



Staff Report to the Zoning Administrator

Application Number:
181100

Applicant: Ken Hart - Swift Consulting
Owner: County of Santa Cruz
APN: N/A (County Right-of-Way)

Agenda Date: December 21, 2018
Agenda Item #: 2
Time: After 9:00 a.m.

Project Description: Proposal to install a new microcell wireless communications facility (Node 124), co-located on a new (replacement) power pole, comprising one four-foot-tall by 14.6 inch diameter cantenna, two 27 inch by 12 inch remote radio units (RRUs), one seven inch by ten inch diplexer shroud, a PG&E smart meter and associated minor equipment. The existing utility pole measures approximately 47.7 feet above ground, and the new pole would measure approximately 58.17 feet above ground. The maximum height of the proposed new utility pole with the cantenna afixed to the top would measure approximately 62.17 feet above ground. A street light is located on the existing pole, and would be replaced on the new utility pole. Requires a Commercial Development Permit and a Variance to exceed 53 feet in height.

The Applicant has submitted a batch of four applications for new microcell wireless communications facilities, co-located on existing or new freestanding utility poles located in County rights-of-way in several locations throughout Live Oak, as indicated in Table 1 below. The subject applications are independent wireless facilities, and are not part of a Distributed Antenna System (DAS).

Table 1 – Location of Four Submitted Verizon Wireless Applications	
Application (Node)	Location
181099 (Node 135)	Mattison Lane, adjacent to APN 029-031-10 (2688 Mattison Lane)
181100 (Node 124)	Chanticleer Avenue, adjacent to APN 029-071-69 (Chanticleer Park)
181103 (Node 98)	Bostwick Lane, adjacent to APN 026-031-44 (2724 Soquel Ave, rear parking lot)
181104 (Node 95)	Capitola Road, adjacent to APN 026-681-01 (1723 Grey Seal Road)

Location: Project located in the County rights-of-way, on the sidewalk on Chanticleer Avenue, west side, approximately 215 feet north of the intersection with Persimmon Court. This project is adjacent to Chanticleer Avenue Park and APN 029-071-69. The project site is located approximately 88.7 feet from the nearest structure (residential).

Supervisory District: 1st District (District Supervisor: John Leopold)

Permits Required: Requires a Level 5 Commercial Development Permit, Variance

Staff Recommendation:

- Determine that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.
- Approval of Application 181100, based on the attached findings and conditions.

Exhibits

A.	Categorical Exemption (CEQA determination)	E.	RF Emissions Report
B.	Findings	F.	Assessor's, Location, Zoning and General Plan Maps
C.	Conditions	G.	Alternative Design
D.	Project plans	H.	Comments

Parcel Information

Rights of Way Widths:	Approximately 40 feet
Existing Land Use:	Right of Way
Existing Land Use - Surrounding:	Parks, Open Space, Residential
Project Access:	Chanticleer Avenue
Planning Area:	Live Oak
Land Use Designation:	R-UL (Urban Low Density Residential)
Zone District:	PR (Parks, Recreation and Open Space)
Coastal Zone	<input type="checkbox"/> Inside <input checked="" type="checkbox"/> Outside
Appealable to Calif. Coastal Comm.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Environmental Information

Geologic Hazards:	Not mapped/no physical evidence on site
Soils:	N/A
Fire Hazard:	Not a mapped constraint
Slopes:	N/A
Env. Sen. Habitat:	Not mapped/no physical evidence on site
Grading:	No grading proposed
Tree Removal:	No trees proposed to be removed
Scenic:	Not a mapped resource
Drainage:	No change to existing drainage
Archeology:	Not mapped/no physical evidence on site

Services Information

Urban/Rural Services Line:	<input checked="" type="checkbox"/> Inside <input type="checkbox"/> Outside
Water Supply:	Santa Cruz Water District
Sewage Disposal:	Santa Cruz Sanitation District
Fire District:	Central Fire District
Drainage District:	Flood Zone 5

History

There have not been other development applications for this utility pole in the past.

Project Setting

The utility pole is located on the west side of Chanticleer Avenue, adjacent to Chanticleer Park and APN 029-071-69, in the PR Zoning District. Nearby parcels are zoned R-1-6 and PF. All parcels across the street contain residential uses, and the immediate surrounding neighborhood is predominately residential. The project site is located approximately 88.7 feet from the nearest structure (residential).

Zoning & General Plan Consistency

The subject utility pole is located in the County right-of-way and the PR (Parks, Recreation, and Open Space) zone district, a designation which allows wireless communication facilities (WCFs) uses that are co-located [per Section 13.10.660(D)]. The proposal is to install a new wireless facility on a new PG&E utility pole is a conditionally permitted use within the zone district and the zoning is consistent with the site's R-UL (Urban Low Density Residential) General Plan designation.

Pursuant to County Code Section 13.10.661(A), all new wireless communication facilities are required to obtain a commercial development permit with approval by the Zoning Administrator.

Antenna Height

Pursuant to Section 13.10.510(D)(2), the height and placement limitations of wireless communication antennas within the PR zone district, may be erected to a height of not more than 25 feet above the 28-foot height limit allowed in the district. The overall height of the new utility pole and added wireless communication equipment will be 62.17 feet, which is above the allowed 53 feet for wireless communication facilities; therefore, approval of a variance is required to exceed the 53-foot height limit.

Variance

Administrative Bulletin WCF-01 allows structure mounted WCFs such as the proposed project to be up to 25 feet taller than the height limit for habitable structures, or 53 feet tall, in the PR zone district, without the need for a variance. The applicant is proposing a microcell facility on a new (replacement) utility pole which would exceed the 53-foot height limit by approximately 9.17 feet.

The applicant has not provided sufficient justification to support variance findings for the additional height required at the proposed location; therefore, to limit any visual impacts on the surrounding neighborhood, it is recommended that the project be conditioned so as to limit any wireless communication equipment to not exceed the 53-foot height limit.

Local Coastal Program Consistency

The proposed wireless facility is not located in the Coastal Zone.

Design Review

The proposed wireless facility is a microcell site consisting of a four-foot high canister antenna (“cantenna”), two remote radio units (RRUs), one diplexer shroud, a PG&E smart meter and associated minor equipment. The existing utility pole measures approximately 47.7 feet above ground, and the new pole would measure approximately 57 feet above ground. A street light is located on the existing pole, and would be replaced on the new utility pole. As proposed, the maximum height of the proposed new utility pole with the cantenna affixed to the top would measure approximately 62.17 feet above ground. For the reason that the wireless facility, as proposed, would exceed the 53-foot height limit as established by Administrative Bulletin WCF-01, this project is conditioned to not exceed a maximum height of 53 feet for any equipment associated with the microcell facility. Limiting the height of the wireless facility to 53 feet would achieve a scale appropriate for the PR zone district, as well as improve its visual compatibility with the surrounding neighborhood.

Microcell facilities are inconspicuous wireless facilities co-located on poles in the public right-of-way that pose minimal visual impact. Although these facilities, because they are in the public rights-of way cannot feasibly be sited and designed to be invisible from public vantage points, all shall be designed to blend into the existing public view as seamlessly as possible. The proposed microcell wireless communication facility will pose minimal visual impact due to its limited size and placement on utility infrastructure. All equipment is proposed to be located on the utility pole, and no ground mounted equipment is proposed, thus reducing pedestrian-level clutter. As conditioned, visual impact will be further minimized by limiting the height of the wireless facility to 53 feet.

In addition, the project includes camouflaging by painting equipment to match the color of the utility pole, utilizes equipment to the extent feasible, and orienting the equipment on the pole in an aligned and organized manner. Together, these efforts will reduce visual impacts of the wireless facility on surrounding land uses.

Radio Frequency Emissions

The County is prohibited by federal law from denying WCF applications, such as this one, on the basis of the health and/or environmental effects of radio frequency (RF) radiation so long as the WCF complies with the FCC’s RF radiation emission limits. A RF radiation emissions calculation report (Exhibit E) has been prepared for this project by a qualified consulting engineer. With appropriate signage, the proposed facilities are calculated to result in RF levels that are compliant with exposure limit standards.

Environmental Review

Staff has determined that the proposed project is Categorically Exempt from the requirements of the California Environmental Quality Act (CEQA) because it qualifies as “New Construction or Conversion of a Small Structure” (Class 3, Section 15303). The CEQA Categorical Exemption form is attached as Exhibit A.

Conclusion

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

Staff Recommendation

- Determine that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.
- **APPROVAL** of Application Number **181100** based on the attached findings and conditions.

Supplementary reports and information referred to in this report are on file and available for viewing at the Santa Cruz County Planning Department, and are hereby made a part of the administrative record for the proposed project.

The County Code and General Plan, as well as hearing agendas and additional information are available online at: www.co.santa-cruz.ca.us

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CALIFORNIA ENVIRONMENTAL QUALITY ACT

NOTICE OF EXEMPTION

The Santa Cruz County Planning Department has reviewed the project described below and has determined that it is exempt from the provisions of CEQA as specified in Sections 15061 - 15332 of CEQA for the reason(s) which have been specified in this document.

Application Number: 181100

Assessor Parcel Number: No APN Spec

Project Location: County Public Right-of-Way

Project Description: Proposal to install a new microcell wireless communications facility (Node 124), co-located on a new (replacement) power pole, comprising one four-foot-tall by 14.6 inch diameter cantenna, two 27 inch by 12 inch remote radio units (RRUs), one seven inch by ten inch diplexer shroud, a PG&E smart meter and associated minor equipment. The maximum height of the proposed new utility pole with the cantenna afixed to the top would measure approximately 62.17 feet above ground. A street light is located on the existing pole, and would be replaced on the new utility pole.

Person or Agency Proposing Project: Ken Hart - Swift Consulting for Verizon Wireless

Contact Phone Number: (831) 459-9992

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

Specify type: Class 3 - New Construction or Conversion of Small Structures (Section 15303)

F. Reasons why the project is exempt:

Class 3 includes construction and location of limited numbers of new, small facilities or structures; installation of small new equipent and facilities in small structures. The exemption applies to the installation of water main, sewage, electrical, gas, and other utility extensions. The construction of the proposed wireless communication facility is within the puvieu of this exemption and is not enticipated to generate any significant environmental impacts.

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

Jonathan DiSalvo, Project Planner

Date: _____

EXHIBIT A

Wireless Communication Facility Use Permit Findings

1. That either: (1) the development of the proposed wireless communications facility as conditioned will not significantly affect any designated visual resources, environmentally sensitive habitat resources (as defined in the Santa Cruz County General Plan/LCP Sections 5.1, 5.10, and 8.6.6.), and/or other significant County resources, including agricultural, open space, and community character resources; or (2) there are no other environmentally equivalent and/or superior and technically feasible alternatives to the proposed wireless communications facility as conditioned (including alternative locations and/or designs) with less visual and/or other resource impacts and the proposed facility has been modified by condition and/or project design to minimize and mitigate its visual and other resource impacts.

This finding can be made, in that the location and design of the proposed wireless facility would not result in a significant visual impact to the character of the area. The proposed facility is to be co-located on a utility pole within a public right-of-way. County Code Section 13.10.660(D) expands the notion of “co-location” to mean “placing new wireless communication facilities/antennas upon existing or new P.G.&E or other utility towers or poles (e.g. “microcell” sites).” The co-location of wireless facilities on utility poles, such as is proposed with this application, is generally encouraged under SCCC 13.10.661(G).

The proposed wireless communication facility is not mapped within any designated scenic corridor and will not be visible from Highway 1, the closest mapped scenic corridor from the site. As a co-located microcell wireless facility, due to its small size and location on a utility pole, is the least visually-intrusive type of WCF. Moreover, its installation and use in a road right-of-way will not impact any sensitive habitat resources or other significant County resources, including agricultural, open space, and community character resources. Although the wireless communication facilities and equipment will not significantly affect any designated visual or significant resources, the project is conditioned to be painted to match the color of the utility pole and minimize the size and bulk of associated equipment as is feasible. These measures minimize visual impacts. Visual impacts will be further minimized by limiting the height of the wireless facility to 53 feet.

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

This finding can be made, in that the PR zone district is not a prohibited or restricted zone district for wireless communication facilities. Further, the location of the proposed co-located facility and the conditions under which it would be operated or maintained will be consistent with all pertinent County ordinances and the directive of Public Utilities Code Section 7901.

3. That the subject property upon which the wireless communications facility is to be built is in compliance with all rules and regulations pertaining to zoning uses, subdivisions and

any other applicable provisions of this title and that all zoning violation abatement costs, if any, have been paid.

This finding can be made, in that, as conditioned, the proposed wireless facility is in compliance with the requirements of the County Code and General Plan designation, in which it is located. The wireless facility is proposed to be installed on a new utility pole located in the right-of-way where the zoning is PR. PR is not a restricted or prohibited zone district for wireless communication facilities.

No zoning violation abatement fees are applicable to the subject site.

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

This finding can be made, in that the proposed wireless communications facility will not be located within the Watsonville Municipal Airport approach Zone; therefore, the project is not subject to the adopted airport safety regulations for the Watsonville Municipal Airport. Additionally, the maximum height of the project will be located well below the aircraft travel path.

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

This finding can be made, in that the RF report prepared by Hammett and Edison Consulting Engineers dated April 23, 2018, indicates the project would result in an exposure limit of approximately 0.20% of the applicable public exposure limit at ground level and 0.29% at the second-floor elevation of any nearby residence. Consequently, sufficient evidence has been submitted to indicate the current proposal would be in compliance with FCC regulations with respect to RF exposure levels.

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

This finding can be made, in that the proposed project site is not located within the coastal zone.

Development Permit Findings

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

This finding can be made, in that the project will comply with prevailing building technology, the California Building Code, and the County Building ordinance to insure the optimum in safety and the conservation of energy and resources. The proposed wireless communication facility use will not deprive adjacent properties or the neighborhood of light, air, or open space. In addition, the project will not be materially injurious to properties or improvements in the vicinity.

The radio frequency exposure levels were evaluated by Hammett and Edison Consulting Engineers dated April 23, 2018, based on the calculated operation of the proposed wireless communication facility, and is attached as Exhibit E. This report evaluated projected emissions levels. The proposed levels are within FCC prescribed limits.

The location of the proposed wireless facility has been evaluated by the Department of Public Works. Given the project's location mounted on a utility pole, it will not obstruct drivers' line of sight or adversely impact vehicles. An encroachment permit is required as a Condition of Approval.

