, and (2) were known to occur within the general vicinity of the proposed project sites.

Federally and State-Listed Plant Species. Review of the USFWS (USFWS 2017), the CNPS (CNPS 2017), and the CNDDB (CNDDB 2017) revealed that 38 listed plant species and species of concern have potential to occur in the general project area. Please refer to Table 2 for a list of these species and their habitat requirements. Potential habitat is present for 19 of these 38 plant species. Botanical surveys were conducted on May 26, June 8, July 12, August 12, August 21, and August 31, 2017. These surveys were conducted within the blooming period of 17 of these 19 special-status plant species.

Survey findings for the 10 targeted special-status species that had blooming periods during our surveys were negative. Therefore, no impacts to those species are expected due to project implementation.

The following 2 special-status plant species bloom outside of our survey dates:

- Ohlone manzanita (February through March)
- Chaparral ragwort (January through April)

The potential for occurrence of these 2 species is considered to be low as neither of these species has been documented in the vicinity of any of the proposed project sites. Additionally, the proposed project disturbance areas are small and ground disturbance will be limited. There has been previous disturbance in all project sites due to road construction and pole line construction activities. Native vegetation growth in most of the sites show stress due to these previous activities. Therefore, no impacts to these 2 plant species are anticipated.

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

Common Name	Scientific Name	Federal Status	State Status	Habitat/Observances	Potential to Occur on Project Site and Buffer Area
Birds					
Cooper's hawk	*Accipiter cooperi*	-	CSC	Nests primarily in deciduous riparian forests. May also occupy dense canopied forests from gray pine-oak woodland to ponderosa pine. Forages in open woodlands.	**Potentially Present.** Potential nesting habitat for this species was observed within the buffer area of the DAV-021m project site. Potential foraging habitat was observed in the general area surrounding this p:roject site. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2017) (see Figure 3a).
Tricolored blackbird	*Agelaius tricolor*	-	CSC	Highly colonial species. Most numerous in Central Valley and Vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of their colony.	**None.** No potential habitat suitable for this species was observed within the proposed project sites or buffer areas.
Great egret	*Ardea alba*	-	CSC	Nests colonially in large trees near water.	**None.** No potential habitat suitable for this species was observed within the proposed project sites or buffer areas.
Great blue heron	*Ardea herodius*	-	CSC	Nests colonially in large trees near water.	**None.** No potential habitat suitable for this species was observed within the proposed project sites or buffer areas.
Western burrowing owl	*Athene cunicularia hypugea*	-	CSC	Open grasslands, prairies, farmlands, and deserts.	**Potentially present.** Potential habitat for this species was observed within the DAV-016m3, DAV-017, DAV-019m, and DAV-020m project sites and buffer areas. No individuals of this species were observed during surveys. No known or potential nesting burrows of this species were observed during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2017)

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

Common Name	Scientific Name	Federal Status	State Status	Habitat/Observances	Potential to Occur on Project Site and Buffer Area
					(see Figure 3a).
Oak titmouse	*Baeolophus inornatus*	-	CSC	Breeds in cavities in oak woodlands, gleaning insects from the bark. Occurs from southern Oregon to northern Mexico along the Central Valley and xeric coastal foothills.	**None.** No potential habitat suitable for this species was observed within the proposed project sites or buffer areas.
Western snowy plover	*Charadrius alexandrines nivosus*	FT	-	Generally nest beside or near tidal waters on the mainland coast from Baja California to Washington, on peninsulas, and offshore islands, and adjacent bays and estuaries. Habitats used by nesting and non-nesting birds include sandy coastal beaches, salt pans, coastal dredged spoils sites, dry salt ponds, salt pond levees, and gravel bars.	**None.** No potential habitat suitable for this species was observed within the proposed project sites or buffer areas.
Olive-sided flycatcher	*Contopus borealis*	-	CSC	Nests in open conifer or mixed oak woodland. Nets on horizontal branches, among a cluster of twigs and needles.	**None.** No potential habitat suitable for this species was observed within the proposed project sites or buffer areas.
Black swift	*Cypseloides niger*	-	CSC	Nests made of moss bound with mud or simply a cushion of grass or bare mud, are often built on small ledges with overhanging moss or grass near seashore and waterfalls.	**None.** No potential habitat suitable for this species was observed within the proposed project sites or buffer areas.
California yellow warbler	*Dendroica petechial brewsteri*	-	CSC	Nests in riparian areas dominated by willows, cottonwoods, sycamores or alders and in mature chaparral. May also inhabit oak and coniferous woodlands and urban areas near stream courses.	**Potentially Present.** Potential nesting and foraging habitat for this species was observed in the buffer area of the DAV-021m project site. No sign of this species was observed during biological surveys nor were any nesting sites identified. This species has not been documented within the immediate vicinity of proposed project site (CDFW 2017) (see Figure 3a).
White-tailed kite	*Elanus leucurus*	-	Fully Protected	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Found in open grasslands, meadows, or marshes foraging close to isolated, dense-topped trees for nesting and perching.	**Potentially Present.** Potential foraging habitat is present in all of the proposed project sites and buffer areas. Potential nesting habitat was observed within the buffer areas of the DAV-017 and DAV-021m project sites. No sign of this species

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

Common Name	Scientific Name	Federal Status	State Status	Habitat/Observances	Potential to Occur on Project Site and Buffer Area
					was observed during biological surveys nor were any nesting sites identified. This species has not been documented within the immediate vicinity of proposed project site (CDFW 2017) (see Figure 3a).
Pacific-slope flycatcher	*Empidonax difficilis*	-	CSC	Found in a variety of habitats including cliff, conifer, forest, hardwood, mixed, and woodland. Nests along streams, in tree cavities, in cliffs, crotch of branch, earth banks, or buildings.	**Potentially Present.** Potential nesting and foraging habitat for this species was observed in the buffer area of the DAV-021m project site. No sign of this species was observed during biological surveys nor were any nesting sites identified. This species has not been documented within the immediate vicinity of proposed project site (CDFW 2017) (see Figure 3a).
Saltmarsh common yellowthroat	*Geothylpis trichas sinuosa*	-	CSC	Nests in fresh and salt marshes in tall grasses, tule patches and willows and forages in thick, continuous cover down to the water surface.	**None.** No potential habitat suitable for this species was observed within the proposed project sites or buffer areas.
Loggerhead shrike	*Lanius ludovicianus*	-	CSC	Requires open habitat with an area to forage, elevated perches and nesting sites. They are often found in open pastures or grasslands and appears to prefer red-cedar and hawthorn trees for nesting. The hawthorn's thorns and the cedar's pin-like needles protect and conceal the shrike from predators. It may also nest in fence-rows or hedge-rows near open pastures, and requires elevated perches as lookout points for hunting. Open pastures and grasslands with shorter vegetation are preferred by Loggerhead Shrikes as it increases their hunting efficiency. Longer vegetation often requires more time and energy to be spent searching for prey, so these birds gravitate towards areas of shorter vegetation.	**Potentially Present.** Potential nesting and foraging habitat for this species was observed in either the project sites or buffer areas of all project sites with the exception of the DAV-022m2 project site. No sign of this species was observed during biological surveys nor were any nesting sites identified. This species has not been documented within the immediate vicinity of proposed project site (CDFW 2017) (see Figure 3a).
Osprey	*Pandion haliaetus*	-	CSC	Nests in large trees within 15 miles of good fish-producing water body.	**None.** No potential habitat suitable for this species was observed within the

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

Common Name	Scientific Name	Federal Status	State Status	Habitat/Observances	Potential to Occur on Project Site and Buffer Area
					proposed project sites or buffer areas.
Bank swallow	*Riparia riparia*	-	CT	Nests in banks along rivers, excavating holes in sides of the banks.	**None.** No potential habitat suitable for this species was observed within the proposed project sites or buffer areas.
Mammals					
Pallid bat	*Antrozous pallidus*	-	CSC	Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**Potentially present.** May forage intermittently within any of the project sites and buffer areas. No roosting habitat observed within the project sites or buffer areas. No individual pallid bats observed in the proposed project site or buffer area during surveys. This species has not been documented as occurring in the project area (see Figure 3a) (CDFW 2017).
Townsend's big-eared bat	*Corynorhinus townsendii*	-	CSC	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	**Potentially present.** May forage intermittently within any of the project sites and buffer areas. No roosting habitat observed within the project sites or buffer areas. No individual Townsend's big-eared bats observed in the proposed project site or buffer area during surveys. This species has been documented occurring 0.9 miles northeast of the DAV-021m project site (see Figure 3a) (CDFW 2017).
Western red bat	*Lasiurus blossevillii*	-	CSC	Roosts primarily in trees 2 to 40 feet above the ground. Found from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	**Potentially present.** May forage intermittently within any of the project sites and buffer areas. Potential roosting habitat observed within the DAV-021m project site buffer area. No individual western red bats observed in

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

Common Name	Scientific Name	Federal Status	State Status	Habitat/Observances	Potential to Occur on Project Site and Buffer Area
					the proposed project site or buffer area during surveys. This species has not been documented within the immediate vicinity of proposed project site (CDFW 2017) (see Figure 3a).
Hoary bat	*Lasiurus cinereus*	-	CSC	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees, feeds primarily on moths, requires water.	**Potentially present.** May forage intermittently within any of the project sites and buffer areas. Potential roosting habitat observed within the DAV-021m project site buffer area. No individual hoary bats observed in the proposed project site or buffer area during surveys. This species has not been documented within the immediate vicinity of proposed project site (CDFW 2017) (see Figure 3a).
Fringed myotis	*Myotis thysanodes*	-	CSC	Roosts in colonies in caves, cliffs and attics of old buildings. Will also use trees as day roosts.	**Potentially present.** May forage intermittently within any of the project sites and buffer areas. No roosting habitat observed within the project sites or buffer areas. No individual fringed myotis bats observed in the proposed project site or buffer area during surveys. This species has not been documented within the immediate vicinity of proposed project site (CDFW 2017) (see Figure 3a).
San Francisco dusky-footed woodrat	*Neotoma fuscipes annectens*	-	CSC	Found throughout the San Francisco Bay area in brushy and forested areas, this species is a generalist herbivore. Houses are typically placed on the ground against or straddling a log or exposed roots of a standing tree, and, are often located in dense brush. Nests are also placed in the crotches and cavities of	**None.** No potential habitat suitable for this species was observed within the proposed project sites or buffer areas.

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

Common Name	Scientific Name	Federal Status	State Status	Habitat/Observances	Potential to Occur on Project Site and Buffer Area
				trees and in hollow logs.	
American badger	*Taxidea taxus*	-	CSC	The species is found in a variety of open herbaceous and shrub vegetation types/habitats with dry, friable soils. It is widely distributed in California, with the exception of the humid coastal belt, occurring from sea-level to alpine meadows and coniferous forests.	**None.** The proposed project sites occur within humid coastal belt, and therefore, the project site is outside the know range of this species.
Invertebrates					
Ohlone tiger beetle	*Cincindela ohlone*	FE	CSC	Hunts, breeds, and digs larval burrows along sunny single-track trails and dirt roads in coastal terrace meadows that still support native grasses.	**None.** No potential habitat suitable for this species was observed within the proposed project sites or buffer areas.
Zayante band-winged grasshopper	*Trimerotropis infantilis*	FE	-	Isolated sandstone deposits in the Santa Cruz Mountains (Zayante sandhills ecosystem). Occurs mostly on sand parkland habitat, but also in areas with well-developed ground cover and in sparse chaparral with grass.	**None.** No potential habitat suitable for this species was observed within the proposed project site or buffer area.
Amphibians and Reptiles					
Western pond turtle	*Emys marmorata*	-	CSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Require basking sites and suitable upland habitat (sandy banks or grassy open fields) for egg-laying.	**None.** No potential habitat suitable for this species was observed within the proposed project site or buffer area.
California red-legged frog	*Rana draytonii*	FT	CSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11 to 20 weeks of permanent water for larval development. Must have access to aestivation habitat, consisting of small mammal burrows and moist leaf litter.	**Potentially Present.** Potential upland aestivation and dispersal habitat near potential breeding areas is present in the DAV-016m3 and DAV-019m project sites and buffer areas. No breeding habitat for this species was observed within any of the proposed project sites. No sign of this species was observed during biological surveys. This species has been documented approximately 0.1 miles northwest of the DAV-016m3 project site, and within the immediate vicinity of the

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

Common Name	Scientific Name	Federal Status	State Status	Habitat/Observances	Potential to Occur on Project Site and Buffer Area
					DAV-019m project site (CDFW 2017) (see Figure 3a).
Fish					
Tidewater goby	*Eucyclogobius newberryi*	FE	-	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches. Require fairly still but not stagnant water and high oxygen levels.	**None.** No potential habitat suitable for this species was observed within the proposed project sites.
Coho salmon, Central California Coast Population	*Oncorhynchus kisutch*	FE	CE	Occupy coastal drainages. Coho have an anadromous life cycle. They hatch in freshwater streams, migrate to live for two years in the ocean, and then return to breed, or spawn, in freshwater, almost always returning to the same river in which they were born. Returning adults typically enter freshwater rivers in the late fall, and spawning occurs throughout the fall and winter. Eggs hatch in the early spring, and juveniles then live in the river-bottom gravel for 10 weeks before emerging. After maturing for about a year in freshwater, coho migrate downstream to coastal estuaries and enter the ocean in the spring.	**None.** No potential habitat suitable for this species was observed within the proposed project sites.
Steelhead – central California coast DPS	*Oncorhynchus mykiss irideus*	FT	-	After maturing for 1 to 3 years in the ocean, adult steelhead typically begin their spawning migration into the Sacramento and San Joaquin Delta System in fall and winter. Adult steelhead enter the mainstream Sacramento River in July, peak in abundance in the fall, and continue migrating through February and March. Juvenile steelhead will remain in fresh water and continue to rear for 1 to 3 years before migrating to the ocean in November through May to mature. Smolt typically migrate to the ocean during March through June.	**None.** No potential habitat suitable for this species was observed within the proposed project sites.

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

Common Name	Scientific Name	Federal Status	State Status	Habitat/Observances	Potential to Occur on Project Site and Buffer Area
Plants					
Blasdale's bent grass	*Agrostis blasdalei*	-	List 1B.2	Coastal bluff scrub, coastal dunes, coastal prairie. Blooms May to July. Elevation: 5-150m.	**None.** Known only from sandhill parklands in the Santa Cruz Mountains.
Bent-flowered fiddleneck	*Amsinckia lunaris*	-	List 1B.2	Coastal bluff scrub, cismontane woodland, valley and foothill grassland. Blooms March to June. Elevation: 3-500m.	**Potentially present.** Potential habitat for this species (coastal bluff scrub and grassland) occurs within the proposed DAV-016m3, DAV-017, DAV-018, DAV-019m, and DAV-020m project sites and buffer areas. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2017) (see Figure 3b).
Coast rockcress	*Arabis blepharophylla*	-	List 4.2	Broadleaved upland forest, coastal bluff scrub, coastal prairie, coastal scrub in rocky areas. Blooms February to May. Elevation: 3-1100m.	**Potentially present.** Potential habitat for this species (coastal bluff scrub and grassland) occurs within the proposed DAV-016m3, DAV-017, DAV-018, DAV-019m, and DAV-020mm project sites and buffer areas. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2017) (see Figure 3b).
Anderson's manzanita	*Arctostaphylos andersonii*	-	List 1B.2	Broadleaved upland forest, chaparral, North Coast coniferous forest in openings and edges and redwood forest. Blooms November to May. Elevation: 60-760m.	**None.** No habitat in project area.
Schreiber's manzanita	*Arctostaphylos glutinosa*	-	List 1B.2	Closed-cone coniferous forest, chaparral on diatomaceous shale. Blooms November to April. Elevation: 170-685m.	**None.** No habitat in project area.

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

Common Name	Scientific Name	Federal Status	State Status	Habitat/Observances	Potential to Occur on Project Site and Buffer Area
Ohlone manzanita	*Arctostaphylos ohloneana*	-	List 1B.1	Closed-cone coniferous forest, coastal scrub on siliceous shale. Blooms February to March. Elevation: 450-530.	**Potentially present.** Potential habitat for this species (coastal bluff scrub) occurs within the proposed DAV-016m3, DAV-018, and DAV-019m project sites and buffer areas. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2017) (see Figure 3b).
Pajaro manzanita	*Arctostaphylos pajaroensis*	-	List 1B.2	Chaparral on sandy soils. Blooms December to March. Elevation: 30-760m.	**None.** No habitat present in study area. Known only from sandhill parklands in the Santa Cruz Mountains.
Bonny Doon manzanita	*Arctostaphylos silvicola*	-	List 1B.2	Closed-cone coniferous forest, chaparral, lower montane coniferous forest on inland marine sands. Blooms February to March. Elevation: 120-600m.	**None.** No habitat present in study area. Known only from sandhill parklands in the Santa Cruz Mountains.
Santa Cruz Mountains pussypaws	*Calyptridium parryi* var. *hesseae*	-	List 1B.1	Chaparral, cismontane woodland on sandy or gravelly soils in openings. Blooms May to August. Elevation: 305-1530m.	**None.** No habitat in study area and not in elevation range of species
Johnny-nip	*Castilleja ambigua* var. *ambigua*	-	List 4.2	Coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, valley and foothill grassland, vernal pools margins. Blooms March to August	**Potentially present.** Potential habitat for this species (coastal bluff scrub and grassland) occurs within the proposed DAV-016m3, DAV-017, DAV-018, DAV-019m, and DAV-020m project sites and buffer areas. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2017) (see Figure 3b).
Ben Lomond spineflower	*Chorizanthe pungens* var. *hartwegiana*	FE	List 1B.1	Lower montane coniferous forest (maritime ponderosa pine sandhills). Blooms April to July. Elevation: 90-610m.	**None.** No habitat present in study area. Known only from sandhill parklands in the Santa Cruz Mountains.
Robust spineflower	*Chorizanthe robusta*	FE	List 1B.1	Maritime chaparral, openings in cismontane	**Potentially present.** Potential habitat for

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

Common Name	Scientific Name	Federal Status	State Status	Habitat/Observances	Potential to Occur on Project Site and Buffer Area
	var. *robusta*			woodland, coastal dunes, coastal scrub on sandy or gravelly soils. Blooms April to September. Elevation: 3-300m.	this species (coastal bluff scrub) occurs within the proposed DAV-016m3, DAV-018, and DAV-019m project sites and buffer areas. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2017) (see Figure 3b).
San Francisco collinsia	*Collinsia multicolor*	-	List 1B.2	Closed-cone coniferous forest, coastal scrub, sometimes on serpentinite. Blooms March to May. Elevation: 30-250m.	**Potentially present.** Potential habitat for this species (coastal bluff scrub) occurs within the proposed DAV-016m3, DAV-018, and DAV-019m project sites and buffer areas. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2017) (see Figure 3b).
Tear drop moss	*Dacryophyllum falcifolium*	-	List 1B.3	North Coast coniferous forest – occurs on calcareous rock in redwood forests. Elevation: 50-275m.	**None.** No habitat present in study area. Known only from sandhill parklands in the Santa Cruz Mountains.
Ben Lomond buckwheat	*Eriogonum nudum* var. *decurrens*	-	List 1B.1	Chaparral, cismontane woodland, lower montane coniferous forest (maritime ponderosa pine sandhills) on sandy soils. Blooms June to October. Elevation: 50-800m.	**None.** No habitat present in study area. Known only from sandhill parklands in the Santa Cruz Mountains.
Santa Cruz wallflower	*Erysimum teretifolium*	FE	CE, List 1B.1	Chaparral, lower montane coniferous forest on inland marine sands. Blooms March to July. Elevation: 120-610m.	**None.** No habitat present in study area. Known only from sandhill parklands in the Santa Cruz Mountains.
San Francisco gumplant	*Grindelia hirsutula* var. *maritima*	-	List 3	Coastal bluff scrub, coastal scrub, valley and foothill grassland on sandy or serpentinite soils. Blooms June to September. Elevation: 15-400m.	**Potentially present.** Potential habitat for this species (coastal bluff scrub and grassland) occurs within the proposed DAV-016m3, DAV-017, DAV-018, DAV-019m, and DAV-020m project sites and

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

Common Name	Scientific Name	Federal Status	State Status	Habitat/Observances	Potential to Occur on Project Site and Buffer Area
					buffer areas. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2017) (see Figure 3b).
Santa Cruz cypress	*Hesperocyparis abramsiana* var. *abramsiana*	FE	CE, List 1B.2	Closed-cone coniferous forest, chaparral, lower montane coniferous forest on sandstone or granitic soils. Perennial evergreen tree. Elevation: 280-800m.	**None.** Known from Santa Cruz Mountains and Bonny Doon Ecological Reserve. No habitat in study area.
Loma Prieta hoita	*Hoita strobilina*	-	List 1B.2	Chaparral, cismontane woodland, riparian woodland, usually on serpentinite and mesic sites. Blooms May to October. Elevation: 30- 860m.	**Potentially present.** Potential habitat for this species (riparian woodland) occurs within the proposed DAV-021m project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2017) (see Figure 3b).
Santa Cruz tarplant	*Holocarpha macradenia*	FT	CE, List 1B.1	Coastal prairie, coastal scrub, valley and foothill grassland often on clay or sandy soils. Blooms June to October. Elevation: 10-220m.	**Potentially present.** Potential habitat for this species (coastal bluff scrub and grassland) occurs within the proposed DAV-016m3, DAV-017, DAV-018, DAV-019m, and DAV-020m project sites and buffer areas. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2017) (see Figure 3b).
Kelloggi's horkelia	*Horkelia cuneata* var. *sericea*	-	List 1B.1	Closed-cone coniferous forest, maritime chaparral, coastal dunes, coastal scrub on sandy or gravelly soils in openings. Blooms April to September. Elevation: 10-200m.	**Potentially present.** Potential habitat for this species (coastal bluff scrub) occurs within the proposed DAV-016m3, DAV-018, and DAV-019m project sites and

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

Common Name	Scientific Name	Federal Status	State Status	Habitat/Observances	Potential to Occur on Project Site and Buffer Area
					buffer areas. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2017) (see Figure 3b).
Point Reyes horkelia	*Horkelia marinensis*	-	List 1B.2	Coastal dunes, coastal prairie, coastal scrub on sandy flats and dunes near coast. Blooms May to September. Elevation: 5-350m.	**None.** No habitat in project area.
Smooth lessingia	*Lessingia micradenia* var. *glabrata*	-	List 1B.2	Chaparral and cismontane woodland on serpentinite, often roadsides. Blooms July to November. Elevation: 120-420m.	**None.** No habitat in project area.
Mt. Diablo cottonweed	*Microphus amphibolus*	-	List 3	Broadleafed upland forest, chaparral, cismontane woodland, valley and foothill grassland on rocky areas. Blooms March to May. Elevation: 45-825m.	**Potentially present.** Potential habitat for this species (grassland) occurs within the proposed DAV-016m3, DAV-017, DAV-019m, and DAV-020m project sites and buffer areas. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2017) (see Figure 3b).
Marsh microseris	*Microseris paludosa*	-	List 1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. Blooms April to July. Elevation: 5- 300m.	**Potentially present.** Potential habitat for this species (coastal bluff scrub and grassland) occurs within the proposed DAV-016m3, DAV-017, DAV-018, DAV-019m, and DAV-020m project sites and buffer areas. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2017) (see Figure 3b).
Elongate copper moss	*Mielichhoferia*	-	List 4.3	Cismontane woodland growing on very acid	**None.** No habitat in project area.

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

Common Name	Scientific Name	Federal Status	State Status	Habitat/Observances	Potential to Occur on Project Site and Buffer Area
	elongata			metamorphic rock or substrate, usually in higher portions of fens. Elevation: 500-1300m.	
Woodland woollythreads	*Monolopia gracilens*	-	List 1B.2	Openings in broadleafed upland forest, chaparral, cismontane woodland, North Coast Coniferous forest, valley and foothill grassland on serpentinite soils. Blooms February to May. Elevation: 100-1200m.	**Potentially present.** Potential habitat for this species (grassland) occurs within the proposed DAV-016m3, DAV-017, DAV-019m, and DAV-020m project sites and buffer areas. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2017) (see Figure 3b).
White-rayed pentachaeta	*Pentachaeta bellidiflora*	FE	CE, List 1B.1	Cismontane woodland, valley and foothill grassland, often on serpentinite. Blooms March to May. Elevation: 35-620m.	**Potentially present.** Potential habitat for this species (grassland) occurs within the proposed DAV-016m3, DAV-017, DAV-019m, and DAV-020m project sites and buffer areas. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2017) (see Figure 3b).
Santa Cruz Mountains beardtongue	*Penstemon rattanii* var. *kleei*	-	List 1B.2	Chaparral, lower montane coniferous forest, North Coast coniferous forest. Blooms May to June. Elevation: 400-1100m.	**None.** No habitat in project area.
Monterey pine	*Pinus radiata*	-	List 1B.1	Closed-cone coniferous forest, cismontane woodland.	**None.** Study site not in the elevation range of this species. Identification difficult; taxonomic work needed.
White-flowered rein orchid	*Piperia candida*	-	List 1B.2	Broadleafed upland forest, lower montane coniferous forest, North Coast Coniferous forest, sometimes on serpentinite. Blooms March to September. Elevation: 30-1310m.	**None.** No habitat in project area.
Choris' popcornflower	*Plagiobothrys chorisianus var*	-	List 1B.2	Chaparral, coastal prairie, coastal scrub, in mesic areas. Blooms March to June. Elevation: 15-160m.	**Potentially present.** Potential habitat for this species (coastal bluff scrub and

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

Common Name	Scientific Name	Federal Status	State Status	Habitat/Observances	Potential to Occur on Project Site and Buffer Area
	chorisianus				grassland) occurs within the proposed DAV-016m3, DAV-017, DAV-018, DAV-019m, and DAV-020m project sites and buffer areas. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2017) (see Figure 3b).
San Francisco popcornflower	*Plagiobothrys diffusus*	-	CE, List 1B.1	Coastal prairie, valley and foothill grassland. Blooms March to June. Elevation: 60-360m.	**None.** Study site not in the elevation range of this species. Identification difficult; taxonomic work needed.
Hoffman's sanicle	*Sanicula hoffmannii*	-	List 4	Broadleafed upland forest, coastal bluff scrub, chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, often on serpentinite or clay. Blooms March to May. Elevation: 30-300m.	**Potentially present.** Potential habitat for this species (coastal bluff scrub) occurs within the proposed DAV-016m3, DAV-018, and DAV-019m project sites and buffer areas. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2017) (see Figure 3b).
Chaparral ragwort	*Senecio aphanactis*	-	List 2B.2	Chaparral, cismontane woodland, coastal scrub on alkaline soils. Blooms January to April. Elevation: 15-800m.	**Potentially present.** Potential habitat for this species (coastal bluff scrub) occurs within the proposed DAV-016m3, DAV-018, and DAV-019m project sites and buffer areas. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2017) (see Figure 3b).
Maple-leaved checkerbloom	*Sidalcea malachroides*	-	List 4.2	Broadleafed upland forest, coastal prairie, coastal scrub, North Coast coniferous forest, riparian	**Potentially present.** Potential habitat for this species (coastal bluff scrub,

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

Common Name	Scientific Name	Federal Status	State Status	Habitat/Observances	Potential to Occur on Project Site and Buffer Area
				woodland often in disturbed areas. Blooms March to August.	grassland, and riparian woodland) occurs within the proposed DAV-016m3, DAV-017, DAV-018, DAV-019m, DAV-020m, and DAV-021m project sites and buffer areas. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2017) (see Figure 3b).
Santa Cruz microseris	*Stebbinsoseris decipiens*	-	List 1B.2	Broadleafed upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland in open areas, sometimes serpentinite. Blooms April to May. Elevation: 10-500m.	**Potentially present.** Potential habitat for this species (coastal bluff scrub and grassland) occurs within the proposed DAV-016m3, DAV-017, DAV-018, DAV-019m, and DAV-020m project sites and buffer areas. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2017) (see Figure 3b).
Santa Cruz clover	*Trifolium buckwestiorum*	-	List 1B.1	Broadleafed upland forest, cismontane woodland, coastal prairie in moist grassland, gravelly margins. Blooms April to October. Elevation: 105-610m.	**None.** Study site not in the elevation range of this species. Identification difficult; taxonomic work needed.
Sensitive Vegetative Communities					
Maritime Coast Range Ponderosa Pine Forest (Not present in project site or buffer area) Monterey Pine Forest (Not present in project site or buffer area) Northern Coastal Salt Marsh (Not present in project site or buffer area) Northern Interior Cypress Forest (Not present in project site or buffer area) Northern Maritime Chaparral (Not present in project site or buffer area)					

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

Common Name	Scientific Name	Federal Status	State Status	Habitat/Observances	Potential to Occur on Project Site and Buffer Area

Status Codes:

Federal
FE = Federally listed as Endangered
FT = Federally listed as Threatened
FC = Federal Candidate species

State
CE = California listed as Endangered
CT = California listed as Threatened
CR = California listed as Rare
CFP = California Fully Protected
CSC = Species of Special Concern
WL = CDFW Watch List

California Rare Plant Rank (formerly known as CNPS Lists)
California Rare Plant Rank 1A = Plants presumed extinct in California
California Rare Plant Rank 1B = Plants rare, threatened, or endangered in California and elsewhere
California Rare Plant Rank 2A = Plants presumed extirpated from California, but more common elsewhere
California Rare Plant Rank 2B = Plants rare or endangered in California, but more common elsewhere
California Rare Plant Rank 3 = Plants about which we need more information; a review list
California Rare Plant Rank 4 = Plants of limited distribution; a watch list.
California Rare Plant Rank Rarity Status of .1 = Seriously endangered in California
California Rare Plant Rank Rarity Status of .2 = Fairly endangered in California

Status, distribution, and habitat information from the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database RareFind 5 (CDFW 2017); California Native Plant Society, California Rare Plant Electronic Inventory (CNPS 2017); and USFWS Online Endangered Species Database (USFWS 2017).

4.3 SPECIAL-STATUS WILDLIFE SPECIES

The following is a discussion of species having potential to occur on site and/or are species that are prominent in today's regulatory environment, such as the California red-legged frog. This document does not address impacts to species that may occur in the region but for which no habitat occurs on site.

Cooper's Hawk

Cooper's hawk is a common winter migrant and occasional summer resident. It breeds in oak woodland habitats and southern cottonwood-willow riparian woodland. Food items include small birds, reptiles and amphibians, and mammals.

Protection of nesting habitat for the Cooper's hawk, a Species of Special Concern, is also of primary concern to CDFW. Cooper's hawks are typically found in oak woodlands and coniferous forests located near water. They prey primarily on small birds but will also consume small mammals, reptiles, and amphibians. According to Roberson (1985), many more Cooper's hawks migrate through Monterey County than breed. The highest occurrence of nesting sites in the County occurs in the Carmel Valley watershed where heavily wooded canyons provide secure nesting habitat.

Potential nesting habitat for this species was observed within the buffer area of the DAV-021m project site. Potential foraging habitat was observed in the general area surrounding this project site. No individuals of this species were observed during surveys nor were any potential or active nesting sites observed. This species has not been documented within the boundaries of or in proximity to the proposed DAV-021m project site (CDFW 2017) (see Figure 3a).

Western Burrowing Owl

Western burrowing owl is a ground dwelling owl that occurs in grassland habitats. Burrowing owls typically uses burrows of small mammals and large rodents, particularly California ground squirrels, for shelter and breeding. The species is listed by the CDFW as a Species of Special Concern (CSC).

We observed potential habitat for this species within the DAV-016m3, DAV-017, DAV-019m, and DAV-020m project sites and buffer areas. No potential burrows that were of appropriate size for use by this species were observed within the boundaries of these proposed project sites or buffer areas. No individual burrowing owls were observed during the course of biological surveys, nor were sign of species presence (i.e., whitewash, castings, feathers, etc.) identified within the proposed project sites and buffer areas. Burrowing owls have not been documented within the project site or in proximity to the project site previously (CDFW 2017) (see Figure 3a).

California Yellow Warbler

California yellow warbler migratory populations breed from northern Alaska and Canada southward to middle United States, and in the west into Mexico. Non-migratory populations primarily breed from southern Florida, throughout the Caribbean and Central American coasts, to northern South America. This species winters from southern Mexico into northern South America. This species nests and forages primarily in riparian plant communities. This species also uses montane and open conifer plant communities for foraging and nesting activities (CDFG 2017).

Nests of this species consist of an open, deep cup of grass fibers lined with fur and/or fine plant fibers placed in an upright fork of a shrub or tree. Clutch size is 3-6 eggs, incubation takes 11-12 days, and fledging occurring in 9-12 days (CDFW 2017).

Potential nesting and foraging habitat for this species was observed in the buffer area of the DAV-021m project site. No sign of this species was observed during biological surveys nor were any nesting sites identified. This species has not been documented within the immediate vicinity of proposed DAV-021m project site (CDFW 2017) (see Figure 3a).

White Tailed Kite

White-tailed kites, a California fully protected species, typically inhabit herbaceous lowlands with variable tree growth and dense populations of voles. They use substantial groves of dense, broad-leafed deciduous trees for nesting and roosting. The white-tailed kite preys on rodents that may be harmful to agricultural crops, primarily voles and other small, diurnal mammals, and occasionally on birds, insects, reptiles, and amphibians.

The kite forages in undisturbed, open grasslands, meadows, farmlands and emergent wetlands. It soars, glides, and hovers less than 100 feet above ground in search of prey and slowly descends vertically upon prey with wings held high, and legs extended; it rarely dives into tall cover. The kite is a yearlong resident in coastal and valley lowlands; rarely found away from agricultural areas, the white-tailed kite has extended its range and increased numbers in recent decades

Potential foraging habitat for white-tailed kite is present in all of the proposed project sites and buffer areas. Potential nesting habitat was observed within the buffer areas of the DAV-017 and DAV-021m project sites. However, no sign of this species was observed during biological surveys nor were any nesting sites identified. This species has not been documented within the immediate vicinity of proposed project sites (CDFW 2017) (see Figure 3a).

Pacific-Slope Flycatcher

The Pacific-slope flycatcher is a small insectivorous bird of the family Tyrannidae. It is native to coastal regions of western North America, including the Pacific Ocean and the southern Gulf of

California, as far north as British Columbia and southern Alaska, but is replaced in the inland regions by the Cordilleran flycatcher. These two species were formerly considered a single species known as the western flycatcher. In winter, both species migrate south to Mexico, where they are virtually indistinguishable from one another. The Pacific-slope flycatcher inhabits either coniferous or deciduous forests. In its range it enters mixed woods, Douglas fir forests, redwood forests, and many other wooded environments including riparian woodlands. As a flycatcher it will wait on a perch and when it sees a flying insect it will chase it without any apparent effort. They also enter swarms of gnats, mosquitos and wherever such insects congregate. They fulfill an important role in keeping insect populations in check, particularly mosquitoes, and they also eat caterpillars and spiders.

Potential nesting and foraging habitat for this species was observed in the buffer area of the DAV-021m project site. No sign of this species was observed during biological surveys nor were any nesting sites identified. This species has not been documented within the immediate vicinity of proposed project site (CDFW 2017) (see Figure 3a).

Loggerhead Shrike

The loggerhead shrike inhabits open country with short vegetation and well-spaced shrubs or low trees, particularly those with spines or thorns. They frequent agricultural fields, pastures, old orchards, riparian areas, desert scrublands, savannas, prairies, golf courses, and cemeteries. Loggerhead shrikes are often seen along mowed roadsides with access to fence lines and utility poles. Loggerhead Shrikes eat insects and other arthropods, amphibians, reptiles, small mammals, and birds; they also sometimes feed on roadkill and carrion. Their staple foods include agricultural pests such as grasshoppers, beetles and rodents. Insects generally dominate the Loggerhead Shrike's diet during breeding season, while winter brings a greater reliance on vertebrate prey. These include lizards, snakes, frogs, turtles, sparrows, goldfinches, ground squirrels, voles, mice, and shrews, to name just a few.

Loggerhead shrikes hunt by scanning the ground from elevated perches, then diving onto prey. They also hover-hunt. Loggerhead shrikes sometimes hunt from the ground, flashing their wing patches in a manner similar to the Northern mockingbird, to startle prey out of hiding. To immobilize large prey items, the Loggerhead shrike impales them on sharp objects such as thorns and barbed wire, or tucks them into forks between branches. Caches of prey thus lain away, also called "larders" or "pantries," provide food stores during winter when prey is scarce, or in breeding season when energy demands are high. A well-provisioned larder may also help a male shrike attract a mate. Loggerhead shrikes maintain territories largely through songs and displays. Males challenge intruders with a wing-fluttering bow, like an intensified version of their prey-stalking display. Displaying rivals usually face away from one another, but may whirl to face each other or stamp the ground. Before nesting, several neighboring shrikes may gather together and call or display for several minutes. This may help establish territories in the neighborhood, promote pair formation, and help new arrivals find territories near already-established birds. Courting males feed and sing to females, perform a ritual dance, and/or

perform a flight display. They are mostly monogamous, although females occasionally raise one brood with one male and then take up with another mate for a second brood the same season.

We observed potential nesting and foraging habitat for this species within all project sites and buffer areas with the exception of the DAV-022m2 project site. No individuals of this species were observed during surveys. No known or potential nesting sites of this species were observed during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2017) (see Figure 3a).