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

This finding can be made, in that, as conditioned, the proposed location of the wireless communication facility and the conditions under which it would be operated or maintained will be consistent with all pertinent County ordinances and the purpose of the PR (Parks, Recreation and Open Space) zone district as one of the uses of the County right-of-way will be a wireless communication facility that meets all current site standards for the zone district.

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

This finding can be made, in that the proposed wireless communication facility use is consistent with the use and density requirements specified for the R-UL (Urban Low Density Residential) land use designation in the County General Plan.

The proposed wireless communication facility is compatible with adjacent uses in that the wireless communications facility was subject to Design Review and its design is consistent with the design review standards, as specified in Policy 8.5.2 (Commercial Compatibility With Other Uses). The proposed wireless communication facility is co-located and will pose minimal visual impact due to its limited size and placement on utility infrastructure. In addition, the project includes camouflaging the facility by painting equipment to match the color of the utility pole, reducing the bulk and side of

the equipment to the extent feasible, and orienting the equipment on the pole in an aligned and organized manner. All equipment will be located on the utility pole, and no ground mounted equipment is proposed, thus reducing pedestrian-level clutter. As conditioned, visual impact will be further minimized by limiting the height of the wireless facility to 53 feet. Together, these efforts will reduce the visual impact of the wireless facility on surrounding land uses.

The proposed WCF will be consistent with the character of the neighborhood as specified in the General Plan Policy 8.1.2 (Design Review Ordinance), in that the proposed wireless facility will comply with the design criteria and has been sited and designed to be visually compatible with the neighborhood. The project has been conditioned to ensure the facility is maintained in good condition and will continue to blend with the existing utilities infrastructure.

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

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

This finding can be made, in that the proposed wireless communication facility is to be constructed on a new utility pole located within a public right of way. The project will not result in adverse impacts to existing utilities, and electric service is readily available at the proposed location. Upon installation of the proposed wireless facility, the site may require periodic maintenance; the occasional maintenance is not expected to adversely impact existing roads or intersections in the surrounding area. Given the small size of the facility, its utility demand (electricity) will not overload utilities.

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

This finding can be made, in that as conditioned, the proposed project has been designed to complement surrounding land uses in the vicinity and will result in a project which is compatible with the physical design aspects of the neighborhood. Chanticleer Avenue is lined with electrical and telephone infrastructure. The project is designed to appear to be part of that existing infrastructure. As conditioned, visual impact will be further minimized by limiting the height of the wireless facility to 53 feet. Limiting the height of the microcell facility to 53 feet will achieve greater compatibility with the neighborhood. The proposed utility pole-mounted microcell wireless facility is considered to be a co-location which is preferred to that of the installation of other types of wireless facilities per County Code Section 13.10.663(A)(2). The project does not propose to construct any dwelling units.

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

This finding can be made, in that as conditioned, the proposed wireless facility mounted on a new utility pole will be of an appropriate scale and type of design that will not visually impact any designated visual resources. As conditioned, visual impact will be further minimized by limiting the height of the wireless facility to 53 feet. The installation is designed to appear to be part of the

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existing utility infrastructure. The project will be camouflaged so that the antennas and equipment on the side of the pole will be painted to match the utility pole. These efforts will minimize the visual impact of the project.

Conditions of Approval

Exhibit D: Project plans, 16 sheets, prepared by Vinculum Services, dated August 7, 2018.

- I. This permit authorizes the construction of a utility pole-mounted wireless communication facility as indicated on the approved Exhibit "G" for this permit. This approval does not confer legal status on any existing structure(s) or existing use(s) on the subject property that are not specifically authorized by this permit. It is the permit-holder's responsibility to receive authorization from the pole-owner for the replacement of the pole and installation of the wireless facility. Prior to exercising any rights granted by this permit including, without limitation, any construction or site disturbance, the applicant/owner shall:
 - A. Sign, date, and return to the Planning Department one copy of the approval to indicate acceptance and agreement with the conditions thereof.
 - B. Submit architectural plans for review and approval by the Planning Department reflecting a design of a wireless communication facility that does not exceed 53 feet in height and is in substantial conformance with the design provided in Exhibit "G". The canister antenna shall not exceed 24 inches tall and 15 inches in diameter with an antenna mount no more than one foot in height attached to the side of the utility pole and any standoff from the utility pole required to accommodate state mandated requirements (currently, 2 feet pursuant to CPUC General Order 95 Rule 94.4 (E)).
 - C. Obtain a Building Permit from the Santa Cruz County Building Official.
 1. Any outstanding balance due to the Planning Department must be paid prior to making a Building Permit application. Applications for Building Permits will not be accepted or processed while there is an outstanding balance due.
 - D. Obtain an Encroachment Permit from the Department of Public Works.
 - E. Obtain any other Federal, State, JPA or other approvals as required.
- II. Prior to issuance of a Building Permit the applicant/owner shall:
 - A. Submit final architectural plans for review and approval by the Planning Department. The final plans shall be in substantial compliance with the plans marked Exhibit "G" on file with the Planning Department. Any changes from the approved Exhibit "G" for this development permit on the plans submitted for the Building Permit must be clearly called out and labeled by standard architectural methods to indicate such changes. Any changes that are not properly called out and labeled will not be authorized by any Building Permit that is issued for the proposed development. The final plans shall include the following additional information:
 1. A copy of the text of these conditions of approval incorporated into the full size sheets of the architectural plan set.

2. One elevation shall indicate materials and colors as they were approved by this Discretionary Application. If specific materials and colors have not been approved with this Discretionary Application, in addition to showing the materials and colors on the elevation, the applicant shall supply a color and material sheet in 8 1/2" x 11" format for Planning Department review and approval.
 - a. Equipment shall be shown as painted to match the utility pole.
 - b. A safety plan, including signage shall be submitted.
 3. Details showing compliance with fire department requirements. If the proposed structure(s) are located within the State Responsibility Area (SRA) the requirements of the Wildland-Urban Interface code (WUI), California Building Code Chapter 7A, shall apply.
- B. Meet all requirements and pay any applicable plan check fee of the Central Fire Protection District.
- III. All construction shall be performed according to the approved plans for the Building Permit. Prior to final building inspection, the applicant/owner must meet the following conditions:
- A. All site improvements shown on the final approved Building Permit plans shall be installed.
 - B. All inspections required by the building permit shall be completed to the satisfaction of the County Building Official.
 - C. The new pole shall be fully vertical (no lean).
 - D. Pursuant to Sections 16.40.040 and 16.42.080 of the County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this development, any artifact or other evidence of an historic archaeological resource or a Native American cultural site is discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the Sheriff-Coroner if the discovery contains human remains, or the Planning Director if the discovery contains no human remains. The procedures established in Sections 16.40.040 and 16.42.080, shall be observed.
- IV. Operational Conditions
- A. In the event that future County inspections of the subject property disclose noncompliance with any Conditions of this approval or any violation of the County Code, the owner shall pay to the County the full cost of such County inspections, including any follow-up inspections and/or necessary enforcement actions, up to and including permit revocation.

- B. The use of temporary generators to power the wireless communication facility is not allowed.
- C. The exterior finish and materials of the wireless communication facility must be maintained on an annual basis to continue to blend with the existing utilities infrastructure. Additional paint and/or replacement materials shall be installed as necessary to blend the wireless communication facility with the existing utilities infrastructure.
- D. Graffiti or other vandalism of the site shall be removed or repaired immediately upon becoming aware of it but no longer than 30 days.
- E. Unless otherwise approved by an encroachment permit, during installation and maintenance of the wireless facility and associated equipment, the right-of-way shall be kept clear of all construction materials and vehicles.
- F. In the event the overhead utility wires are to be removed and undergrounded along this section of Chanticleer Avenue, the applicant (Verizon) shall, at their own expense, remove all of their wireless communication equipment from the subject pole, within 12-months of notification.
- G. The operator of the wireless communication facility must submit within 90 days of commencement of normal operations (or within 90 days of any major modification of power output of the facility) a written report to the Santa Cruz County Planning Department documenting the measurements and findings with respect to compliance with the established Federal Communications Commission (FCC) Non-Ionizing Electromagnetic Radiation (NEIR) exposure standard. The wireless communication facility must remain in continued compliance with the NEIR standard established by the FCC will be a violation of the terms of this permit.
- H. If, as a result of future scientific studies and alterations of industry-wide FCC standards resulting from those studies, substantial evidence is presented to Santa Cruz County that radio frequency transmissions may pose a hazard to human health and/or safety, the Santa Cruz County Planning Department shall set a public hearing and in its sole discretion, may revoke or modify the conditions of this permit.
- I. If future technological advances would allow for reduced visual impacts resulting from the proposed telecommunication facility, the operator of the wireless communication facility must make those modifications which would allow for reduced visual impact of the proposed facility as part of the normal replacement schedule. If, in the future, the facility is no longer needed, the operator of the wireless communication facility must abandon the facility and be responsible for the removal of all permanent structures and the restoration of the site as needed to re-establish the area consistent with the character of the surrounding natural landscape.
- J. Any modification in the type of equipment shall be reviewed and acted on by the Planning Department staff. The County may deny the modification or amend the

approved conditions at that time, or the Planning Director may refer it for public hearing before the Zoning Administrator.

- K. Transfer of Ownership: In the event that the original permittee sells its interest in the permitted wireless communications facility, the succeeding carrier shall assume all responsibilities concerning the project and shall be held responsible to the County for maintaining consistency with all project conditions of approval, including proof of liability insurance. Within 30-days of a transfer of ownership, the succeeding carrier shall provide a new contact name to the Planning Department.
- V. As a condition of this development approval, the holder of this development approval ("Development Approval Holder"), is required to defend, indemnify, and hold harmless the COUNTY, its officers, employees, and agents, from and against any claim (including attorneys' fees), against the COUNTY, its officers, employees, and agents to attack, set aside, void, or annul this development approval of the COUNTY or any subsequent amendment of this development approval which is requested by the Development Approval Holder.
- A. COUNTY shall promptly notify the Development Approval Holder of any claim, action, or proceeding against which the COUNTY seeks to be defended, indemnified, or held harmless. COUNTY shall cooperate fully in such defense. If COUNTY fails to notify the Development Approval Holder within sixty (60) days of any such claim, action, or proceeding, or fails to cooperate fully in the defense thereof, the Development Approval Holder shall not thereafter be responsible to defend, indemnify, or hold harmless the COUNTY if such failure to notify or cooperate was significantly prejudicial to the Development Approval Holder.
- B. Nothing contained herein shall prohibit the COUNTY from participating in the defense of any claim, action, or proceeding if both of the following occur:
1. COUNTY bears its own attorney's fees and costs; and
 2. COUNTY defends the action in good faith.
- C. Settlement. The Development Approval Holder shall not be required to pay or perform any settlement unless such Development Approval Holder has approved the settlement. When representing the County, the Development Approval Holder shall not enter into any stipulation or settlement modifying or affecting the interpretation or validity of any of the terms or conditions of the development approval without the prior written consent of the County.
- D. Successors Bound. "Development Approval Holder" shall include the applicant and the successor(s) in interest, transferee(s), and assign(s) of the applicant.

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

Application #: 181100
APN: No APN Spec
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Please note: This permit expires three years from the effective date listed below unless a building permit (or permits) is obtained for the primary structure described in the development permit (does not include demolition, temporary power pole or other site preparation permits, or accessory structures unless these are the primary subject of the development permit). Failure to exercise the building permit and to complete all of the construction under the building permit, resulting in the expiration of the building permit, will void the development permit, unless there are special circumstances as determined by the Planning Director.

Approval Date: _____

Effective Date: _____

Expiration Date: _____

Deputy Zoning Administrator

Appeals: Any property owner, or other person aggrieved, or any other person whose interests are adversely affected by any act or determination of the Zoning Administrator, may appeal the act or determination to the Planning Commission in accordance with chapter 18.10 of the Santa Cruz County Code.

CD DRAWING SIGN-OFF

VINCULUMS

Signature

Date

SITE ACQUISITION:

PLANNING:

CONSTRUCTION:

MANAGEMENT:

verizon

Signature

Date

CONSTRUCTION:

REAL ESTATE:

RF ENGINEER:

EQUIPMENT ENGINEER:

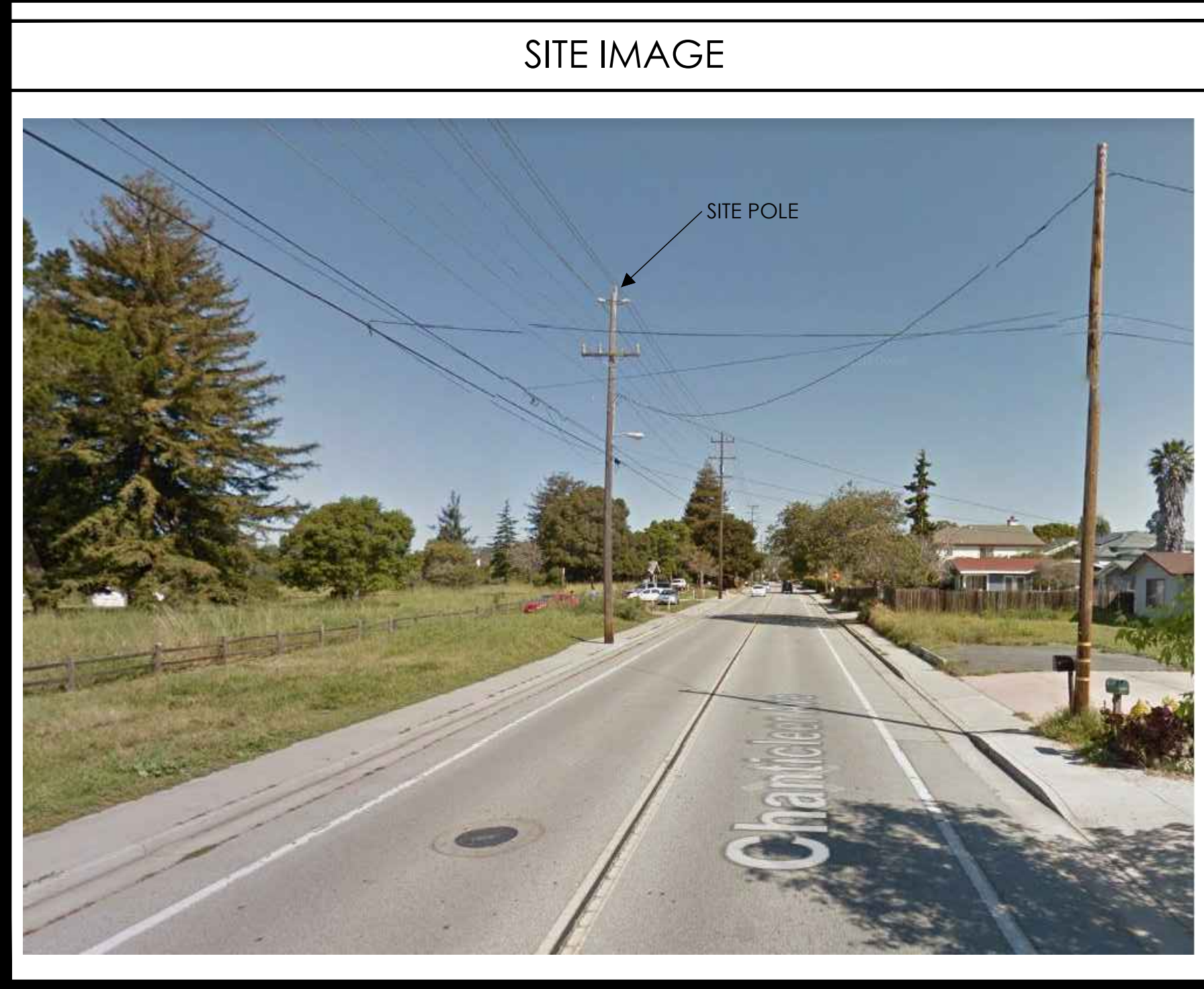
MW ENG/TRANSPORT:

Other (IF APPLICABLE)

Signature

Date

Owner:



verizon

2785 Mitchell Drive Suite 9 Walnut Creek, CA 94598

SANTA CRUZ 124

PROW (IFO) 1930 CHANTICLEER

SANTA CRUZ, CA 95062

PG&E ORDER/PM #31334117

PG&E APP/PM #112957670

LAT: 36.9783104

LONG: -121.9800312

DIRECTIONS

FROM VERIZON OFFICE AT 2785 MITCHELL DRIVE, WALNUT CREEK, CA

1. Head north-east on Mitchell Dr towards Oak Grove Rd

2. Turn right onto Oak Grove Rd

3. Turn right onto Ygnacio Valley Rd

4. Ygnacio Valley Rd turns right and becomes Hillside Ave

5. Use the left 2 lanes to turn left onto the Interstate 680 S slip road to San Jose

6. Merge onto I-680 S

7. Take exit 12 for Mission Blvd/State Route 262 towards I-880

8. Keep right at the fork, follow signs for Mission Blvd W and merge onto CA-262 S/Mission Blvd

9. Merge onto CA-262 S/Mission Blvd

10. Use the left 2 lanes to take the exit towards Interstate 880 S/San Jose

11. Merge onto I-880 S

12. Keep left to continue on CA-17 S

13. Take exit 1B to merge onto CA-1 S towards Watsonville/Monterey

14. Take exit 439 for Soquel Ave

15. Turn left onto Soquel Ave

16. Turn right onto Chanticleer Ave

17. Pole Will Be Before Persimmon Ct

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PROJECT DIRECTORY

APPLICANT:

Verizon Wireless
2785 Mitchell Drive, Suite 9
Walnut Creek, CA 94598

POLE OWNER:

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SITE INFORMATION

PSL #:

437787

APPLICANT:

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2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

AGENT:

VINCULUMS SERVICES
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WALNUT CREEK, CA 94598
CINDY HOLBROOK
T 209.627.8412

APN ADJACENCY:

(IFO) 029-071-69

SITE ADDRESS:

PROW (IFO)1930 CHANTICLEER
SANTA CRUZ, CA 95062

COUNTY:

COUNTY OF SANTA CRUZ

ZONING JURISDICTION:

COUNTY OF SANTA CRUZ

ZONING:

PR-PRL

CODE COMPLIANCE

CONSTRUCTION WORKS AND MATERIALS MUST COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY LOCAL JURISDICTION, INCLUDING BUT NOT LIMITED TO:

• CALIFORNIA CODE OF REGULATIONS

• 2016 CALIFORNIA BUILDING CODE

• 2016 CALIFORNIA MECHANICAL CODE

• 2016 CALIFORNIA PLUMBING CODE

• 2016 CALIFORNIA ELECTRIC CODE

• 2016 GREEN CODE

• 2016 EDITION OF TITLE 24 ENERGY STANDARDS

• ANY LOCAL BUILDING CODE AMENDMENTS TO THE ABOVE

• CITY / COUNTY ORDINANCES

• 2016 CALIFORNIA FIRE CODES WITH ALL LOCAL AMENDMENTS

• GO 95 REGULATIONS

PROJECT DESCRIPTION

THIS IS AN UNMANNED TELECOMMUNICATIONS FACILITY FOR THE VERIZON WIRELESS NETWORK CONSISTING OF THE INSTALLATION AND OPERATION OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON A REPLACEMENT WOOD POLE (BY OTHERS, UNDER SEPARATE PERMIT) IN THE PUBLIC RIGHT-OF-WAY.

SCOPE OF WORK

1. INSTALL NEW TELECOMMUNICATIONS EQUIPMENT BOXES ON A NEW ±65.0' HT. REPLACEMENT WOOD POLE BY OTHERS (POLETOP 57' ABOVE GROUND). ALL POLE-MOUNTED EQUIPMENT TO BE INSTALLED ON A GO95 COMPLIANT STANDOFF BRACKET

2. EQUIPMENT CONSISTS OF (1) 4' HT. ANTENNA ON TOP OF POLE, (2) RRUS32, (2) PSUs, (1) AC DISTRIBUTION PANEL, (1) DISCONNECT SWITCH, (1) FIBER DEMARC BOX, (3) DIPLEXERS, (1) PG&E SMART METER, GROUNDING, AND GROUND TEST WELL.

3. INSTALL POLE STEPS PER GO 95 REGULATIONS AS REQUIRED.

4. ALL POLE EQUIPMENT TO BE PAINTED VALSPAR 'DEEP EARTH' COLOR

5. UTILITY SERVICE TO BE FROM OVERHEAD

ADMINISTRATIVE REQUIREMENTS

CONTRACTOR SHALL VERIFY ALL PLANS & (E) DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME IF USING 11"X17" PLOT, DRAWINGS WILL BE HALF SCALE

USA NORTH 811

Call 811 Before You Dig

verizon

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Project Architect:

VINCULUMS

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SUITE 125
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Site Agent:

100% Construction Drawings

Drawing Phase:

SANTA CRUZ 124

PROW (IFO) 1930 CHANTICLEER

SANTA CRUZ, CA 95062

PSL #437787

PROJECT ID #P-139495

PG&E ORDER/PM #31334117

PG&E APP/PM #112957670

Site Name:

Professional Seal:

It is a violation of law for any person, unless they are acting under the direction of a licensed Professional Architect/Engineer, to alter this document.

Rev.

Date

Description

01

10/24/17

Construction Dwgs 90%

02

12/15/17

Construction Dwgs 90%

03

02/23/18

Construction Dwgs 100%

04

04/25/18

Construction Dwgs 100%

05

08/07/18

Construction Dwgs 100%

Project No.:

Date: 08/07/18 Job No.:

Scale: AS SHOWN CAD File:

Designed By: JG Checked: RB

TITLE SHEET

Sheet Title:

T.1

Sheet No.:

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EXHIBIT D

GENERAL CONSTRUCTION NOTES

- PLANS ARE INTENDED TO BE DIAGRAMMATIC OUTLINE ONLY. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE CONTRACTOR SHALL OBTAIN, IN WRITING, AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL CONTACT USA (UNDERGROUND SERVICE ALERT) AT (800) 227-2600, FOR UTILITY LOCATIONS, 48 HOURS BEFORE PROCEEDING WITH ANY EXCAVATION, SITE WORK OR CONSTRUCTION.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE, OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CBC / UBC'S REQUIREMENTS REGARDING EARTHQUAKE RESISTANCE, FOR, BUT NOT LIMITED TO, PIPING, LIGHT FIXTURES, CEILING GRID, INTERIOR PARTITIONS, AND MECHANICAL EQUIPMENT. ALL WORK MUST COMPLY WITH LOCAL EARTHQUAKE CODES AND REGULATIONS.
- REPRESENTATIONS OF TRUE NORTH, OTHER THAN THOSE FOUND ON THE PLOT OF SURVEY DRAWINGS, SHALL NOT BE USED TO IDENTIFY OR ESTABLISH BEARING OF TRUE NORTH AT THE SITE. THE CONTRACTOR SHALL RELY SOLELY ON THE PLOT OF SURVEY DRAWING AND ANY SURVEYOR'S MARKINGS AT THE SITE FOR THE ESTABLISHMENT OF TRUE NORTH, AND SHALL NOTIFY THE ARCHITECT / ENGINEER PRIOR TO PROCEEDING WITH THE WORK IF ANY DISCREPANCY IS FOUND BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND THE TRUE NORTH ORIENTATION AS DEPICTED ON THE CIVIL SURVEY. THE CONTRACTOR SHALL ASSUME SOLE LIABILITY FOR ANY FAILURE TO NOTIFY THE ARCHITECT / ENGINEER.
- THE BUILDING DEPARTMENT ISSUING THE PERMITS SHALL BE NOTIFIED AT LEAST TWO WORKING DAYS PRIOR TO THE COMMENCEMENT OF WORK, OR AS OTHERWISE STIPULATED BY THE CODE ENFORCEMENT OFFICIAL HAVING JURISDICTION.
- DO NOT EXCAVATE OR DISTURB BEYOND THE PROPERTY LINES OR LEASE LINES, UNLESS OTHERWISE NOTED.
- ALL EXISTING UTILITIES, FACILITIES, CONDITIONS, AND THEIR DIMENSIONS SHOWN ON THE PLAN HAVE BEEN PLOTTED FROM AVAILABLE RECORDS. THE ARCHITECT / ENGINEER AND THE OWNER ASSUME NO RESPONSIBILITY WHATSOEVER AS TO THE SUFFICIENCY OR THE ACCURACY OF THE INFORMATION SHOWN ON THE PLANS, OR THE MANNER OF THEIR REMOVAL OR ADJUSTMENT. CONTRACTORS SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL EXISTING UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTORS SHALL ALSO OBTAIN FROM EACH UTILITY COMPANY DETAILED INFORMATION RELATIVE TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTING EXISTING UTILITIES.
- CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES, BOTH HORIZONTAL AND VERTICALLY, PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES OR DOUBTS AS TO THE INTERPRETATION OF PLANS SHOULD BE IMMEDIATELY REPORTED TO THE ARCHITECT / ENGINEER FOR RESOLUTION AND INSTRUCTION. AND NO FURTHER WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS CHECKED AND CORRECTED BY THE ARCHITECT / ENGINEER. FAILURE TO SECURE SUCH INSTRUCTION MEANS CONTRACTOR WILL HAVE WORKED AT HIS/HER OWN RISK AND EXPENSE.
- ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS TO BE DISTURBED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISH ELEVATIONS PRIOR TO FINAL INSPECTION OF WORK.
- ANY DRAIN AND/OR FIELD TILE ENCOUNTERED / DISTURBED DURING CONSTRUCTION SHALL BE RETURNED TO ITS ORIGINAL CONDITION PRIOR TO COMPLETION OF WORK. SIZE, LOCATION AND TYPE OF ANY UNDERGROUND UTILITIES OR IMPROVEMENTS SHALL BE ACCURATELY NOTED AND PLACED ON "AS-BUILT" DRAWINGS BY GENERAL CONTRACTOR, AND ISSUED TO THE ARCHITECT / ENGINEER AT COMPLETION OF PROJECT.
- ALL TEMPORARY EXCAVATIONS FOR THE INSTALLATION OF FOUNDATIONS, UTILITIES, ETC., SHALL BE PROPERLY LAID BACK OR BRACED IN ACCORDANCE WITH CORRECT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.
- INCLUDE MISC. ITEMS PER VERIZON WIRELESS SPECIFICATIONS

GENERAL NOTES FOR EXISTING CELL SITES

- PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
- SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
- THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
- SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.
- SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES. GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
- SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

APPLICABLE CODES, REGULATIONS AND STANDARDS:

- SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION.
- THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
- SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:
- AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION
- TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-F, STRUCTURAL STANDARD FOR STRUCTURAL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES
- INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRICAL EQUIPMENT.
- IEEE C62.41, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND "HIGH SYSTEM EXPOSURE")
- TIA 467 COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS TELCORDIA GR-63 NETWORK EQUIPMENT-BUILDING SYSTEM (NEBS)-PHYSICAL PROTECTION
TELCORDIA GR-347 CENTRAL OFFICE POWER WIRING
TELCORDIA GR-1275 GENERAL INSTALLATION REQUIREMENTS
TELCORDIA GR-1503 COAXIAL CABLE CONNECTIONS
- ANY AND ALL OTHER LOCAL & STATE LAWS AND REGULATIONS
- FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

GENERAL TRENCHING NOTES

- MAINTAIN 40" MINIMUM COVER FOR ALL ELECTRICAL CONDUITS.
- MAINTAIN 30" MINIMUM COVER FOR ALL TELECOMMUNICATIONS CONDUITS.
- MINIMUM 1" SAND SHADING BELOW CONDUITS, AND 6" COVERING ON TOP OF CONDUITS REQUIRED.
- ALL ELECTRICAL CONDUITS FROM POWER COMPANY FROM ANY POLE, TRANSFORMER OR OTHER LOCATIONS WILL BE SLURRY BACKFILLED.
- IN STREET SLURRY TO GRADE AND MILL DOWN 1-1/2" FOR AC CAP.
- IN DIRT SLURRY 18" FROM GRADE AND FILL 95% COMPACTION NATIVE SOIL FOR BALANCE
- WARNING TAPE TO BE PLACED IN TRENCH 12" ABOVE ALL CONDUITS AND #18 WARNING TAPE ABOVE RING.

GENERAL GROUNDING NOTES

- 5/8" x 8" ROD, CAD WELD BELOW GRADE
- GROUND TESTED AT 5 OHMS OR LESS.
- #5 GROUND AND BOND WIRE.
- GROUPS 3" FROM POLE.
- PLACE 3 #10 GA WIRES FROM TESCO BREAKER TO PBMD OR STRONG BOX.
- WOOD MOLDING, STAPLED EVERY 3' AND AT EACH END.