Bat Species

The ***pallid bat*** is a locally common species of low elevations in California. It occurs throughout California except for the high Sierra Nevada from Shasta to Kern Counties, and the northwestern corner of the state from Del Norte and western Siskiyou Counties to northern Mendocino County. A wide variety of habitats are occupied, including grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. The species is most common in open, dry habitats with rocky areas for roosting. Day roosts are in caves, crevices, mines, and occasionally in hollow trees and buildings. Roost must protect bats from high temperatures. Bats move deeper into cover if temperatures rise. Night roosts may be in more open sites, such as porches and open buildings. Few hibernation sites are known, but probably uses rock crevices.

Maternity colonies form in early April, and may have a dozen to 100 individuals. Males may roost separately or in the nursery colony. Pallid bats require water, but has a good urine-concentrating ability. This species prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging.

This species may forage intermittently within any of the project sites and buffer areas. No roosting habitat observed within the project sites or buffer areas. No individual pallid bats observed in the proposed project site or buffer area during surveys. This species has not been documented as occurring in the project area (see Figure 3a) (CDFW 2017).

Townsend's big-eared bat is found throughout California, but the details of its distribution are not well known. This species is found in all but subalpine and alpine habitats, and may be found at any season throughout its range. Once considered common, Townsend's big-eared bat now is considered uncommon in California. It is most abundant in mesic habitats. This species requires caves, mines, tunnels, buildings, or other human-made structures for roosting. They may use separate sites for night, day, hibernation, or maternity roosts. Hibernation sites are cold, but not below freezing. Individuals may move within the hibernaculum to find suitable temperatures. Maternity roosts are warm. Roosting sites are the most important limiting resource. This species feeds on small moths. Beetles and a variety of soft-bodied insects also are taken. This species mates from November-February, but many females are inseminated before hibernation begins. Sperm is stored until ovulation occurs in spring. Gestation lasts 56 to 100 days, depending on temperature, size of the hibernating cluster, and time in hibernation.

Births occur in May and June, peaking in late May. A single litter of 1 is produced annually. Young are weaned in 6 weeks and fly in 2.5 to 3 weeks after birth. Growth rate depends on temperature. The maternity group begins to break up in August. Females mate in their first autumn, males in their first or second autumn. About half of young females return to their birth site after their first hibernation.

This species may forage intermittently within any of the project sites and buffer areas. No roosting habitat observed within the project sites or buffer areas. No individual Townsend's big-eared bats observed in the proposed project site or buffer area during surveys. This species has been documented occurring 0.9 miles northeast of the DAV-021m project site (see Figure 3a) (CDFW 2017).

The ***western red bat*** is a locally common bat species in some areas of California, occurring from Shasta County to the Mexican border, west of the Sierra Nevada/Cascade crest and deserts. The winter range includes western lowlands and coastal regions south of San Francisco Bay, including the project area. There is migration between summer and winter ranges, and migrants may be found outside the normal range. Roosting habitat includes forests and woodlands from sea level up through mixed conifer forests. This species feeds over a wide variety of habitats including grasslands, shrublands, open woodlands and forests, and croplands. This bat species feeds on a variety of insects. The most important prey are moths, crickets, beetles, and cicadas. Foraging flight is slow and erratic. Though capable of rapid, direct flight, it is maneuverable. They are frequently seen foraging in large concentrations. Foraging may be from high above treetops to nearly ground level. The same foraging route may be followed on many occasions.

Western red bats roost primarily in trees, less often in shrubs. Roost sites often are in edge habitats adjacent to streams, fields, or urban areas. Preferred roost sites are protected from above, open below, and located above dark ground-cover. Such sites minimize water loss. Roosts may be from 2 to 40 feet above ground level. Females and young may roost in higher sites than males.

This species may forage intermittently within any of the project sites and buffer areas. Potential roosting habitat observed within the DAV-021m project site buffer area. No individual western red bats observed in the proposed project site or buffer area during surveys. This species has not been documented within the immediate vicinity of proposed project site (CDFW 2017) (see Figure 3a).

The ***hoary bat*** is the most widespread North American bat. It may be found at any location in California, although distribution is patchy in southeastern deserts. This common, solitary species winters along the coast and in southern California, breeding inland and north of the winter range. During migration, this species may be found at locations far from the normal range, such as the Channel Islands and the Farallon Islands. Habitats suitable for bearing young include all woodlands and forests with medium to large-size trees and dense foliage. Hoary bats have been recorded from sea level to 13,200 feet. There is evidence that sexes are separate

during the warm months, females being more abundant in the northeastern U.S., males in the west. Both sexes occur on the winter range. During migration in southern California, males are found in foothills, deserts and mountains; females in lowlands and coastal valleys. This species generally roosts in dense foliage of medium to large trees. Preferred sites are hidden from above, with few branches below, and have ground cover of low reflectivity. Females and young tend to roost at higher sites in trees. Studies have shown that the hoary bat feeds primarily on moths, although various flying insects are taken. Studies in Hawaii, where no other bat species occur, have revealed a more varied diet, suggesting that moth specialization in the continental U.S. may be a result of competition with other bat species. Foraging flight of the hoary bat is fast and straight. Females bear young while roosting in trees, preferring sites as described under cover requirements. Females may leave the young in the roosting site while foraging. Copulation occurs in autumn, in migration or on the wintering grounds. Mating is followed by delayed fertilization. The young are born from mid-May through early July. From 1-4 young may be born, but most litters have 2. The offspring are capable of flight after 33 days.

This species may forage intermittently within any of the project sites and buffer areas. Potential roosting habitat observed within the DAV-021m project site buffer area. No individual hoary bats observed in the proposed project site or buffer area during surveys. This species has not been documented within the immediate vicinity of proposed project site (CDFW 2017) (see Figure 3a).

The ***fringed myotis*** is widespread in California, occurring in all but the Central Valley and Colorado and Mojave deserts. Its abundance appears to be irregular; it may be common locally. It occurs in a wide variety of habitats; records range in elevation from sea level to 9,350 feet. Optimal habitats are pinyon-juniper, valley foothill hardwood and hardwood-conifer, generally at 4,000 to 7,000 feet. This bat species feeds mostly on beetles, and also on moths, arachnids, and orthopterans. Foraging flight is slow and maneuverable, and capture may utilize wing and tail membranes. This species is capable of hovering, and occasionally may land on the ground. They feeds over water, over open habitats, and by gleaning from foliage. The fringed myotis roosts in caves, mines, buildings, and crevices. Separate day and night roosts may be used. Adults and subadults generally form separate groups in the roost. Maternity colonies of up to 200 individuals are located in caves, mines, buildings, or crevices. Adult males are absent from maternity colonies, which are occupied from late April through September. Maternity group members may remain together during hibernation.

This species may forage intermittently within any of the project sites and buffer areas. No roosting habitat observed within the project sites or buffer areas. No individual fringed myotis bats observed in the proposed project site or buffer area during surveys. This species has not been documented within the immediate vicinity of proposed project site (CDFW 2017) (see Figure 3a).

California Red-Legged Frog

California red-legged frog breeding habitat for this frog is primarily in ponds, but they will also breed in slow moving streams, or deep pools in intermittent streams. Inhabited ponds are typically permanent and contain emergent and shoreline vegetation. Sufficient pond depth and shoreline cover are both critical, because they provide means of escape from predators for the frogs (Stebbins 1985, CDFW 1988). Additionally, emergent vegetation is necessary for the deposition of eggs. The breeding period begins during heavy rains, from early to late winter, usually November through early May. The larvae mature in 11 to 20 weeks.

Non-breeding CRF have been found in both aquatic and upland habitats. The majority of individuals prefer dense, shrubby or emergent vegetation, closely associated with deep (>0.7 meters) still, or slow moving water. However, some individuals use habitats that are removed from aquatic habitats, seeking cover in ground squirrel burrows, under boulders and logs and in non-native grasslands. Upland refugia habitat includes areas up to 90 meters from a stream corridor and includes natural features, such as boulders, rocks, trees, shrubs, and logs. Incised stream channels with portions narrower than 18 inches and depths greater than 18 inches may also provide habitat. In general, densely vegetated terrestrial areas within the riparian corridor provide important sheltering habitat during the winter flooding of the streams. Along the coast, upland habitat is used throughout the year with animals making straight- line movements between water bodies regardless of the terrain (Bulger et al. 2003).

During dry periods, California red-legged frogs are seldom found far from water. However, during wet weather, individuals may make overland excursions through upland habitats over distances up to 2 miles. These dispersal movements are generally straight-line, point-to-point migrations rather than following specific habitat corridors. Dispersal distances are believed to depend on the availability of suitable habitat and prevailing environmental conditions. Very little is known about how California red-legged frogs use upland habitats during these periods.

During summer, California red-legged frogs often disperse from their breeding habitat to forage and seek summer habitat if water is not available (USFWS 2017). This habitat may include shelter under boulders, rocks, logs, industrial debris, agricultural drains, watering troughs, abandoned sheds, or hay-ricks. They will also use small mammal burrows, incised streamed channels, or areas with moist leaf litter (Jennings and Hayes 1994). This summer movement behavior, however, has not been observed in all California red-legged frog populations studied.

The historical range of the California red-legged frog extended along the coast from the vicinity of Point Reyes National Seashore, Marin County, California and inland from Redding, Shasta County southward to northwestern Baja California, Mexico (Jennings and Hayes 1985). The current distribution of this species includes only isolated localities in the Sierra Nevada, northern Coast and Northern Traverse Ranges. It is still common in the San Francisco Bay area and along the central coast. It is now believed to be extirpated from the southern Transverse and Peninsular Ranges (USFWS 2017).

Potential upland aestivation and dispersal habitat for this species near potential breeding areas is present within the DAV-016m3 and DAV-019m project sites and buffer areas. No breeding habitat for this species was observed within any of the proposed project sites. No sign of this species was observed during biological surveys.

CRF are reported from a number of locations in the general project area. This species has been documented approximately 0.1 miles northwest of the DAV-016m3 project site, and within the immediate vicinity of the DAV-019m project site (CDFW 2017) (see Figure 3a). Figure 3a shows all the documented locations for this species in the general project area. This species has the potential to use upland areas found in the DAV-016m3 and DAV-019m project sites for upland refugia. Both of these sites have appropriate vegetative cover to serve as upland refugia habitat. Additionally, they are located within 1.0 mile of appropriate aquatic breeding habitat. No appropriate cover (i.e., California ground squirrel burrow, logs, or other debris were observed during our biological surveys. Additionally, no individuals of this species were observed during biological surveys. This species could potential use the habitat during movement, but is unlikely to use the sites for aestivation activities.

4.4 CRITICAL HABITAT

Coho salmon (Central California Coast) – the project area is located along the Central California Coast (NOAA 2005).

Steelhead (California Central Coast) – the project area is located within the Big Basin Hydrologic Unit 3 of the Central California Coast Ecologically Significant Unit (NOAA 2005).

California Red-legged Frog – the project area is located within the Santa Cruz 1 Critical Habitat Unit located in the northwest corner of Santa Cruz County (USFWS 2010).

4.5 SPECIAL STATUS NATURAL COMMUNITIES

The arroyo willow thickets, and riparian vegetative communities are all considered to be sensitive natural communities even though they are not officially designated by the CNDDB as special-status plant communities. These areas are protected by the County of Santa Cruz General Plan as well as the CCC and local coastal plan. In addition these areas fall under the jurisdiction of the USACE, RWQCB and CDFW.

5.0 Impacts Analysis and Mitigation Measures

This section summarizes the potential biological impacts from implementation of the proposed project. The analysis of these effects is based on multiple reconnaissance-level biological surveys of the project sites and buffer areas, a review of existing databases and literature, and personal professional experience with biological resources of the region. Potential effects to federally- and state-listed special-status animal species may occur from the proposed project. Mitigations for these biological impacts are provided below. A synopsis of the species potentially affected is presented in Table 3, and is followed by mitigation measures to avoid "take" of individuals.

Table 3: Special Status Animal Species Potentially Affected by the Proposed Project

Species	Status (Federal /State)	Habitat Present/Absent	Avoidance Yes/No
California red-legged frog	FT/CSC	Present	Yes
Cooper's hawk	-/CSC	Present	Yes
Western Burrowing Owl	-/CSC	Present	Yes
California yellow warbler	-/CSC	Present	Yes
White-tailed kite	-/CFP	Present	Yes
Pacific-slope flycatcher	-/CSC	Present	Yes
Loggerhead shrike	-/CSC	Present	Yes
Pallid bat	-/CSC	Present	Yes
Townsend's big-eared bat	-/CSC	Present	Yes
Western red bat *Lasiurus blossevillii*	-/CSC	Present	Yes
Hoary bat *Lasiurus cinereus*	-/CSC	Present	Yes
Fringed myotis *Myotis thysanodes*	-/CSC	Present	Yes

Potential Impacts to Common Wildlife and Plant Populations from Project Activities

Direct mortality or injury to common wildlife and plant populations could occur during ground disturbance activities associated with implementation of the project. Small vertebrate, invertebrate, and plant species are particularly prone to impact during project implementation

because they are much less to non-mobile, and cannot easily move out of the path of project activities. Other more mobile wildlife species, such as most birds and larger mammals, can avoid project-related activities by moving to other adjacent areas temporarily. Increased human activity and vehicle traffic in the vicinity may disturb some wildlife species. Because common wildlife species found in the project area are locally and regionally common, potential impacts to these resources are considered less than significant. Therefore, no avoidance or minimization measures are proposed at this time.

Potential Impacts to Nesting Special-Status Avian Species from Project Activities

Implementation of the proposed project could potentially impact individual and nesting migratory birds and raptor species (including Cooper's hawk, western burrowing owl, California yellow warbler, white-tailed kite, Pacific coast flycatcher, loggerhead shrike) should they become established within the proposed project site or buffer area prior to project implementation. Impacts to these species could occur through crushing by construction equipment during implementation of project activities. Actively nesting birds could also be affected due to noise and vibration from project activities, if nests are located close enough to project activities. Project related noise and vibration could cause the abandonment of active nest sites. Impacts to these species would be considered significant. In the event that nesting birds become established in the proposed project site or buffer area, the following mitigation measures will be implemented.

If ground disturbing activities occur during the breeding season of migratory avian or raptor species (February through mid-September), surveys for active nests will be conducted by a qualified biologist no more than 10 days prior to start of activities. Pre-construction nesting surveys shall be conducted for nesting migratory avian and raptor species in the project site and buffer area. Pre-construction biological surveys shall occur prior to the proposed project implementation, and during the appropriate survey periods for nesting activities for individual avian species. Surveys will follow required CDFW and USFWS protocols, where applicable. A qualified biologist will survey suitable habitat for the presence of these species. If a migratory avian or raptor species is observed and suspected to be nesting, a buffer area will be established to avoid impacts to the active nest site. Identified nests should be continuously surveyed for the first 24 hours prior to any construction-related activities to establish a behavioral baseline. If no nesting avian species are found, project activities may proceed and no further mitigation measures will be required. If active nesting sites are found, the following exclusion buffers will be established, and no project activities will occur within these buffer zones until young birds have fledged and are no longer reliant upon the nest or parental care for survival.

- Minimum no disturbance of 250 feet around active nest of non-listed bird species and 250 foot no disturbance buffer around migratory birds;
- Minimum no disturbance of 500 feet around active nest of non-listed raptor species;

- and 0.5-mile no disturbance buffer from listed species and fully protected species until breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival.
- Once work commences, all nests should be continuously monitored to detect any behavioral changes as a result of project activities. If behavioral changes are observed, the work causing that change should cease and the appropriate regulatory agencies (i.e. CDFW, USFWS, etc.) shall be consulted for additional avoidance and minimization measures.
- A variance from these no disturbance buffers may be implemented when there is compelling biological or ecological reason to do so, such as when the project area would be concealed from a nest site by topography. Any variance from these buffers is advised to be supported by a qualified wildlife biologist and is recommended that CDFW and USFWS be notified in advance of implementation of a no disturbance buffer variance.

The following measures included in the CDFW's *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) shall be implemented by CCI for the proposed project:

a. If preconstruction surveys determine that burrowing owls are present in the proposed project sites and/or buffer areas, a burrowing owl mitigation plan shall be prepared by a qualified biologist describing recommended site specific shelter-in-place measures, worker training, and/or other measures to ensure that Project construction does not result in adverse impacts to the burrowing owls.

b. Occupied burrows shall not be disturbed during the burrowing owl nesting season (February 1 through August 31) unless a qualified biologist approved by the CDFW verifies through non-invasive methods that either: (1) the birds have not begun egg-laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

c. Burrowing owls present in the project sites or within 500 feet (as identified during preconstruction surveys) shall be moved away from the disturbance area using passive relocation techniques. Prior to commencement of relocation, a management plan shall be prepared and approved by CDFW. Relocation shall be completed between September 1 and January 31 (outside of breeding season). A minimum of one or more weeks is required to relocate the owls and allow them to acclimate to alternate burrows. Passive relocation techniques will follow the CDFG Staff Report on Burrowing Owl Mitigation Guidelines (2012) and include the following measures:

    i. Install one-way doors in burrow entrances. Leave doors in place for 48 hours to ensure owls have left the burrow.

ii. Allow one or more weeks for owls to acclimate to off-site burrows. Daily monitoring shall be required for the passive relocation period.

iii. Once owls have relocated off-site, collapse existing burrows to prevent reoccupation. Prior to burrow excavation, flexible plastic pipe shall be inserted into the tunnels to allow escape of any remaining owls during excavation. Excavation shall be conducted by hand whenever possible.

iv. Destruction of burrows shall occur only pursuant to a management plan approved by CDFW.

v. As an alternative (if approved by CDFW), all occupied burrows identified off-site within 500 feet of construction activities outside of nesting season (September through January) and during nesting season (February 1 through August 31) could be buffered by hay bales, fencing (e.g. sheltering in place) or as directed by a qualified biologist and the CDFW.

Potential Impacts to Special-Status Bat Species from Project Activities

Implementation of the proposed project could potentially impact bat maternity sites (pallid, western red, and hoary bats) if these species are present in the DAV-021m project site or buffer area during implementation of the project and if they have established maternity or roosting sites. Impacts to bat maternity/roost sites would occur primarily from noise and vibration created from project construction equipment and construction related activities. Noise and vibration could lead to these bat species abandoning established roost/maternity sites. Direct mortality of these species could also occur if these species are present in any trees that are removed during project activities. Impacts to these species would be considered significant. CCI will implement the following mitigation measures to avoid or minimize impacts to bat species during project implementation:

In the event any tree removal is necessary on project site DAV-021m, and to prevent direct mortality of bats roosting in the trees on the project site, a bat habitat assessment must be conducted by a qualified bat biologist that should be conducted 3 to 6 months prior to tree removal. Tree removal must only occur during seasonal periods of bat activity, between March 1, or when evening temperatures are above 45F and rainfall less than 1/2" in 24 hours occurs, and April 15, prior to parturition of pups. The next acceptable period for tree removal with suitable roosting habitat is after pups become self-sufficiently volant – September 1 through about October 15, or prior to evening temperatures dropping below 45F and onset of rainfall fretter than 1/2" in 24 hours.

Potential Impacts to CRF

Implementation of the proposed project could potentially impact individual CRF if they are present within project sites DAV-016m3 and DAV-019m due to overland movement activities

between breeding ponds during project construction activities. No proposed construction activities are proposed directly within any aquatic breeding habitat. However, grading and earthmoving activities associated with work activities have the potential to crush individuals of this species should they be present within either of these project sites during project implementation. Direct injury or mortality of individual or small populations of these species could occur during project activities. Impacts to these species would constitute a significant impact. However, with the implementation of the mitigation measures described below, impacts would be reduced to a less than significant level.

Mitigation Measures

Avoidance measures presented in the *Programmatic Biological Opinion* (USFWS 1999), will be adopted and implemented to prevent mortality of individual red-legged frog that may be found migrating across or aestivating on the proposed DAV-016m3 and DAV-019m project sites during proposed project activities.

- Preconstruction surveys for CRF shall be completed within 48 hours prior to commencement of any earth-moving activity, construction, or vegetation removal within project sites DAV-016m3 and DAV-019m, whichever comes first. The preconstruction survey shall include two nights of nocturnal surveys in areas of suitable habitat.

- If any CRF are encountered during the surveys, all work in the work area shall be placed on hold while the findings are reported to the CDFW and USFWS and it is determined what, if any, further actions must be followed to prevent possible take of this species.

- Where construction will occur in CRF habitat where CRF are potentially present, work areas will be fenced in a manner that prevents equipment and vehicles from straying from the designated work area into adjacent habitat areas. A qualified biologist will assist in determining the boundaries of the area to be fenced in consultation with the Santa Cruz County, USFWS, and CDFW. All workers will be advised that equipment and vehicles must remain within the fenced work areas.

- The USFWS authorized biologist will direct the installation of the fence and will conduct biological surveys to move any individuals of these species from within the fenced area to suitable habitat outside of the fence. Exclusion fencing will be at least 24 inches in height. The type of fencing must be approved by the authorized biologist, the USFWS, and CDFW. This fence should be permanent enough to ensure that it remains in good condition throughout the duration of the construction project on the project site. It should be installed prior to any site grading or other construction-related activities are implemented. The fence should remain in place during all site grading or other construction-related activities. The California red-legged frog exclusion fence could be "silt fence" that is buried along the bottom edge.

- If at any individuals of these species are found within an area that has been fenced to exclude these species, activities will cease until the authorized biologist moves the individuals.

- If any of these species are found in a construction area where fencing was deemed unnecessary, work will cease until the authorized biologist moves the individuals. The authorized biologist in consultation with USFWS and CDFW will then determine whether additional surveys or fencing are needed. Work may resume while this determination is being made, if deemed appropriate by the authorized biologist.

- Any individuals found during clearance surveys or otherwise removed from work areas will be placed in nearby suitable, undisturbed habitat. The authorized biologist will determine the best location for their release, based on the condition of the vegetation, soil, and other habitat features and the proximity to human activities.

- Clearance surveys shall occur on a daily basis in the work area.

- The authorized biologist will have the authority to stop all activities until appropriate corrective measures have been completed.

- To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force will be followed at all times.

- Project activities shall be limited to daylight hours, except during an emergency, in order to avoid nighttime activities when CRF frogs may be present. Because dusk and dawn are often the times when red-legged frogs and tiger salamanders are most actively foraging and dispersing, all construction activities should cease one half hour before sunset and should not begin prior to one half hour before sunrise.

- Traffic speed should be maintained at 10 miles per hour or less in the work area.

Potential Impacts to Native Vegetative Communities

Construction activities at the DAV-016m3, DAV-018, DAV-019m, and DAV-020m project sites will result in the removal of native coyote bushes and California sage plants during the installation of project components. CCI met with the Santa Cruz County Planning Department on July 18, 2017, and during the course of the meeting, discussed the re-vegetation of the sites, including coyote bush and California sage plantings. The purpose of this effort is to maintain the visual character of the sites as well as maintain the current vegetation cover and genetic diversity of these plants on the site.

Prior to installation of project components at these sites, a qualified biologist will inventory the

coyote bush and California sage plants at each site and get an accurate number of plants that are proposed for removal. After construction activities are complete, CCI will hire a contractor to replant 2 times the number of plants removed. The purpose of replanting twice the amount of plants is to account for mortality of individual replanted shrubs during the revegetation process. The contractor will prepare the soil for the plantings. The plants will be planted in the prepared soils, and mulch will be placed around the plants to maintain moisture. A system of irrigation lines will be laid through the revegetation area, and will be hooked up to an irrigation water tank. The contractor will refill the water tank on a regular basis during the non-rainy season of the year. No watering will be required during the rainy season. CCI will establish a regular yearly schedule with the contractor and the Santa Cruz County Planning Department to conduct site visits to assess the revegetation efforts. If during the site visits it is determined that individual plants are dying or dead, they may need to be replaced by the contractor. Yearly visits and replantings would occur until the replanted bushes have re-established successfully.

Removal of Pampas Grass from Project Sites DAV-018 and DAV-019m

CCI, as part of this project and at the request of Santa Cruz County Planning Department as project wide mitigation, is proposing to remove non-native invasive Pampas grass populations from the DAV-018 and DAV-019m project sites and surrounding buffer areas. CCI will hire an invasive weed consultant that is experiences in the removal of invasive noxious weeds, including Pampas grass. The consultant will remove all Pampas grass from the sites using hand tools, shovels, and other mechanical means to remove root systems and above ground portions of the plants. The consultant will then locally apply Roundup herbicide at the removal sites to chemically kill the plant roots and seeds that remain. The consultant will then stabilize the soils at the areas of removal so that native vegetative species can re-establish. CCI will establish a schedule with the consultant to revisit the site once a year to remove any additional Pampas grass and reapply chemical controls. CCI will correspond with Santa Cruz County Planning Department to coordinate this schedule. CCI will continue the annual visits until the Pampas grass does not regrow for one year.

Potential Noxious Weed Impacts

Construction activities have the potential to introduce new invasive plant species onto the proposed project sites and surrounding areas. These new invasive plant species could be carried onto the project sites on construction equipment used at other sites outside of project area. Proposed project activities also have the potential to spread invasive plant species populations already present within the proposed project sites through the use of construction equipment and the improper disposal of invasive plants removed from areas of the project site. The spreading of invasive weed and non-native plant species to the project sites could potentially lead to reductions or complete absence of native plants within the proposed project sites. This impact would be considered a significant impact. Avoidance measures presented in Appendix D to the BRA will be implemented to reduce or avoid impacts from invasive plant species.

6.0 Conclusions and Determinations

6.1 Conclusions

This project will incorporate reasonable and prudent measures for avoidance and minimization, described in Section 1.4, and species-specific avoidance and minimization measures. As a result, the project is not anticipated to result in take of any of the listed species described in this biological assessment.

6.2 Determinations

A "may affect, but not likely to adversely affect" determination to special-status species is based on guidelines established by the USFWS under Section 7(a) of the Federal Endangered Species Act (FESA). FESA states that, "each federal agency shall...insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an "agency action") is not likely to jeopardize the continued existence of any Endangered or Threatened species or result in the destruction or adverse modification of habitat of such species." In addition, the "may affect, but not likely to adversely affect" language means that all effects are either beneficial, insignificant, or discountable, or any combination thereof.

Beneficial effects have contemporaneous positive effects without any adverse effects to the species or habitat. Insignificant effects relate to the size of the effect and include those effects that are undetectable, not measurable, or cannot be evaluated. Discountable effects are those extremely unlikely to occur. Thus, components of the proposed project were deemed to have an insignificant effect based on the size and temporal nature of the proposed project.

California red-legged frog - Presence of this species is inferred based on potential habitat within the project area and proximity to a known occurrence of CRF (CNDDB 2017). This project will not result in mortality of CRF and may result in insignificant effects to potential dispersal habitat. As a result, we determine that the project *may affect, but is not likely to adversely affect* CRF

Critical Habitat - The project will not affect any critical habitat nor adversely modify any critical habitat for California red-legged frog.

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Appendix A: Project Figures

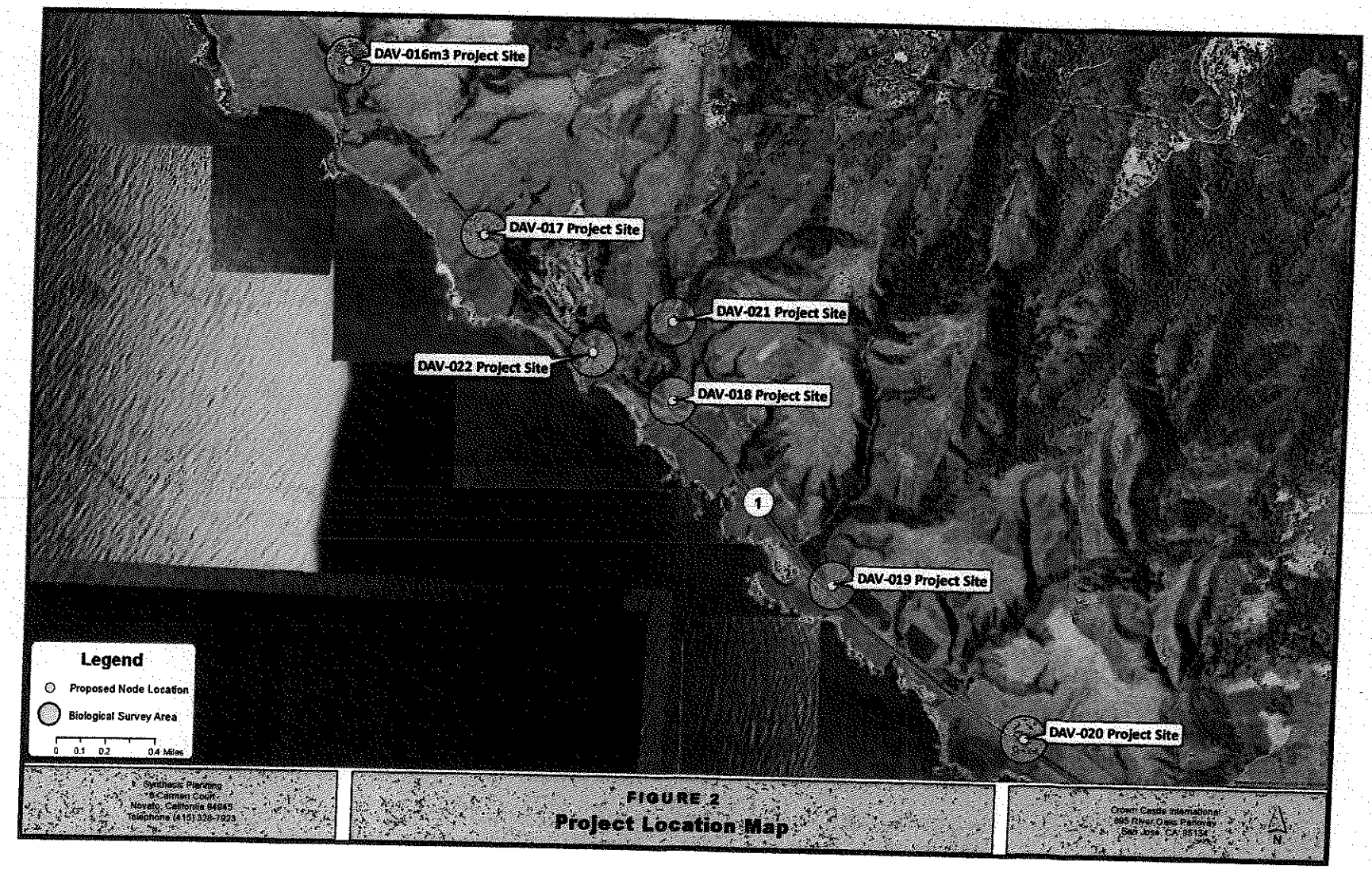
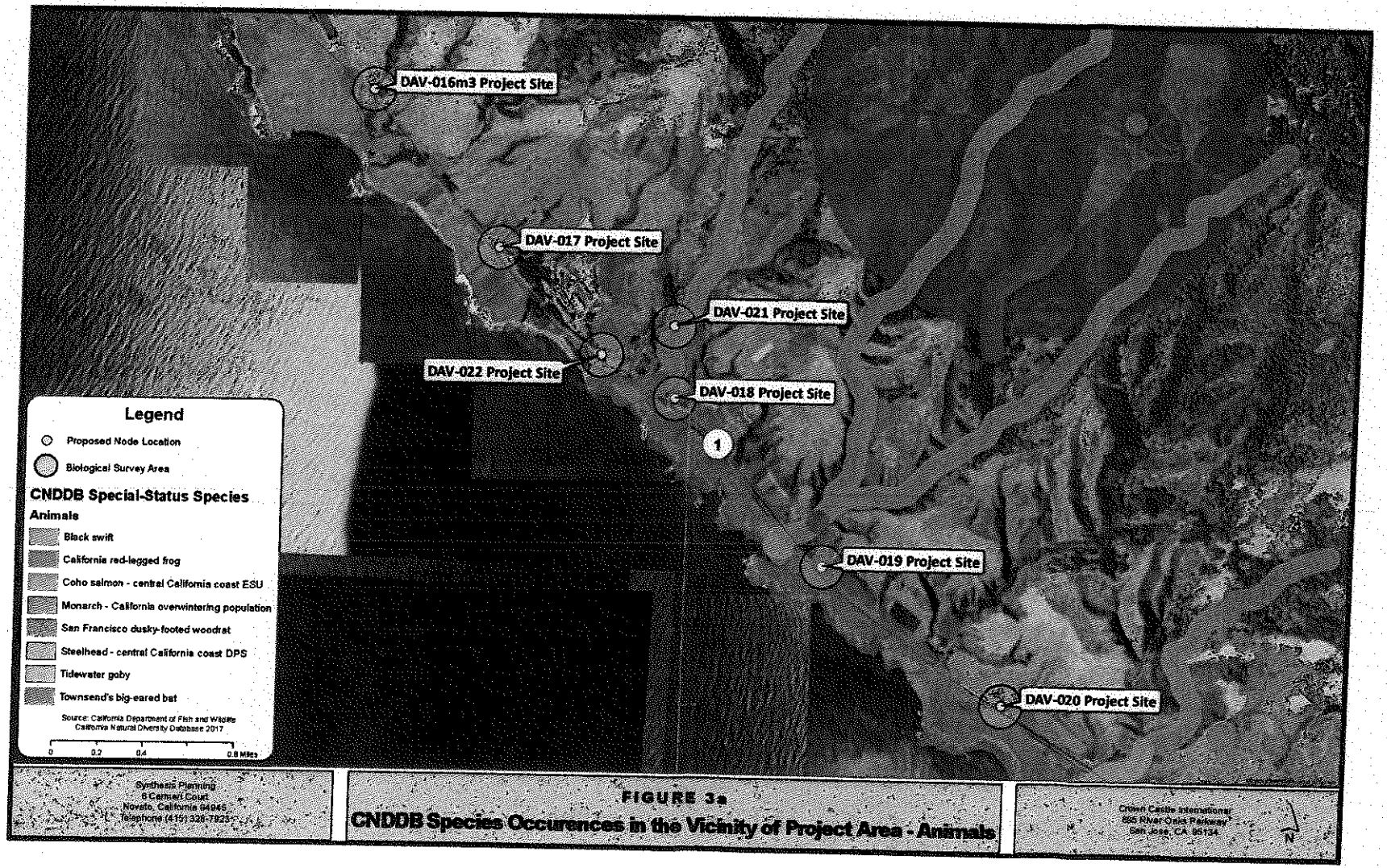
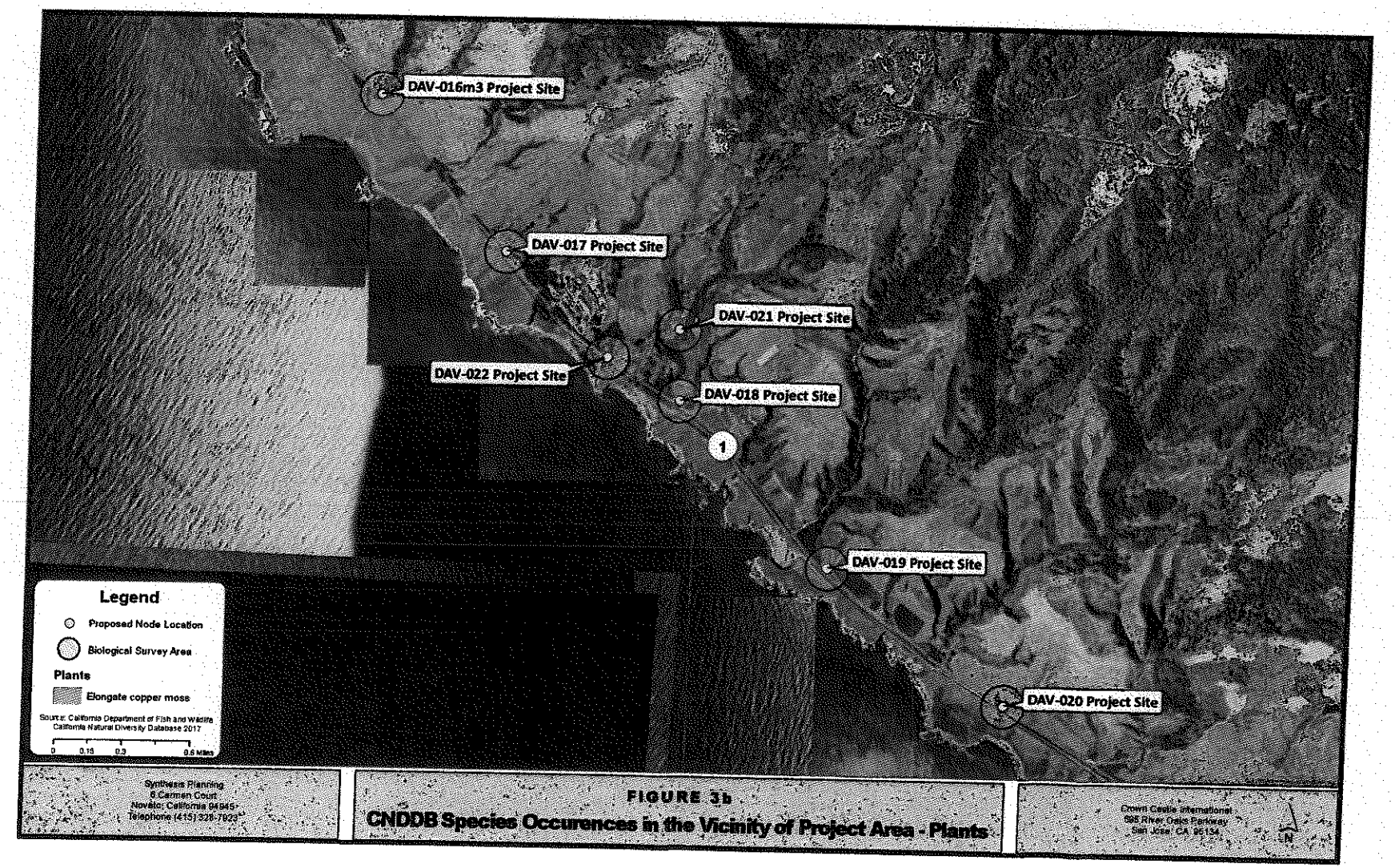