GENERAL CONDUIT NOTES

- ALL CONDUITS WILL BE MANDELED AND EQUIPPED WITH 3/8" PULL ROPE.
- SCHEDULE 40 CONDUIT FOR UNDERGROUND USE.
- SCHEDULE 80 CONDUIT FOR RISER USE.
- 2" GALVANIZED STEEL CONDUIT FOR ANY CONDUIT UNDER 3", STUB UP 10" THEN CONVERT TO SCHEDULE 80.
- CONVERT 4" CONDUIT TO 3" AT BASE OF POLE.
- CONTRACTOR TO STUB UP POLE 10" w/ 3" POWER CONDUIT. POWER COMPANY TO CONVERT FROM 3" STUB SCHEDULE 80 TO 2" SCHEDULE 80 FROM TOP OF STUB UP.

TYPICAL R.O.W. POLE CONSTRUCTION NOTES

- CABLE NOT TO IMPEDE 15' CLEAR SPACE OFF POLE FACE.
- ALL CLUMB STEPS NEXT TO CONDUIT SHALL HAVE EXTENDED STEPS.
- NO BOLT THREADS TO PROTRUDE MORE THAN 1-1/2"
- ALL HOLES IN POLE LEFT FROM REARRANGEMENT OF CALIBERS TO BE FILLED.
- 90° SHORT SWEEPS UNDER ANTENNA ARM. ALL CABLES MUST TRANSITION ON THE INSIDE OR BOTTOM OF THE ARM (NO CABLE ON TOP OF ARM).
- USE 90° CONNECTOR AT CABLE CONNECTION FOR OMNI DOWN ANTENNAS.
- USE CABLE CLAMPS TO SECURE CABLE TO ARMS. PLACE 2" VERIZON WIRELESS CABLE I.D. TAGS ON BOTH SIDES OF ARMS.
- USE 1/2" DIA. CABLE ON ANTENNAS UNLESS OTHERWISE SPECIFIED.
- PLACE OPS ON ARM OF SOUTHERN SKY EXPOSURE AT MINIMUM 6" FROM TRANSMIT ANTENNA WHICH IS 24" AWAY FROM CENTER OF POLE.
- FILL VOID AROUND CABLES AT CONDUIT OPENING WITH FOAM SEALANT TO PREVENT WATER INTRUSION.

GENERAL NOTES

	NEW ANTENNA		GROUT OR PLASTER		TELCO RUN
	EXISTING ANTENNA		(E) BRICK		POWER/TELCO RUN
	GROUND ROD		(E) MASONRY		GROUNDING CONDUCTOR
	GROUND BUS BAR		CONCRETE		GROUNDING CONDUCTOR
	MECHANICAL GRND. CONN.		EARTH		GROUNDING CONDUCTOR
	GROUND ACCESS WELL		GRAVEL		CONDUIT UNDERGROUND
	ELECTRIC BOX		PLYWOOD		FUSE, SIZE AND TYPE AS INDICATED.
	TELEPHONE BOX		WOOD CONT.		SAFETY SWITCH, 2P-240V-60A W/60A FUSES, NEMA 3R ENCLOSURE, SQ D CATALOG NO. H222NR8
	LIGHT POLE		WOOD BLOCKING		MANUAL TRANSFER SWITCH, 2P-240V-200A, NO FUSE, NEMA 3R ENCLOSURE
	FND. MONUMENT		STEEL		LIGHTING FIXTURE, FLUORESCENT, 10.94" x 4'-0", 2/40W, SURFACE MOUNTING TYPE, HUBBELL LIGHTING CATALOG #WSW232T
	SPOT ELEVATION		CENTERLINE		LIGHTING FIXTURE, FLUORESCENT, 10.94" x 8'-0", 2/95W, SURFACE MOUNTING TYPE, HUBBELL LIGHTING CATALOG #1TWSM232T
	SET POINT		PROPERTY/LEASE LINE		LIGHTING FIXTURE, HIGH PRESSURE SODIUM, 1/170W, WALL MOUNTING TYPE, HUBBELL LIGHTING CATALOG #NRG-307 OR 1/50W, HUBBELL LIGHTING CATALOG #NRG-121
	REVISION		MATCH LINE		EXIT SIGN, THERMOPLASTIC LED, SINGLE FACE, UNIVERSAL MOUNTING, W/BATTERY PACK, HUBBELL LIGHTING CATALOG #PRB
	GRID REFERENCE		WORK POINT		TOGGLE SWITCH, 1P-125V-15A, HUBBELL CATALOG #HBL 1201CN
	DETAIL REFERENCE		GROUND CONDUCTOR		TOGGLE SWITCH, 1P-120V-15A, "WP"
	ELEVATION REFERENCE		COAXIAL CABLE		IONIZATION SMOKE DETECTOR W/ALARM HORN & AUXILIARY CONTACT, 120 VAC, GENTEX PART NO. 7100F
	SECTION REFERENCE		OVERHEAD SERVICE CONDUCTORS		POLE
			CHAIN LINK FENCING		(N) POLE MOUNTED XFMR
			OVERHEAD ELEPHONE/OVERHEAD POWER		(E) POLE MOUNTED XFMR
			OVERHEAD TELEPHONE LINE		(N) PAD MOUNTED XFMR
			OVERHEAD POWER LINE		(E) PAD MOUNTED XFMR
			POWER RUN		
			LIGHTING FIXTURE, 1/175W, METAL HALIDE, HUBBELL CAT #MIC-0175H-336		
			5/8" X 10'-0" .CU. GND ROD 30" MIN. BELOW GRADE.		

	5/8" X 10'-0" .CU. GND ROD IN TEST WELL 30" MIN. BELOW GRADE.
	CHEMICAL GROUND ROD (XIT GROUND ROD)
	CADWELD CONNECTION
	MECHANICAL CONNECTION
	HALO GROUND CONNECTION
	CIRCUIT BREAKER
	UTILITY METER BASE
	TRANSFORMER
	STEPDOWN TRANSFORMER
	RECEPTACLE, 2P-3W-125V-15A, DUPLEX, GROUND TYPE, HUBBELL CATALOG #5362
	TOGGLE SWITCH, 1P-120V-15A, "WP"
	IONIZATION SMOKE DETECTOR W/ALARM HORN & AUXILIARY CONTACT, 120 VAC, GENTEX PART NO. 7100F
	POLE
	(N) POLE MOUNTED XFMR
	(E) POLE MOUNTED XFMR
	(N) PAD MOUNTED XFMR
	(E) PAD MOUNTED XFMR

A. AMPERE A.B. ANCHOR BOLT ABV. ABOVE ACCA ANTENNA CABLE COVER ASSEMBLY ADDL. ADDITIONAL A.F.F. ABOVE FINISHED FLOOR A.F.G. ABOVE FINISHED GRADE A/C AMPERE INTERRUPTING CAPACITY ALUM. ALUMINUM ALT. ALTERNATE ANT. ANTENNA APPROX. APPROXIMATE(LY) ARCH. ARCHITECT(URAL) AMP. AMPERE AWG. AMERICAN WIRE GAUGE BATT. BATTERY BD. BOARD BLDG. BUILDING BLK. BLOCKING BM. BEAM B.N. BOUTSARY NAILING BR. BRANCH BRKR. BREAKER B/CW. BARE TINNED COPPER WIRE BIS. BASE TRANSMISSION SYSTEM B.O.F. BOTTOM OF FOOTING BU. BACK-UP CABINET CAB. CABINET CANT. CANTILEVER(ED) CB. CIRCUIT BREAKER C.I.P. CAST IN PLACE CH. CHUTE CLG. CEILING CLR. COLUMN COL. CONCRETE CONC. CONCRETE CONN. CONNECTION(OR) CONST. CONSTRUCTION CONT. CONTINUOUS C. CONT. PENNY (NAILS) DBL. DOUBLE DEM. DEMAND DEPT. DEPARTMENT D.F. DOUGLAS FIR DIA. DIAMETER DIA.G. DIAGONAL DIM. DIMENSION DWG. DRAWING(S) DWL. DOWEL(S) EA. EACH EGR. EMERGENCY GENERATOR RECEPTACLE EL. ELEVATION ELEC. ELECTRICAL ELEV. ELEVATOR E.M. ELECTRICAL METALLIC TUBING EN. EDGE NAIL ENCL. ENCLOSURE ENG. ENGINEER EQ. EQUAL EXT. EXISTING EXP. EXPANSION EXT. EXTERIOR FAB. FABRICATION(OR) FAC. FACTOR F/A FIRE ALARM F.F. FINISH FLOOR F.G. FINISH GRADE FIN. FINISHED FLR. FLOOR FLUOR. FLUORESCENT FBN. FOUNDATION F.O.C. FACE OF CONCRETE F.O.M. FACE OF MASONRY F.O.S. FACE OF STUD F.O.W. FACE OF WALL F.S. FINISH SURFACE FT. FOOT (FEET) FTG. FOOTING FU. FUSE GEN. GENERATOR GR. GROWTH (CABINET) GA. GAUGE GEN. GENERATOR GL. GALVANIZED G.F.C.I. GROUND FAULT CIRCUIT INTERRUPTER GLB. GLUE LAMINATED BEAM GND. GROUND GPS. GLOBAL POSITIONING SYSTEM GRND. GROUND HDBC. HARD DRAWN COPPER WIRE HDR. HEADER HGR. HANGER HPS. HIGH PRESSURE SODIUM	HT. HEIGHT ICCB. ISOLATED COPPER GROUND BUS IN. INCHES INT. INTERIOR INT. LB. (#) INTERIOR LBS. BOLTS L.F. LINEAR FEET (FOOT) LG. LONG (ITUDINAL) L. LOW PRESSURE SODIUM LPS. LOW PRESSURE SODIUM MAS. MASONRY MAX. MAXIMUM M.B. MACHINE BOLT MECH. MECHANICAL MFR. MANUFACTURER MIN. MINIMUM MISC. MISCELLANEOUS MLO. MAIN LUGS ONLY MTD. MOUNTED MTG. MOUNTING MTL. METAL MIS. MANUAL TRANSFER SWITCH N. NEUTRAL (N) NEW NEMA NO. (#) N.T.S. NOT TO SCALE OH. OVERHEAD ON. ON CENTER OPNG. OPENING P. POLE P/C PRECAST CONCRETE PCS. PERSONAL COMMUNICATION SERVICES PH. PLYWOOD PNLBD. PANELBOARD PRC. POWER PROTECTION CABINET PRC. PRIMARY RADIO CABINET PRI. PRIMARY P.S.F. POUNDS PER SQUARE FOOT P.S.I. POUNDS PER SQUARE INCH P.T. PRESSURE TREATED PWR. POWER (CABINET) QTY. QUANTITY RAD. (R) RADIUS RCP. RECEPTACLE REF. REFERENCE REINF. REINFORCEMENT(ING) REQ'D. REQUIRED RGS. RIGID GALVANIZED STEEL SAF. SAFETY SCH. SCHEDULE SDBC. SOFT DRAWN BARE COPPER SEC. SECONDARY SHT. SHEET SIM. SIMILAR S.N. SOLID NEUTRAL SPEC. SPECIFICATION(S) SQ. SQUARE SS. STAINLESS STEEL STD. STANDARD STL. STEEL STRUC. STRUCTURAL SURF. SURFACE SW. SWITCH TEL. TELEPHONE TEMP. TEMPORARY THIN. THIN T.N. TIE NAIL T.O.A. TOP OF ANTENNA T.O.C. TOP OF CURB T.O.F. TOP OF FOUNDATION T.O.P. TOP OF PLATE (PARAPET) T.O.S. TOP OF STEEL T.O.W. TOP OF WALL TYP. TYPICAL U.G. UNDER GROUND U.L. UNDERWRITERS LABORATORY INC. U.N.O. UNLESS NOTED OTHERWISE V. VOLT VAC. VOLT ALTERNATING CURRENT V.I.F. VERIFY IN FIELD W. WAIT OR WIRE WD. WIDE(WIDTH) W/ WITH W/O WITHOUT WD. WOOD W.P. WEATHERPROOF WT. WEIGHT XFER. TRANSFER XFMR. TRANSFORMER XLPE. CROSS-LINK POLYETHYLENE C. CENTERLINE E. PLATE, PROPERTY LINE
---	---

LEGEND

ABBREVIATIONS



Verizon Wireless
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Client:



Project Architect:



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WALNUT CREEK, CA 94598
T 925.482.8500

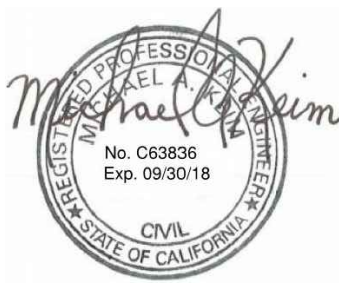
Site Agent:

100% Construction
Drawings

Drawing Phase:

SANTA CRUZ 124
PROW (IFO) 1930 CHANTICLEER
SANTA CRUZ, CA 95062
PSL #437787
PROJECT ID #P-139495
PG&E ORDER/PM #31334117
PG&E APP/PM #112957670

Site Name:



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Rev.	Date	Description
01	10/24/17	Construction Dwgs 90%
02	12/15/17	Construction Dwgs 90%
03	02/23/18	Construction Dwgs 100%
04	04/25/18	Construction Dwgs 100%
05	08/07/18	Construction Dwgs 100%

Project No.:

Date: 08/07/18 Job No.:

Scale: AS SHOWN CAD File:

Designed By: JG Checked: RB

GENERAL NOTES
LEGEND
ABBREVIATIONS

Sheet Title:

Sheet No.:

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T.3



Verizon Wireless
2785 Mitchell Drive, Suite 9
Walnut Creek, CA 94598

Client:



Meridian Management LLC
785 Oak Grove Road E2
Suite 251
Concord, CA 94518
T 707.592.5924
www.meridianmanagement.com

Project Architect:



575 LENNON LANE
SUITE 125
WALNUT CREEK, CA 94598
T 925.482.8500

Site Agent:

100% Construction Drawings

Drawing Phase:

SANTA CRUZ 124
PROW (IFO) 1930 CHANTICLEER
SANTA CRUZ, CA 95062
PSL #437787
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Project No.:

Date: 08/07/18 Job No.:

Scale: AS SHOWN CAD File:

Designed By: JG Checked: RB

POLE ELEVATION

Sheet Title:

T.4

Sheet No.:

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SITE MAP

A BOUNDARY SURVEY WAS NOT PERFORMED
AT THIS TIME. RIGHT-OF-WAY WIDTHS AND
PROPERTY LINE LOCATIONS SHOWN HEREON
ARE APPROXIMATE AND BASED ON A COMBINATION
OF VARIOUS MAPS AND FIELD OBSERVATIONS
FOR GRAPHICAL PURPOSES ONLY

AVG TREE HEIGHT
THIS AREA
110'± AMSL

OPEN FIELD

A.P.N.
029-071-69

CHANTICLEER AVENUE

A.P.N.
029-092-18

LATITUDE & LONGITUDE
TAKEN HERE
36°58'41.92"(NAD 83)
121°58'48.06"(NAD 83)

A.P.N.
029-092-11

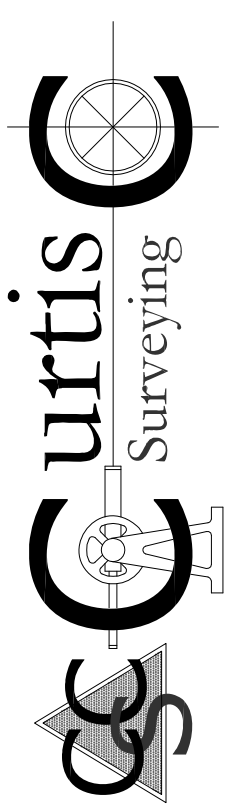
BUILDING

A.P.N.
029-092-26

SURVEYOR ASSUMES NO RESPONSIBILITY TO
CONTACT U.S.A. OR ANY OTHER AGENCIES PRIOR TO
CONSTRUCTION. THE LOCATION OF EXISTING
UTILITIES SHOWN HEREON MAY NOT BE ACCURATE
AND ALL EXISTING UTILITIES MAY NOT BE SHOWN.
CONTACT U.S.A. PRIOR TO CONSTRUCTION.