FIGURE 2
Project Location Map


DAV-016m3 Project Site
DAV-017 Project Site
DAV-021 Project Site
DAV-022 Project Site
DAV-018 Project Site
DAV-019 Project Site
DAV-020 Project Site
1
Legend
Proposed Node Location
Biological Survey Area
CNDDB Special-Status Species
Animals
Black swift
California red-legged frog
Coho salmon - central California coast ESU
Monarch - California overwintering population
San Francisco dusky-footed woodrat
Steelhead - central California coast DPS
Tidewater goby
Townsend's big-eared bat
Source: California Department of Fish and Wildlife
California Natural Diversity Database 2017
0
0.2
0.4
0.8 Miles
Synthesis Planning
6 Carmel Court
Novato, California 94945
Telephone (415) 326-7923
FIGURE 3a
CNDDB Species Occurences in the Vicinity of Project Area - Animals
Crown Castle International
695 River Oaks Parkway
San Jose, CA 95134
N


DAV-016m3 Project Site
DAV-017 Project Site
DAV-021 Project Site
DAV-022 Project Site
DAV-018 Project Site
1
DAV-019 Project Site
DAV-020 Project Site
Legend
Proposed Node Location
Biological Survey Area
Plants
Elongate copper moss
Source: California Department of Fish and Wildlife
California Natural Diversity Database 2017
0
0.15
0.3
0.6 Miles
Synthesis Planning
6 Carmen Court
Novato, California 94945
Telephone (415) 526-7923
FIGURE 3b
CNDDB Species Occurences in the Vicinity of Project Area - Plants
Crown Castle International
695 River Oaks Parkway
San Jose, CA 95134
N

Appendix B
List of Plant Species Observed During Biological Surveys

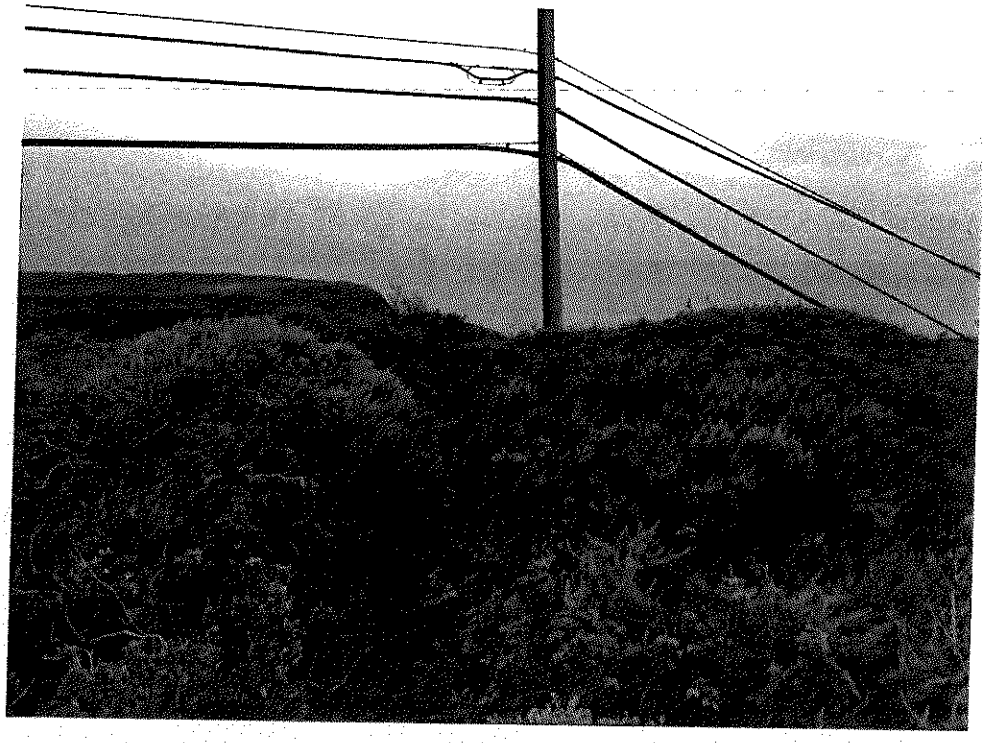
Scientific Name / Common Name
Aesculus californica / California buckeye
Alnus rubra / Red alder
Artemisia californica / California sagebrush
Arundo donax / Giant reed*
Avena barbata / Slender wild oats*
Baccharis pilularis/ Coyote brush
Bellis perennis / English daisy*
Brassica niger / Black mustard
Bromus diandrus Ripgut brome*
Bromus hordaeceus / Soft chess*
Bromus sterilis / Sterile brome*
Carduus pycnocephalus / Italian thistle*
Carpobrotus chilensis / Sea fig, iceplant*
Carpobrotus edulis / Iceplant*
Cirsium vulgare / Bull thistle*
Conium maculatum / Poison hemlock*
Cortaderia jubata / Jubata or pampas grass*
Danthonia californica / California oatgrass
Delairea odorata / German ivy*
Dipascus fullonum / Teasel*
Echium candicans / Pride of Madeira*
Equisetum arvense / Common horsetail
Ericameria ericoides / Goldenbush
Erigeron glaucus / Seaside daisy
Eriophyllum staechadifolium / Lizard-tail
Erodium cicutarium / Red-stemmed filaree*
Eschscholzia californica / California poppy
Eucalyptus globulus / Blue gum*
Festuca arundinacea / Tall fescue
Festuca perennis / Ryegrass*
Foeniculum vulgare / Fennel*
Grindelia stricta var. *platyphylla* / Coastal gum plant
Helminthotheca echioides / Bristly ox-tongue*
Hordeum marinum ssp. *gussoneanum* / Mediterranean barley*

Hordeum murinum ssp. *leporinum* / Hare barley*
Hypochaeris glabra / Smooth cat's-ear*
Hypochaeris radicata / Rough cat's-ear*
Malva sp. / Mallow*
Marah fabaceus / Wild cucumber, Man root
Medicago polymorpha / Bur clover*
Melilotus albus / White sweet clover*
Plantago coronopus / Cut-leaf plantain*
Plantago lanceolata / English plantain*
Polypogon monspeliensis Rabbit's-foot grass*
Raphanus sativus / Wild Radish
Rubus armeniacus / Himalayan blackberry
Rubus parviflorus / Thimbleberry
Rubus ursinus / California blackberry
Salix laevigata / Red willow
Salix lasiolepis / Arroyo willow
Schoenoplectus californicus / California bulrush
Scrophularia californica / California bee plant
Senecio vulgaris / Common groundsel*
Sonchus asper / Prickly sow thistle*
Sonchus oleraceus / Common sow thistle*
Toxicodendron diversilobum / Poison oak
Tropaeolum majus / Nasturtium*
Typha latifolia / Cattail
Urtica dioica / Stinging nettle
Vicia sp. / Vetch
Zantedeschia aethiopica / Calla lily*

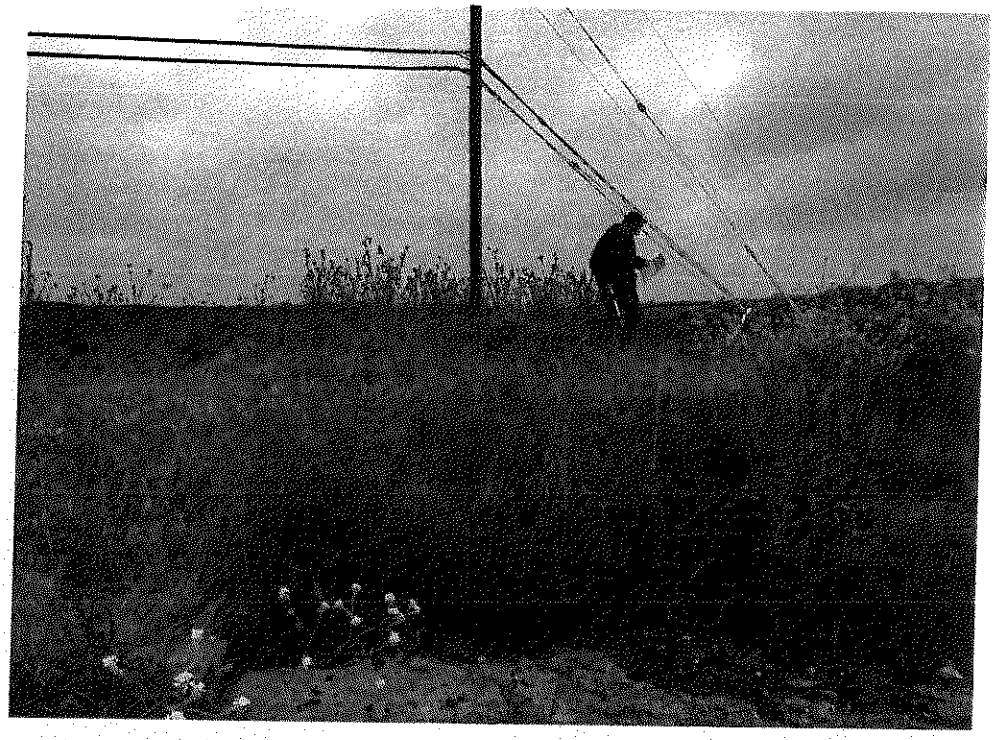
* = Non-native species

Appendix C
Site Photos

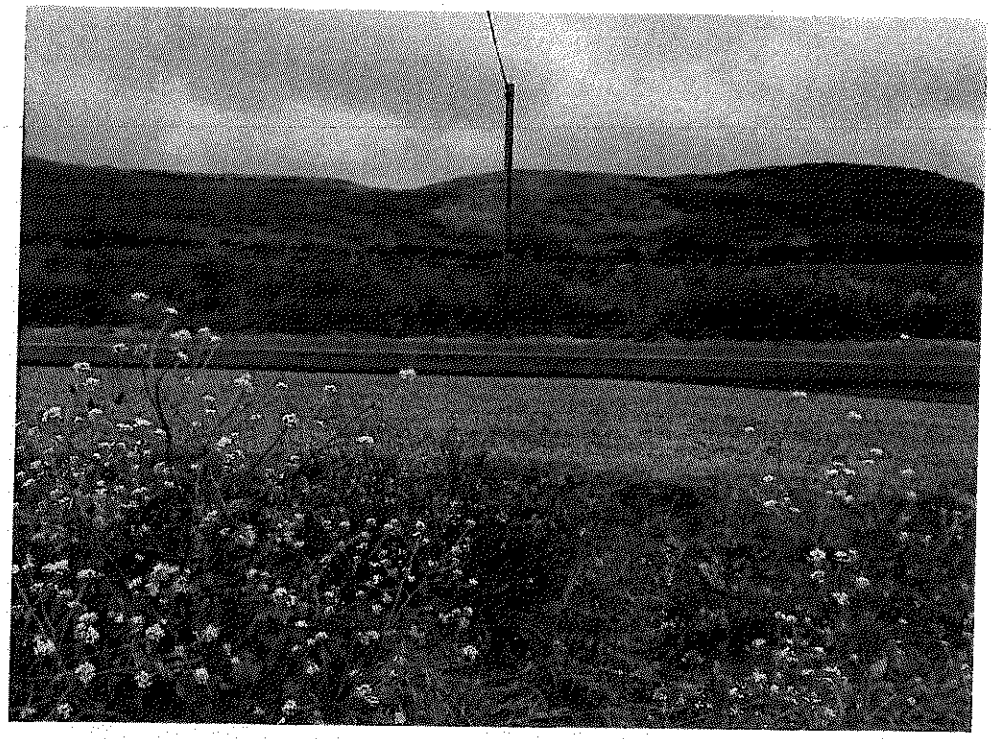
Proposed DAV-018 project site. View looking southwest at project site.



Proposed DAV-018 project site. View looking south at project site.

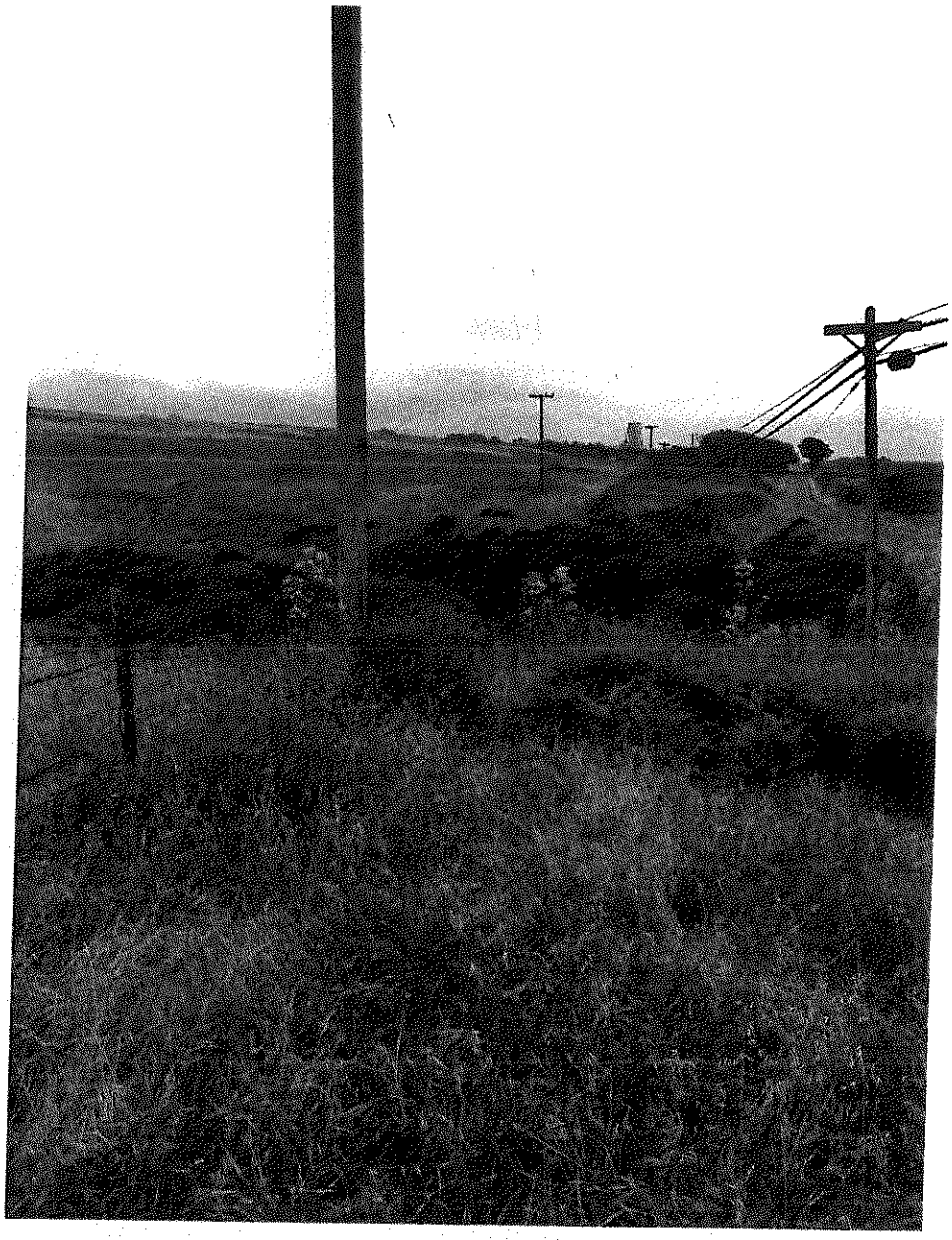


Proposed DAV-019m project site. View looking southwest at project site.

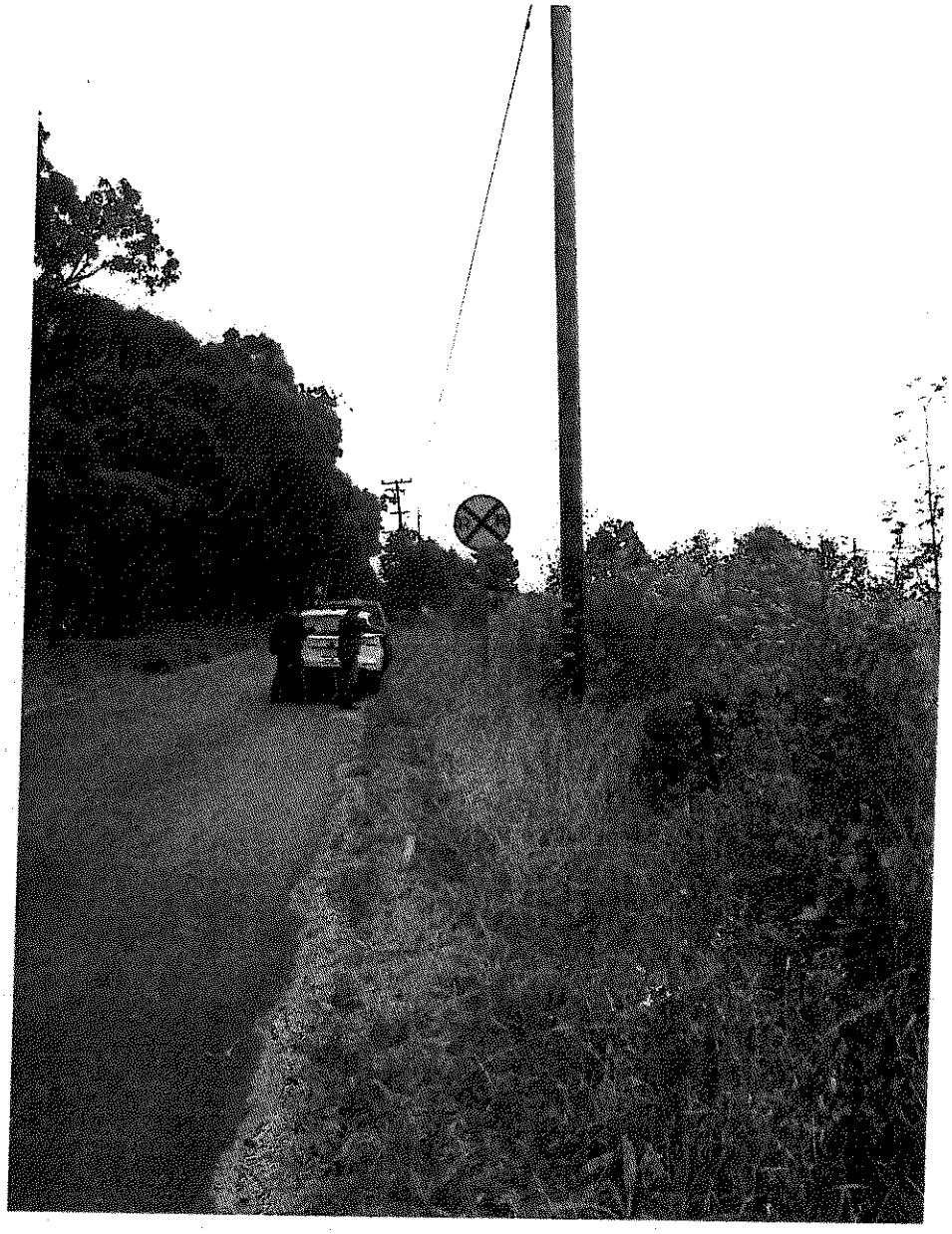


Proposed DAV-020m project site. View looking northeast at project site.

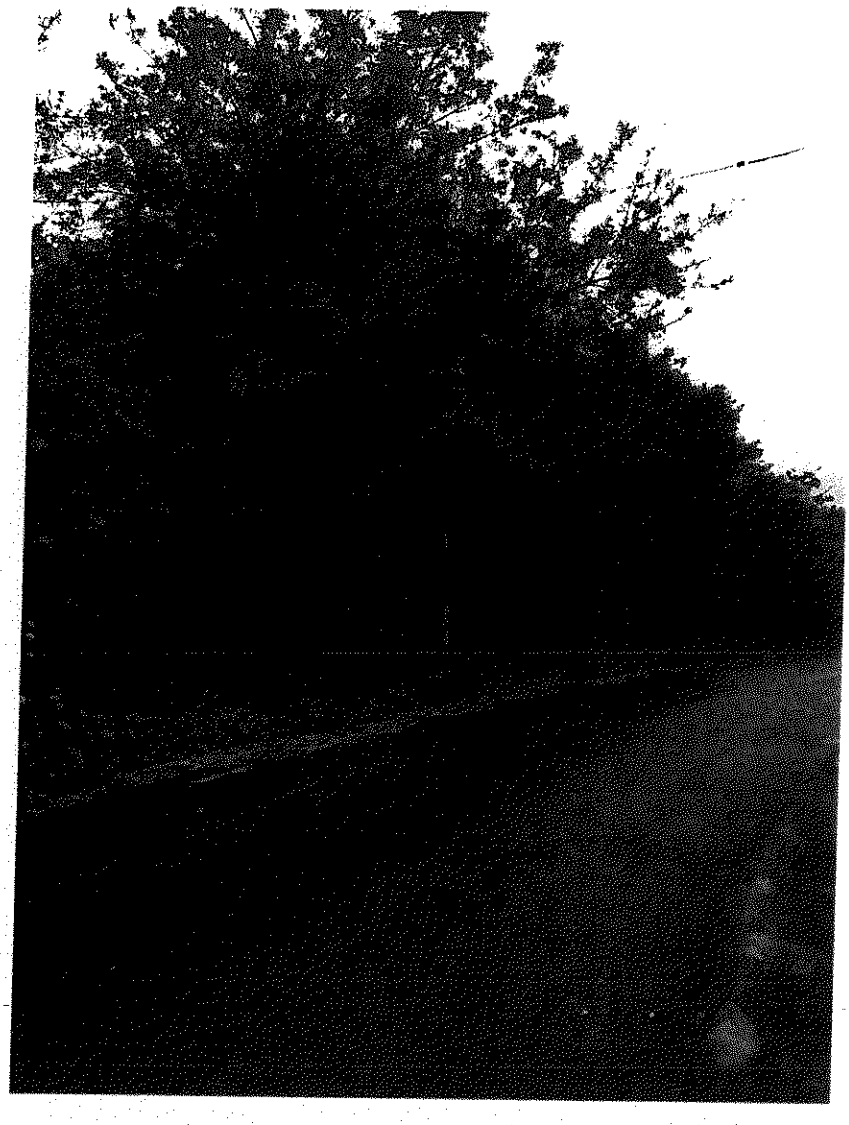
Proposed DAV-022m2 project site. View looking southeast at project site.



Proposed DAV-016m3 project site. View looking southeast at project site.



Proposed DAV-017 project site. View looking southeast at project site.



Proposed DAV-021m project site. View looking southwest at project site.

Appendix C
Invasive Vegetation Control Procedures

Construction activities have the potential to introduce new invasive plant species onto the proposed project sites and surrounding areas. These new invasive plant species could be carried onto the project sites on construction equipment used. Proposed project activities also have the potential to spread invasive plant species populations already present within the proposed project sites.

The following plan identifies methods that may be employed to control invasive plants and populations.

MONITORING AND SURVEY METHODS

WEED IDENTIFCATION

Monitoring and removal of non-native species requires training in plant identification. Plant identification training and field manuals will be provided to field staff including biological monitors, weed abatement contractors, project operators and staff, and construction workers. Non-native plant species will be identified using *The Jepson Manual, Higher Plants of California*.

Plant identification training will include:

- An in-field presentation containing pictures and descriptions of the known non-native species found within the proposed project footprint;
- An overview of the field manual;
- Instructions on management strategies for noxious weeds and non-native species that are observed within the proposed project footprint.

SURVEY AND MONITORING

Surveys and monitoring will ensure timely detection and eradication of non-native plant species, which are essential to the long-term management of noxious weed management.

Biological monitors will be present during site clearing and construction activities. Construction crews will be responsible for inspecting construction areas, identifying the presence of noxious weeds, and inspecting equipment cleaning facilities for weed seed removal. In addition, the biological monitor will verify that weed management activities prescribed in the field are consistent with activities outlined in this plan. Monitoring construction areas for non-native species arrivals will be conducted on a regular basis, and will consist of surveying the construction areas and access routes and documenting the presence of non-native plant species.

General site monitoring of the proposed project will be conducted by grounds personnel on an ongoing basis. Non-native species control will be conducted, as needed, by project personnel.

Monitoring will be conducted at a minimum of every other week during the growing season (February to June). Project personnel will be trained in non-native plant identification and non-native plant removal strategies.

Database and Mapping

Locations of new noxious weeds and non-native plant species occurrences and species data (detection date, growth stage, infestation extent, treatments implemented, results of treatment, and current status) will be maintained during the construction and operation within the proposed project footprint. A geographic information system (GIS) will be used to map and store data.

NOXIOUS WEED AND NON-NATIVE PLANT SPECIES MANAGEMENT

General prevention measures that will be implemented prior to and during construction activities and will inhibit the spread of weeds and their germination include the following:

- Project-related disturbances to ecologically sensitive areas will be avoided or minimized when possible. Sensitive residual areas that are impacted will be mitigated as appropriate.
- The project proponent will minimize the clearing of existing trees and shrubs during site design and construction to the greatest practicable extent.
- Temporary impacts to vegetation communities will be mitigated through revegetation of impacted areas. Revegetation will involve recontouring the land, replacing collected topsoil, and planting seed and/or container stock. Based on monitoring of the restoration area, maintenance activities such as weeding, replacement planting and supplemental watering may be necessary to achieve restoration standards. Revegetated areas will include all areas temporarily impacted by construction. Reclamation activities will be undertaken as early as possible on disturbed areas. Additional reclamation measures will be developed to address site-specific conditions, as necessary.
- Topsoil from may be salvaged and reapplied during final reclamation. Areas of disturbed soil will be reclaimed using weed-free native shrubs, grasses, and forbs.
- Vehicle wash and inspection stations will be maintained throughout the project area. Recorded vehicle inspection logs will be kept for all vehicles brought on and off the project site.
- Materials brought on-site will be closely monitored to minimize the potential for weed introduction.

Personnel Environmental Training

Environmental training for contractors and related personnel entering the project site will be provided prior to and during construction activities. Mandatory training will be required for contractors, subcontractors, inspection personnel, construction managers, construction personnel, and individuals transiting vehicles and equipment into the project area. The training

will include non-native species identification and non-native species management strategies for the prevention and spread of non- native species, as well as eradication and control methods of existing and introduced non-native species.

Equipment Cleaning

Equipment cleaning will be required to prevent the spread of weed species into new habitats. The construction contractor will insure that all construction equipment will be cleaned by high pressure air or water spray in order to remove dirt and mud that may contain seeds, roots, or rhizomes. Prior to entering the project area, equipment will be inspected to ensure they are free of any dirt or mud. During construction, all equipment will be cleaned after work in weed-contaminated soils. Cleaning stations will use either high pressure water or air to remove dirt and mud from equipment and will be located away from any sensitive biological resource. Sediment basins will be required if water is used for on-site equipment cleaning. For equipment entering and leaving site, records and cleaning records will be kept stating the location, date and time, license plate/vehicle identification or serial number of equipment, and methods used.

Soil Management

Soil management will limit ground disturbances to the minimum feasible amount, and fugitive dust will be suppressed in order to minimize the spread of seeds. Soil management activities include revegetation of temporarily disturbed areas and the reclamation of topsoil. Revegetation will involve recontouring the land, replacing collected topsoil, and planting seed and/or container stock. Reclamation activities will be undertaken as early as possible on disturbed areas. Topsoil from excavations and construction activities will be segregated from sub-soil and reapplied to the surface of the ground during reclamation. During grading and construction activities, the contractor shall avoid transporting soil within proposed project footprint or outside of the proposed project footprint. Topsoil shall be stockpiled adjacent to the area from which they are removed to eliminate the transportation of soil-born non-native seeds, roots, and rhizomes. In addition, topsoil that is allowed to be stockpiled for the duration of a growing season (February to June) will be managed as described in this plan.

Weed-free Products

Weed-free products obtained from certified sources (i.e., free of primary noxious weeds) will be utilized. The contractor will ensure that straw or hay bales, gravel, mulch, and soil are free of weeds and, where feasible, mulch and soil will be generated or used from the proposed project footprint.

ERADICATION AND CONTROL METHODS

Physical Weed Removal Methods

Physical control methods are applicable for removal of non-native species and can include hand pulling and mechanical clearing. Methods employed will depend on the species, size, and extent of the non-native species targeted and the root structure of each plant. Hand pulling is often most effective for localized non-native species control when the plant is large enough that it will not break and leave the root structures in place to resprout. This method is less effective in large areas or with species that spread through underground root systems.

Chemical Weed Removal Methods

Herbicide application is a widely employed, efficient, non-native species control method that is effective for large areas where hand pulling is not applicable. Herbicides will be employed in accordance with local, state, and federal regulations. Pre- and post-emergent herbicides may be applied. Pre-emergent herbicides are those that are integrated into the soil before the weed seed germinates and generally require irrigation or rainfall. Application of pre-emergent herbicides would occur in early fall prior to fall/early winter rain events. Post-emergent herbicides are applied directly to the weed while it is growing prior to seed set. Post-emergent treatment will occur between February and early April.

Any herbicides used as part of the weed control program will be mixed, handled, and applied in accordance with manufacturer's label instructions by a State-certified licensed contractor. No herbicide applications will be performed during unfavorable wind and weather conditions. Application of herbicides will not occur when either of the following conditions exist; wind speeds in excess of 6 miles per hour (mph) during liquid application or 15 mph during granular application, snow or ice are present, or the air temperature is above 90 degrees Fahrenheit. Herbicide containers will be returned to the contractor's facilities for disposal in accordance with applicable federal, state and local codes and regulations.

Permitting and Regulatory Requirements

Prior to application of any herbicide, contractors will obtain required permits from state and local authorities. Contractors applying herbicide measures must be a State-certified contractor. Only herbicides that are approved by the State of California will be used within or adjacent to the project site.

Application and Handling

The following general precautions and procedures will be implemented during application and handling of herbicides:

- Conduct pretreatment survey before applying herbicides.
- Select herbicide that is least damaging to the environment while providing the described results.
- Select herbicide products carefully to minimize additional impacts from degradates, adjuvants, inert ingredients, and tank mixtures.

- Apply the least amount of herbicide needed to achieve the desired result.
- Follow herbicide applicators label for use and storage.
- Have licensed applicators apply herbicides.
- Use only USEPA-approved herbicides and follow product label directions and "advisory statements.
- Review, understand, and conform to the "Environmental Hazards" section on the herbicide product label. This section warms of known pesticide risks to the environment and provides practical ways to avoid harm to organisms or to the environment.
- Minimize the size of application area, when feasible.
- Comply with herbicide-free buffer zones to ensure that drift will not affect crops or nearby residents/landowners and native habitat.
- Post treated areas and specify reentry or rest times, if appropriate.
- Notify adjacent landowners prior to treatment.
- Keep a copy of Material Safety Data Sheets (MSDS) at work site. MSDSs are available for review at http://wwwcdms.net/.
- Keep records of each application, including the active ingredient, formulation, application rate, date, time, and location.
- Avoid accidental direct spray and spill conditions to minimize risks to resources.
- Take precautions to minimize drift by not applying herbicides when winds exceed >10 miles per hour, or a serious rainfall event is imminent.
- Use drift control agents and low volatile formulations.
- Conduct pre-treatment surveys for sensitive habitat and special status species within or adjacent to proposed treatment areas.
- Consider site characteristics, environmental conditions, and application equipment in order to minimize damage to non-target vegetation.
- Use drift reduction agents, as appropriate, to reduce the drift hazard to non-target species.
- Turn off applied treatment at the completion of spray runs and during turns to start another spray run.
- Refer to the herbicide product label when planning revegetation to ensure that subsequent vegetation would not be injured following application of the herbicide.

Attachment 6

APPLICATIONS 161248-161253; 171059
(DAV 016-DAV 023)

Archeologic Report

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July 25, 2017

Cord Hute
Synthesis Environmental
6 Carmen Court
Novato, California

Subject: Cultural Resources Assessment for the Davenport Gap Node Project, Santa Cruz County, California (BCR Consulting Project No. SYN1701)

Dear Mr. Hute:

BCR Consulting LLC (BCR Consulting) is under contract to Synthesis Environmental to conduct a Cultural Resources Assessment of the Davenport Gap Node Project (project) located in Santa Cruz County, California. The project sites include seven proposed node sites in the Davenport Community of Santa Cruz County, California. The project site is located in a non-sectioned portion of Townships 10 and 11 South, Range 3 West, Mt. Diablo Baseline and Meridian. It is depicted on the United States Geological Survey (USGS) 7.5-minute *Davenport* (1991) and *Santa Cruz* (1994), *California* topographic quadrangles.

NATURAL SETTING

The local geology consists of Quaternary-period and Pleistocene Aromas Red Sands formation terrace deposits, which underlie the Pliocene-epoch (of the Tertiary period) Purisima Formation sediments. Local drainages have incised these deposits resulting in local deposition of Quaternary alluvium throughout stream channels, particularly at lower elevations (Muir 1980; California Department of Water Resources 2004). The region is characterized by a Mediterranean climate with relatively dry summers and mild winters. Annual rainfall averages approximately 25 inches (ibid) and typically occurs in the form of fall and winter storms and showers. The largest local fresh water source is Aptos Creek, which drains a large watershed to the north of the APE, and crosses the APE on its way to the Pacific from northeast to southwest. In spite of municipal and residential development and landscaping, some native vegetation communities remain locally intact. Signature native and non-native species associated with each habitat are summarized below in Table B (see also Williams et al. 2009: 67-68, 109, 111, 375). For prehistoric use of many of the local native species see Lightfoot and Parrish 2009.

Table B. Local Vegetation Communities

Habitat	Plant Species	Animal Species
Conifer Forest	Baker Cypress, Bishop Pine, Cuyamaca Cypress, Gowen Cypress, Knobcone Pine, McNab Cypress, Monterey Cypress, Monterey Pine, Torrey Pine, Santa Cruz Cypress, Sargent Cypress,	Black-tailed Deer, California Ground Squirrel, Deer Mouse, Meadow Vole, Raccoon, Western Gray Squirrel, Woodrat, Bushtit, Pine Siskin, Pygmy Nuthatch, Red

	Tecate Cypress, Yadon's Piperia, Manzanita, Salal, Scrub Oak, Monterey Clover, Milkweed	Crossbill, Red-Tailed Hawk, Sage Sparrow, Stellar's Jay.
Coastal Prarie/Annual Grassland	Blue bunchgrass, California Oatgrass, Bent Grass, Needlegrass, Tufted Hairgrass, Blue-eyed Grass, Butter-and-Eggs, California Buttercup, California Poppy, Chckerbloom, Douglas Iris, Goldfield, Indian Paintbrush, Plantago, Santa Cruz Tarplant, Seaside Daisy, Sonoma Spineflower, Coyotebrush, Ferns, Various Introduced Annual and Perrenial Grasses.	California Vole, Deer Mouse, Pocket Gopher, Roosevelt Elk, Shrew, Tule Elk, Western Harvest Mouse, American Kestrel, Burrowing Owl, California Quail, Grasshopper Sparrow, Northern Harrier, Peregrine Falcon, Red-Tailed Hawk, White-Crowned Sparrow.
Coastal Oak Woodland	Black Oak, Blue Oak, Buckeye, California Bay, Canyon Live Oak, Coast Live Oak, Engelmann Oak, Interior Live Oak, Oregon Oak, Valley Oak, Coffeeberry, Toyon, Blue Dicks	Mule deer, Western Grey Squirrel, Deer Mouse, Wood Rat, Northern Flicker, Scrub Jay, Ash-throated Flycatcher, Western Kingbird, White-breasted Nuthatch.

CULTURAL SETTING

Prehistory

Similar to most of western North America, human groups commenced regional settlement between 9,000-11,500 years before present. Humans proliferated globally during this era due to gradual environmental warming that marked the close of the last ice age. Changes in settlement patterns and subsistence focus are widely cited as adaptations to the new conditions and have been organized into a number of chronological frameworks for the region (see Moratto 1984; Heizer 1978; and others).

Ethnography

The project area is situated within the traditional boundaries of the Awaswas sub-group of the Coastanoan people. Coastanoan territory ranges from the southern San Francisco Bay in the north, along the coast to the Sur River forming the southern boundary, and is bounded on the east by California's Diablo Range (Levy 1978:485). The Coastanoan designation is linguistic, and comprises eight distinct languages that were divided into approximately 50 autonomous tribelets (Levy 1978:485; Kroeber 1925). Like many other California natives, the Costanoans relied on hunting and gathering for subsistence, although their relatively sedentary settlement pattern and high population necessitated careful land management traditions. Acorns were a staple, while roots, berries, and various other vegetation and hunted mammals supplemented their diet (see Crespi 1927; Galvan 1968).

History

Historic-era California is generally divided into three periods: the Spanish or Mission Period (1769 to 1821), the Mexican or Rancho Period (1821 to 1848), and the American Period (1848 to present).

Spanish Period. The Spanish period (1769-1821) is represented by exploration of the region; establishment of Mission San Juan Bautista; and the introduction of livestock, agricultural goods, and European architecture and construction techniques. Spanish influence continued to some extent after 1821 due to the continued implementation of the mission system.

Mexican Period. The Mexican period (1821-1848) began with Mexican independence from Spain and continued until the end of the Mexican-American War (Cleland 1941). The Secularization Act resulted in the transfer, through land grants (called ranchos) of large mission tracts to politically prominent individuals. At that time, cattle ranching was a more substantial business than farming, and until the Gold Rush of 1849, livestock and horticulture dominated California's economy (Beattie and Beattie 1974).