LEGEND

-
- PROPERTY LINE
- FENCE LINE
- EDGE OF PAVEMENT
- EDGE OF GRAVEL
- OVERHEAD UTILITY LINE



Curtis C. Surveying | Professional Land Surveyor | Mapping | Drafting
AZ 52145 | CA 8714 | CO 38514 | ID 16110 | NV 20714 | UT 77309265
916.213.5500 | curt@curtiscsurveying.com | www.curtiscsurveying.com

REVISIONS

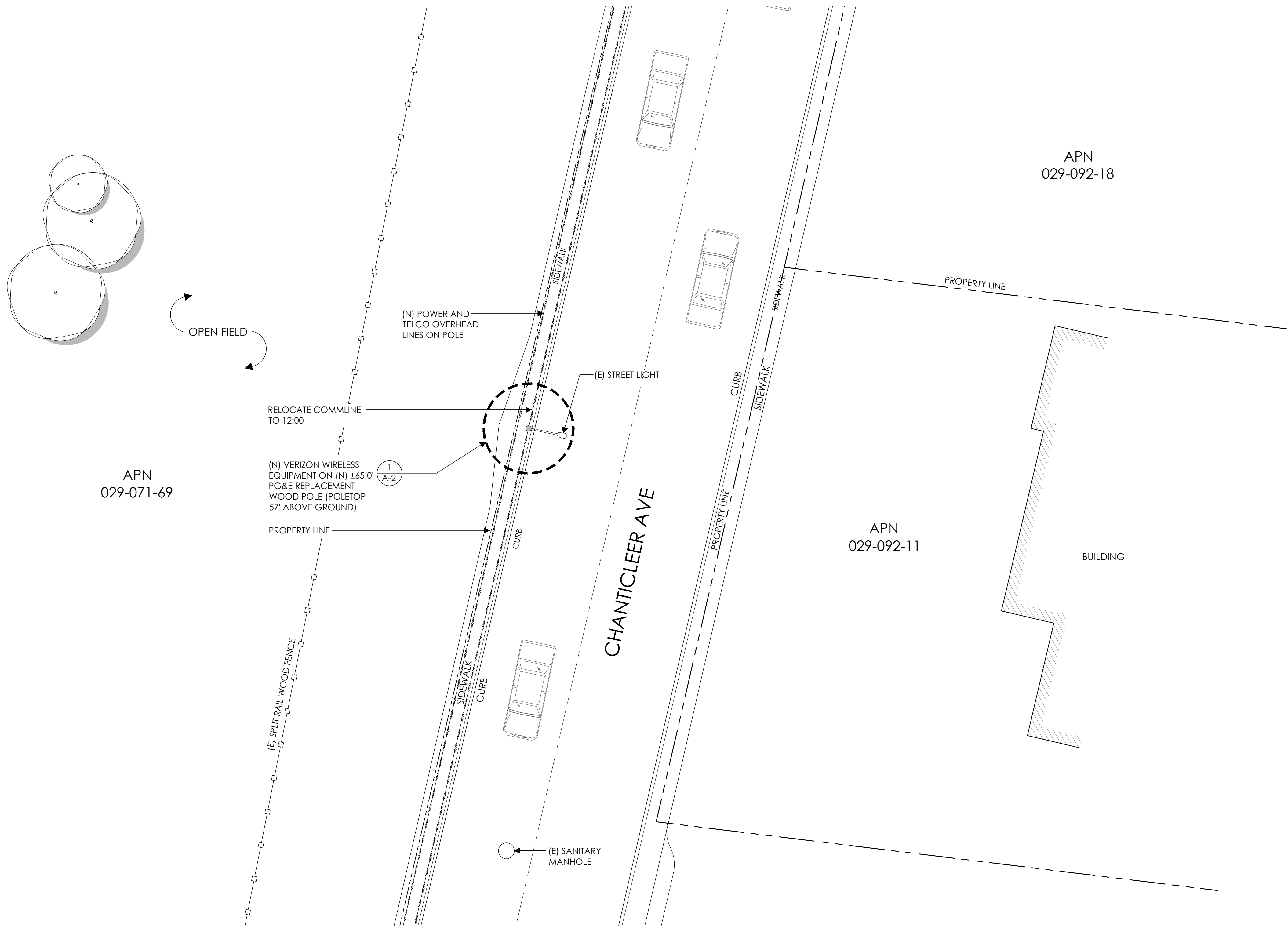
[illegible]The Verizon logo, consisting of the word "verizon" in a bold, lowercase, sans-serif font, with a checkmark integrated into the "i".

VERIZON WIRELESS
2785 MITCHELL DRIVE, BLDG 9
WALNUT CREEK, CA. 94598

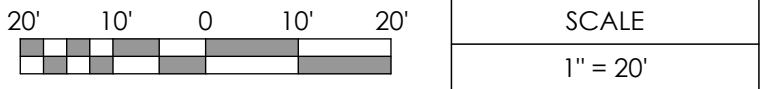
437787
CC SANTA CRUZ 124
NEAR 1930 CHANTICLEER
SANTA CRUZ, CA 95062

DRAWN:	DATE: 11/20/17
JOB NO.	17149
SHEET NO.	

C-1



OVERALL SITE PLAN



Verizon Wireless
2785 Mitchell Drive, Suite 9
Walnut Creek, CA 94598

Client:



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T 707.592.5924
www.meridian.management

Project Architect:



575 LENNON LANE
SUITE 125
WALNUT CREEK, CA 94598
T 925.482.8500

Site Agent:

100% Construction
Drawings

Drawing Phase:

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Site Name:



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Project No.:

Date: 08/07/18 Job No.:

Scale: AS SHOWN CAD File:

Designed By: JG Checked: RB

OVERALL SITE
PLAN

Sheet Title:

A.1

Sheet No.:

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- (N) VERIZON EQUIPMENT TO BE MOUNTED IN THE 12:00 QUADRANT
- CLIMBING SPACE BETWEEN 6:00 & 9:00
- POLE STEPS REQUIRED FROM 8.5' TO COMMUNICATIONS ZONE PER GO95
- STEPS SHOULD BE USABLE WHEN INSTALLED WITHIN CLIMBING SPACE

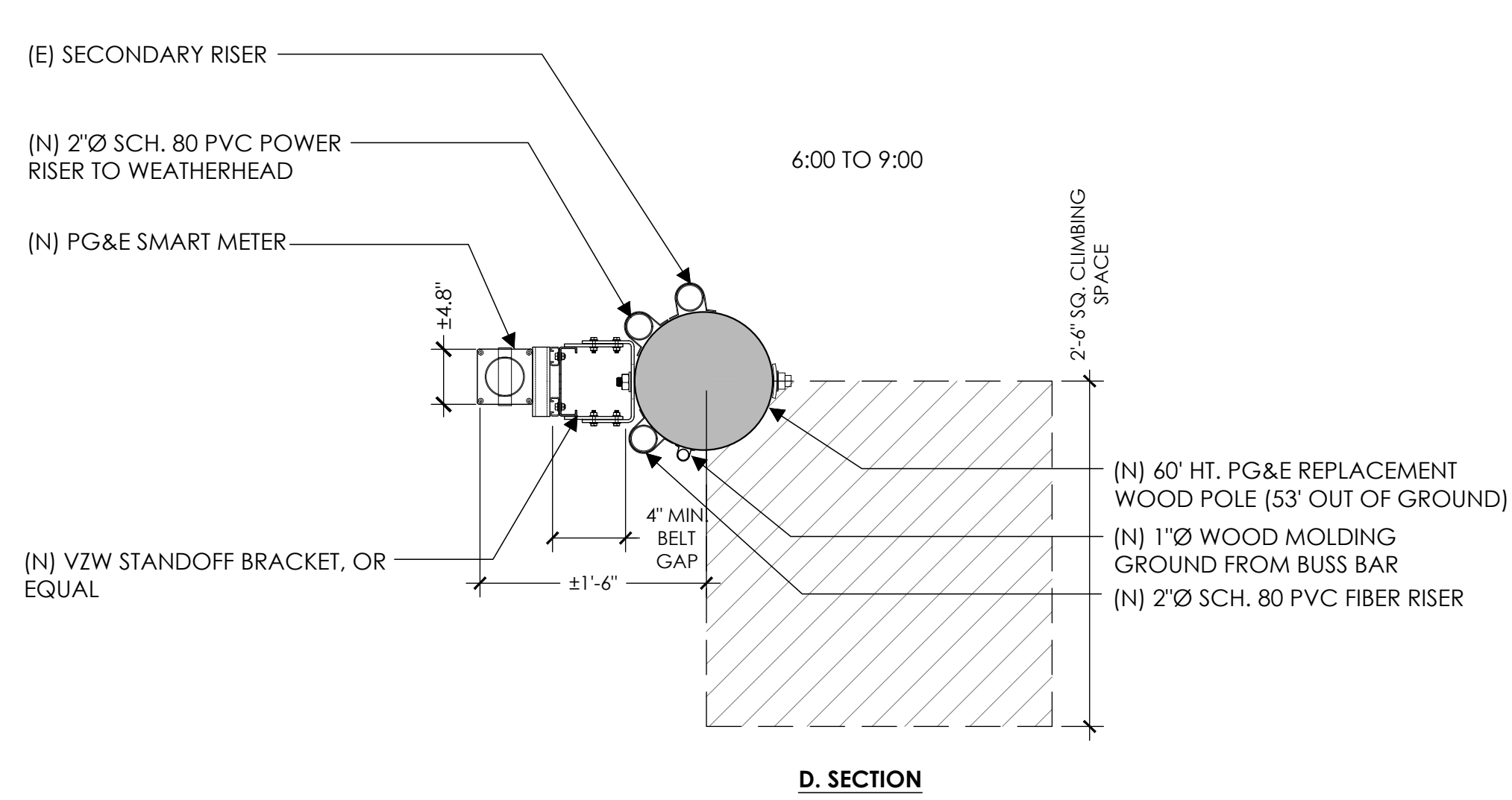
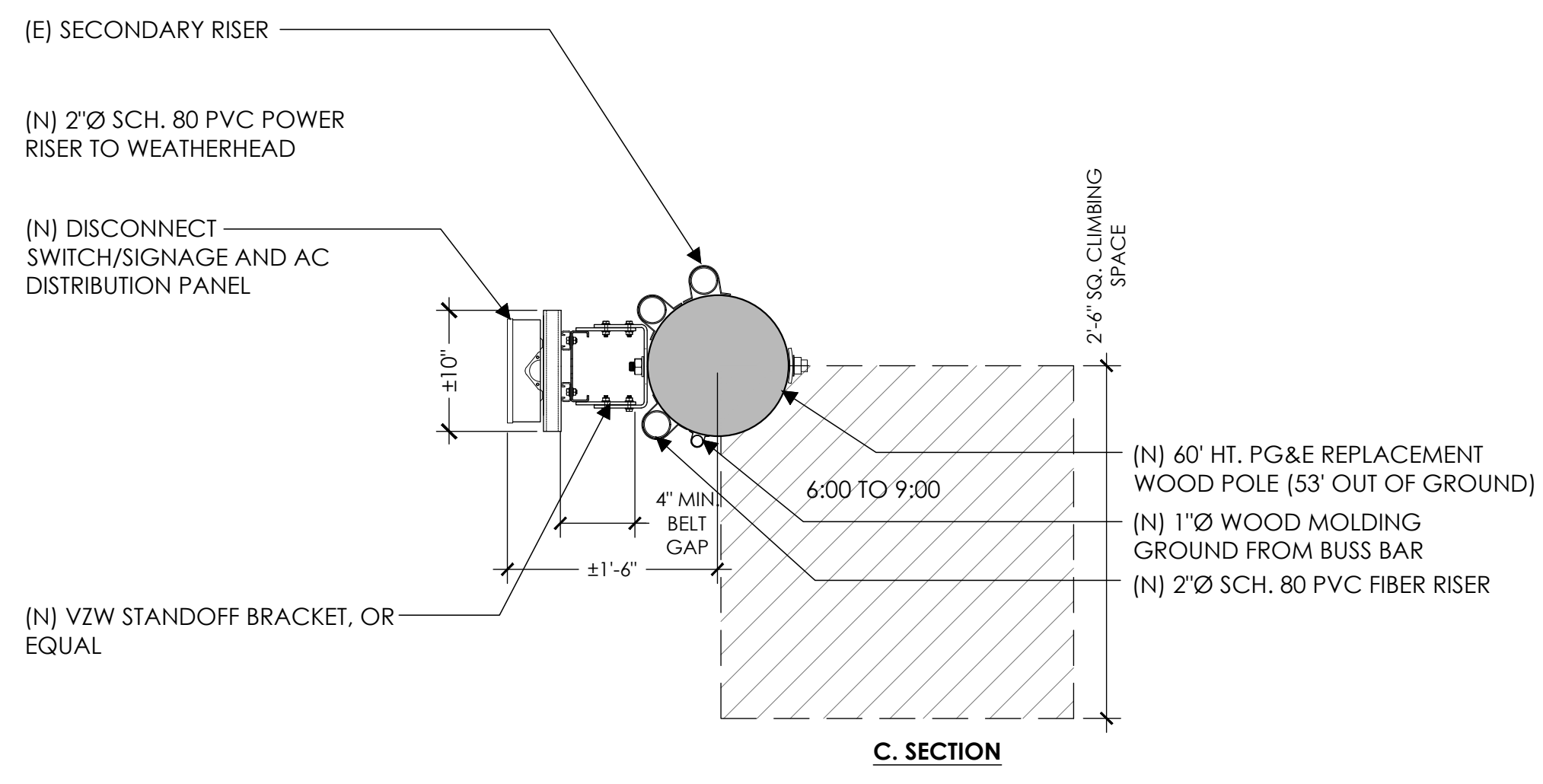
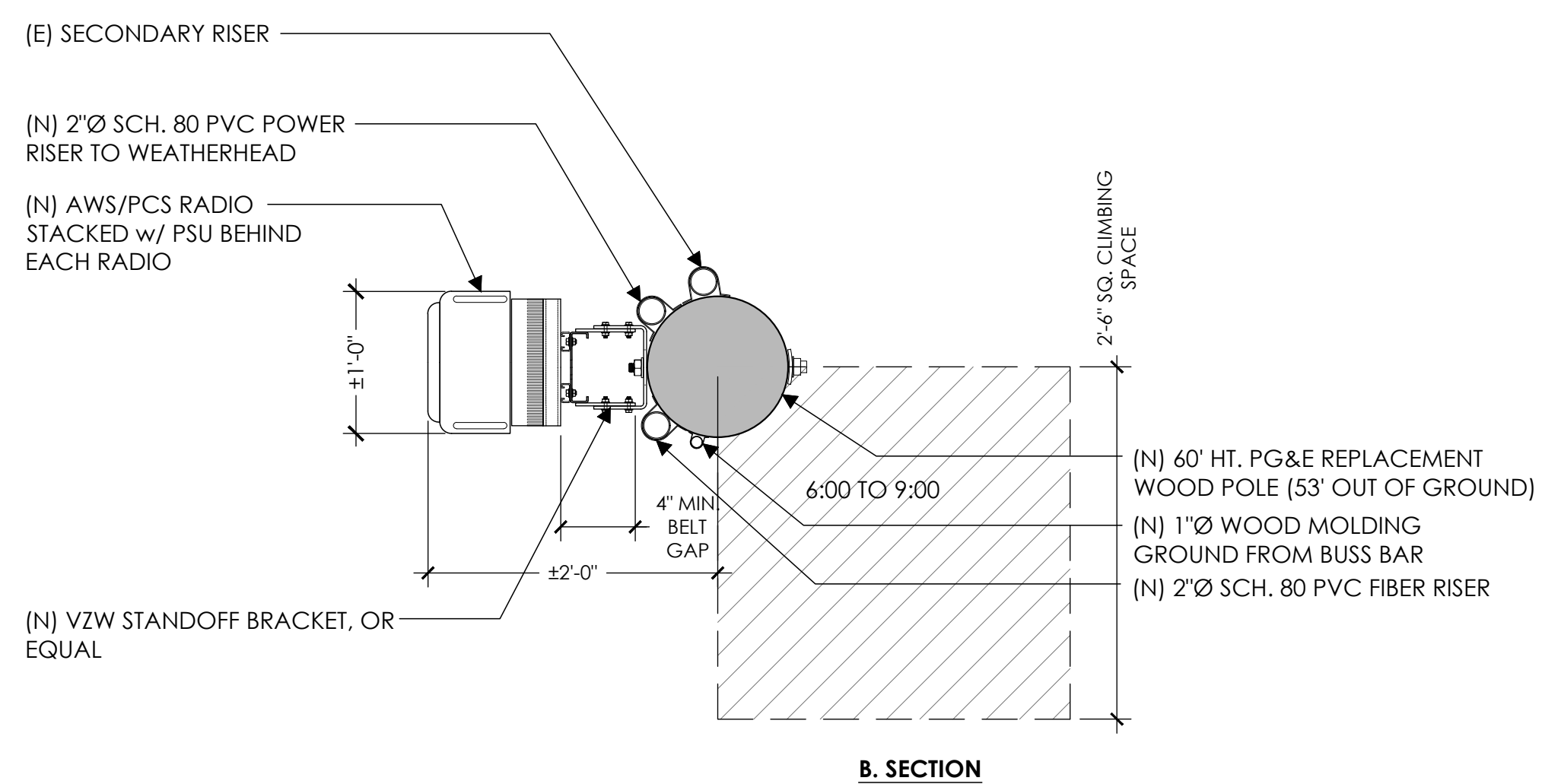
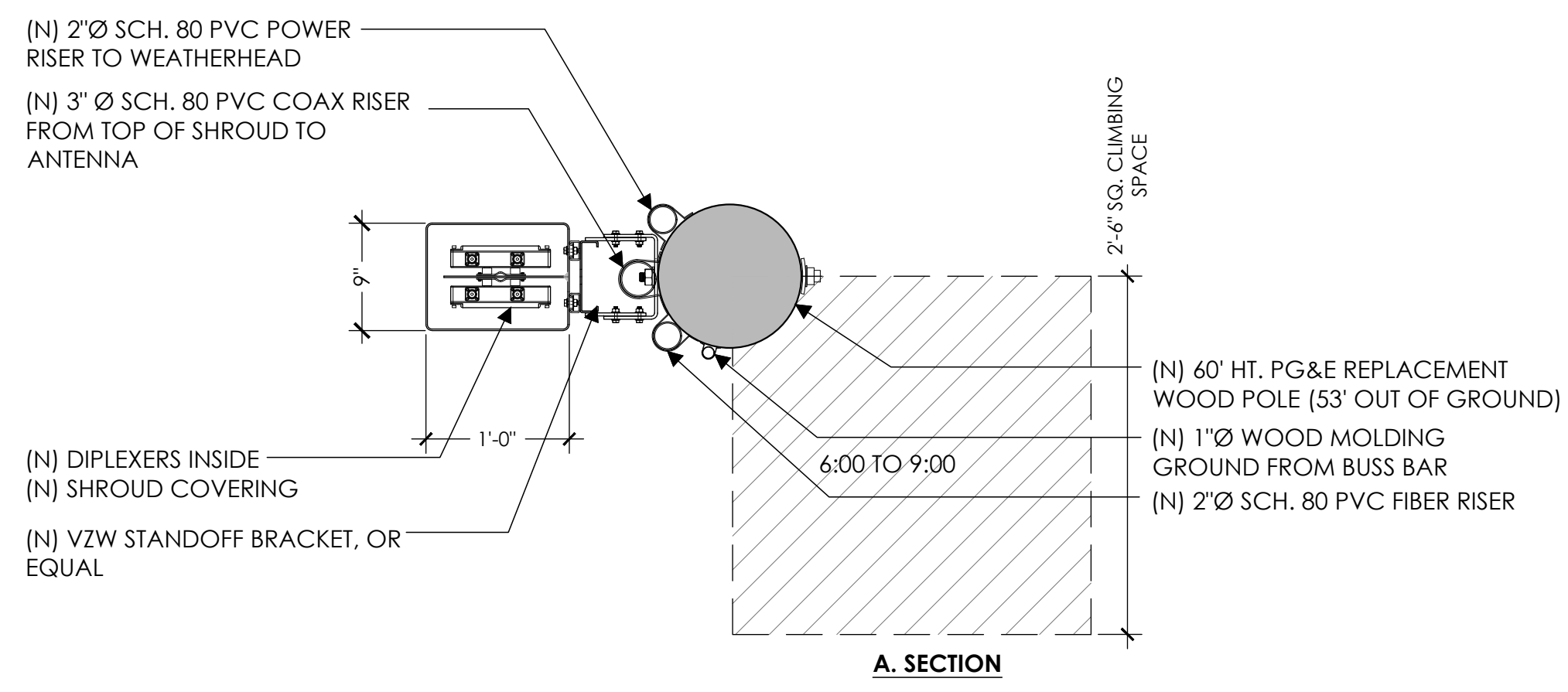
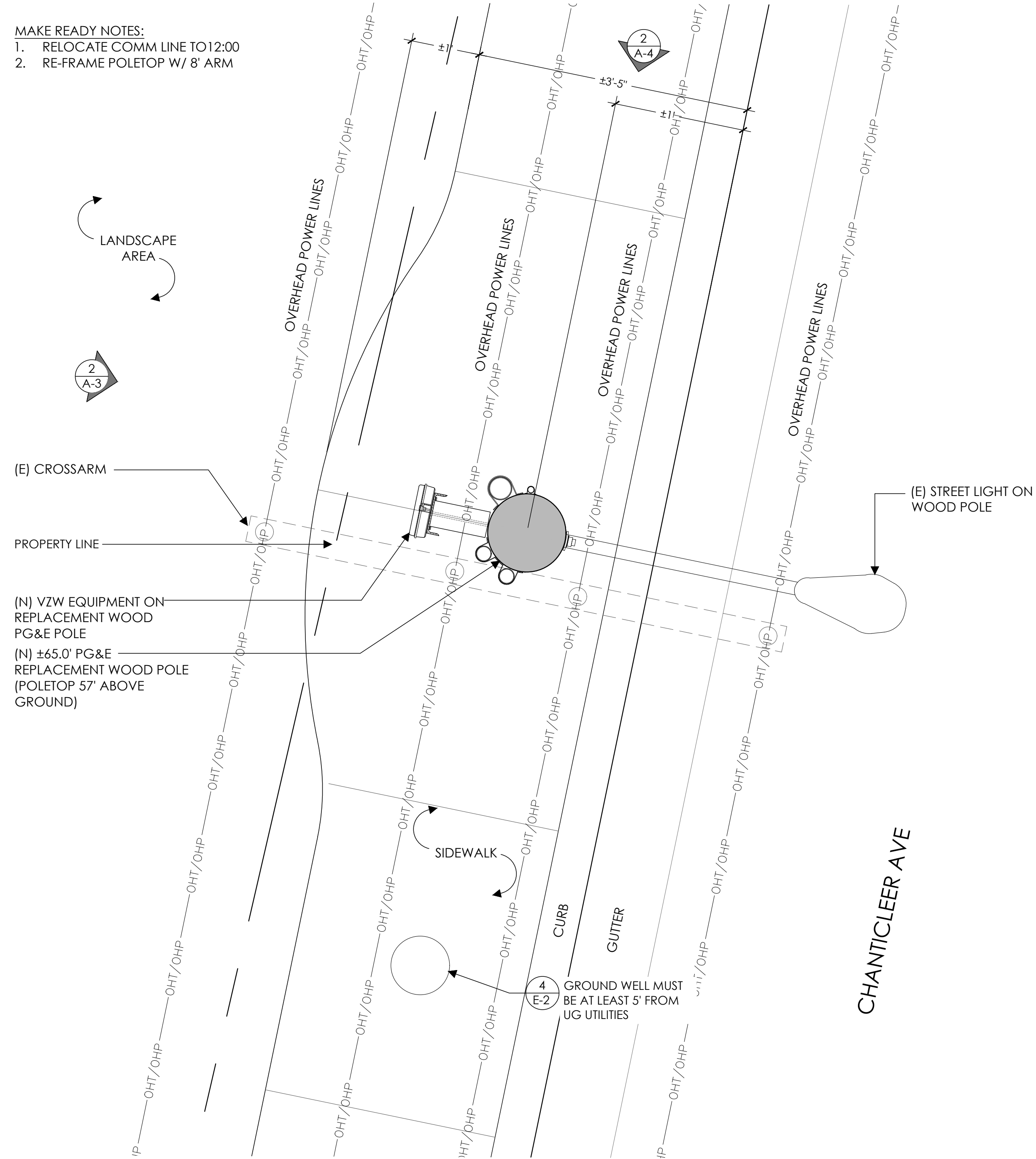
EQUIPMENT SYSTEM:

ALL NEW COMPONENTS NOT SHOP PAINTED SHOULD BE FIELD PAINTED VALSPAR 'DEEP EARTH' COLOR

NEW CONDUIT FOR POWER/TELCO:

(1) 2" CONDUIT FOR POWER
(1) 2" CONDUIT FOR FIBER
(1) 3" CONDUIT FOR COAX
(1) 1" WOOD MOLDING FOR GROUND

MAKE READY NOTES:
1. RELOCATE COMM LINE TO 12:00
2. RE-FRAME POLETOP W/ 8' ARM



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Walnut Creek, CA 94598

Client:



Project Architect:



575 LENNON LANE
SUITE 125
WALNUT CREEK, CA 94598
T 925.482.8500

Site Agent:

100% Construction
Drawings

(E) LIGHT POLE
Drawing Phase:

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PROW (IFO) 1930 CHANTICLEER
SANTA CRUZ, CA 95062
PSL #437787
PROJECT ID #P-139495
PG&E ORDER/PM #31334117
PG&E APP/PM #112957670

Site Name:



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Project No.:

Date: 08/07/18 Job No.:

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Designed By: JG Checked: RB

POLE PLAN
ENLARGEMENT

Sheet Title:

A.2

Sheet No.:

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POLE PLAN ENLARGEMENT



SCALE
1" = 1'-0"

1

POLE PLAN ENLARGEMENTS



SCALE
1" = 1'-0"