American Period. The American Period, 1848–Present, began with the Treaty of Guadalupe Hidalgo. In 1850, California was accepted into the Union of the United States primarily due to the population increase created by the Gold Rush. The cattle industry reached its greatest prosperity during the first years of the American Period. Mexican Period land grants had created large pastoral estates in California, and demand for beef during the Gold Rush led to a cattle boom that lasted from 1849–1855. However, beginning about 1855, the demand for beef began to decline due to imports of sheep from New Mexico and cattle from the Mississippi and Missouri Valleys. When the beef market collapsed, many California ranchers lost their ranchos through foreclosure (Beattie and Beattie 1974). This set the stage for the development of agricultural and municipal economies that proliferated during 20th century and continue to this day.

PERSONNEL

David Brunzell, M.A., RPA acted as the Project Manager and Principal Investigator for the project. He also initiated Native American Heritage Commission Sacred Lands File Search and compiled the technical report. The cultural resources records search was performed by the Northwest Information Center in Rohnert Park, California. BCR Consulting Staff Archaeologist Damien Tietjen, B.A. carried out the field assessment.

NATIVE AMERICAN CONSULTATION

BCR Consulting requested a search of the Sacred Lands File maintained by the Native American Heritage Commission (NAHC) on June 30, 2017. The request included a brief project description and location maps sent by email to the NAHC. Results are provided in Attachment C of this report.

METHODS

Records Search

Prior to fieldwork, a records search was conducted by the NWIC. This included a review of all recorded historic and prehistoric cultural resources, as well as a review of known cultural resource surveys and excavation reports generated from projects located within one half-mile of the project sites. In addition, a review was conducted of the National Register of Historic Places (National Register), the California Register of Historical Resources (California Register), and documents and inventories from the California Office of Historic Preservation including the lists of California Historical Landmarks, California Points of

Historical Interest, Listing of National Register Properties, and the Inventory of Historic Structures.

Field Survey

A pedestrian and windshield-style archaeological field survey of the project sites was conducted on July 9, 2017. The survey was conducted by locating each proposed node sites and inspecting undisturbed surface areas on foot. Where visible, soil exposures and rodent back dirt were carefully examined for cultural resources.

RESULTS

Records Search

Personnel from the Northwest Information Center (NWIC) at Rohnert Park completed the records search for the project on July 19, 2017. This research has revealed 12 cultural resources located within a half-mile radius of the proposed site locations. Of these resources, eight are prehistoric habitation sites, and four are historic-period resources. The research results are summarized in the below table (Table A.):

Table A. Records Search Summary

USGS 7.5 Minute Quad(s)	Cultural Resources within 1/2 Mile of the Project Site
Davenport (1991) and *Santa Cruz* (1994), California	P-44-24, 25, 50, 60, 61*, 62, 171, 196, 229, 377, 379, 406

*Prehistoric habitation site located 200 feet southwest of DAV-022.

Field Survey

During the field survey, BCR Consulting archaeologists inspected each of the proposed impact areas within the project site. No previously unrecorded prehistoric or historic archaeological resources were identified within any of the project site boundaries. Throughout most of the project sites, ground visibility was obscured by dense vegetation. Ground disturbances were also severe in most locations, and included grading, landscaping, and other disturbances related to adjacent roads.

CONCLUSIONS AND RECOMMENDATIONS

Project site DAV-022 is potentially sensitive for buried cultural resources due to its proximity to a known prehistoric archaeological resource (see Table A). Archaeological monitoring is recommended for any excavation associated with this project site. If any cultural resources are discovered, the monitor should be empowered to divert construction excavation until a qualified archaeologist can evaluate the find. Sensitivity for buried archaeological resources is not indicated outside these areas. In case of accidental discoveries of historic or prehistoric resources during construction-related excavation when an archaeological monitor is not present, work should cease and a U.S. Secretary of the Interior Qualified Archaeologist should be notified to record and evaluate the find.

If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the NAHC, which will determine and notify a Most Likely

Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC.

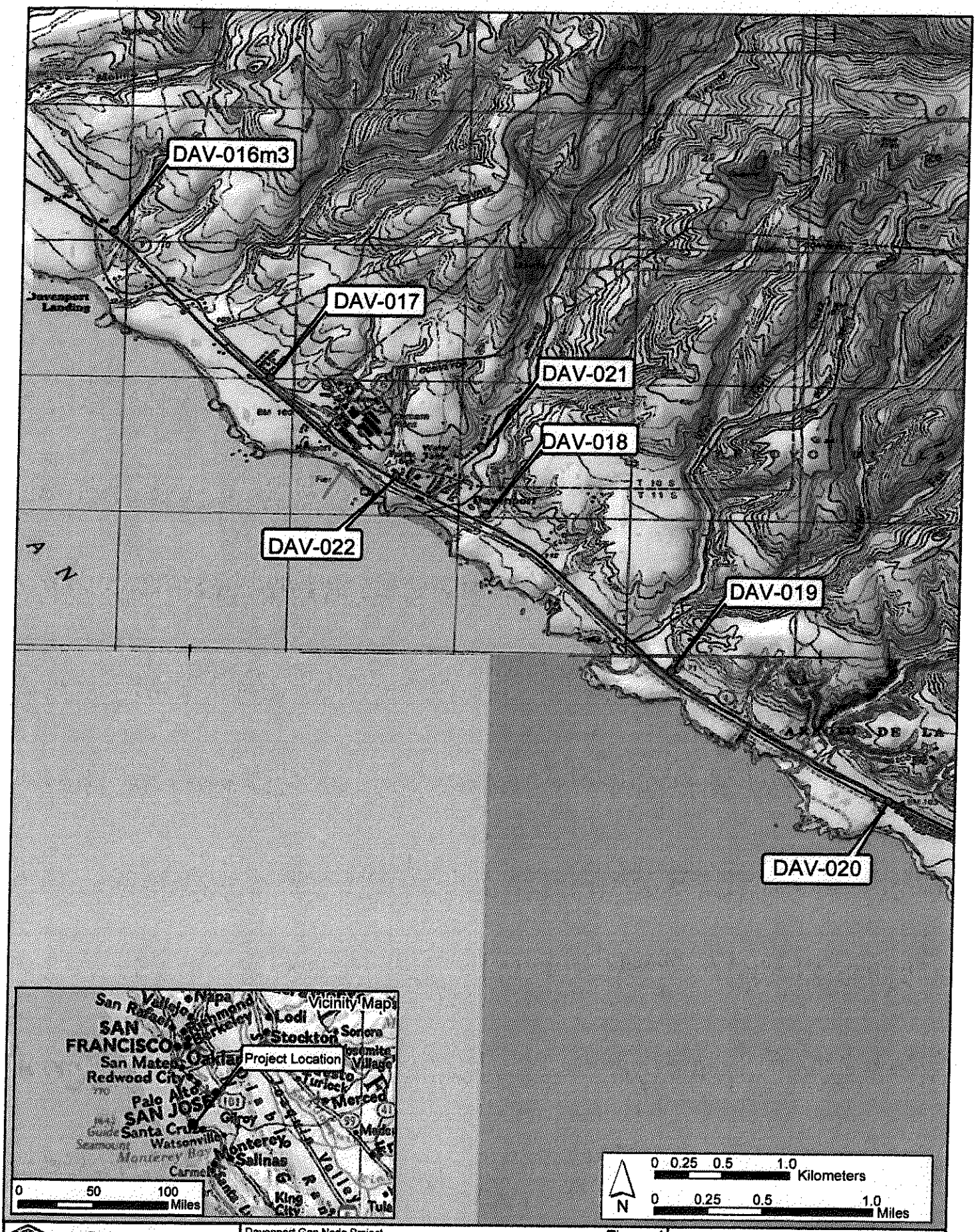
Please contact me by phone at 909/525-7078 or e-mail at david.brunzell@yahoo.com with any questions or comments.

Sincerely,

David Brunzell, M.A./RPA
Principal Investigator/Archaeologist

Attachment A: Project Location and Vicinity Map
Attachment B: References
Attachment C: Native American Heritage Commission Consultation Correspondence
Attachment D: Project Photographs

ATTACHMENT A:
PROJECT LOCATION AND VICINITY MAP



BCR CONSULTING LLC
Claremont Napa Tehachapi
www.bcrconsulting.net
909-525-7078

Davenport Gap Node Project
Project Locations

Figure 1

Reference: USGS Quad: *Davenport* (1991) and *Santa Cruz* (1994), *California*

Synthesis Environmental

ATTACHMENT B:
REFERENCES

REFERENCES

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United States Geological Survey
1991 *Davenport, California* 7.5-minute topographic quadrangle map.
1994 *Santa Cruz, California* 7.5-minute topographic quadrangle map.

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ATTACHMENT C:

NATIVE AMERICAN HERITAGE COMMISSION CONSULTATION CORRESPONDENCE

Subject: BCR SLF Request, Davenport Gap Node Project, Santa Cruz County

From: david.brunzell@yahoo.com

To: nahc@nahc.ca.gov

Date: Friday, June 30, 2017, 6:19:09 PM PDT

Hi Steve,

I'd like to request a Sacred Lands File Search for the proposed Davenport Gap Node Project in the Community of Davenport, Santa Cruz County. This is for information purposes only (not government to government consultation). The Project will be located as follows (MDBM; see attached project location map):

Township 10 and 11 South
Range 3 West
Non-sectioned
USGS 7.5 Minute Topographic Quads: *Davenport* (1991) and *Santa Cruz* (1994), *California*

Please send the results and list to my email and please get in touch with any questions.

Thanks,

David Brunzell
Principal Investigator/Archaeologist

BCR Consulting LLC
Certified Small Business (SB)
1420 Guadalajara Place
Claremont, California 91711
909-525-7078

www.bcrconsulting.net

NATIVE AMERICAN HERITAGE COMMISSION
Environmental and Cultural Department
1550 Harbor Blvd., ROOM 100
West SACRAMENTO, CA 95691
(916) 373-3710
Fax (916) 373-5471

June 5, 2017

David Brunzell
BCR Consulting

Email to: david.brunzell@yahoo.com

RE: Davenport Gap Node Project, Santa Cruz County

Dear Mr. Brunzell,

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not preclude the presence of cultural resources in any project area. Other sources for cultural resources should also be contacted for information regarding known and/or recorded sites.

Enclosed is a list of Native Americans tribes who may have knowledge of cultural resources in the project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these tribes, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at frank.lienert@nahc.ca.gov.

Sincerely,

for Frank Lienert
Associate Governmental Program Analyst

Native American Heritage Commission
Native American Contacts
7/5/2017

Amah MutsunTribal Band
Valentin Lopez, Chairperson
P.O. Box 5272 Ohlone/Costanoan
Galt , CA 95632 Northern Valley Yokuts
vlopez@amahmutsun.org
(916) 743-5833

Amah MutsunTribal Band of Mission San Juan Bautista
Irenne Zwierlein, Chairperson
789 Canada Road Ohlone/Costanoan
Woodside , CA 94062
amahmutsuntribal@gmail.com
(650) 851-7489 Cell
(650) 851-7747 Office
(650) 332-1526 Fax

Costanoan Ohlone Rumsen-Mutsen Tribe
Patrick Orozco, Chairman
644 Peartree Drive Ohlone/Costanoan
Watsonville , CA 95076
yanapvoic97@gmail.com
(831) 728-8471

Muwekma Ohlone Indian Tribe of the SF Bay Area
Rosemary Cambra, Chairperson
P.O. Box 360791 Ohlone / Costanoan
Milpitas , CA 95036
muwekma@muwekma.org
(408) 314-1898
(510) 581-5194

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28 Ohlone/Costanoan
Hollister , CA 95024
ams@indiancanyon.org
(831) 637-4238

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code

This list is only applicable for contacting local Native Americans with regard to cultural resources assessments for the updated contact list for the Davenport Gap Node Project, Santa Cruz County

ATTACHMENT D:
PHOTOGRAPHIC DOCUMENTATION

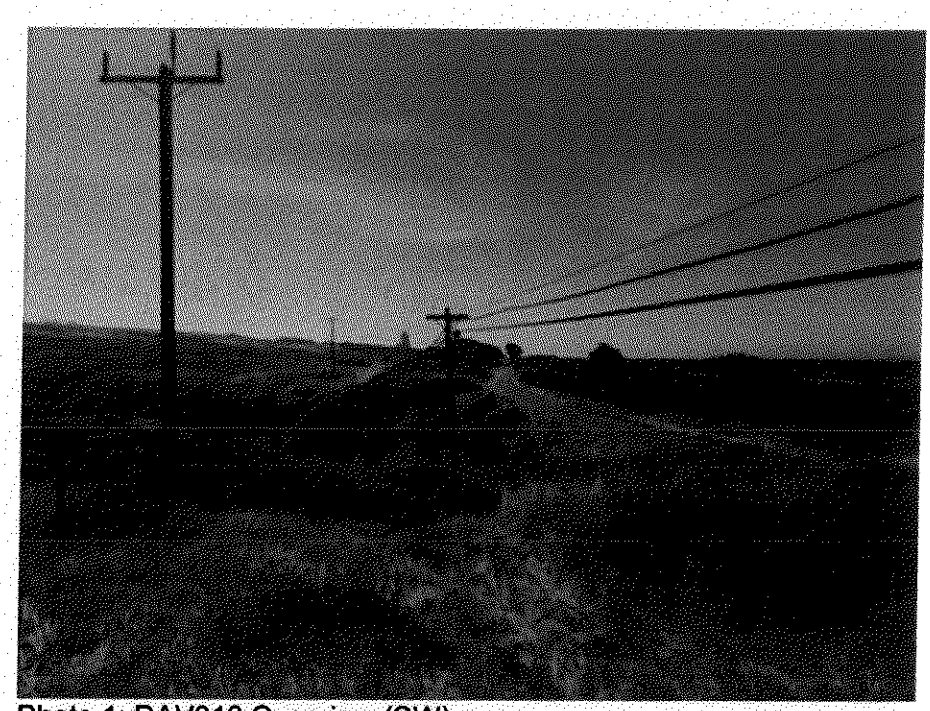

Photo 1: DAV016 Overview (SW)

Photo 2: DAV022 Overview (E)

Attachment 7

APPLICATIONS 161248, 161250-161252 (DAV 016-DAV 023)

Site Photographs

Dudlea palmerii

APPLICATION 161248 (DAV 016)

APPLICATION 161248 (DAV 016)

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APPLICATION 161250 (DAV 018)

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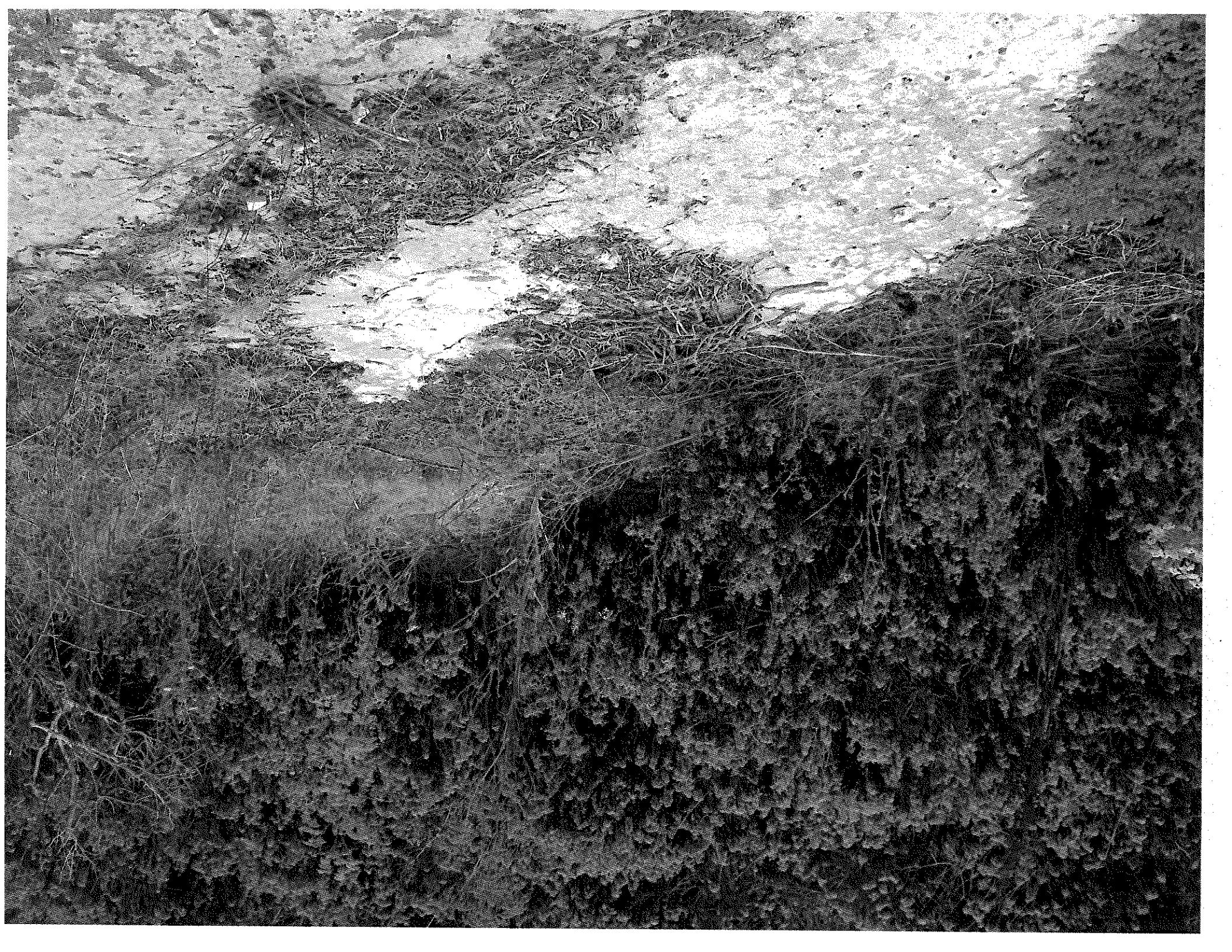

APPLICATION 161251 (DAV 019)

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03/01/2017 11:52

APPLICATION 161252 (DAV 020)


02/17/2017 13:30

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APPLICATION 161253 (DAV 021)

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02/17/2017 15:00


SLOW
02/17/2017 15:00

Attachment 8

Location Maps, Site Plans and Elevations

Note: this section approximately 30 pages – approximately 4 pp. per site

The project has seven sites, referenced by County permit application numbers.
Applicant site location numbers are referenced in parentheses.

161248 (DAV 016m3, also referenced as DAV 016)

161249 (DAV 017)

161250 (DAV 018)

161251 (DAV 019m, also referenced as DAV 019)

161252 (DAV 020m, also referenced as DAV 020)

161253 (DAV 021m, also referenced as DAV 021)

171059 (DAV 022m2, also referenced as DAV 022)

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DAV-016m3
SOUTHEAST OF HWY1/DAVENPORT LANDING RD
DAVENPORT, CA

PROJECT MANAGER:
JAY THOMAS
PRESIDENT CELL SITE ASSOCIATES INC.
654 BALTUSROL DR.
APTOS, CA 95003
PHONE: (925) 413-8448
EMAIL: JAY-THOMAS@SBCGLOBAL.NET

NODE ENGINEER:
COASTAL COMMUNICATIONS
5841 EDISON PL, STE. 200
CARLSBAD, CA 92008
TODD THREW
(760) 929-0924
TODD@COASTALCOMMINC.COM

CROWN CASTLE (Applicant)
BEACON DEVELOPMENT, LLC
3 ROVINA LANE
PETALUMA, CA 94952
JASON F. OSBORNE
(415) 559-2121
JASON@BEACONDEV.NET

PROJECT TEAM

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

1. CALIFORNIA BUILDING CODE CBC-2016
2. CALIFORNIA ADMINISTRATIVE CODE. (INCL. TITLES 24 & 25) 2016
3. ANSI/EIA-222-F LIFE SAFETY CODE NFPA
4. BUILDING OFFICIALS AND CODE ADMINISTRATORS (BOCA)
5. CALIFORNIA ELECTRICAL CODE CEC-2016
6. CALIFORNIA MECHANICAL CODE CMC-2016
7. CALIFORNIA PLUMBING CODE CPC 2016
8. LOCAL BUILDING CODE(S)
9. COUNTY AND/OR COUNTY ORDINANCES
10. MUST COMPLY TO LATEST CALIFORNIA FIRE CODE. (AND LATEST MUNICIPAL FIRE CODE).
11. CALIFORNIA GENERAL ORDER 95 AND 128.

CODE COMPLIANCE

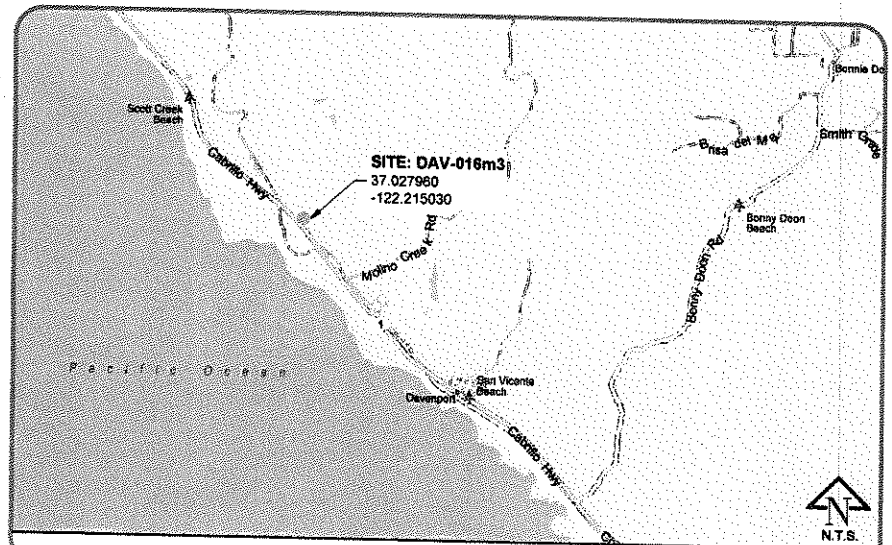
CROWN CASTLE TO INSTALL THE FOLLOWING:

- INSTALL ACCORDING TO UTILITY STANDARDS AND PRACTICES.
- INSTALL (1) TRANSFORMER AND SECONDARY SERVICE.
- INSTALL 3" SCHEDULE 80 POWER FEED RISER.
- INSTALL 2" SCHEDULE 80 COMM RISER WITH WEATHERHEAD.
- INSTALL(2) 2" SCHEDULE 80 FIBER RISER ON TELCO POLE AND SERVICE POLE
- INSTALL NEW FCC SIGN.
- INSTALL NEW CHANNEL MOUNTING BRACKET.
- INSTALL (1) POWER SUPPLY & BATTERY BACKUP.
- INSTALL (1) FIBER OPTIC PANEL, (1) METER BOX & ELECTRICAL DISCONNECT WITH 4 BREAKERS.
- INSTALL (1) NEW FENCE AND NEW H-FRAME WITH (1) ION-M-85P19P, (1) RRUS-11 B13 (700), (1) AC TO DC INVERTER & (1) FIBER OPTIC PANEL.
- INSTALL (2) PANEL ANTENNAS MODEL #HTNCWW45185F000 ON ANTENNA MOUNTING BRACKETS.
- INSTALL VERTICAL GROUND ROD.

PROJECT SUMMARY

SHEET NO.	DESCRIPTION
T-1	TITLE SHEET
D-1	NOTES
D-2	DETAILS
D-3	DETAILS
P-1	SITE PLAN
P-2	ENLARGED SITE PLAN
P-3	POLE PROFILE
P-4	POLE PROFILE
P-5	POLE PROFILE
C-1	SURVEY

SHEET INDEX



VICINITY MAP

LATITUDE:	37.027960
LONGITUDE:	-122.215030
ELEVATION:	94.2 ± AMSL (NAVD 1968)
JURISDICTION:	CAL-TRANS
A.P.N.:	CAL-TRANS RIGHT -OF-WAY
ZONING:	CAL-TRANS RIGHT-OF-WAY
OCCUPANCY:	UNMANNED
TYPE OF CONSTRUCTION:	ATTACHMENTS TO NEW POLE
HANDICAP REQUIREMENTS:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESSES NOT REQUIRED
TITLE 24 REQUIREMENTS:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. THIS PROJECT IS EXEMPT

PROJECT INFORMATION

1. STREET USE PERMIT SHALL BE OBTAINED BY CONTRACTOR PRIOR TO COMMENCING WORK.
2. ALL WORK TO BE CONDUCTED IN THE RIGHT OF WAY.
3. ALL DISTURBED LANDSCAPING SHALL BE REPLACED TO SIMILAR EXISTING CONDITION.
4. ANY SIDEWALK CLOSURE SHALL BE COORDINATED WITH THE COUNTY AND PROPER BOARING WILL BE PLACED.
5. NO MATERIALS OR EQUIPMENT SHALL BE STORED ON PRIVATE PROPERTY OR BLOCK ACCESS TO PRIVATE PROPERTY.
6. CLEANUP OF SITE WILL BE COMPLETED EACH EVENING AND THE SITE WILL BE RETURNED TO EXISTING CONDITIONS AT THE COMPLETION OF CONSTRUCTION AT EACH SITE.

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR RESPONSIBLE FOR SAME.

GENERAL CONTRACTOR NOTES

FROM: 695 RIVER OAKS PKWY, SAN JOSE, CA 95134
TO: NODE DAV-016m2 SWANTON RD, DAVENPORT, CA

1. FROM RIVER OAKS PARKWAY GET ON MONTAGUE EXPRESSWAY E.
2. FOLLOW MONTAGUE EXPRESSWAY E TO 880 S.
3. FOLLOW 880 S TO CA-17 S TO CA-1 N TO DAVENPORT LANDING RD IN SANTA CRUZ COUNTY.
4. DESTINATION WILL BE ON YOUR RIGHT.

DRIVING DIRECTIONS

DAV-016m3
DAVENPORT
CROWN CASTLE PROJECT NO.
VZW346267CA

CLIENT:
CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:
Communications
Telecommunications Engineering
5841 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0936
www.coastalcommunic.com

PROPRIETARY INFORMATION

THE INFORMATION CONTAINED IN THIS SET OF DRAWINGS IS PROPRIETARY AND CONFIDENTIAL TO VERIZON. ANY USE OR DISCLOSURE OTHER THAN AS IT RELATES TO VERIZON IS STRICTLY PROHIBITED.

DIGALERT
1-800-227-2600
CALL AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
TICKET #

REVISION/ ISSUE	DATE
VARIOUS CHANGES	04-25-17
EQUIPMENT TO VAULT	05-22-17
EQUIPMENT TO H-FRAME	08-28-17

SITE NAME & ADDRESS:
DAV-016m3
SOUTHEAST OF HWY1/DAVENPORT LANDING RD
DAVENPORT, CA

TITLE SHEET

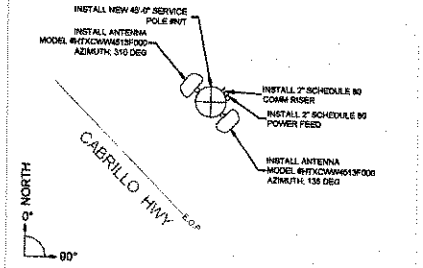
DRAWN BY:	DRAFT DATE:	APPROVED BY:
F.B.	04/19/17	GD

SHEET NO.
T-1

CROWN CASTLE TO INSTALL THE FOLLOWING:

- INSTALL ACCORDING TO UTILITY STANDARDS AND PRACTICES.
- INSTALL (1) TRANSFORMER AND SECONDARY SERVICE.
- INSTALL 2" SCHEDULE 80 POWER FEED RISER.
- INSTALL 2" SCHEDULE 80 COMM RISER WITH WEATHERHEAD.
- INSTALL (2) 2" SCHEDULE 80 FIBER RISER, TELCO AND SERVICE POLE.
- INSTALL NEW PCC SIGN.
- INSTALL NEW CHANNEL MOUNTING BRACKET.
- INSTALL (1) POWER SUPPLY & BATTERY BACKUP.
- INSTALL (1) FIBER OPTIC PANEL, (1) METER BOX & ELECTRICAL DISCONNECT WITH 4 BREAKERS.
- INSTALL (1) NEW FENCE AND NEW H-FRAME WITH (1) ION-M 65P/19P, (1) RRUS-11 B13 (700), (1) AC TO DC INVERTER & (1) FIBER OPTIC PANEL.
- INSTALL (2) PANEL ANTENNAS MODEL #HTNCWW4513F000 ON ANTENNA MOUNTING BRACKETS.
- INSTALL VERTICAL GROUND ROD.

A NEW CONSTRUCTION NOTES



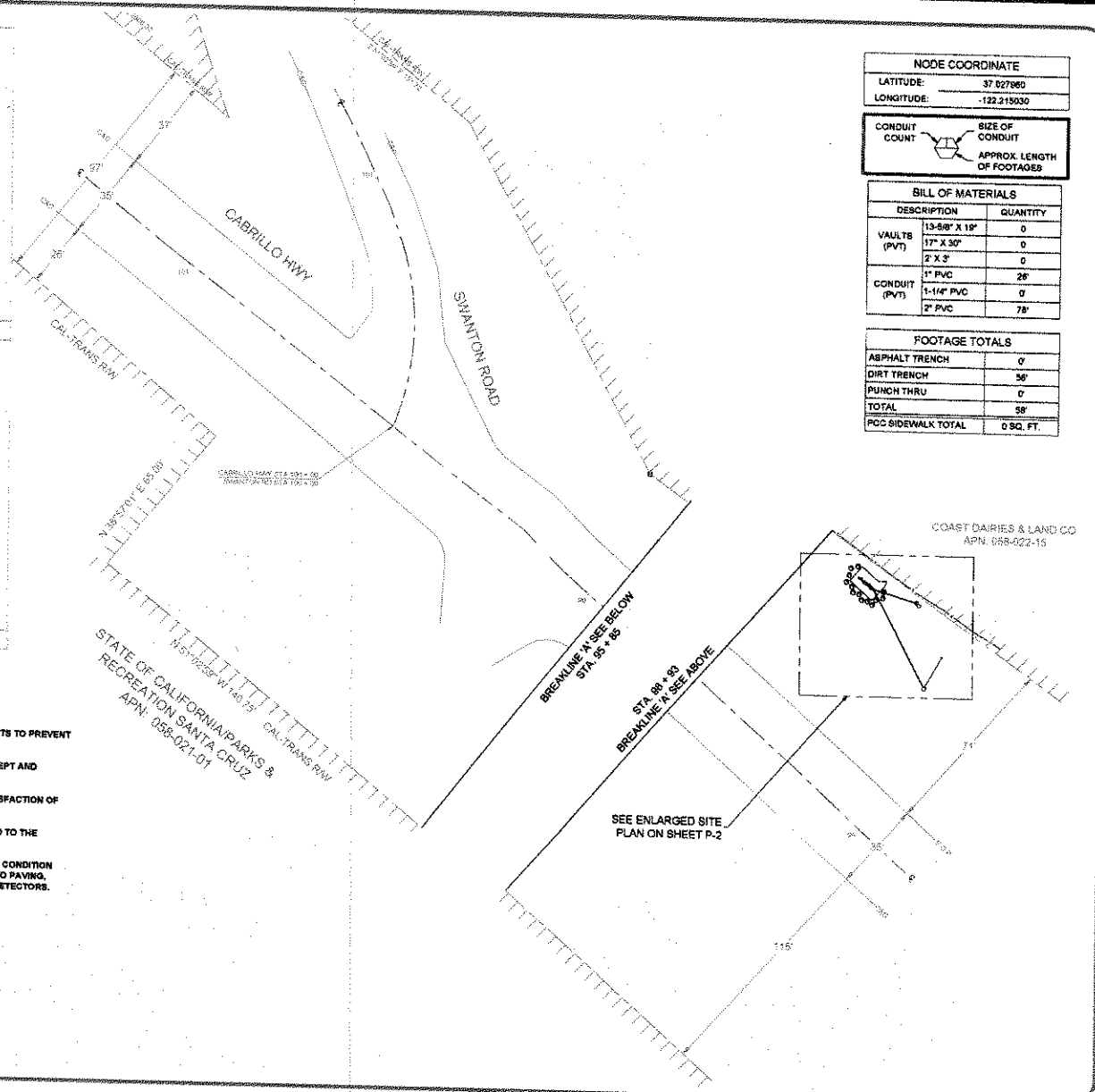
B TOP VIEW N.T.S.

NOTES:

1. CONTRACTOR TO POTHOLE ALL UTILITY CROSSINGS.
2. CONTRACTOR TO PLACE SANDBAGS AROUND ANY/ALL STORM DRAIN INLETS TO PREVENT CONTAMINATED WATER.
3. SPOILS PILE WILL BE COVERED AND CONTAINED AND STREET WILL BE SWEPT AND CLEANED AS NEEDED.
4. CONTRACTOR TO REPAIR DAMAGED PUBLIC IMPROVEMENTS TO THE SATISFACTION OF THE COUNTY ENGINEER.
5. CURB & GUTTER TO BE PROTECTED IN PLACE. SIDEWALK TO BE REPLACED TO THE SATISFACTION OF THE COUNTY ENGINEER.
6. THE CONTRACTOR SHALL RESTORE THE ROADWAY BACK TO IT'S ORIGINAL CONDITION SATISFACTORY TO THE COUNTY ENGINEER INCLUDING, BUT NOT LIMITED TO PAVING, STRIPING, BIKE LANES, PAVEMENT LEGENDS, SIGNS, AND TRAFFIC LOOP DETECTORS.

NORTH

SCALE: 1" = 20'



NODE COORDINATE	
LATITUDE:	37.027960
LONGITUDE:	-122.215030

CONDUIT COUNT — SIZE OF CONDUIT — APPROX. LENGTH OF FOOTAGES

BILL OF MATERIALS		
DESCRIPTION		QUANTITY
VAULTS (PVT)	13-5/8" X 19"	0
	17" X 30"	0
	2' X 3'	0
CONDUIT (PVT)	1" PVC	26'
	1-1/4" PVC	0'
	2" PVC	78'

FOOTAGE TOTALS	
ASPHALT TRENCH	0'
DIRT TRENCH	56'
PUNCH THRU	0'
TOTAL	56'
PCC SIDEWALK TOTAL	0 SQ. FT.

DAV-016m3

DAVENPORT

CROWN CASTLE PROJECT NO.

VZW346287CA

CLIENT:

CROWN CASTLE

695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:

Communications
Telecommunications Engineering

5841 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0010
FAX: (760) 929-0936
www.coastalcommins.com

PROPRIETARY INFORMATION

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DIGALERT

1-800-227-2600
CALL AT LEAST TWO DAYS BEFORE YOU DIG

UNDERGROUND SERVICE ALERT
TICKET #

REVISION / ISSUE	DATE
VARIOUS CHANGES	04-25-17
EQUIPMENT TO VAULT	06-22-17
EQUIPMENT TO H-FRAME	06-28-17

SITE NAME & ADDRESS:

DAV-016m3
SOUTHEAST OF
HWY1/DAVENPORT
LANDING RD
DAVENPORT, CA

SITE PLAN

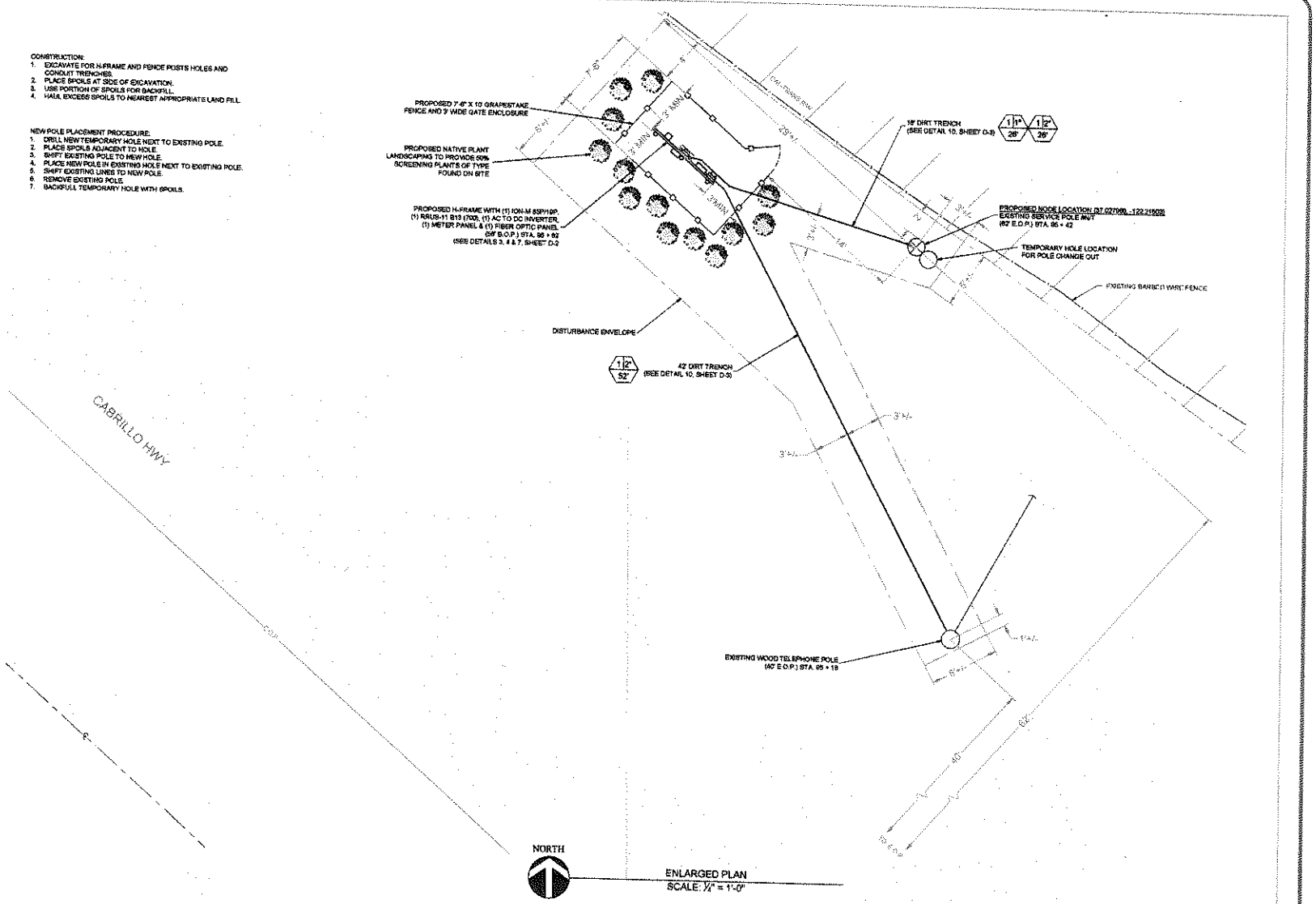
DRAWN BY:	DRAFT DATE:	APPROVED BY:
F.B.	04/19/17	GD

SHEET NO.

P-1

CONSTRUCTION:
1. EXCAVATE FOR H-FRAME AND FENCE POSTS HOLES AND CONDUIT TRENCHES.
2. PLACE SPOILS AT SIDE OF EXCAVATION.
3. USE PORTION OF SPOILS FOR BACKFILL.
4. HAUL EXCESS SPOILS TO NEAREST APPROPRIATE LAND FILL.

NEW POLE PLACEMENT PROCEDURE:
1. DRILL NEW TEMPORARY HOLE NEXT TO EXISTING POLE.
2. PLACE SPOILS ADJACENT TO HOLE.
3. SHIFT EXISTING POLE TO NEW HOLE.
4. PLACE NEW POLE IN EXISTING HOLE NEXT TO EXISTING POLE.
5. SHIFT EXISTING LINES TO NEW POLE.
6. REMOVE EXISTING POLE.
7. BACKFILL TEMPORARY HOLE WITH SPOILS.



DAV-016m3

DAVENPORT
CROWN CASTLE PROJECT NO.
VZW346267CA

CLIENT:
CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:
Communications
Telecommunications Engineering
5841 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0956
www.coastalcommgrp.com

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DIGALERT
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UNDERGROUND SERVICE ALERT
TICKET #

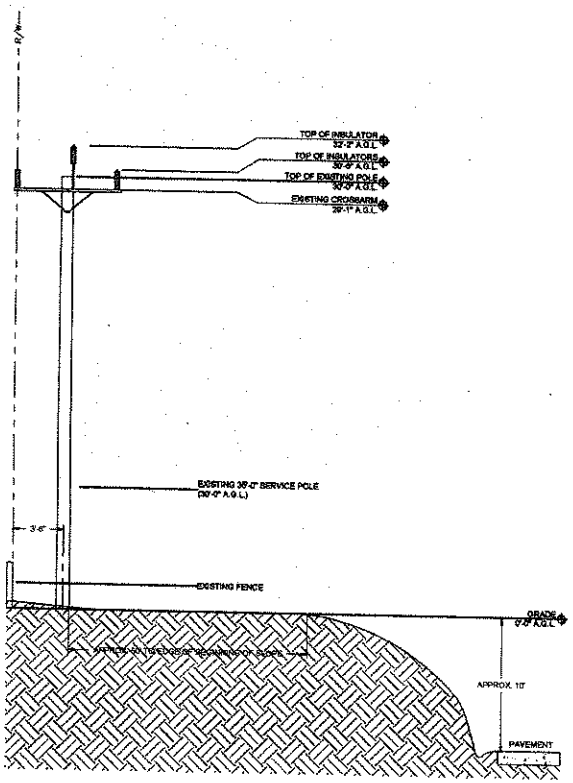
REVISION / ISSUE	DATE
VARIOUS CHANGES	04-25-17
EQUIPMENT TO VAULT	08-22-17
EQUIPMENT TO H-FRAME	08-28-17

SITE NAME & ADDRESS:
DAV-016m3
SOUTHEAST OF
HWY1/DAVENPORT
LANDING RD
DAVENPORT, CA

ENLARGED SITE PLAN

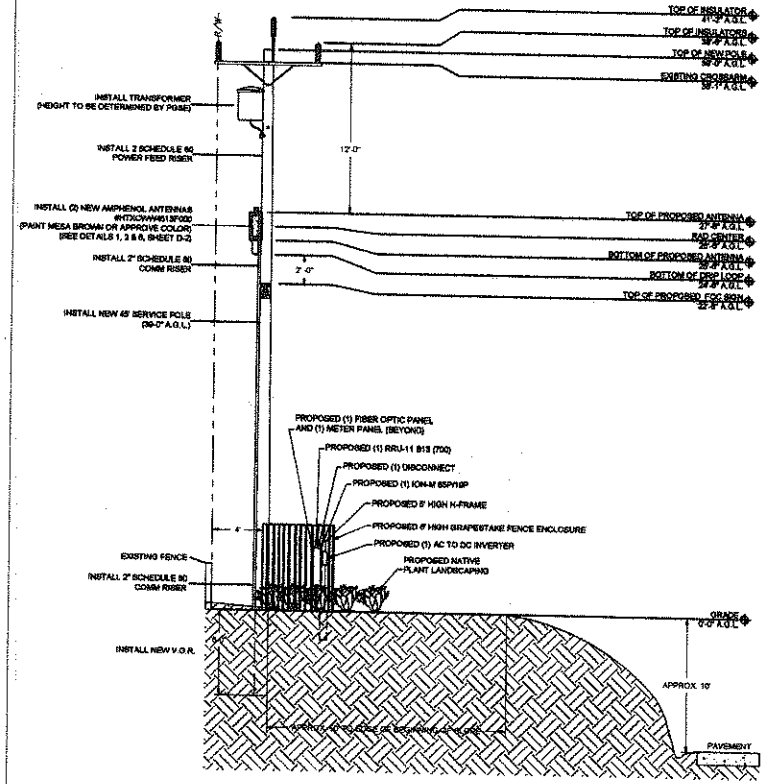
DRAWN BY:	DRAFT DATE:	APPROVED BY:
F.B.	04/19/17	GD

SHEET NO.
P-2



C | EXISTING POLE PROFILE: LOOKING SOUTHEAST | SCALE: 1/4" = 1'-0"

POLE ID: N/A
TOP OF EXISTING POLE: 30'-0"
TOP OF NEW POLE: 39'-0"
TOP OF ANTENNA(S): 27'-6"
RAD CENTER: 26'-6"
AZIMUTH(S): 135 DEG & 310 DEG



C | PROPOSED POLE PROFILE: LOOKING SOUTHEAST | SCALE: 1/4" = 1'-0"

DAV-016m3

DAVENPORT

CROWN CASTLE PROJECT NO.

VZW346267CA

CLIENT:

CROWN CASTLE

695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:

Communications
Telecommunications Engineering

5841 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0936
www.questionsconsulting.com

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UNDERGROUND SERVICE ALERT
TICKET #

REVISION / ISSUE	DATE
VARIOUS CHANGES	04-25-17
EQUIPMENT TO VAULT	05-22-17
EQUIPMENT TO H-FRAME	09-28-17

SITE NAME & ADDRESS:

DAV-016m3
SOUTHEAST OF
HWY1/DAVENPORT
LANDING RD
DAVENPORT, CA

PROFILE

DRAWN BY:	DRAFT DATE:	APPROVED BY:
F.B.	04/19/17	GD

SHEET NO.

P-4

DAV-017

140FT SW OF 1 1ST AVE
DAVENPORT, CA

PROJECT MANAGER:
JAY THOMAS
PRESIDENT CELL SITE ASSOCIATES INC.
654 BALTUSROL DR.
APTOS, CA 95003
PHONE: (925) 413-8448
EMAIL: JAY-THOMAS@SBCGLOBAL.NET

NODE ENGINEER:
COASTAL COMMUNICATIONS
5841 EDISON PL. STE. 200
CARLSBAD, CA 92008
TODD THREW
(760) 929-0924
TODD@COASTALCOMMINC.COM

CROWN CASTLE (Applicant)
BEACON DEVELOPMENT, LLC
3 ROVINA LANE
PETALUMA, CA 94952
JASON F. OSBORNE
(415) 359-2121
JASON@BEACONDEV.NET

PROJECT TEAM

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

1. CALIFORNIA BUILDING CODE CBC-2016
2. CALIFORNIA ADMINISTRATIVE CODE. (INCL. TITLES 24 & 25) 2016
3. ANSI/EIA-222-F LIFE SAFETY CODE NFPA
4. BUILDING OFFICIALS AND CODE ADMINISTRATORS (BOCA)
5. CALIFORNIA ELECTRICAL CODE CEC-2016
6. CALIFORNIA MECHANICAL CODE CMC-2016
7. CALIFORNIA PLUMBING CODE CPC 2016
8. LOCAL BUILDING CODE(S)
9. COUNTY AND/OR COUNTY ORDINANCES
10. MUST COMPLY TO LATEST CALIFORNIA FIRE CODE. (AND LATEST MUNICIPAL FIRE CODE).
11. CALIFORNIA GENERAL ORDER 95 AND 128.

CODE COMPLIANCE

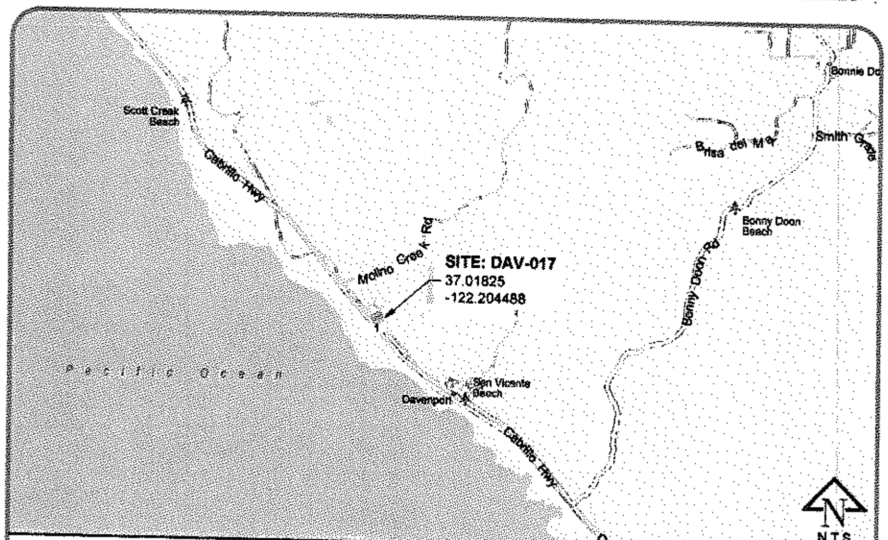
CROWN CASTLE TO INSTALL THE FOLLOWING:

- INSTALL ACCORDING TO UTILITY STANDARDS AND PRACTICES.
- INSTALL (1) TRANSFORMER AND SECONDARY SERVICE.
- INSTALL 2" SCHEDULE 80 POWER FEED RISER WITH WEATHERHEAD.
- INSTALL 2" SCHEDULE 80 COMM RISER WITH WEATHERHEAD.
- INSTALL NEW CHANNEL MOUNTING BRACKET.
- INSTALL (1) POWER SUPPLY & BATTERY BACKUP.
- INSTALL (1) FIBER OPTIC PANEL, (1) METER BOX & ELECTRICAL DISCONNECT WITH 4 BREAKERS.
- INSTALL (1) NEW CUBE CISH-51-LG SHROUD KIT WITH (1) ION-M 85P/19P, (1) RRUS-11 B13 (700), (1) AC TO DC INVERTER.
- INSTALL (2) PANEL ANTENNAS MODEL# HTXCWW4513P000 ON ANTENNA MOUNTING BRACKETS.
- INSTALL VERTICAL GROUND ROD.
- INSTALL NEW 2' X 3' CROWN CASTLE FIBER VAULT.
- INSTALL NEW FCC SIGN.

PROJECT SUMMARY

SHEET NO.	DESCRIPTION
T-1	TITLE SHEET
D-1	NOTES
D-2	DETAILS
D-3	DETAILS
P-1	SITE PLAN
P-2	ENLARGED SITE PLAN
P-3	POLE PROFILE
P-4	POLE PROFILE
C-1	SURVEY

SHEET INDEX



VICINITY MAP

LATITUDE:	37.01825
LONGITUDE:	-122.204488
ELEVATION:	106.1 ± AMSL (NAVD 88)
JURISDICTION:	COUNTY OF SANTA CRUZ
A.P.N. ZONING: OCCUPANCY:	PUBLIC RIGHT OF WAY PUBLIC FACILITY UNMANNED
TYPE OF CONSTRUCTION:	ATTACHMENTS TO EX. POLE
HANDICAP REQUIREMENTS:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESSES NOT REQUIRED
TITLE 24 REQUIREMENTS:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. THIS PROJECT IS EXEMPT

PROJECT INFORMATION

1. STREET USE PERMIT SHALL BE OBTAINED BY CONTRACTOR PRIOR TO COMMENCING WORK.
2. ALL WORK TO BE CONDUCTED IN THE RIGHT OF WAY.
3. ALL DISTURBED LANDSCAPING SHALL BE REPLACED TO SIMILAR EXISTING CONDITION.
4. ANY SIDEWALK CLOSURE SHALL BE COORDINATED WITH THE COUNTY AND PROPER SIGNING WILL BE PLACED.
5. NO MATERIALS OR EQUIPMENT SHALL BE STORED ON PRIVATE PROPERTY OR BLOCK ACCESS TO PRIVATE PROPERTY.
6. CLEANUP OF SITE WILL BE COMPLETED EACH EVENING AND THE SITE WILL BE RETURNED TO EXISTING CONDITIONS AT THE COMPLETION OF CONSTRUCTION AT EACH SITE.

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR RESPONSIBLE FOR SAME.

GENERAL CONTRACTOR NOTES

FROM: 695 RIVER OAKS PKWY, SAN JOSE, CA 95134
TO: NODE DAV-017 CEMENT PLANT RD, DAVENPORT, CA

1. FROM RIVER OAKS PARKWAY GET ON MONTAGUE EXPRESSWAY E.
2. FOLLOW MONTAGUE EXPRESSWAY E TO 880 S.
3. FOLLOW 880 S TO CA-17 S TO CA-1 N TO CEMENT PLANT RD IN DAVENPORT.
4. SLIGHT RIGHT ONTO CEMENT PLANT RD.
5. DESTINATION WILL BE ON LEFT.

DRIVING DIRECTIONS

DAV-017
DAVENPORT
CROWN CASTLE PROJECT NO.
VZW346267CA

CLIENT:
CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:
Coastal Communications
Telecommunications Engineering
5841 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0936
www.coastalcomminc.com

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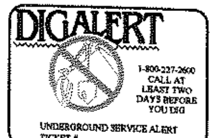
DIGALERT

1-800-227-2600
CALL AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
TICKET #

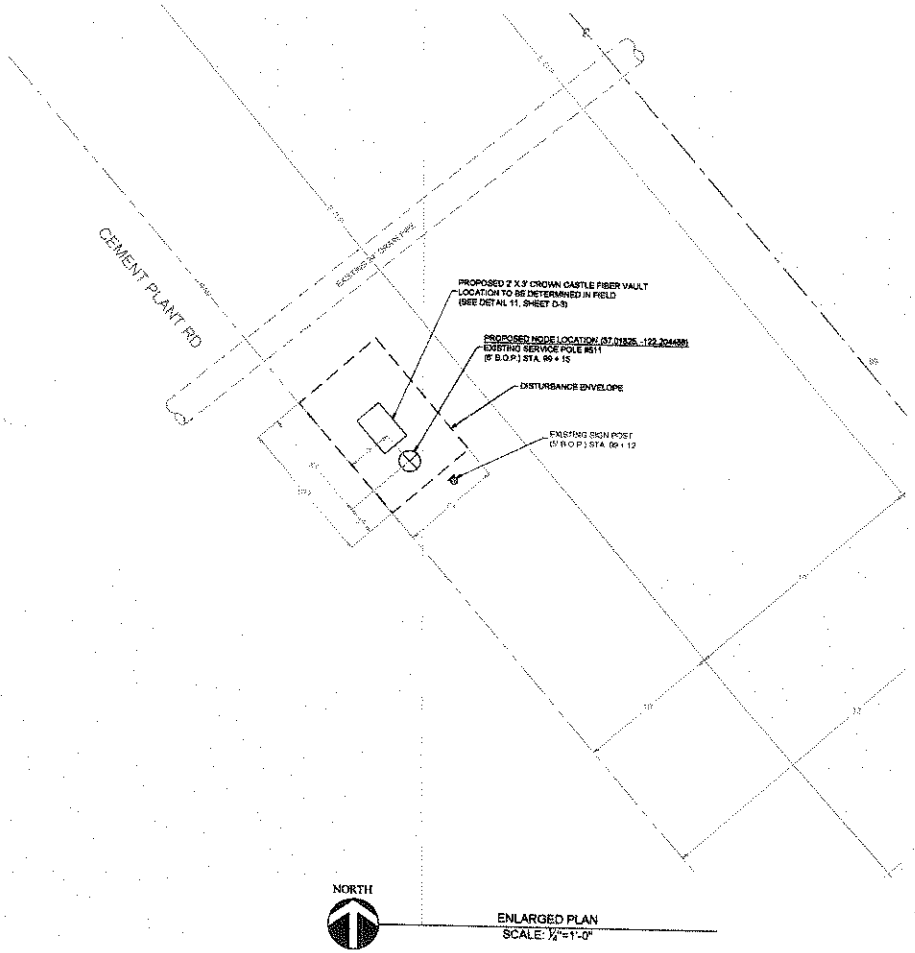
REVISION / ISSUE	DATE
EQUIPMENT MOVED TO POLE	04/12/17
VARIOUS CHANGES	04/19/17
ADD VAULT	04/22/17
MINOR CHANGES	04/25/17
CITY REDLINES	08/07/17

SITE NAME & ADDRESS:
DAV-017
140FT SW OF 1 1ST AVE
DAVENPORT, CA

TITLE SHEET

DRAWN BY:	DRAFT DATE:	APPROVED BY:
RG	12/14/16	GD

SHEET NO.
T-1



ENLARGED PLAN
SCALE: 1/2"=1'-0"

CONSTRUCTION:
1. EXCAVATE FOR VAULT AND CONDUIT TRENCH.
2. PLACE SPOILS AT SIDE OF EXCAVATION.
3. USE PORTION OF SPOILS FOR BACKFILL.
4. HAUL EXCESS SPOILS TO NEAREST APPROPRIATE LAND FILL.

DAV-017

DAVENPORT

CROWN CASTLE PROJECT NO.

VZW346267CA

CLIENT:

CROWN CASTLE

695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:

Communications
Telecommunications Engineering

5941 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0936
www.coastalcontrolinc.com

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DIGALERT

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UNDERGROUND SERVICE ALERT
TICKET #

REVISION / ISSUE	DATE
EQUIPMENT MOVED TO POLE	04/12/17
VARIOUS CHANGES	04/19/17
ADD VAULT	04/22/17
MINOR CHANGES	04/25/17
CITY REDLINES	08/07/17

SITE NAME & ADDRESS:

DAV-017
140FT SW OF 1 1ST AVE
DAVENPORT, CA

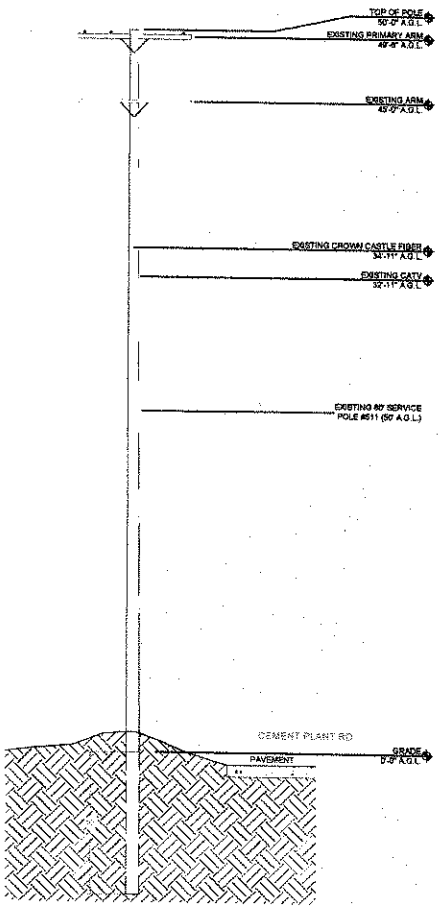
ENLARGED SITE PLAN

DRAWN BY:	DRAFT DATE:	APPROVED BY:
RG	12/14/16	GD

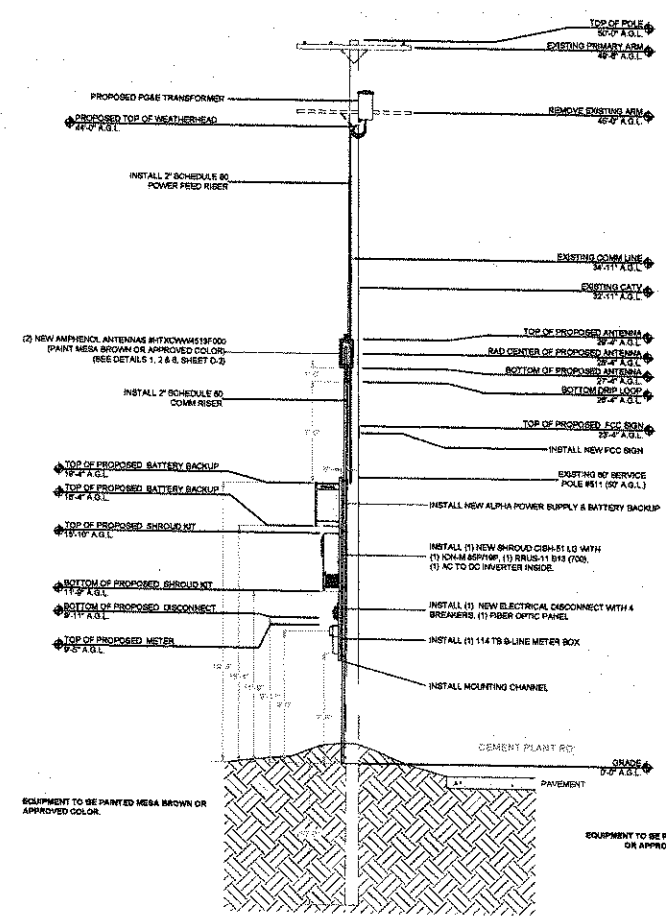
SHEET NO.

P-2

POLE ID: 511
TOP OF EXISTING POLE: 50'
TOP OF ANTENNA(S): 29'-4"
RAD CENTER: 28'-4"
AZIMUTH(S): 130° & 310°



C EXISTING POLE PROFILE: LOOKING NORTHWEST SCALE: 1/4" = 1'-0"



C PROPOSED POLE PROFILE: LOOKING NORTHWEST SCALE: 1/4" = 1'-0"

DAV-017

DAVENPORT
CROWN CASTLE PROJECT NO.
VZW346267CA

CLIENT:
CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:
Communications
Telecommunications Engineering
5841 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0610
FAX: (760) 929-0936
www.coastalcomm.com

DIGALERT
1-800-227-2600
CALL AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT TICKET #:

REVISION / ISSUE	DATE
EQUIPMENT MOVED TO POLE	04/12/17
VARIOUS CHANGES	04/19/17
ADD VAULT	04/22/17
MINOR CHANGES	04/25/17
CITY REDLINES	08/07/17

SITE NAME & ADDRESS:
DAV-017
140FT SW OF 1 1ST AVE
DAVENPORT, CA

PROFILE

DRAWN BY:	DRAFT DATE:	APPROVED BY:
RG	12/14/16	GD

SHEET NO.
P-3

DAV-018

100FT SE OF OLD COAST RD / CABRILLO HWY
DAVENPORT, CA

PROJECT MANAGER:
JAY THOMAS
PRESIDENT CELL SITE ASSOCIATES INC.
654 BALTUSROL DR.
APTOS, CA 95003
PHONE: (925) 413-8448
EMAIL: JAY-THOMAS@SBCGLOBAL.NET

NODE ENGINEER:
COASTAL COMMUNICATIONS
5841 EDISON PL, STE. 200
CARLSBAD, CA 92008
TODD THREW
(760) 929-0924
TODD@COASTALCOMMINC.COM

CROWN CASTLE (Applicant)
BEACON DEVELOPMENT, LLC
3 ROVINA LANE
PETALUMA, CA 94952
JASON P. OSBORNE
(415) 559-2121
JASON@BEACONDEV.NET

PROJECT TEAM

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

1. CALIFORNIA BUILDING CODE CBC-2016
2. CALIFORNIA ADMINISTRATIVE CODE. (INCL. TITLES 24 & 25) 2016
3. ANSI/EIA-222-F LIFE SAFETY CODE NFPA
4. BUILDING OFFICIALS AND CODE ADMINISTRATORS (BOCA)
5. CALIFORNIA ELECTRICAL CODE CEC-2016
6. CALIFORNIA MECHANICAL CODE CMC-2016
7. CALIFORNIA PLUMBING CODE CPC 2016
8. LOCAL BUILDING CODE(S)
9. COUNTY AND/OR COUNTY ORDINANCES
10. MUST COMPLY TO LATEST CALIFORNIA FIRE CODE. (AND LATEST MUNICIPAL FIRE CODE).
11. CALIFORNIA GENERAL ORDER 95 AND 128.

CODE COMPLIANCE

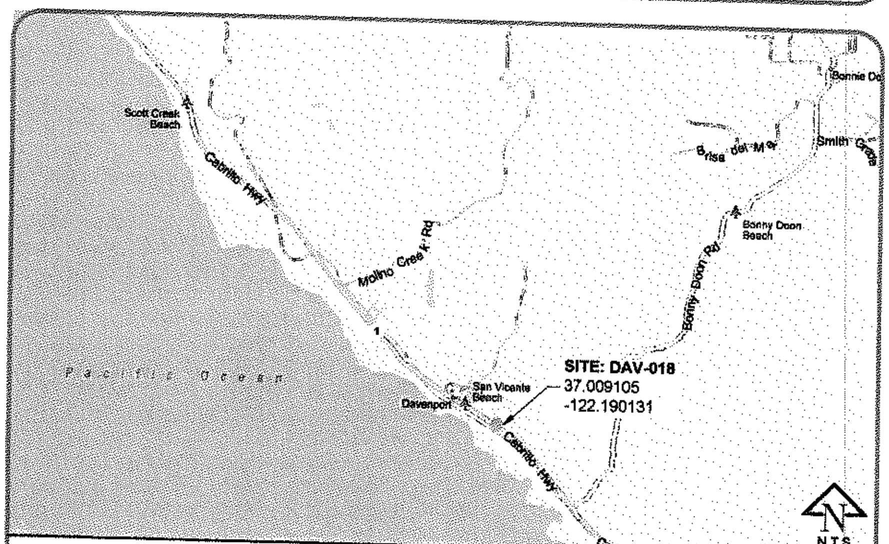
CROWN CASTLE TO INSTALL THE FOLLOWING:

- INSTALL ACCORDING TO UTILITY STANDARDS AND PRACTICES.
- INSTALL 3" SCHEDULE 80 POWER FEED RISER.
- INSTALL 2" SCHEDULE 80 COMM RISER (FIBER).
- INSTALL 2" SCHEDULE 80 COMM RISER (COAX TO ANTENNA).
- INSTALL (1) NEW GROUND CABINET WITH (1) ALPHA BATTERY BACKUP POWER SUPPLY, (1) 8086-M 8SP19P, (1) RRUS-11 B13 (700), (1) RRUS-32 B4/66 (2100), (2) AC TO DC INVERTERS, (1) FIBER OPTIC PANEL INSIDE.
- INSTALL (1) 15" X 15" ENCLOSURE WITH (1) DONGAN TRANSFORMER & LOW VOLT COAX CONNECTION INSIDE, (1) DISCONNECT WITH 9 BREAKERS ON SIDE OF CABINET.
- INSTALL (1) METER PANEL, DISCONNECT SWITCH, (1) 15" X 15" ENCLOSURE WITH (1) DONGAN TRANSFORMER & LOW VOLT COAX CONNECTION INSIDE METER POLE.
- INSTALL (2) PANEL ANTENNAS MODEL# HTXCW4H533F000 ON ANTENNA MOUNTING BRACKETS.
- INSTALL VERTICAL GROUND ROD.
- PROPOSED .425 LOW VOLT COAX ON EXISTING CROWN CASTLE FIBER 17'-5" A.G.L (NODE POLE).
- PROPOSED .425 LOW VOLT COAX AT 21'-0" A.G.L. (METER POLE)
- INSTALL NEW FCC SIGN.
- INSTALL SWITCH 11'-7" TO 10'-3" A.G.L. (METER POLE).
- INSTALL METER 10'-3" TO 8'-0" A.G.L (METER POLE).

PROJECT SUMMARY

SHEET NO.	DESCRIPTION
T-1	TITLE SHEET
D-1	NOTES
D-2	DETAILS
D-3	DETAILS
P-1	SITE PLAN
P-2	ENLARGED SITE PLAN
P-3	POLE PROFILE
P-4	POLE PROFILE
P-5	POLE PROFILE
P-6	POLE PROFILE
C-1	SURVEY

SHEET INDEX



VICINITY MAP

LATITUDE:	37.009105
LONGITUDE:	-122.190131
ELEVATION:	109.5' ± AMSL (NAVD 88) AT BASE OF WOOD POLE
JURISDICTION:	CAL-TRANS
A.P.N.	CAL-TRANS RIGHT OF WAY
ZONING:	CAL-TRANS RIGHT OF WAY
OCCUPANCY:	UNMANNED
TYPE OF CONSTRUCTION:	ATTACHMENTS TO EX. POLE
HANDICAP REQUIREMENTS:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESSES NOT REQUIRED
TITLE 24 REQUIREMENTS:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. THIS PROJECT IS EXEMPT

PROJECT INFORMATION

FROM: 695 RIVER OAKS PKWY, SAN JOSE, CA 95134
TO: NODE DAV-018 CABRILLO HWY, DAVENPORT, CA

1. FROM RIVER OAKS PARKWAY GET ON MONTAGUE EXPRESSWAY E.
2. FOLLOW MONTAGUE EXPRESSWAY E TO 880 S.
3. FOLLOW 880 S TO CA-17 S AND CA-1 N TO YOUR DESTINATION IN SANTA CRUZ COUNTY.
4. DESTINATION WILL BE ON RIGHT.

DRIVING DIRECTIONS

1. STREET USE PERMIT SHALL BE OBTAINED BY CONTRACTOR PRIOR TO COMMENCING WORK.
2. ALL WORK TO BE CONDUCTED IN THE RIGHT OF WAY.
3. ALL DISTURBED LANDSCAPING SHALL BE REPLACED TO SIMILAR EXISTING CONDITION.
4. ANY SIDEWALK CLOSURE SHALL BE COORDINATED WITH THE CAL-TRANS AND PROPER SIGNING WILL BE PLACED.
5. NO MATERIALS OR EQUIPMENT SHALL BE STORED ON PRIVATE PROPERTY OR BLOCK ACCESS TO PRIVATE PROPERTY.
6. CLEANUP OF SITE WILL BE COMPLETED EACH EVENING AND THE SITE WILL BE RETURNED TO EXISTING CONDITIONS AT THE COMPLETION OF CONSTRUCTION AT EACH SITE.

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR RESPONSIBLE FOR SAME.

GENERAL CONTRACTOR NOTES

DAV-018
DAVENPORT
CROWN CASTLE PROJECT NO.
VZW346267CA

CLIENT:
CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:
Communications
Telecommunications Engineering
5841 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0936
www.coastalcomminc.com

PROPRIETARY INFORMATION
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DIGALERT
1-800-227-2600
CALL AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT TICKET #

REVISION / ISSUE	DATE
EQUIPMENT MOVED TO POLE	04/12/17
VARIOUS CHANGES	04/17/17
VARIOUS CHANGES	04/19/17
VARIOUS CHANGES	04/20/17
EQUIPMENT TO CABINET	06/21/17
CUSTOMER REDLINES	08/09/17

SITE NAME & ADDRESS:
DAV-018
100FT SE OF OLD COAST RD/ CABRILLO HWY
DAVENPORT, CA

TITLE SHEET

DRAWN BY:	DRAFT DATE:	APPROVED BY:
RG	12/19/16	GD

SHEET NO.
T-1

CROWN CASTLE TO INSTALL THE FOLLOWING:

- INSTALL ACCORDING TO UTILITY STANDARDS AND PRACTICES.
- INSTALL 2" SCHEDULE 80 POWER FEED RISER.
- INSTALL 3" SCHEDULE 80 COMM RISER (FIBER & COAX TO ANTENNA).
- INSTALL (1) NEW GROUND CABINET WITH (1) ALPHA BATTERY BACKUP POWER SUPPLY, (1) ION-M, 85P/IPF, (1) RRUS-11 B13 (700), (1) RRUS-32 B4/66 (2100), (2) AC TO DC INVERTERS, (1) FIBER OPTIC PANEL INSIDE.
- INSTALL (1) 15" X 15" ENCLOSURE WITH (1) DONGAN TRANSFORMER & LOW VOLT COAX CONNECTION INSIDE, (1) DISCONNECT WITH 4 BREAKERS ON SIDE OF CABINET.
- INSTALL (1) METER PANEL, DISCONNECT SWITCH, (1) 15" X 15" ENCLOSURE WITH, (1) DONGAN TRANSFORMER & LOW VOLT COAX CONNECTION INSIDE METER POLE.
- INSTALL (2) PANEL ANTENNAS MODEL# HTXCWW4513P000 ON ANTENNA MOUNTING BRACKETS.
- INSTALL VERTICAL GROUND ROD.
- PROPOSED .625 LOW VOLT COAX ON EXISTING CROWN CASTLE FIBER 17'-5" A.G.L (NODE POLE).
- PROPOSED .626 LOW VOLT COAX AT 21'-0" A.G.L. (METER POLE)
- INSTALL NEW FCC SIGN.
- INSTALL SWITCH 11'-7" TO 10'-7" A.G.L. (METER POLE).
- INSTALL METER 10'-1" TO 9'-0" A.G.L (METER POLE).

NODE COORDINATE	
LATITUDE:	37.009105
LONGITUDE:	-122.190131

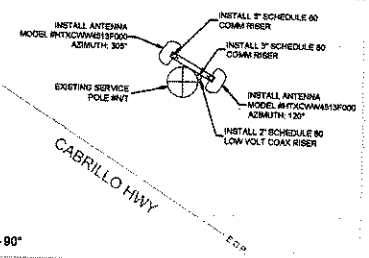
OF CONDUIT — SIZE OF CONDUIT — APPROX. LENGTH OF FOOTAGES

NO GROUND DISTURBANCE AT METER POLE

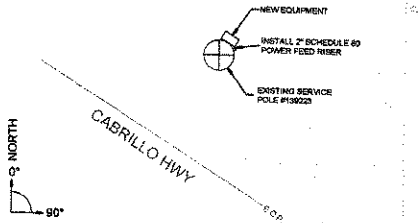
BILL OF MATERIALS		
DESCRIPTION		QUANTITY
VAULTS (PVT)	13-5/8" X 19"	0
	17" X 30"	0
	2' X 3'	0
CONDUIT (PVT)	1" PVC	0
	1-1/2" PVC	0
	2" PVC	123'
	4" PVC	43'

FOOTAGE TOTALS	
ASPHALT TRENCH	0'
DIRT TRENCH	36'
PUNCH THRU	0'
TOTAL	36'
POC SIDEWALK TOTAL	0 SQ. FT.