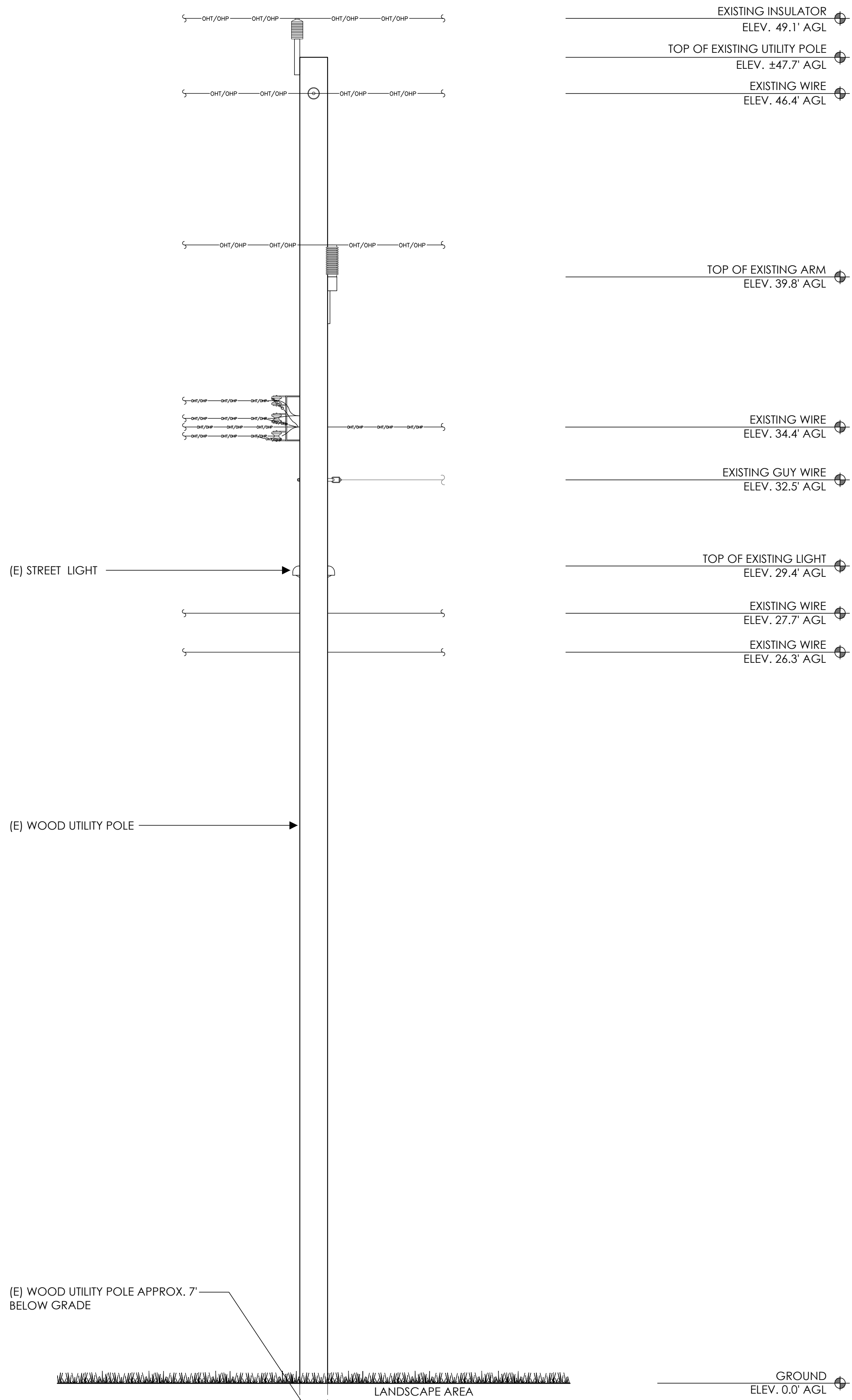
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SCALE NOTE:

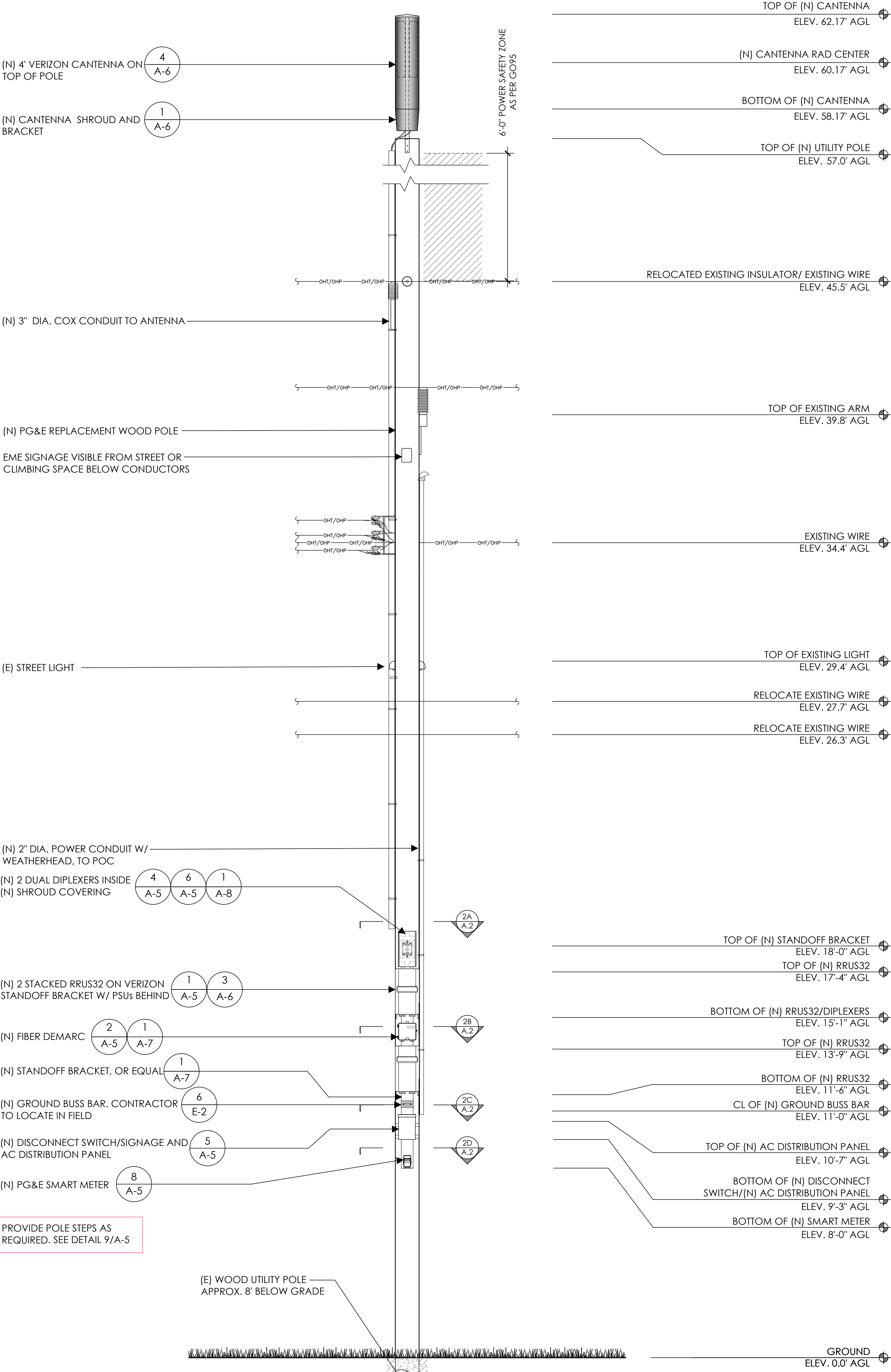
IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE CORRECTLY, CHECK FOR REDUCTION OR ENLARGEMENT FROM ORIGINAL PLANS.

NOTES:

- INSTALL POWER WEATHERHEAD
- (N) VERIZON EQUIPMENT TO BE MOUNTED IN THE 12:00 QUADRANT
- CLIMBING SPACE BETWEEN 6:00 & 9:00
- POLE STEPS REQUIRED FROM 8.5' TO COMMUNICATIONS ZONE PER GO95
- STEPS SHOULD BE USABLE WHEN INSTALLED WITHIN CLIMBING SPACE



NORTHWEST ELEVATION - EXISTING



NORTHWEST ELEVATION - PROPOSED



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Walnut Creek, CA 94598

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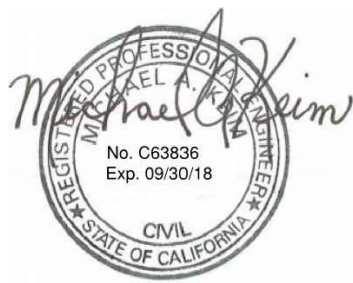
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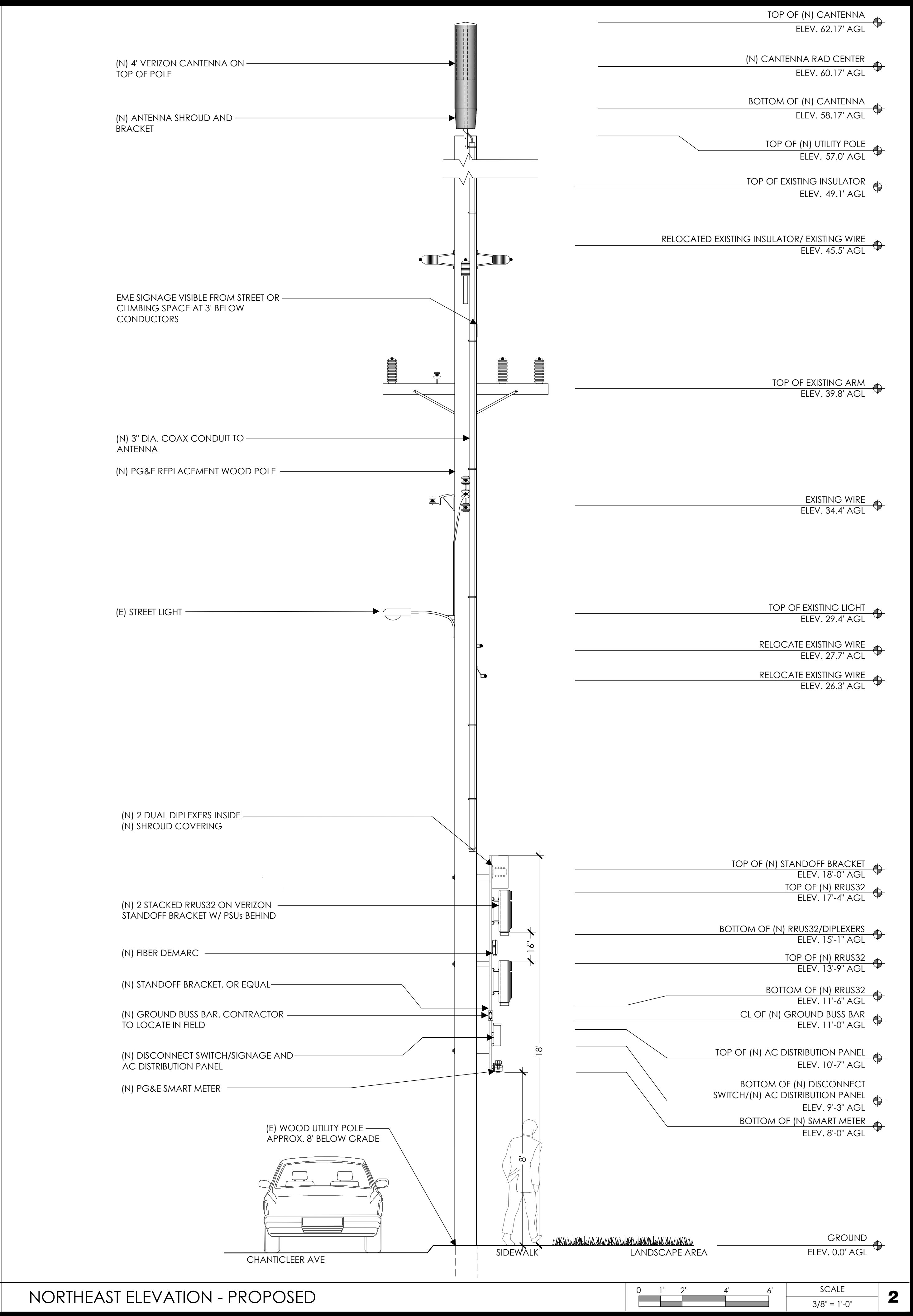
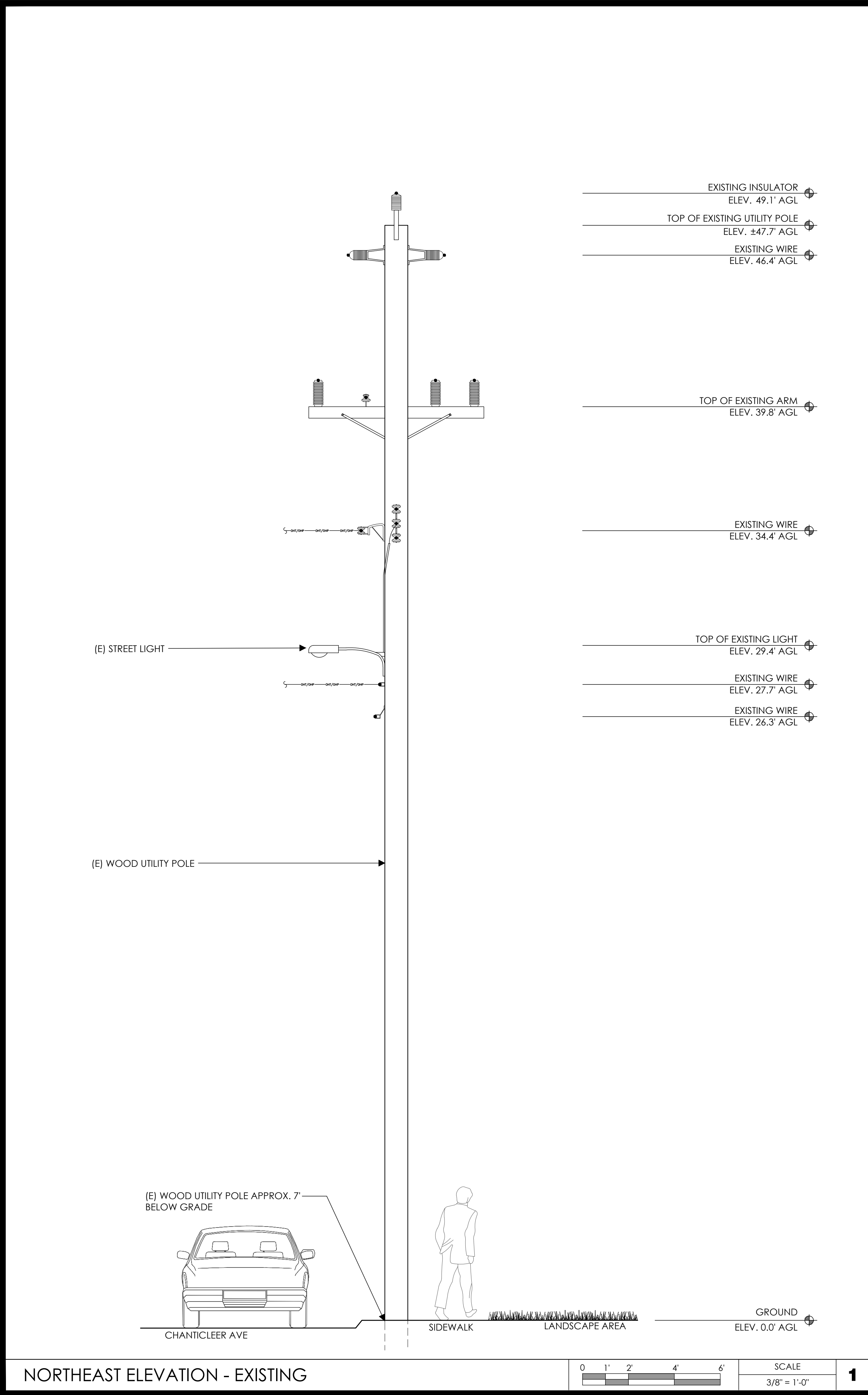
ELEVATIONS