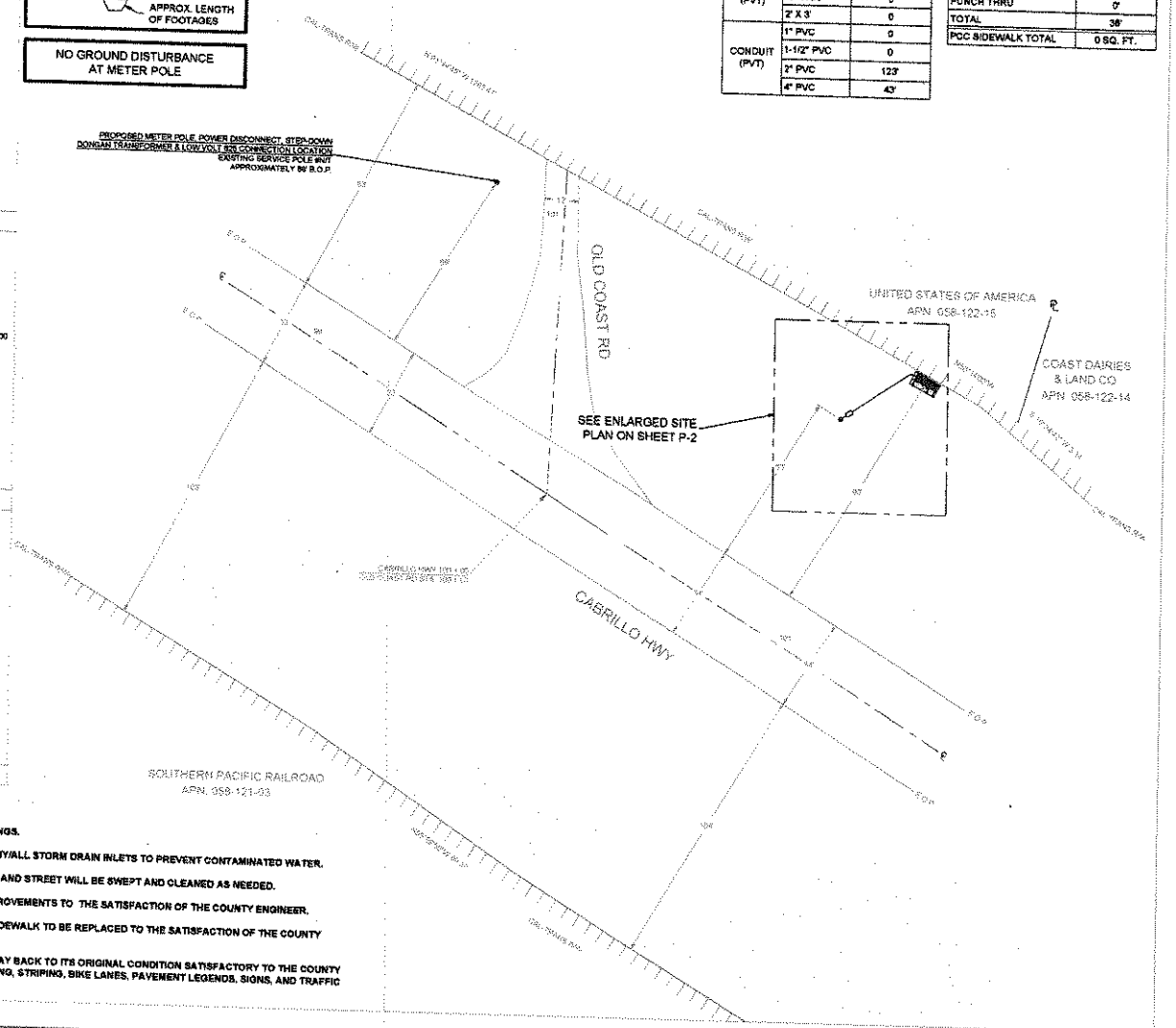
A NEW CONSTRUCTION NOTES



B TOP VIEW (NODE POLE) N.T.S.



C TOP VIEW (METER POLE) N.T.S.



NOTES:

1. CONTRACTOR TO POTHOLE ALL UTILITY CROSSINGS.
2. CONTRACTOR TO PLACE SANDBAGS AROUND ANY/ALL STORM DRAIN INLETS TO PREVENT CONTAMINATED WATER.
3. SPOILS PILE WILL BE COVERED AND CONTAINED AND STREET WILL BE SWEPT AND CLEANED AS NEEDED.
4. CONTRACTOR TO REPAIR DAMAGED PUBLIC IMPROVEMENTS TO THE SATISFACTION OF THE COUNTY ENGINEER.
5. CURB & GUTTER TO BE PROTECTED IN PLACE. SIDEWALK TO BE REPLACED TO THE SATISFACTION OF THE COUNTY ENGINEER.
6. THE CONTRACTOR SHALL RESTORE THE ROADWAY BACK TO ITS ORIGINAL CONDITION SATISFACTORY TO THE COUNTY ENGINEER INCLUDING, BUT NOT LIMITED TO PAVING, STRIPING, BIKE LANES, PAVEMENT LEGENDS, SIGNS, AND TRAFFIC LOOP DETECTORS.

NORTH

SCALE: 1" = 20'

DAV-018

DAVENPORT

CROWN CASTLE PROJECT NO:

VZW346267CA

CLIENT:

CROWN CASTLE

695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:

Communications
Telecommunications Engineering

5841 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0936
www.coastalcomminc.com

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UNDERGROUND SERVICE ALERT
TICKET #

REVISION / ISSUE	DATE
EQUIPMENT MOVED TO POLE	04/12/17
VARIOUS CHANGES	04/17/17
VARIOUS CHANGES	04/19/17
VARIOUS CHANGES	04/20/17
EQUIPMENT TO CABINET	05/21/17
CUSTOMER REDLINES	06/06/17

SITE NAME & ADDRESS:

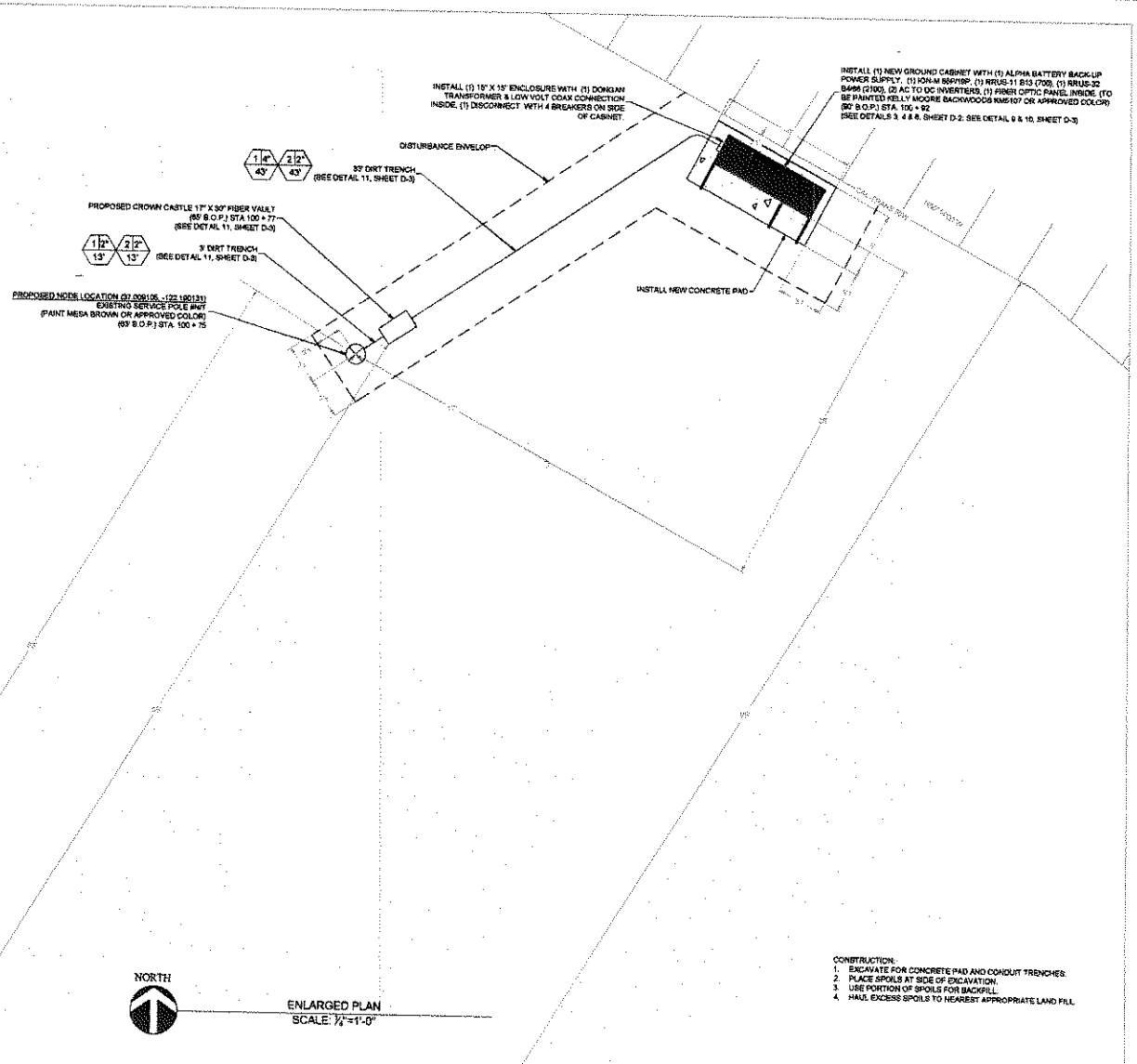
DAV-018
100FT SE OF OLD COAST RD/
CABRILLO HWY
DAVENPORT, CA

SITE PLAN

DRAWN BY:	DRAFT DATE:	APPROVED BY:
RG	12/19/16	CD

SHEET NO:

P-1



DAV-018

DAVENPORT

CROWN CASTLE PROJECT NO.

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UNDERGROUND SERVICE ALERT
TICKET #

REVISION / ISSUE	DATE
EQUIPMENT MOVED TO POLE	04/12/17
VARIOUS CHANGES	04/17/17
VARIOUS CHANGES	04/19/17
VARIOUS CHANGES	04/20/17
EQUIPMENT TO CABINET	08/21/17
CUSTOMER REDLINES	08/09/17

SITE NAME & ADDRESS:

DAV-018
100FT SE OF OLD COAST RD/
CABRILLO HWY
DAVENPORT, CA

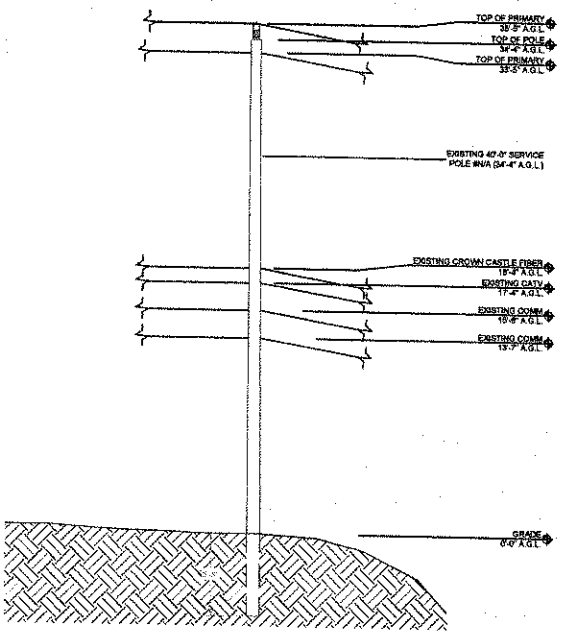
SITE PLAN

DRAWN BY:	DRAFT DATE:	APPROVED BY:
RG	12/19/16	GD

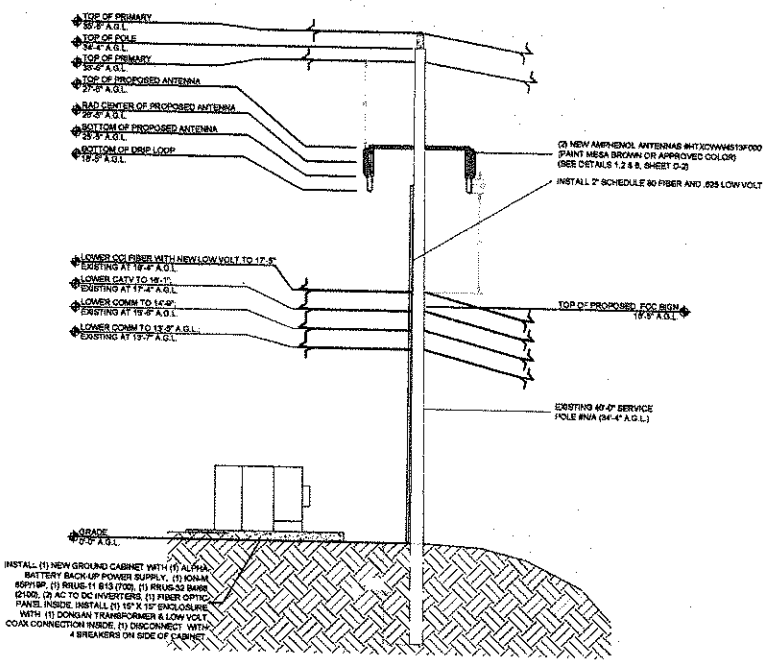
SHEET NO.

P-2

TOP OF EXISTING POLE: 34'-4"
TOP OF ANTENNA(S): 27'-5"
RAD CENTER: 26'-5"
AZIMUTH(S): 120 DEG & 305 DEG



C EXISTING POLE PROFILE: LOOKING SOUTHWEST SCALE: 1/4" = 1'-0"



C PROPOSED POLE PROFILE: LOOKING SOUTHWEST SCALE: 1/4" = 1'-0"

DAV-018

DAVENPORT

CROWN CASTLE PROJECT NO.
VZW346267CA

CLIENT:
CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:
Communications
Telecommunications Engineering
5341 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0936
www.coastalcommsinc.com

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UNDERGROUND SERVICE ALERT TICKET #

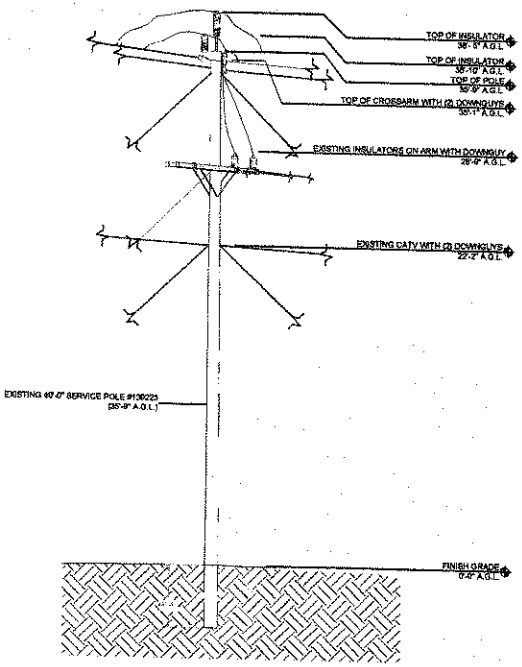
REVISION / ISSUE	DATE
EQUIPMENT MOVED TO POLE	04/12/17
VARIOUS CHANGES	04/17/17
VARIOUS CHANGES	04/19/17
VARIOUS CHANGES	04/20/17
EQUIPMENT TO CABINET	08/21/17
CUSTOMER REDLINES	08/28/17

SITE NAME & ADDRESS:
DAV-018
100FT SE OF OLD COAST RD/
CABRILLO HWY
DAVENPORT, CA

PROFILE

DRAWN BY:	DRAFT DATE:	APPROVED BY:
RG	12/19/16	GD

SHEET NO.
P-4

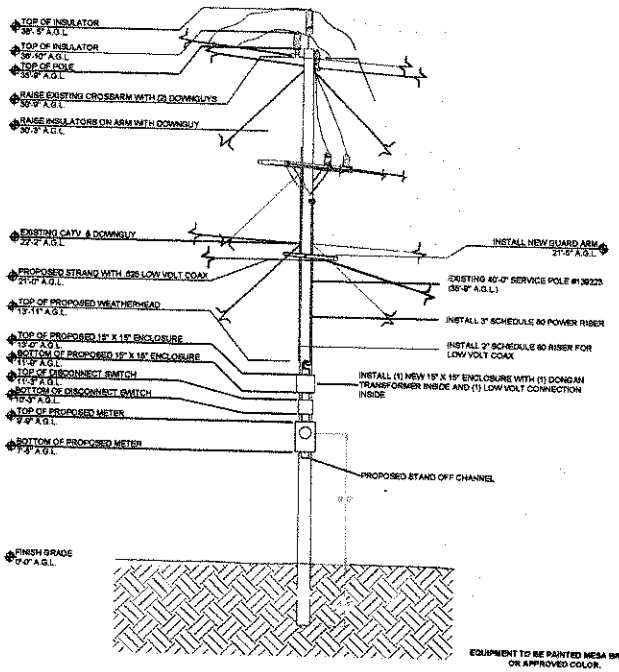


C EXISTING POLE PROFILE: LOOKING SOUTHWEST SCALE: 1/4" = 1'-0"

POLE ID: 136223

TOP OF EXISTING POLE: 38'-9"

NO GROUND DISTURBANCE AT METER POLE



EQUIPMENT TO BE PAINTED MESA BROWN OR APPROVED COLOR.

METER POLE

C PROPOSED POLE PROFILE: LOOKING SOUTHWEST SCALE: 1/4" = 1'-0"

DAV-018

DAVENPORT

CROWN CASTLE PROJECT NO.

VZW346267CA

CLIENT:

CROWN CASTLE

695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:

Communications
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5841 EDISON PLACE, SUITE 200
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VARIOUS CHANGES	04/17/17
VARIOUS CHANGES	04/19/17
VARIOUS CHANGES	04/20/17
EQUIPMENT TO CABINET	06/21/17
CUSTOMER REDLINES	08/09/17

SITE NAME & ADDRESS:

DAV-018
100FT SE OF OLD COAST RD/
CABRILLO HWY
DAVENPORT, CA

PROFILE

DRAWN BY:	DRAFT DATE:	APPROVED BY:
RG	12/19/16	GD

SHEET NO.

P-5

DAV-019m
1,100FT SE OF BONNY DOON RD / CABRILLO HWY
DAVENPORT, CA

PROJECT MANAGER:
JAY THOMAS
PRESIDENT CELL SITE ASSOCIATES INC.
634 BALTUSROL DR.
APTOS, CA 95003
PHONE: (925) 413-8448
EMAIL: JAY-THOMAS@SBCGLOBAL.NET

NODE ENGINEER:
COASTAL COMMUNICATIONS
5841 EDISON PL, STE. 200
CARLSBAD, CA 92008
TODD THREW
(760) 929-0924
TODD@COASTALCOMMINC.COM

CROWN CASTLE (Applicant)
BEACON DEVELOPMENT, LLC
3 ROVINA LANE
PETALUMA, CA 94952
JASON F. OSBORNE
(415) 559-2121
JASON@BEACONDEV.NET

PROJECT TEAM

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

1. CALIFORNIA BUILDING CODE CBC-2016
2. CALIFORNIA ADMINISTRATIVE CODE. (INCL. TITLES 24 & 25) 2016
3. ANSI/EIA-222-F LIFE SAFETY CODE NFPA
4. BUILDING OFFICIALS AND CODE ADMINISTRATORS (BOCA)
5. CALIFORNIA ELECTRICAL CODE CEC-2016
6. CALIFORNIA MECHANICAL CODE CMC-2016
7. CALIFORNIA PLUMBING CODE CPC 2016
8. LOCAL BUILDING CODE(S)
9. COUNTY AND/OR COUNTY ORDINANCES
10. MUST COMPLY TO LATEST CALIFORNIA FIRE CODE. (AND LATEST MUNICIPAL FIRE CODE).
11. CALIFORNIA GENERAL ORDER 95 AND 128.

CODE COMPLIANCE

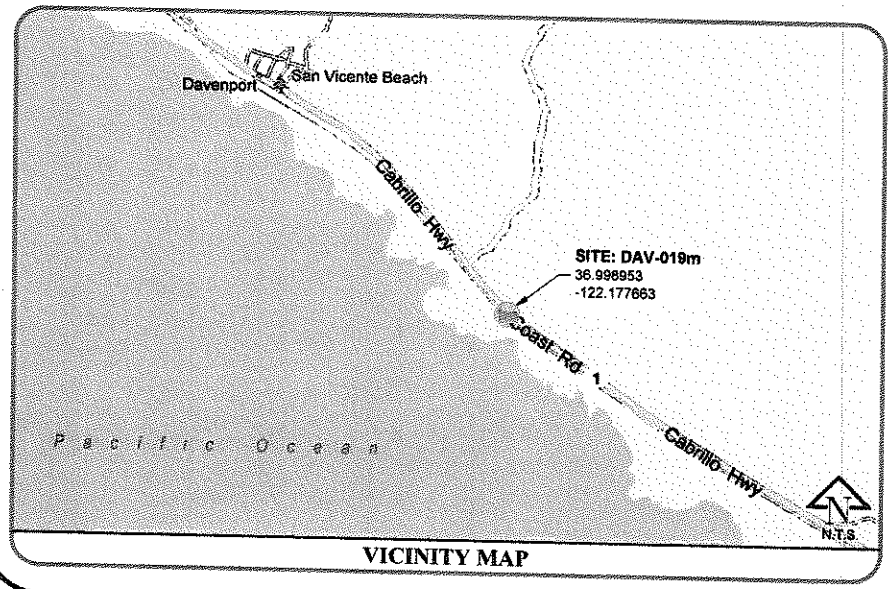
CROWN CASTLE TO INSTALL THE FOLLOWING:

- INSTALL ACCORDING TO UTILITY STANDARDS AND PRACTICES.
- INSTALL NEW 50' POLE.
- TRANSFER EXISTING PRIMARY TO 44'-0".
- TRANSFER EXISTING ARM TO 42'-0".
- INSTALL TRANSFORMER (HEIGHT TO BE DETERMINED BY PG&E).
- INSTALL (3) PANEL ANTENNAS MODELS HTXC WW4513R00 ON ANTENNA MOUNTING BRACKETS.
- PROPOSED CHARLIE CABINET WITH ALPHA BATTERY BACK-UP POWER SUPPLY. (1) RN-54 65/100, (1) RRUS-11 B12 (700), (1) AC TO DC INVERTERS, (1) FIBER OPTIC PANEL INSIDE.
- INSTALL (1) METER PANEL WITH (1) DISCONNECT BOX ON SIDE OF CABINET.
- TRANSFER EXISTING CROWN CASTLE FIBER & DOWN GUY AT 39'-0".
- TRANSFER EXISTING COMM & DOWN GUY AT 19'-0".
- INSTALL 3" SCHEDULE 80 POWER FEED RISER.
- INSTALL 4" SCHEDULE 80 COMM RISER.
- INSTALL VERTICAL GROUND ROD.
- INSTALL NEW POC SIGN.

PROJECT SUMMARY

SHEET NO.	DESCRIPTION
T-1	TITLE SHEET
D-1	NOTES
D-2	DETAILS
D-3	DETAILS
P-1	SITE PLAN
P-2	ENLARGED SITE PLAN
P-3	POLE PROFILE
P-4	POLE PROFILE
C-1	SURVEY

SHEET INDEX



VICINITY MAP

LATITUDE:	36.998953
LONGITUDE:	-122.177663
ELEVATION:	90.0 ± AMSL (NAVD 88)
JURISDICTION:	CAL-TRANS
A.P.N. ZONING: OCCUPANCY:	CAL-TRANS RIGHT -OF-WAY CAL-TRANS RIGHT-OF-WAY UNMANNED
TYPE OF CONSTRUCTION:	ATTACHMENTS TO NEW POLE
HANDICAP REQUIREMENTS:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS NOT REQUIRED
TITLE 24 REQUIREMENTS:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. THIS PROJECT IS EXEMPT

PROJECT INFORMATION

1. STREET USE PERMIT SHALL BE OBTAINED BY CONTRACTOR PRIOR TO COMMENCING WORK.
2. ALL WORK TO BE CONDUCTED IN THE RIGHT OF WAY.
3. ALL DISTURBED LANDSCAPING SHALL BE REPLACED TO SIMILAR EXISTING CONDITION.
4. ANY SIDEWALK CLOSURE SHALL BE COORDINATED WITH THE COUNTY AND PROPER SIGNING WILL BE PLACED.
5. NO MATERIALS OR EQUIPMENT SHALL BE STORED ON PRIVATE PROPERTY OR BLOCK ACCESS TO PRIVATE PROPERTY.
6. CLEANUP OF SITE WILL BE COMPLETED EACH EVENING AND THE SITE WILL BE RETURNED TO EXISTING CONDITIONS AT THE COMPLETION OF CONSTRUCTION AT EACH SITE.

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK, OR RESPONSIBLE FOR SAME.

GENERAL CONTRACTOR NOTES

FROM: 695 RIVER OAKS PKWY, SAN JOSE, CA 95134
TO: NODE DAV-019M CABRILLO HWY, DAVENPORT, CA

1. FROM RIVER OAKS PARKWAY GET ON MONTAGUE EXPRESSWAY E.
2. FOLLOW MONTAGUE EXPRESSWAY E TO 880 S.
3. FOLLOW 880 S TO CA-17 S TO CA-1 N TO YOUR DESTINATION IN SANTA CRUZ COUNTY.
4. DESTINATION WILL BE ON YOUR LEFT.

DRIVING DIRECTIONS

DAV-019m
DAVENPORT
CROWN CASTLE PROJECT NO:
VZW346267CA

CLIENT:
CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:
Communications
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5841 EDISON PLACE, SUITE 200
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TICKET #

REVISION / ISSUE	DATE
EQUIPMENT MOVED TO POLE	04/12/17
VARIOUS CHANGES	04/12/17
VARIOUS CHANGES	04/25/17
EQUIPMENT MOVED TO CABINET	06/19/17

SITE NAME & ADDRESS:
DAV-019m
1,100FT SE OF
BONNY DOON RD /
CABRILLO HWY
DAVENPORT, CA

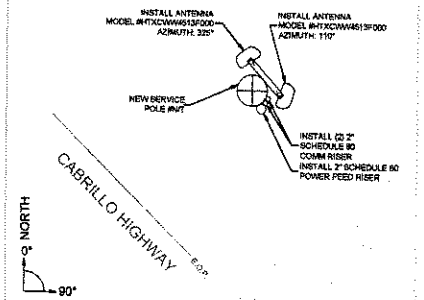
TITLE SHEET

DRAWN BY:	DRAFT DATE:	APPROVED BY:
JER	12/20/16	GD

SHEET NO.
T-1

- INSTALL ACCORDING TO UTILITY STANDARDS AND PRACTICES.
- INSTALL NEW 50' POLE.
- TRANSFER EXISTING PRIMARY TO 44'-0".
- TRANSFER EXISTING ARM TO 42'-0".
- INSTALL TRANSFORMER (HEIGHT TO BE DETERMINED BY PG&E).
- INSTALL (2) PANEL ANTENNAS MODEL# HTXCWW4513F000 ON ANTENNA MOUNTING BRACKETS.
- PROPOSED CHARLES CABINET WITH ALPHA BATTERY BACK-UP POWER SUPPLY, (1) ION-M 85/19P, (1) RRUS-11 B13 (700), (1) AC TO DC INVERTERS, (1) FIBER OPTIC PANEL, INSIDE.
- INSTALL (1)METER PANEL WITH (1) DISCONNECT BOX ON SIDE OF CABINET.
- INSTALL EXISTING CROWN CASTLE FIBER & DOWN GUY AT 20'-0".
- INSTALL COMM & DOWN GUY AT 18'-6".
- INSTALL 4" SCHEDULE 80 POWER FEED RISER.
- INSTALL (2) 2" SCHEDULE 80 COMM RISER.
- INSTALL VERTICAL GROUND ROD.
- INSTALL NEW PCC SIGN.

A NEW CONSTRUCTION NOTES



B TOP VIEW N.T.S.

NODE COORDINATE	
LATITUDE:	36.998953
LONGITUDE:	-122.177883

BILL OF MATERIALS		
DESCRIPTION		QUANTITY
VAULTS (PVT)	13-5/8" X 16"	0
	17" X 30"	0
	2' X 3'	0
CONDUIT (PVT)	1" PVC	0'
	4" PVC	55'
	2" PVC	152'

FOOTAGE TOTALS	
ASPHALT TRENCH	0'
DIRT TRENCH	49'
PUNCH THRU	0'
TOTAL	49'
PCC SIDEWALK TOTAL	0 SQ. FT.

OF CONDUIT — SIZE OF CONDUIT — APPROX. LENGTH OF FOOTAGES

NOTES:

1. CONTRACTOR TO POTHOLE ALL UTILITY CROSSINGS.
2. CONTRACTOR TO PLACE SANDBAGS AROUND ANY/ALL STORM DRAIN INLETS TO PREVENT CONTAMINATED WATER.
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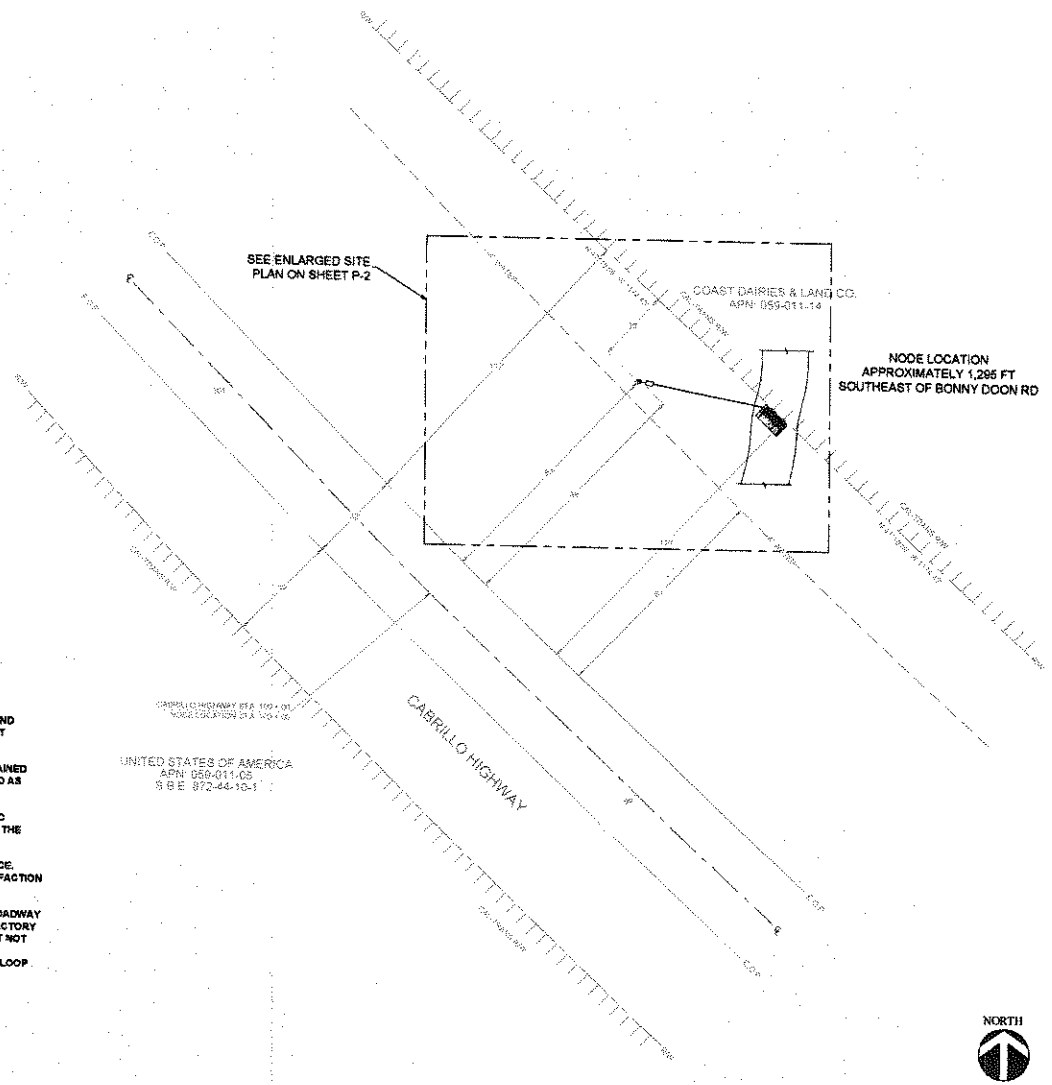
5. CURB & GUTTER TO BE PROTECTED IN PLACE. SIDEWALK TO BE REPLACED TO THE SATISFACTION OF THE COUNTY ENGINEER.
6. THE CONTRACTOR SHALL RESTORE THE ROADWAY BACK TO ITS ORIGINAL CONDITION SATISFACTORY TO THE COUNTY ENGINEER INCLUDING, BUT NOT LIMITED TO PAVING, STRIPING, BIKE LANES, PAVEMENT LEGENDS, SIGNS, AND TRAFFIC LOOP DETECTORS.



DAV-019m
DAVENPORT
CROWN CASTLE PROJECT NO.
VZW346267CA

CLIENT:
CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:
Communications
Telecommunications Engineering
5841 HIXSON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0936
www.coastalcomminc.com

PROPRIETARY INFORMATION

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DIGALERT
1-800-227-2600
CALL AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
TICKET #

REVISION / ISSUE	DATE
EQUIPMENT MOVED TO POLE	04/12/17
VARIOUS CHANGES	04/12/17
VARIOUS CHANGES	04/25/17
EQUIPMENT MOVED TO CABINET	08/18/17

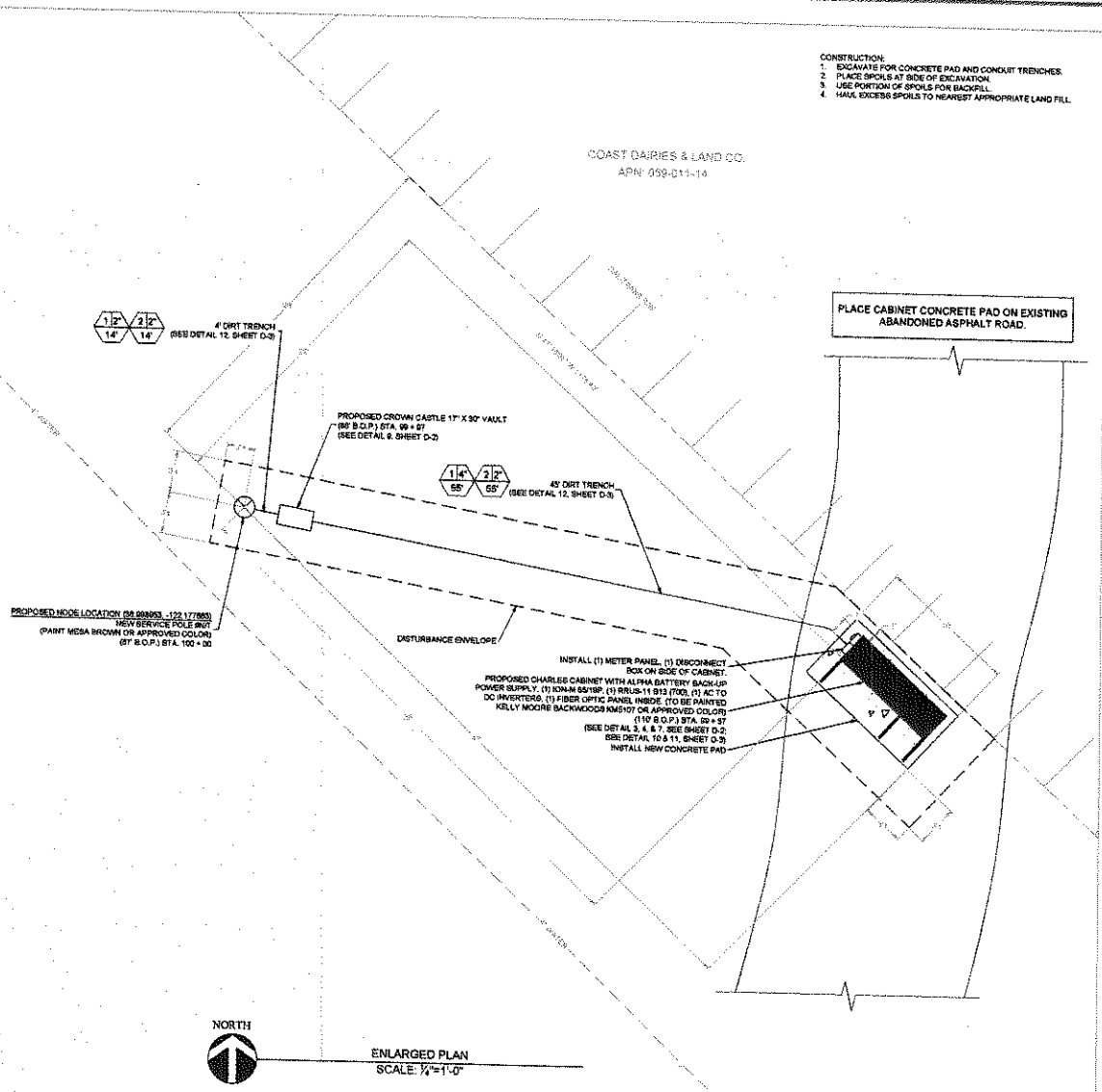
SITE NAME & ADDRESS:
DAV-019m
1,100FT SE OF
BONNY DOON RD /
CABRILLO HWY
DAVENPORT, CA

SITE PLAN

DRAWN BY:	DRAFT DATE:	APPROVED BY:
JER	12/20/16	GD

SHEET NO.
P-1

CONSTRUCTION:
1. EXCAVATE FOR CONCRETE PAD AND CONDUIT TRENCHES.
2. PLACE SPOILS AT SIDE OF EXCAVATION.
3. USE PORTION OF SPOILS FOR BACKFILL.
4. HAUL EXCESS SPOILS TO NEAREST APPROPRIATE LAND FILL.



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

DAV-019m

DAVENPORT

CROWN CASTLE PROJECT NO.

VZW346267CA

CLIENT:

CROWN CASTLE

695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:

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Telecommunications Engineering

5841 EDISON PLACE, SUITE 200
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FAX: (760) 929-0936
www.constellationcomm.com

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REVISION / ISSUE	DATE
EQUIPMENT MOVED TO POLE	04/12/17
VARIOUS CHANGES	04/12/17
VARIOUS CHANGES	04/25/17
EQUIPMENT MOVED TO CABINET	08/18/17

SITE NAME & ADDRESS:

DAV-019m
1,100FT SE OF
BONNY DOON RD /
CABRILLO HWY
DAVENPORT, CA

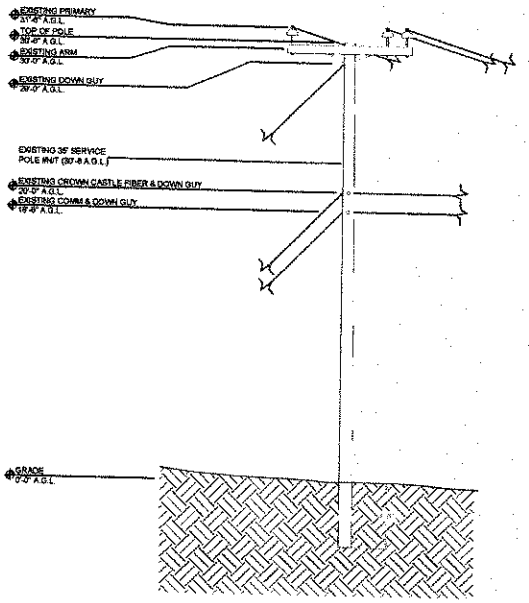
ENLARGED SITE PLAN

DRAWN BY:	DRAFT DATE:	APPROVED BY:
JER	12/20/16	GD

SHEET NO.

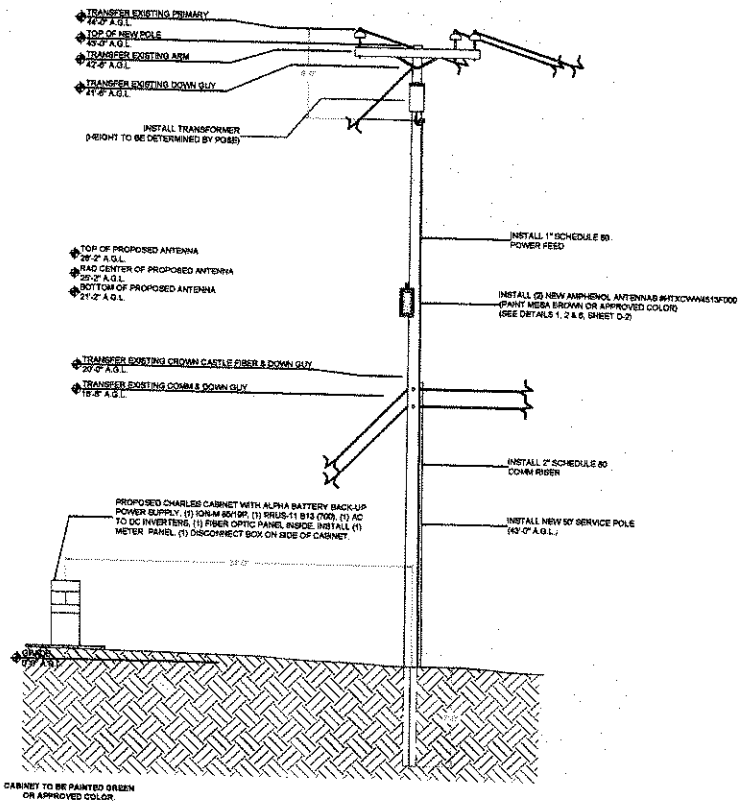
P-2

POLE ID: NIT
TOP OF EXISTING POLE: 30'-8"
TOP OF NEW POLE: 45'-0"
TOP OF ANTENNA(S): 29'-2"
RAD CENTER: 25'-2"
AZIM./TH(S): 110° & 325°



C EXISTING POLE PROFILE: LOOKING SOUTHEAST

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



C PROPOSED POLE PROFILE: LOOKING SOUTHEAST

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

DAV-019m

DAVENPORT

CROWN CASTLE PROJECT NO.

VZW346267CA

CLIENT:

CROWN CASTLE

695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
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Telecommunications Engineering

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FAX: (760) 929-0936
www.nextelcomms.com

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TICKET #

REVISION / ISSUE	DATE
EQUIPMENT MOVED TO POLE	04/12/17
VARIOUS CHANGES	04/12/17
VARIOUS CHANGES	04/25/17
EQUIPMENT MOVED TO CABINET	06/19/17

SITE NAME & ADDRESS:

DAV-019m
1,100FT SE OF
BONNY DOON RD /
CABRILLO HWY
DAVENPORT, CA

PROFILE

DRAWN BY:	DRAFT DATE:	APPROVED BY:
JER	12/20/16	OD

SHEET NO.

P-3

DAV-020m
CABRILLO HWY
DAVENPORT, CA

PROJECT MANAGER:
JAY THOMAS
PRESIDENT CELL SITE ASSOCIATES INC.
654 BALTUSROL DR.
APTOS, CA 95003
PHONE: (925) 413-8448
EMAIL: JAY-THOMAS@SBCGLOBAL.NET

NODE ENGINEER:
COASTAL COMMUNICATIONS
5841 EDISON PL, STE. 200
CARLSBAD, CA 92008
TODD THREW
(760) 929-0924
TODD@COASTALCOMMINC.COM

CROWN CASTLE (Applicant)
BEACON DEVELOPMENT, LLC
3 ROVINA LANE
PETALUMA, CA 94952
JASON F. OSBORNE
(415) 559-2121
JASON@BEACONDEV.NET

PROJECT TEAM

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

1. CALIFORNIA BUILDING CODE CBC-2016
2. CALIFORNIA ADMINISTRATIVE CODE. (INCL. TITLES 24 & 25) 2016
3. ANSI/EIA-222-F LIFE SAFETY CODE NFPA
4. BUILDING OFFICIALS AND CODE ADMINISTRATORS (BOCA)
5. CALIFORNIA ELECTRICAL CODE CEC-2016
6. CALIFORNIA MECHANICAL CODE CMC-2016
7. CALIFORNIA PLUMBING CODE CPC 2016
8. LOCAL BUILDING CODE(S)
9. COUNTY AND/OR COUNTY ORDINANCES
10. MUST COMPLY TO LATEST CALIFORNIA FIRE CODE. (AND LATEST MUNICIPAL FIRE CODE).
11. CALIFORNIA GENERAL ORDER 95 AND 128.

CODE COMPLIANCE

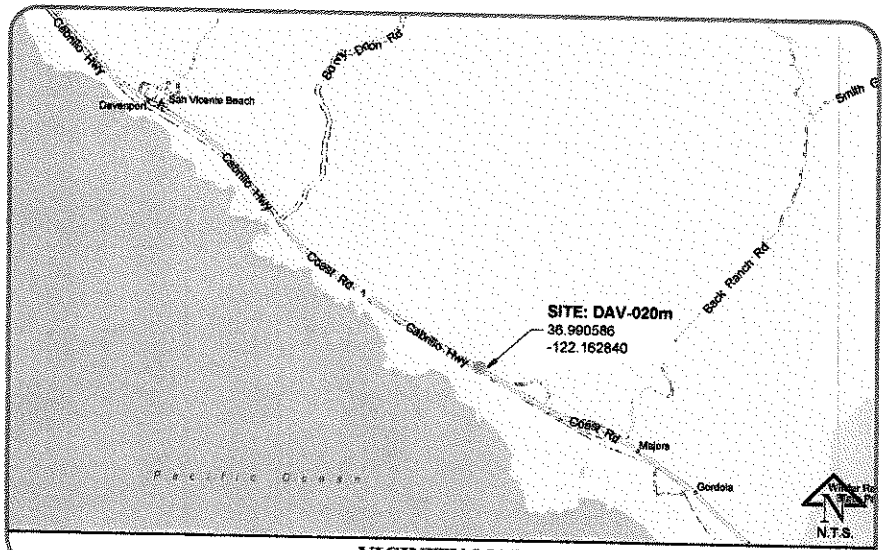
CROWN CASTLE TO INSTALL THE FOLLOWING:

- INSTALL ACCORDING TO UTILITY STANDARDS AND PRACTICES.
- INSTALL 2" SCHEDULE 80 COMM RISER.
- INSTALL 3" SCHEDULE 40 POWER RISER.
- INSTALL (1) POWER SUPPLY & BATTERY BACKUP.
- INSTALL (1) NEW 4'X4'0" VAULT ON TOP OF CONCRETE PAD WITH, (1) ION-M 85P19P, (1) RRUS-11 B13 (700), (1) AC TO DC INVERTER, (1) FIBER OPTIC PANEL.
- INSTALL (1) METER BOX & (1) ELECTRICAL PANEL WITH 4 BREAKERS IN VAULT.
- INSTALL (2) PANEL ANTENNAS MODEL# HTSCWW4513P66 ON ANTENNA MOUNTING BRACKETS.
- INSTALL NEW 5' POLE EXTENSION.
- INSTALL VERTICAL GROUND ROD.
- INSTALL NEW PCC SIGN.
- INSTALL (4) SAFETY BOLLARDS.

PROJECT SUMMARY

SHEET NO.	DESCRIPTION
T-1	TITLE SHEET
D-1	NOTES
D-2	DETAILS
D-3	DETAILS
P-1	SITE PLAN
P-2	ENLARGED SITE PLAN
P-3	POLE PROFILE
P-4	POLE PROFILE
C-1	SURVEY

SHEET INDEX



VICINITY MAP

LATITUDE:	36.990586
LONGITUDE:	-122.162840
ELEVATION:	110.4 ± AMSL (NAVD 88)
JURISDICTION:	CAL-TRANS
A.P.N. ZONING: OCCUPANCY:	CAL-TRANS RIGHT OF WAY CAL-TRANS RIGHT OF WAY UNMANNED
TYPE OF CONSTRUCTION:	ATTACHMENTS TO EX. POLE
HANDICAP REQUIREMENTS:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESSES NOT REQUIRED
TITLE 24 REQUIREMENTS:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. THIS PROJECT IS EXEMPT

PROJECT INFORMATION

1. STREET USE PERMIT SHALL BE OBTAINED BY CONTRACTOR PRIOR TO COMMENCING WORK.
2. ALL WORK TO BE CONDUCTED IN THE RIGHT OF WAY.
3. ALL DISTURBED LANDSCAPING SHALL BE REPLACED TO SIMILAR EXISTING CONDITION.
4. ANY SIDEWALK CLOSURE SHALL BE COORDINATED WITH THE COUNTY AND PROPER SIGNING WILL BE PLACED.
5. NO MATERIALS OR EQUIPMENT SHALL BE STORED ON PRIVATE PROPERTY OR BLOCK ACCESS TO PRIVATE PROPERTY.
6. CLEANUP OF SITE WILL BE COMPLETED EACH EVENING AND THE SITE WILL BE RETURNED TO EXISTING CONDITIONS AT THE COMPLETION OF CONSTRUCTION AT EACH SITE.

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR RESPONSIBLE FOR SAME.

GENERAL CONTRACTOR NOTES

FROM: 695 RIVER OAKS PKWY, SAN JOSE, CA 95134
TO: NODE DAV-020m CEMENT PLANT RD, DAVENPORT, CA

1. FROM RIVER OAKS PARKWAY GET ON MONTAGUE EXPRESSWAY E.
2. FOLLOW MONTAGUE EXPRESSWAY E TO 880 S.
3. FOLLOW 880 S TO CA-17 S TO CA-1 N TO YOUR DESTINATION IN SANTA CRUZ COUNTY.
4. DESTINATION WILL BE ON YOUR RIGHT.

DRIVING DIRECTIONS

DAV-020m
DAVENPORT
CROWN CASTLE PROJECT NO.
VZW346267CA

CLIENT:
CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:
Communications
Telecommunications Engineering
5841 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0935
www.coastalcommpros.com

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TICKET #

REVISION / ISSUE	DATE
EQUIPMENT MOVED ONTO POLE	04/12/17
VARIOUS CHANGES	04/12/17
EQUIPMENT TO VAULT	06/22/17
CUSTOMER REDLINES	08/09/17

SITE NAME & ADDRESS
DAV-020m
CABRILLO HWY
DAVENPORT, CA

TITLE SHEET

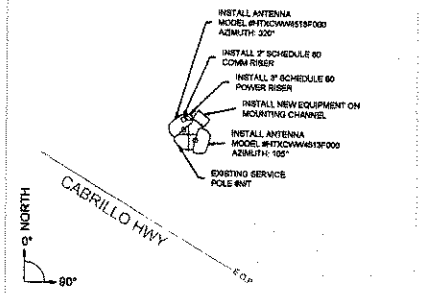
DRAWN BY:	DRAFT DATE:	APPROVED BY:
JER	12/21/16	GD

SHEET NO.
T-1

CROWN CASTLE TO INSTALL THE FOLLOWING:

- INSTALL ACCORDING TO UTILITY STANDARDS AND PRACTICES.
- INSTALL 2" SCHEDULE 80 COMM RISER.
- INSTALL 3" SCHEDULE 80 POWER RISER.
- INSTALL (1) POWER SUPPLY & BATTERY BACKUP.
- INSTALL (1) NEW 4'X 6' VAULT ON TOP OF CONCRETE PAD WITH, (1) ION-M 8S9/19P, (1) RRUS-11 B13 (700), (1) AC TO DC INVERTER, (1) FIBER OPTIC PANEL.
- INSTALL (1) METER BOX & (1) ELECTRICAL DISCONNECT PANEL WITH 4 BREAKERS IN VAULT.
- INSTALL (2) PANEL ANTENNAS MODEL# HTXCWW4513F000 ON ANTENNA MOUNTING BRACKETS.
- INSTALL NEW 5' POLE EXTENSION.
- INSTALL VERTICAL GROUND ROD.
- INSTALL NEW FCC SIGN.
- INSTALL (4) SAFETY BOLLARDS.

A NEW CONSTRUCTION NOTES



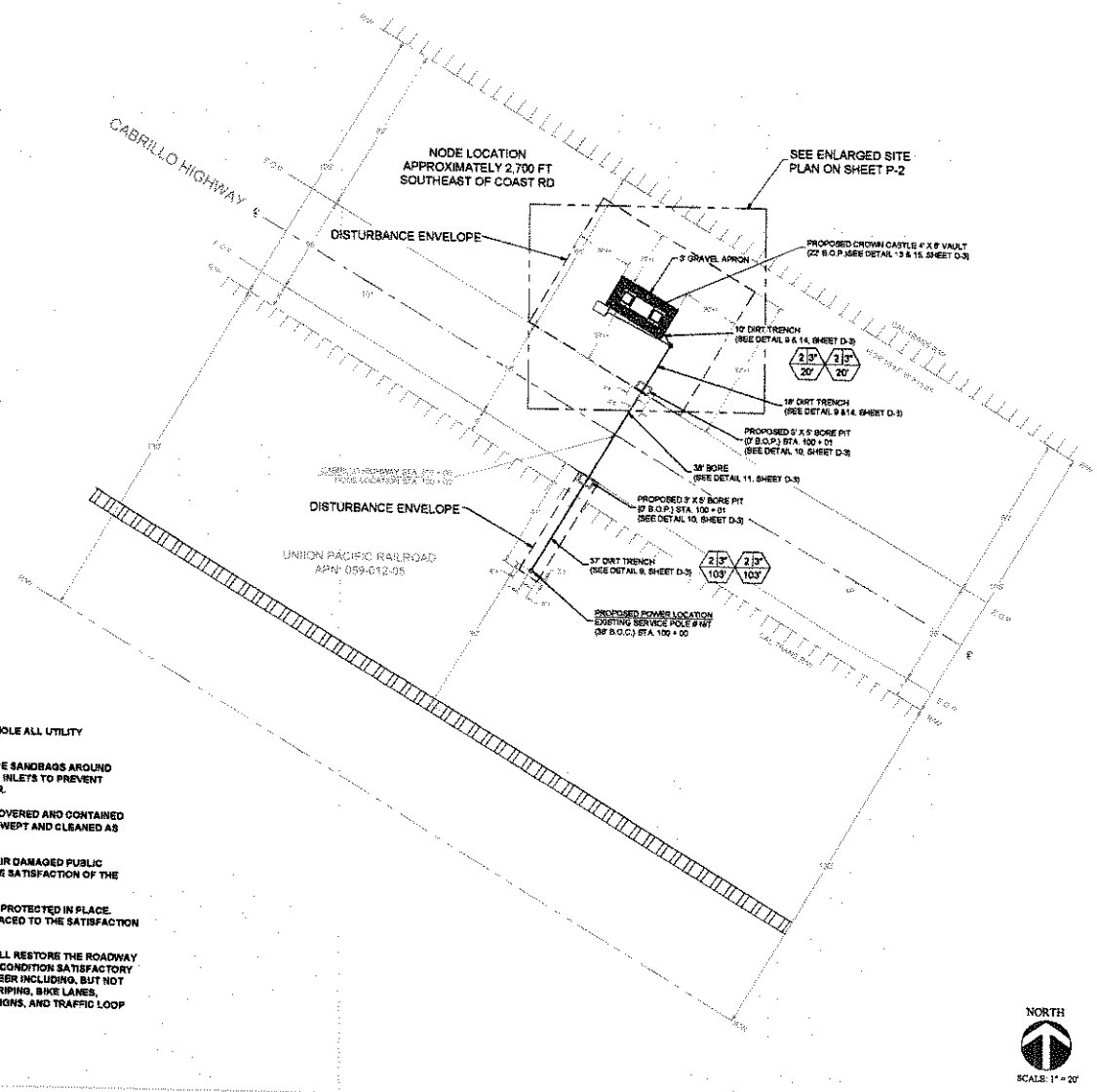
B TOP VIEW N.T.S.

BILL OF MATERIALS		
DESCRIPTION		QUANTITY
VAULTS (PVT)	13-5/8" X 19"	0
	17" X 30"	0
	2' X 3'	0
CONDUIT (PVT)	2" PVC	0
	3" PVC	520
	0	0'

FOOTAGE TOTALS	
ASPHALT TRENCH	0'
DIRT TRENCH	72'
BORE	38'
TOTAL	110'
PCC SIDEWALK TOTAL	0 SQ. FT.

NODE COORDINATE	
LATITUDE:	36.990585
LONGITUDE:	-122.182840

CONDUIT COUNT — SIZE OF CONDUIT — APPROX. LENGTH OF FOOTAGES



NOTES:

1. CONTRACTOR TO POTHOLE ALL UTILITY CROSSINGS.
2. CONTRACTOR TO PLACE SANDBAGS AROUND ANY/ALL STORM DRAIN INLETS TO PREVENT CONTAMINATED WATER.
3. SPOILS PILE WILL BE COVERED AND CONTAINED AND STREET WILL BE SWEPT AND CLEANED AS NEEDED.
4. CONTRACTOR TO REPAIR DAMAGED PUBLIC IMPROVEMENTS TO THE SATISFACTION OF THE ENGINEER.
5. CURB & GUTTER TO BE PROTECTED IN PLACE. SIDEWALK TO BE REPLACED TO THE SATISFACTION OF THE ENGINEER.
6. THE CONTRACTOR SHALL RESTORE THE ROADWAY BACK TO ITS ORIGINAL CONDITION SATISFACTORY TO THE COUNTY ENGINEER INCLUDING, BUT NOT LIMITED TO PAVING, STRIPING, BIKE LANES, PAVEMENT LEGENDS, SIGNS, AND TRAFFIC LOOP DETECTORS.

DAV-020m

DAVENPORT

CROWN CASTLE PROJECT NO.

VZW346267CA

CLIENT:

CROWN CASTLE

695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:

Communications
Telecommunications Engineering

5161 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0956
www.coastalcommins.com

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UNDERGROUND SERVICE ALERT
TICKET #

REVISION / ISSUE	DATE
EQUIPMENT MOVED ONTO POLE	04/12/17
VARIOUS CHANGES	04/12/17
EQUIPMENT TO VAULT	05/22/17
CUSTOMER REDLINES	08/09/17

SITE NAME & ADDRESS:

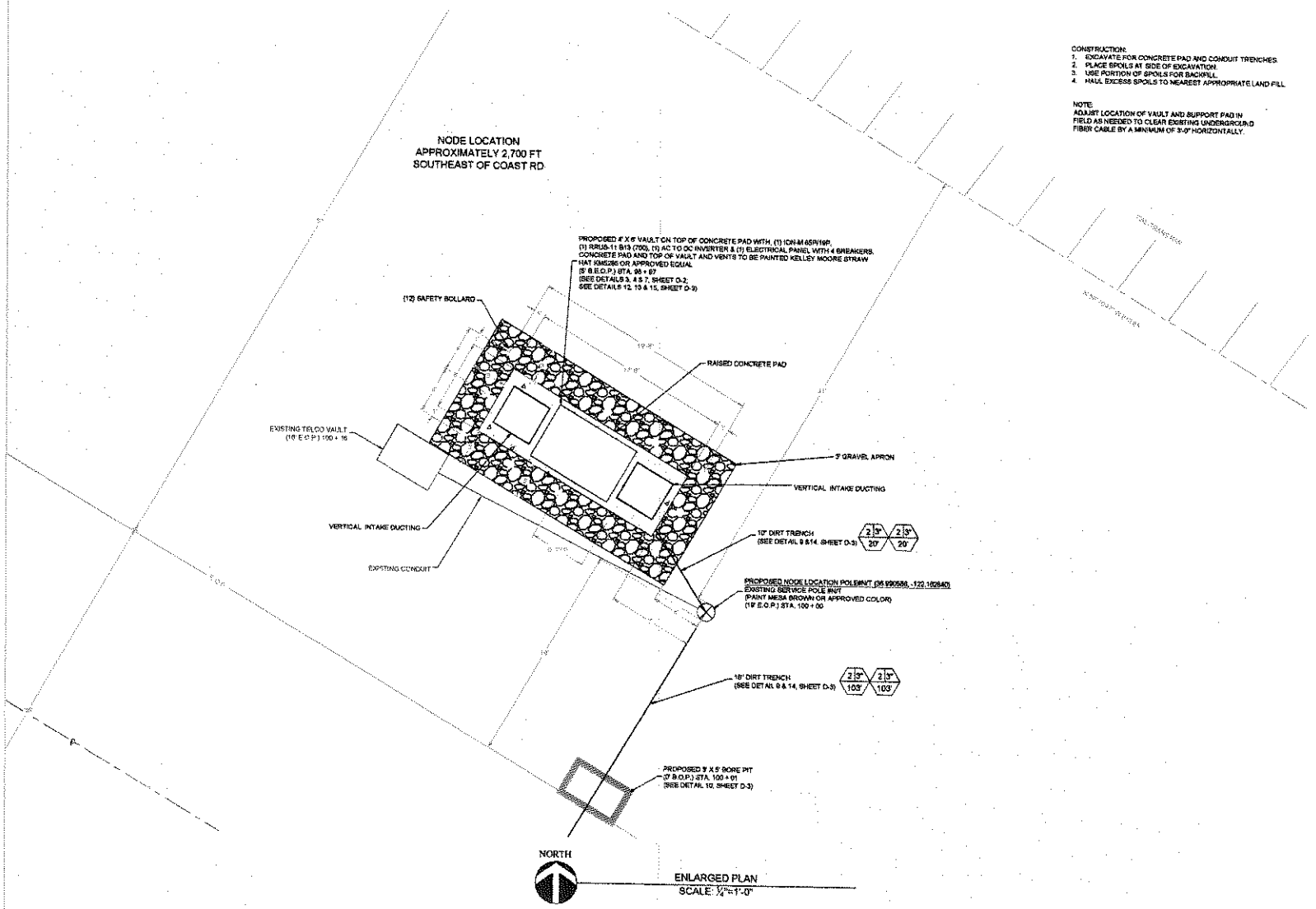
DAV-020m
CABRILLO HWY
DAVENPORT, CA

SITE PLAN

DRAWN BY:	DRAFT DATE:	APPROVED BY:
JER	12/21/16	GD

SHEET NO.

P-1



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EQUIPMENT TO VAULT	06/22/17
CUSTOMER REDLINES	08/09/17

SITE NAME & ADDRESS:

DAV-020m
CABRILLO HWY
DAVENPORT, CA

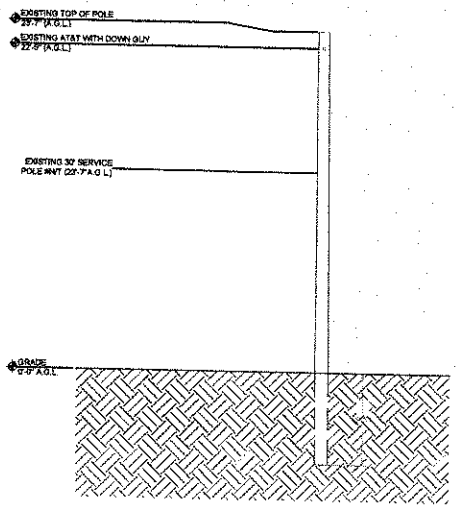
SITE PLAN

DRAWN BY:	DRAFT DATE:	APPROVED BY:
JER	12/21/16	GD

SHEET NO.

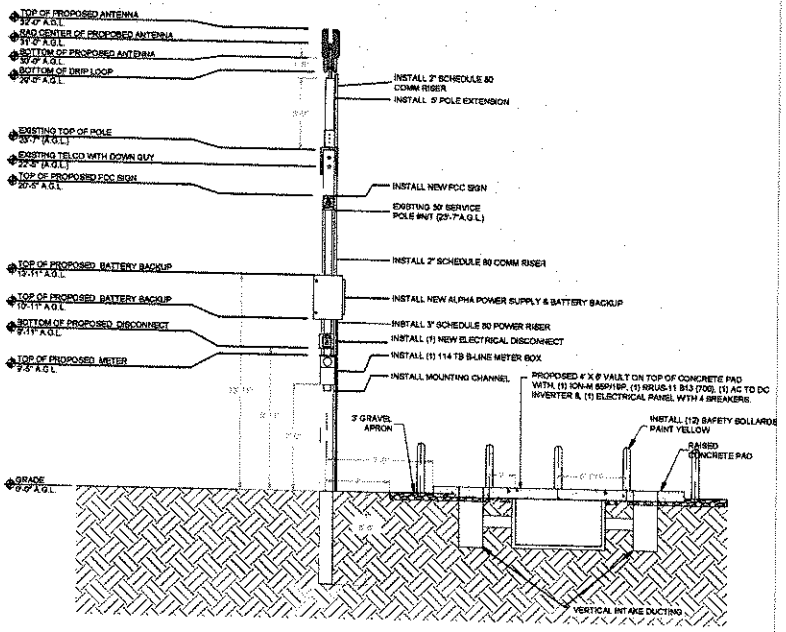
P-2

POLE ID: N/T
TOP OF EXISTING POLE: 29'-7"
TOP OF ANTENNA(S): 32'-0"
RAD CENTER: 31'-6"
AZIMUTH(S): 105° & 320°



C EXISTING POLE PROFILE: LOOKING SOUTHWEST

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



ALL EQUIPMENT , POLE TOP EXTENSION, AND ANTENNAS TO BE PAINTED TO MATCH POLE COLOR. CONCRETE PAD AND TOP OF VAULT AND VENTS TO BE PAINTED KELLEY MORRE STRAW HAT KM6289 OR APPROVED EQUAL.

C PROPOSED POLE PROFILE: LOOKING SOUTHWEST

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

DAV-020m

DAVENPORT

CROWN CASTLE PROJECT NO:
VZW346267CA

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www.oceanicomms.com

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SITE NAME & ADDRESS:
DAV-020m
CABRILLO HWY
DAVENPORT, CA

PROFILE

DRAWN BY:	DRAFT DATE:	APPROVED BY:
JER	12/21/16	GD

SHEET NO:
P-3

DAV-021m
ACROSS 231 SAN VICENTE ST
DAVENPORT, CA

PROJECT MANAGER:
JAY THOMAS
PRESIDENT CELL SITE ASSOCIATES INC.
634 BALTUSROL DR.
APTOS, CA 95003
PHONE: (925) 413-8448
EMAIL: JAY-THOMAS@SBCGLOBAL.NET

NODE ENGINEER:
COASTAL COMMUNICATIONS
5841 EDISON PL, STE. 200
CARLSBAD, CA 92008
TODD THREW
(760) 929-0924
TODD@COASTALCOMMINC.COM

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BEACON DEVELOPMENT, LLC
3 ROVINA LANE
PETALUMA, CA 94952
JASON F. OSBORNE
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JASON@BEACONDEV.NET

PROJECT TEAM

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11. CALIFORNIA GENERAL ORDER 95 AND 128.

CODE COMPLIANCE

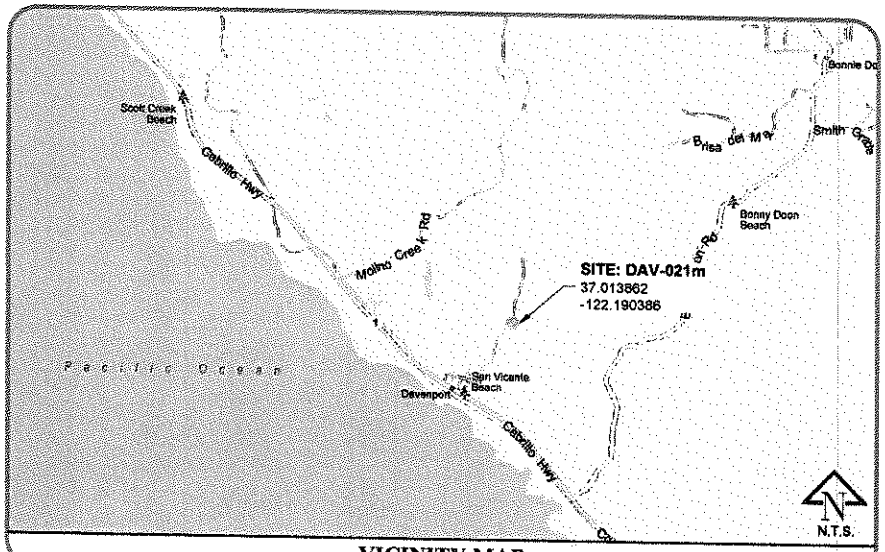
CROWN CASTLE TO INSTALL THE FOLLOWING:

- INSTALL ACCORDING TO UTILITY STANDARDS AND PRACTICES.
- INSTALL 2" SCHEDULE 80 COMM RISER.
- INSTALL 3" SCHEDULE 80 POWER RISER.
- INSTALL (1) NEW CUBE CISH-31-LO SHROUD EIT.
- INSTALL (1) POWER SUPPLY & BATTERY BACKUP AND (1) ION-M 85P/19P, (1) RRUS-11 B13 (700), (1) RRUS-32 B4/66 (2100), (2) AC TO DC INVERTER, (1) FIBER OPTIC PANEL, (1) METER BOX & ELECTRICAL DISCONNECT WITH 4 BREAKERS.
- INSTALL (2) AMPHENOL PANEL ANTENNAS MODEL# C1UX065X06F000-T ON ANTENNA MOUNTING BRACKETS.
- INSTALL VERTICAL GROUND ROD.
- INSTALL 5' POLE EXTENSION.
- INSTALL NEW FCC SIGN.

PROJECT SUMMARY

SHEET NO.	DESCRIPTION
T-1	TITLE SHEET
D-1	NOTES
D-2	DETAILS
D-3	DETAILS
P-1	SITE PLAN
P-2	ENLARGED SITE PLAN
P-3	POLE PROFILE
P-4	POLE PROFILE
P-5	METER ELEVATION
C-1	SURVEY

SHEET INDEX



VICINITY MAP

LATITUDE:	37.013862
LONGITUDE:	-122.190386
ELEVATION:	41.0 ± AMSL (NAVD 88)
JURISDICTION:	COUNTY OF SANTA CRUZ
A.P.N.:	PUBLIC RIGHT OF WAY
ZONING:	PUBLIC FACILITY
OCCUPANCY:	UNMANNED
TYPE OF CONSTRUCTION:	ATTACHMENTS TO EX. POLE
HANDICAP REQUIREMENTS:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCENSES NOT REQUIRED
TITLE 24 REQUIREMENTS:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. THIS PROJECT IS EXEMPT

PROJECT INFORMATION

1. STREET USE PERMIT SHALL BE OBTAINED BY CONTRACTOR PRIOR TO COMMENCING WORK.
2. ALL WORK TO BE CONDUCTED IN THE RIGHT OF WAY.
3. ALL DISTURBED LANDSCAPING SHALL BE REPLACED TO SIMILAR EXISTING CONDITION.
4. ANY SIDEWALK CLOSURE SHALL BE COORDINATED WITH THE COUNTY AND PROPER SIGNING WILL BE PLACED.
5. NO MATERIALS OR EQUIPMENT SHALL BE STORED ON PRIVATE PROPERTY OR BLOCK ACCESS TO PRIVATE PROPERTY.
6. CLEANUP OF SITE WILL BE COMPLETED EACH EVENING AND THE SITE WILL BE RETURNED TO EXISTING CONDITIONS AT THE COMPLETION OF CONSTRUCTION AT EACH SITE.

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR RESPONSIBLE FOR SAME.

GENERAL CONTRACTOR NOTES

FROM: 695 RIVER OAKS PKWY, SAN JOSE, CA 95134
TO: NODE DAV-021M 231 SAN VICENTE ST, DAVENPORT, CA

1. FROM RIVER OAKS PARKWAY GET ON MONTAGUE EXPRESSWAY E.
2. FOLLOW MONTAGUE EXPRESSWAY E TO 880 S.
3. FOLLOW 880 S TO CA-17 S TO CA-1 N TO COAST RD IN DAVENPORT.
4. CONTINUE ON OLD COAST RD TO SAN VICENTE ST ON RIGHT.
5. DESTINATION WILL BE ON RIGHT.

DRIVING DIRECTIONS

DAV-021m
DAVENPORT
CROWN CASTLE PROJECT NO.
VZW346267CA

CLIENT:
CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:
Coastal Communications
Telecommunications Engineering
5841 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0935
www.coastalcomminc.com

DIGALERT
1-800-227-2600
CALL AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
TICKET #

REVISION / ISSUE	DATE
EQUIP. MOUNTED TO POLE	04/12/17
VARIOUS CHANGES	04/18/17
VARIOUS CHANGES	04/21/17
VARIOUS CHANGES	04/25/17

SITE NAME & ADDRESS:
DAV-021m
ACROSS 231 SAN VICENTE ST
DAVENPORT, CA

TITLE SHEET

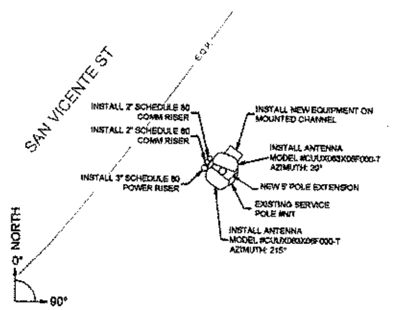
DRAWN BY:	DRAFT DATE:	APPROVED BY:
RG/JER	12/2/16	GD

SHEET NO.
T-1

CROWN CASTLE TO INSTALL THE FOLLOWING:

- INSTALL ACCORDING TO UTILITY STANDARDS AND PRACTICES.
- INSTALL 2" SCHEDULE 80 COMM RISER.
- INSTALL 3" SCHEDULE 80 POWER RISER.
- INSTALL (1) NEW CUBE CISH-51-LG SHROUD KIT.
- INSTALL (1) POWER SUPPLY & BATTERY BACKUP AND (1) ION-M 85P/19P, (1) RRUS-11 B13 (700), (1) RRUS-32 B4/66 (2100), (2) AC TO DC INVERTER, (1) FIBER OPTIC PANEL, (1) METER BOX & ELECTRICAL DISCONNECT WITH 4 BREAKERS.
- INSTALL (2) AMPHENOL PANEL ANTENNAS MODEL# CUUX063X06F000-T ON ANTENNA MOUNTING BRACKETS.
- INSTALL VERTICAL GROUND ROD.
- INSTALL 5' POLE EXTENSION.
- INSTALL NEW FCC SIGN.

A NEW CONSTRUCTION NOTES



B TOP VIEW N.T.S.

NOTES:

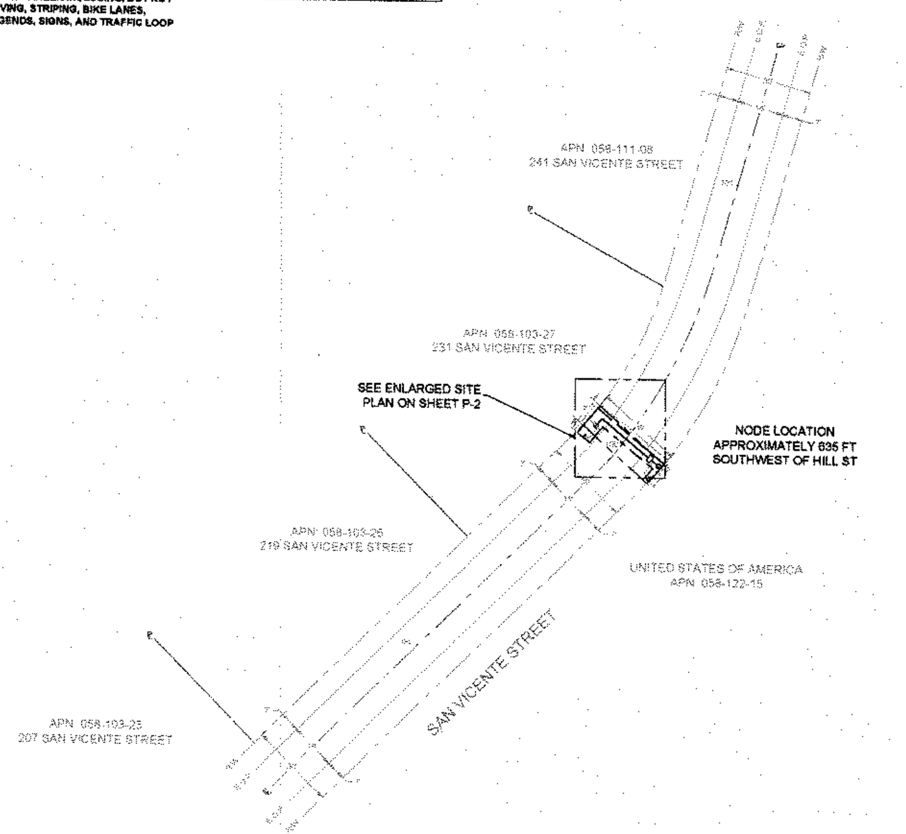
1. CONTRACTOR TO POTHOLE ALL UTILITY CROSSINGS.
2. CONTRACTOR TO PLACE SANDBAGS AROUND ANY/ALL STORM DRAIN INLETS TO PREVENT CONTAMINATED WATER.
3. SPOILS PILE WILL BE COVERED AND CONTAINED AND STREET WILL BE SWEPT AND CLEANED AS NEEDED.
4. CONTRACTOR TO REPAIR DAMAGED PUBLIC IMPROVEMENTS TO THE SATISFACTION OF THE COUNTY ENGINEER.
5. CURB & GUTTER TO BE PROTECTED IN PLACE. SIDEWALK TO BE REPLACED TO THE SATISFACTION OF THE COUNTY ENGINEER.
6. THE CONTRACTOR SHALL RESTORE THE ROADWAY BACK TO ITS ORIGINAL CONDITION SATISFACTORY TO THE COUNTY ENGINEER INCLUDING, BUT NOT LIMITED TO PAVING, STRIPING, BIKE LANES, PAVEMENT LEGENDS, SIGNS, AND TRAFFIC LOOP DETECTORS.

BILL OF MATERIALS		
DESCRIPTION		QUANTITY
VAULTS (PVT)	13-5/8" X 19"	0
	17" X 30"	0
	2' X 3'	0
CONDUIT (PVT)	2" PVC	48'
	1-1/4" PVC	0'
	3" PVC	48'

FOOTAGE TOTALS	
ASPHALT TRENCH	16'
DIRT TRENCH	12'
PUNCH THRU	0'
TOTAL	28'
PCC SIDEWALK TOTAL	0 SQ. FT.

NODE COORDINATE	
LATITUDE:	37.013662
LONGITUDE:	-122.190386

CONDUIT COUNT — SIZE OF CONDUIT — APPROX. LENGTH OF FOOTAGES



DAV-021m

DAVENPORT

CROWN CASTLE PROJECT NO.

VZW346267CA

CLIENT:

CROWN CASTLE

695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:

Communications
Telecommunications Engineering

5841 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0936

PROPRIETARY INFORMATION

THE INFORMATION CONTAINED IN THIS SET OF DRAWINGS IS PROPRIETARY AND CONFIDENTIAL TO VERIZON. ANY USE OR DISCLOSURE OTHER THAN AS IT RELATES TO VERIZON IS STRICTLY PROHIBITED.

DIGALERT

1-800-227-2600
CALL AT LEAST TWO DAYS BEFORE YOU DIG

UNDERGROUND SERVICE ALERT TICKET #

REVISION / ISSUE	DATE
EQUIP. MOUNTED TO POLE	04/12/17
VARIOUS CHANGES	04/18/17
VARIOUS CHANGES	04/21/17
VARIOUS CHANGES	04/25/17

SITE NAME & ADDRESS:

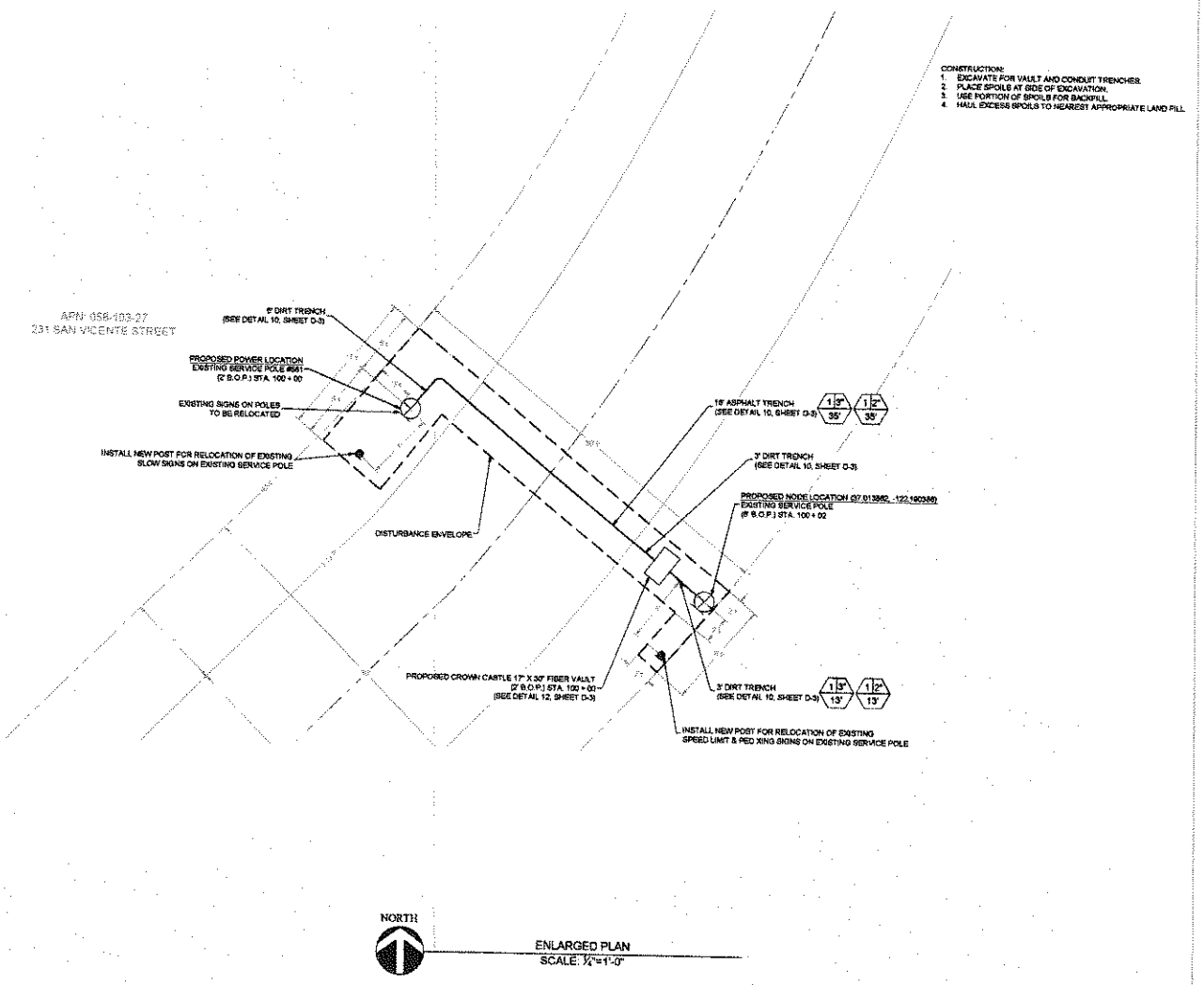
DAV-021m
ACROSS 231 SAN VICENTE ST
DAVENPORT, CA

SITE PLAN

DRAWN BY:	DRAFT DATE:	APPROVED BY:
RG/JER	12/22/16	GD

SHEET NO.

P-1



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

DAV-021m

DAVENPORT

CROWN CASTLE PROJECT NO:
VZW346267CA

CLIENT:
CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:
Communications
Telecommunications Engineering
5841 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0936
www.capitalconsultc.com

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UNDERGROUND SERVICE ALERT
TICKET #

REVISION / ISSUE	DATE
EQUIP. MOUNTED TO POLE	04/12/17
VARIOUS CHANGES	04/18/17
VARIOUS CHANGES	04/21/17
VARIOUS CHANGES	04/25/17

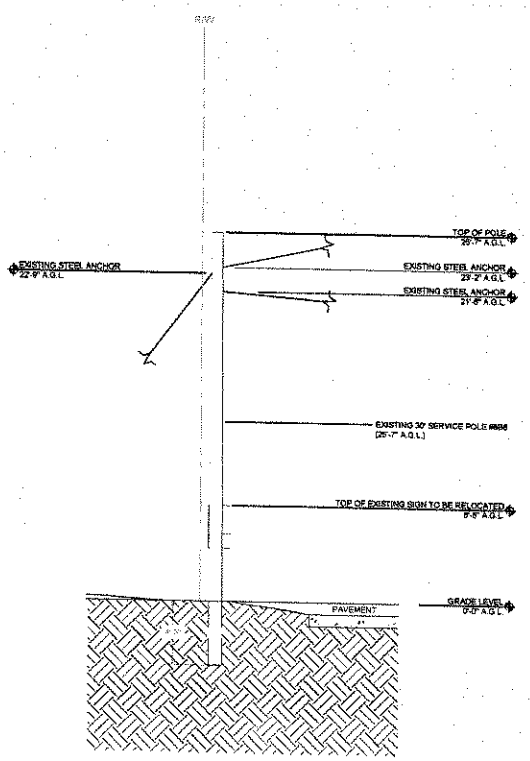
SITE NAME & ADDRESS:
DAV-021m
ACROSS 231 SAN VICENTE ST
DAVENPORT, CA

ENLARGED SITE PLAN

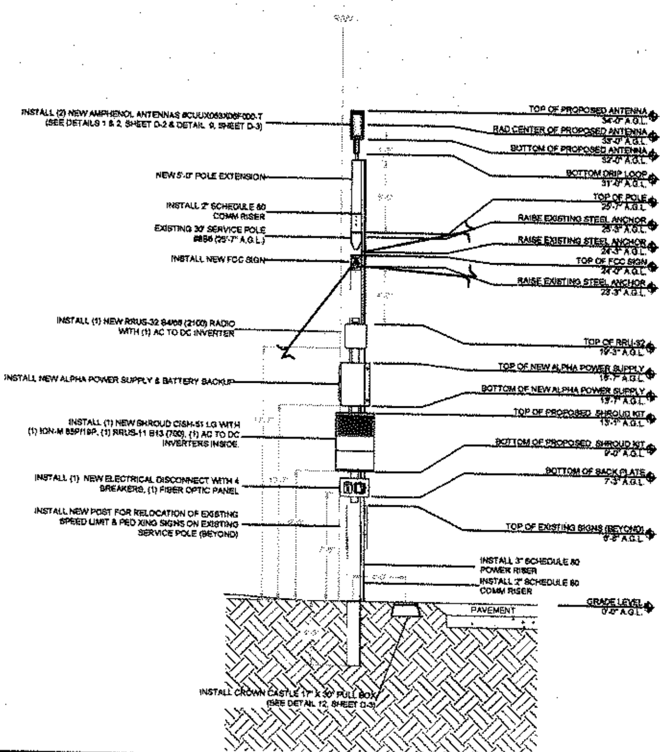
DRAWN BY:	DRAFT DATE:	APPROVED BY:
RG/JER	12/22/16	GD

SHEET NO.
P-2

POLE ID: 886
TOP OF EXISTING POLE: 25'-7"
TOP OF ANTENNA(S): 34'-0"
RAD CENTER: 33'-0"
AZIMUTH(S): 20° & 215°



C EXISTING POLE PROFILE: LOOKING SOUTHWEST — SCALE: 1/4" = 1'-0"



EQUIPMENT ON POLE TO BE PAINTED TO MATCH POLE COLOR. POLE TOP EXTENSION AND ANTENNAS TO BE PAINTED KELLY MOORE BACK WOODS KM5107 OR APPROVED COLOR

C PROPOSED POLE PROFILE: LOOKING SOUTHWEST — SCALE: 1/4" = 1'-0"

DAV-021m
DAVENPORT
CROWN CASTLE PROJECT NO.
VZW346267CA

CLIENT:
CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:
Communications
Telecommunications Engineering
5841 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0936

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UNDERGROUND SERVICE ALERT
TICKET #

REVISION / ISSUE	DATE
EQUIP. MOUNTED TO POLE	04/12/17
VARIOUS CHANGES	04/18/17
VARIOUS CHANGES	04/21/17
VARIOUS CHANGES	04/25/17

SITE NAME & ADDRESS:
DAV-021m
ACROSS 231 SAN VICENTE ST
DAVENPORT, CA

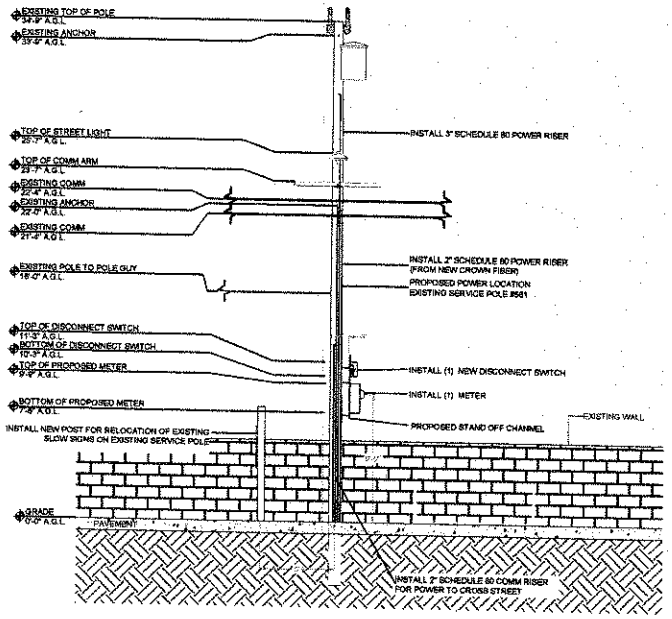
PROFILE

DRAWN BY:	DRAFT DATE:	APPROVED BY:
RG/JER	12/22/16	GD

SHEET NO.
P-3

POLE ID: 898

TOP OF EXISTING POLE: 54'-9"



EQUIPMENT ON POLE TO BE PAINTED TO MATCH POLE COLOR.

D PROPOSED METER ELEVATION: LOOKING NORTHWEST

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

DAV-021m

DAVENPORT

CROWN CASTLE PROJECT NO.

VZW346267CA

CLIENT:

CROWN CASTLE

695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:

Communications
Telecommunications Engineering

5941 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0936
www.coastalcosmine.com

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UNDERGROUND SERVICE ALERT
TICKET #

REVISION / ISSUE	DATE
EQUIP. MOUNTED TO POLE	04/12/17
VARIOUS CHANGES	04/18/17
VARIOUS CHANGES	04/21/17
VARIOUS CHANGES	04/25/17

SITE NAME & ADDRESS:

DAV-021m
ACROSS 231 SAN VICENTE ST
DAVENPORT, CA

METER ELEVATION

DRAWN BY:	DRAFT DATE:	APPROVED BY:
RG/JER	12/22/16	GD

SHEET NO:

P-5

DAV-022m2

75 FT WEST OF 500 HWY 1
DAVENPORT, CA

PROJECT MANAGER:
JAY THOMAS
PRESIDENT CELL SITE ASSOCIATES INC.
654 SALTUSROL DR.
APTOS, CA 95003
PHONE: (925) 413-8448
EMAIL: JAY-THOMAS@SBCGLOBAL.NET

NODE ENGINEER:
COASTAL COMMUNICATIONS
5841 EDISON PL, STE. 200
CARLSBAD, CA 92008
TODD THREW
(760) 929-0924
TODD@COASTALCOMMINC.COM

CROWN CASTLE (Applicant)
BEACON DEVELOPMENT, LLC
3 ROVINA LANE
PETALUMA, CA 94952
JASON F. OSBORNE
(415) 559-2121
JASON@BEACONDEV.NET

PROJECT TEAM

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

1. CALIFORNIA BUILDING CODE CBC-2013
2. CALIFORNIA ADMINISTRATIVE CODE, (INCL. TITLES 24 & 25) 2013
3. ANSI/EIA-222-F LIFE SAFETY CODE NFPA
4. BUILDING OFFICIALS AND CODE ADMINISTRATORS (BOCA)
5. CALIFORNIA ELECTRICAL CODE CEC-2013
6. CALIFORNIA MECHANICAL CODE CMC-2013
7. CALIFORNIA PLUMBING CODE CPC 2013
8. LOCAL BUILDING CODE(S)
9. COUNTY AND/OR COUNTY ORDINANCES
10. MUST COMPLY TO LATEST CALIFORNIA FIRE CODE. (AND LATEST MUNICIPAL FIRE CODE).
11. CALIFORNIA GENERAL ORDER 95 AND 128.

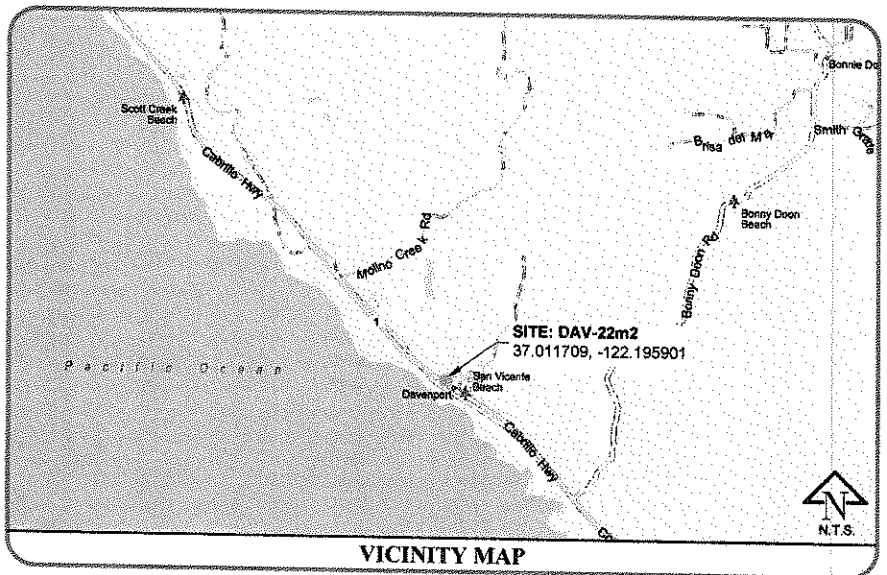
CODE COMPLIANCE

- INSTALL ACCORDING TO UTILITY STANDARDS AND PRACTICES.
- INSTALL NEW 45' POLE.
- TRANSFER EXISTING COMMUNICATION LINES.
- INSTALL (2) PANEL ANTENNAS MODEL #CUUH0653D06F000-T ON ANTENNA MOUNTING BRACKETS.
- INSTALL (1) 73" X 23" X 54" CABINET WITH POWER SUPPLY & BATTERY BACKUP AND (1) ION-M 850/95P, (1) RRUS-11 B13 (700), (1) RRUS-32 B4/66 (2100) (2) AC TO DC INVERTERS, (1) FIBER OPTIC PANEL, (1) METER BOX & ELECTRICAL DISCONNECT WITH 4 BREAKERS.
- INSTALL 2" SCHEDULE 80 POWER FEED RISER.
- INSTALL NEW 2' X 3' CROWN CASTLE VAULT FOR COAX SIZE TRANSITION.
- INSTALL NEW (1) 3" POWER CONDUIT WITH 12" SEPARATION.
- INSTALL VERTICAL GROUND ROD.
- INSTALL (2) NEW SAFETY BOLLARDS.
- INSTALL NEW FCC SIGN.

PROJECT SUMMARY

SHEET NO.	DESCRIPTION
T-1	TITLE SHEET
D-1	NOTES
D-2	DETAILS
D-3	DETAILS
P-1	SITE PLAN
P-2	ENLARGED SITE PLAN
P-3	POLE PROFILE
P-4	POLE PROFILE
C-1	SURVEY

SHEET INDEX



VICINITY MAP

LATITUDE:	37.011709
LONGITUDE:	-122.195901
ELEVATION:	101.6 ± AMSL (NAVD 88)
JURISDICTION:	CAL-TRANS R/W
A.P.N. ZONING: OCCUPANCY:	CAL-TRANS RIGHT-OF-WAY CAL-TRANS RIGHT-OF-WAY UNMANNED
TYPE OF CONSTRUCTION:	ATTACHMENTS TO NEW POLE
HANDICAP REQUIREMENTS:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESSES NOT REQUIRED
TITLE 24 REQUIREMENTS:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. THIS PROJECT IS EXEMPT.

PROJECT INFORMATION

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CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR RESPONSIBLE FOR SAME.

GENERAL CONTRACTOR NOTES

FROM: 695 RIVER OAKS PKWY, SAN JOSE, CA 95134 TO: NODE DAV-22m2 38 MARINE VIEW AVE, DAVENPORT, CA

1. FROM 695 RIVER OAKS PKWY TAKE SEELY AVE TO MONTAGUE EXPY
2. TAKE CA-87 S, CA-17 S
3. KEEP RIGHT TO CONTINUE ON CA-1 N
4. DESTINATION WILL BE ON THE RIGHT

DRIVING DIRECTIONS

DAV-022m2
DAVENPORT
CROWN CASTLE PROJECT NO:
VZW346267CA

CLIENT:
CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:
Coastal Communications
Telecommunications Engineering
5841 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0936
www.coastalcommunications.com

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DIGALERT
1-800-227-2600
CALL AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
TICKET #

REVISION / ISSUE	DATE
POLE LOCATION MOVE	04/19/17
VARIOUS CHANGES	04/21/17
MINOR CHANGES	04/25/17

SITE NAME & ADDRESS:
DAV-022m2
75 FT WEST OF
500 HWY 1
DAVENPORT, CA

TITLE SHEET

DRAWN BY:	DRAFT DATE:	APPROVED BY:
JER	12/21/16	GD

SHEET NO.
T-1

- INSTALL ACCORDING TO UTILITY STANDARDS AND PRACTICES.
- INSTALL NEW 45' POLE.
- TRANSFER EXISTING COMMUNICATION LINES.
- INSTALL (2) PANEL ANTENNAS MODEL #CUUX063X06F000-T ON ANTENNA MOUNTING BRACKETS
- INSTALL (1) 75" X 23" X 34" CABINET WITH POWER SUPPLY & BATTERY BACKUP AND (1) ION-M RBP99P, (1) RRUS-11 B13 (700), (1) RRUS-32 B4/66 (2100) (2) AC TO DC INVERTERS, (1) FIBER OPTIC PANEL, (1) METER BOX & ELECTRICAL DISCONNECT WITH 4 BREAKERS.
- INSTALL 3" SCHEDULE 80 POWER FEED RISER.
- INSTALL NEW 2' X 3' CROWN CASTLE VAULT FOR COAX SIZE TRANSITION.
- INSTALL NEW (1) 3" POWER CONDUIT WITH 12" SEPARATION.
- INSTALL VERTICAL GROUND ROD.
- INSTALL (2) NEW SAFETY BOLLARDS.
- INSTALL NEW FCC SIGN.

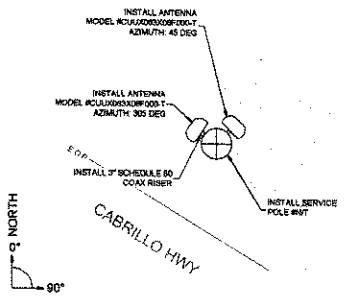
BILL OF MATERIALS		
DESCRIPTION		QUANTITY
VAULTS (PVT)	13-5/8" X 19"	0
	17" X 30"	0
	2' X 3'	0
CONDUIT (PVT)	1" PVC	94'
	3" PVC	80
	2" PVC	97'

FOOTAGE TOTALS	
ASPHALT TRENCH	0'
DIRT TRENCH	81'
PUNCH THRU	0'
TOTAL	81'
PCC SIDEWALK TOTAL	0 SQ. FT.

NODE COORDINATE	
LATITUDE:	37.011709
LONGITUDE:	-122.195901

CONDUIT COUNT — SIZE OF CONDUIT — APPROX. LENGTH OF FOOTAGES

A NEW CONSTRUCTION NOTES



B TOP VIEW N.T.S.

NOTES:

1. **CONTRACTOR TO POTHOLE ALL UTILITY CROSSINGS.**
2. **CONTRACTOR TO PLACE SANDBAGS AROUND ANY/ALL STORM DRAIN INLETS TO PREVENT CONTAMINATED WATER.**
3. **SPOILS PILE WILL BE COVERED AND CONTAINED AND STREET WILL BE SWEPT AND CLEANED AS NEEDED.**
4. **CONTRACTOR TO REPAIR DAMAGED PUBLIC IMPROVEMENTS TO THE SATISFACTION OF THE COUNTY ENGINEER.**
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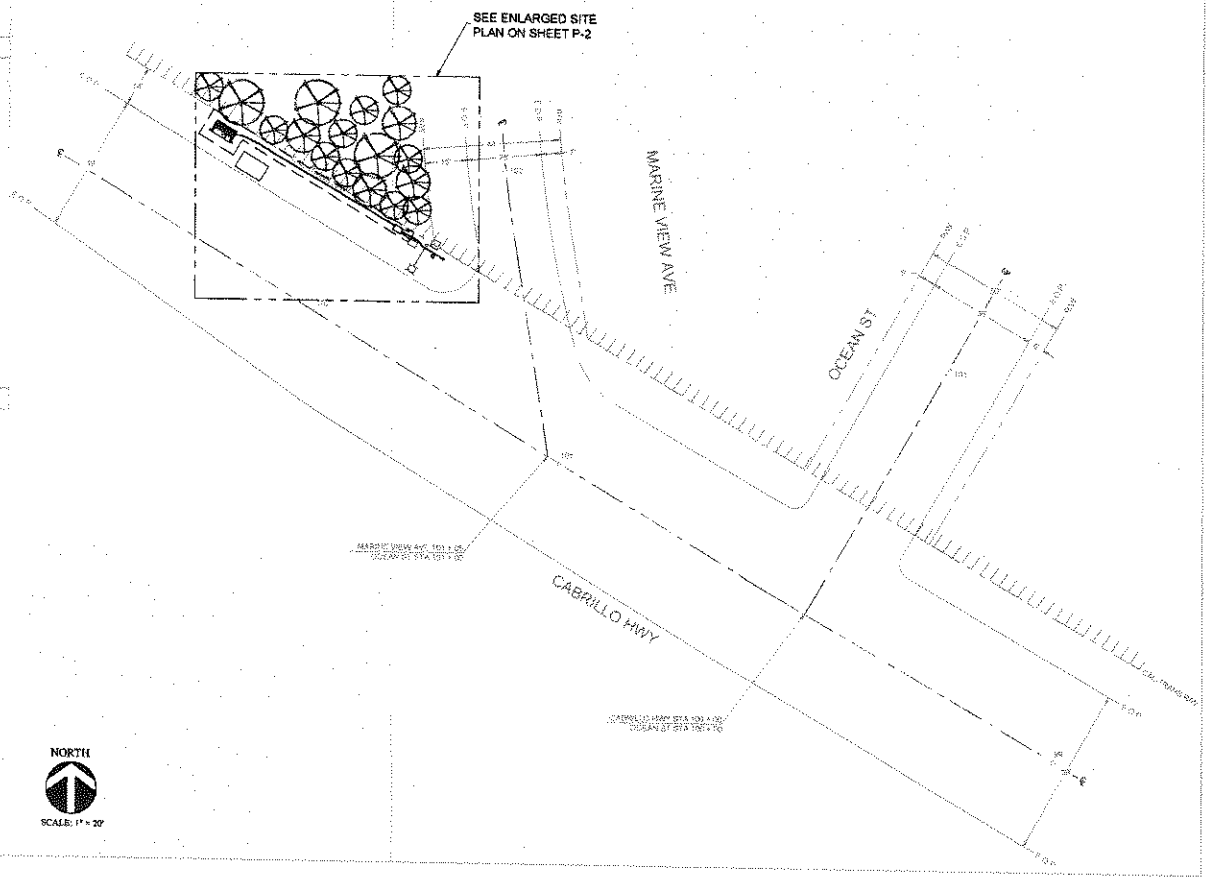

DAV-022m2

DAVENPORT

CROWN CASTLE PROJECT NO.

VZW346267CA

CLIENT:

CROWN CASTLE

695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:

Communications
Telecommunications Engineering

5941 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0936
www.consultcommline.com

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CALL AT LEAST TWO DAYS BEFORE YOU DIG

UNDERGROUND SERVICE ALERT
TICKET #

REVISION / ISSUE	DATE
POLE LOCATION MOVE	04/19/17
VARIOUS CHANGES	04/21/17
MINOR CHANGES	04/25/17

SITE NAME & ADDRESS:

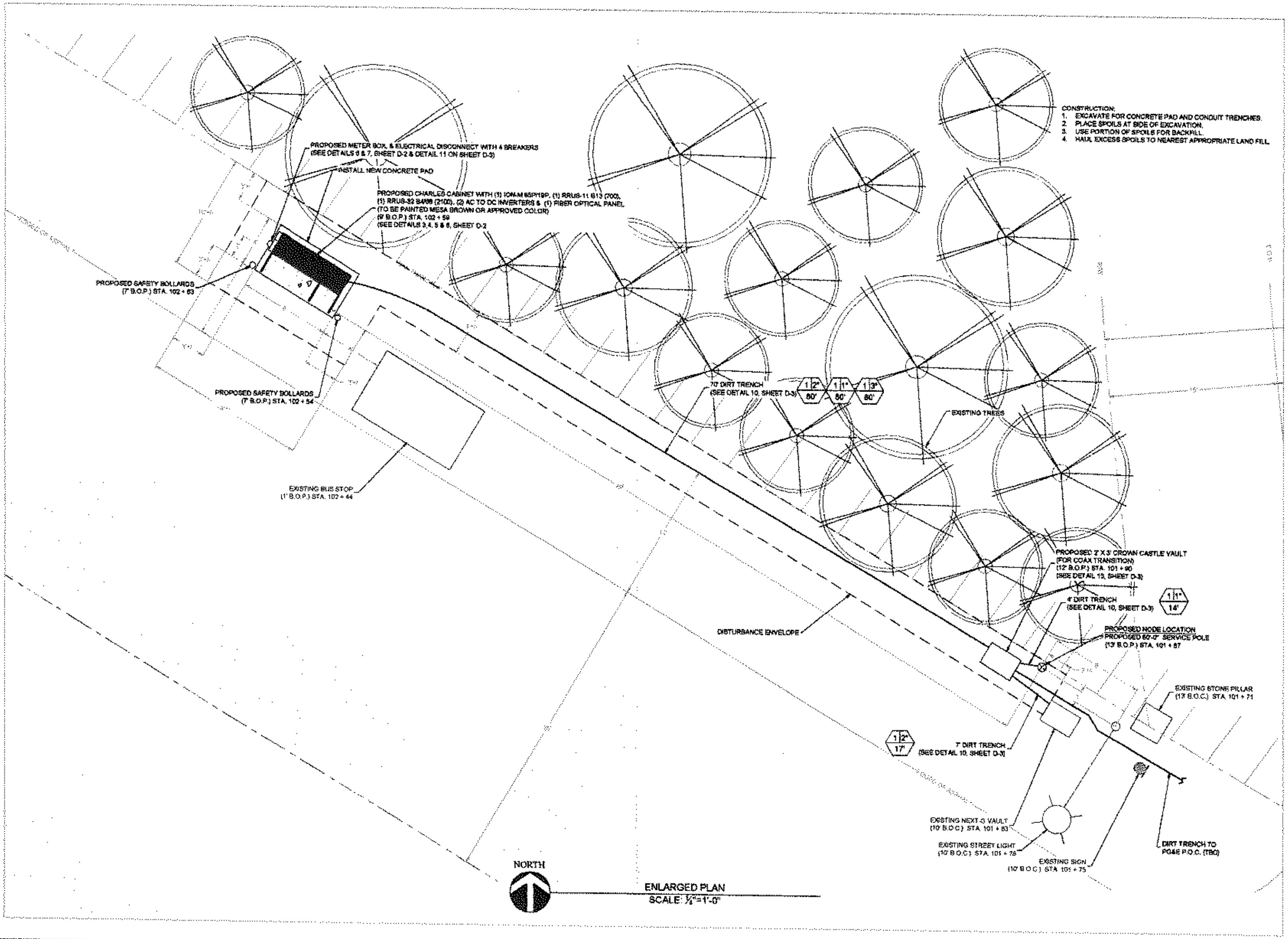
DAV-022m2
75 FT WEST OF
500 HWY 1
DAVENPORT, CA

SITE PLAN

DRAWN BY:	DRAFT DATE:	APPROVED BY:
JER	12/21/16	GD

SHEET NO.

P-1



ENLARGED PLAN
SCALE: ½"=1'-0"

DAV-022m2

DAVENPORT

CROWN CASTLE PROJECT NO.

VZW346267CA

CLIENT:

CROWN CASTLE

695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:

Communications
Telecommunications Engineering

5841 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0936
www.coastalcommsinc.com

PROPRIETARY INFORMATION

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DIGALERT

1-800-227-2600
CALL AT LEAST TWO DAYS BEFORE YOU DIG

UNDERGROUND SERVICE ALERT
TICKET #

REVISION / ISSUE	DATE
POLE LOCATION MOVE	04/19/17
VARIOUS CHANGES	04/21/17
MINOR CHANGES	04/25/17

SITE NAME & ADDRESS:

DAV-022m2
75 FT WEST OF
500 HWY 1
DAVENPORT, CA

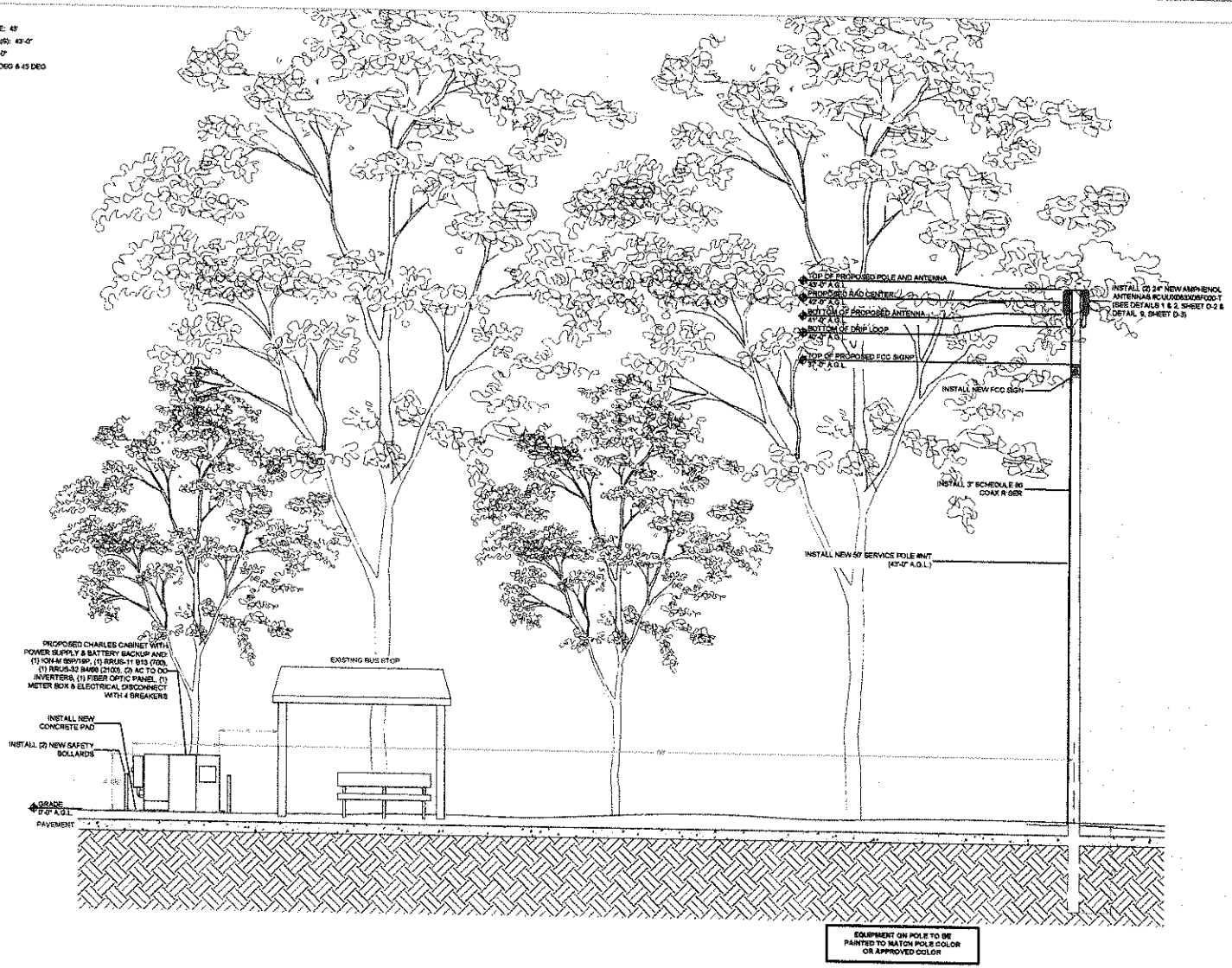
ENLARGED SITE PLAN

DRAWN BY:	DRAFT DATE:	APPROVED BY:
JER	12/21/16	GD

SHEET NO.

P-2

POLE ID: N/A
TOP OF NEW POLE: 45'
TOP OF ANTENNA(S): 43'-0"
RAD CENTER: 42'-0"
AZIMUTH(S): 305 DEG & 45 DEG



C **PROPOSED POLE PROFILE: LOOKING NORTHEAST**

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

DAV-022m2

DAVENPORT

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SITE NAME & ADDRESS:
DAV-022m2
75 FT WEST OF
500 HWY 1
DAVENPORT, CA

PROFILE

DRAWN BY:	DRAFT DATE:	APPROVED BY:
JER	12/21/16	GD

SHEET NO.
P-3