Sheet Title:

A.3

Sheet No.:

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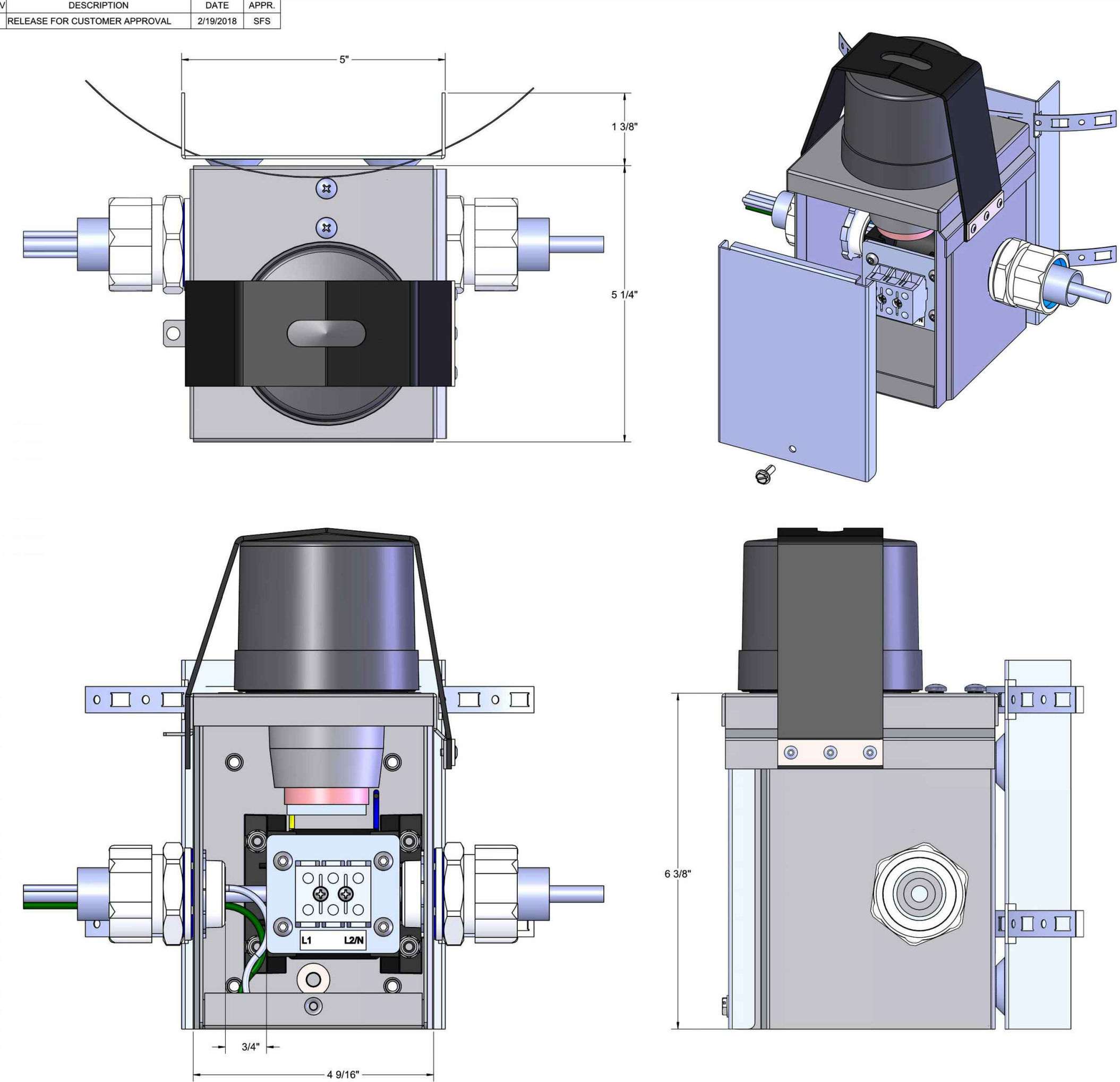



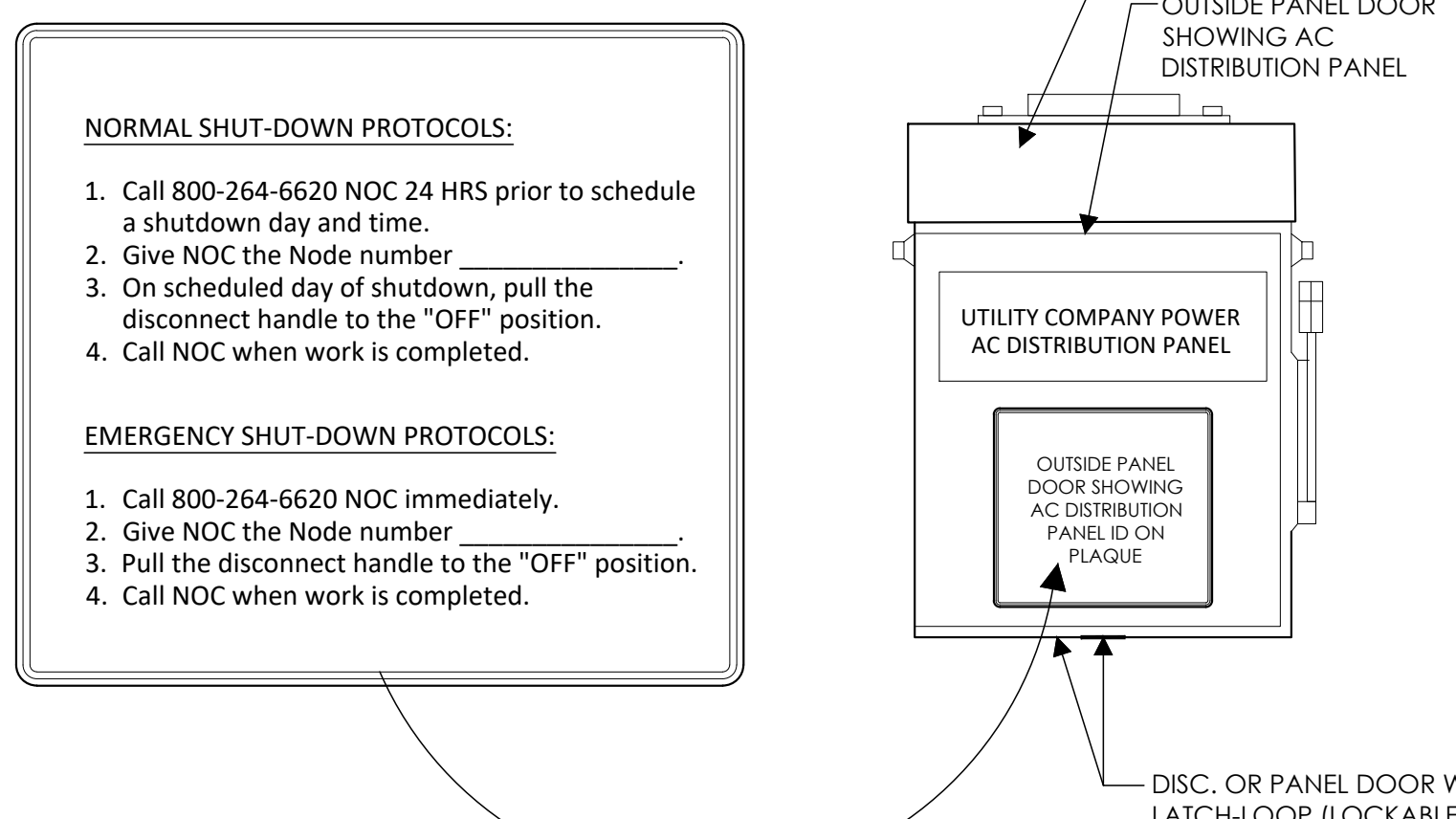
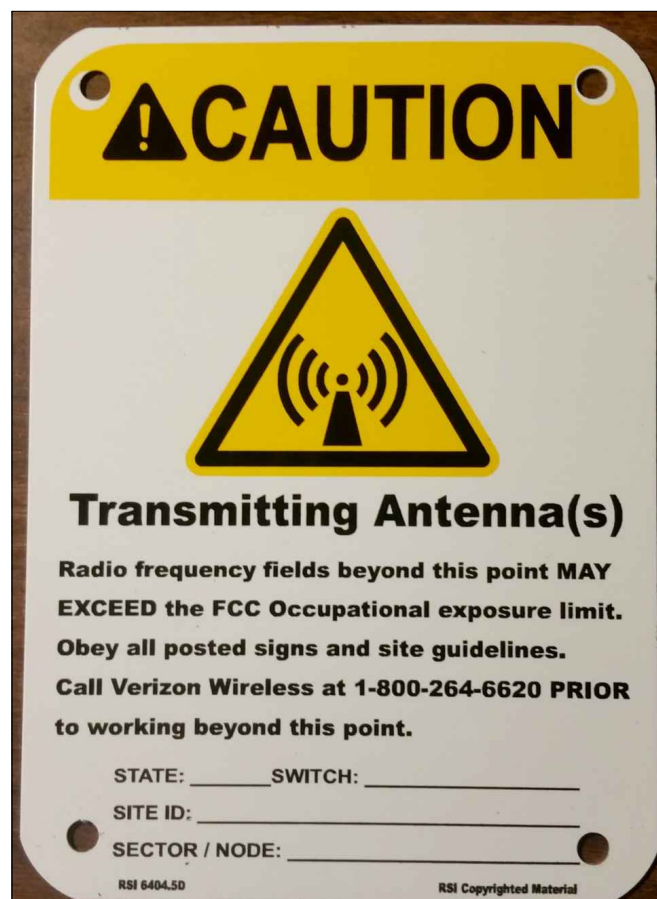
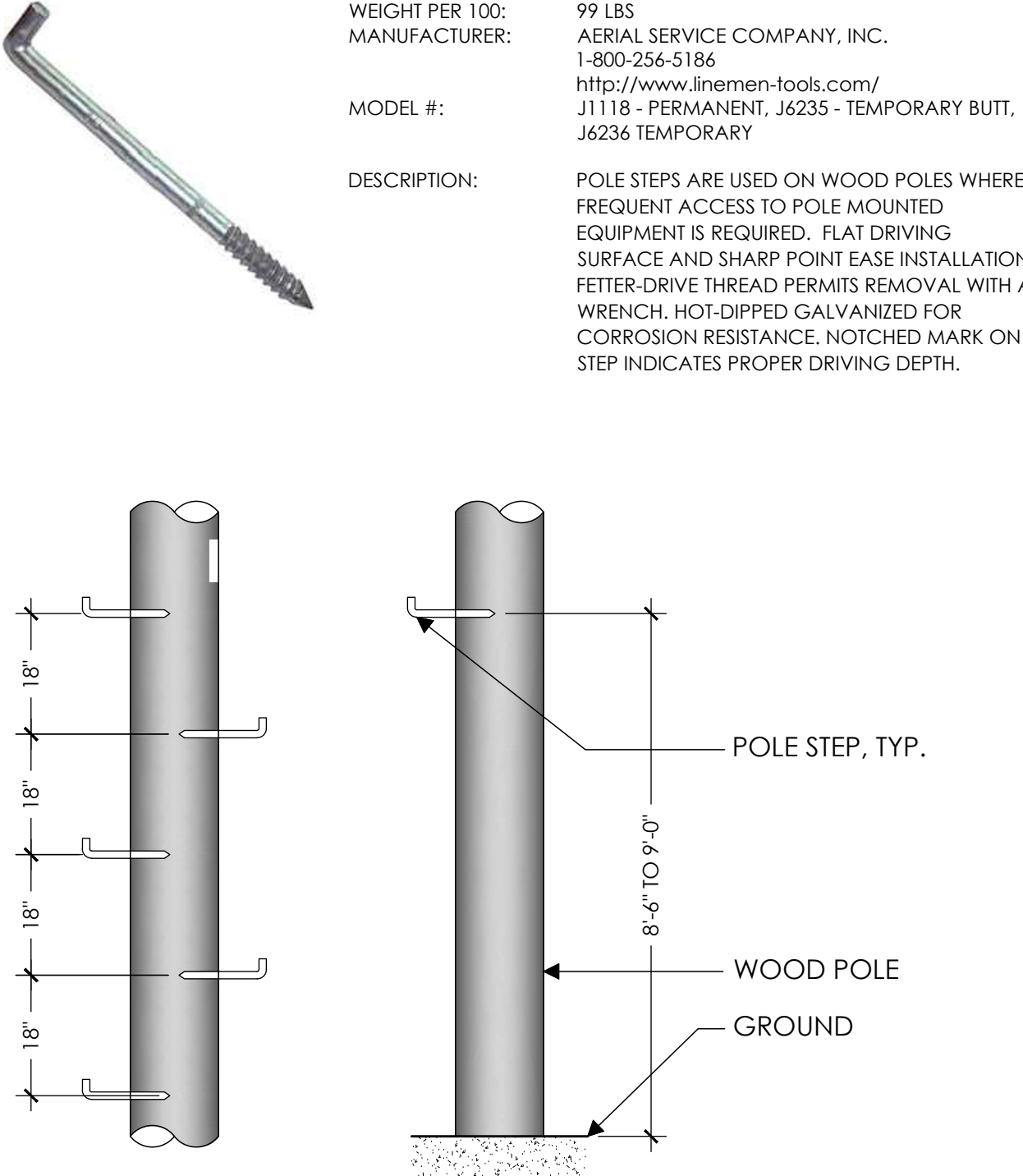
ELEVATIONS

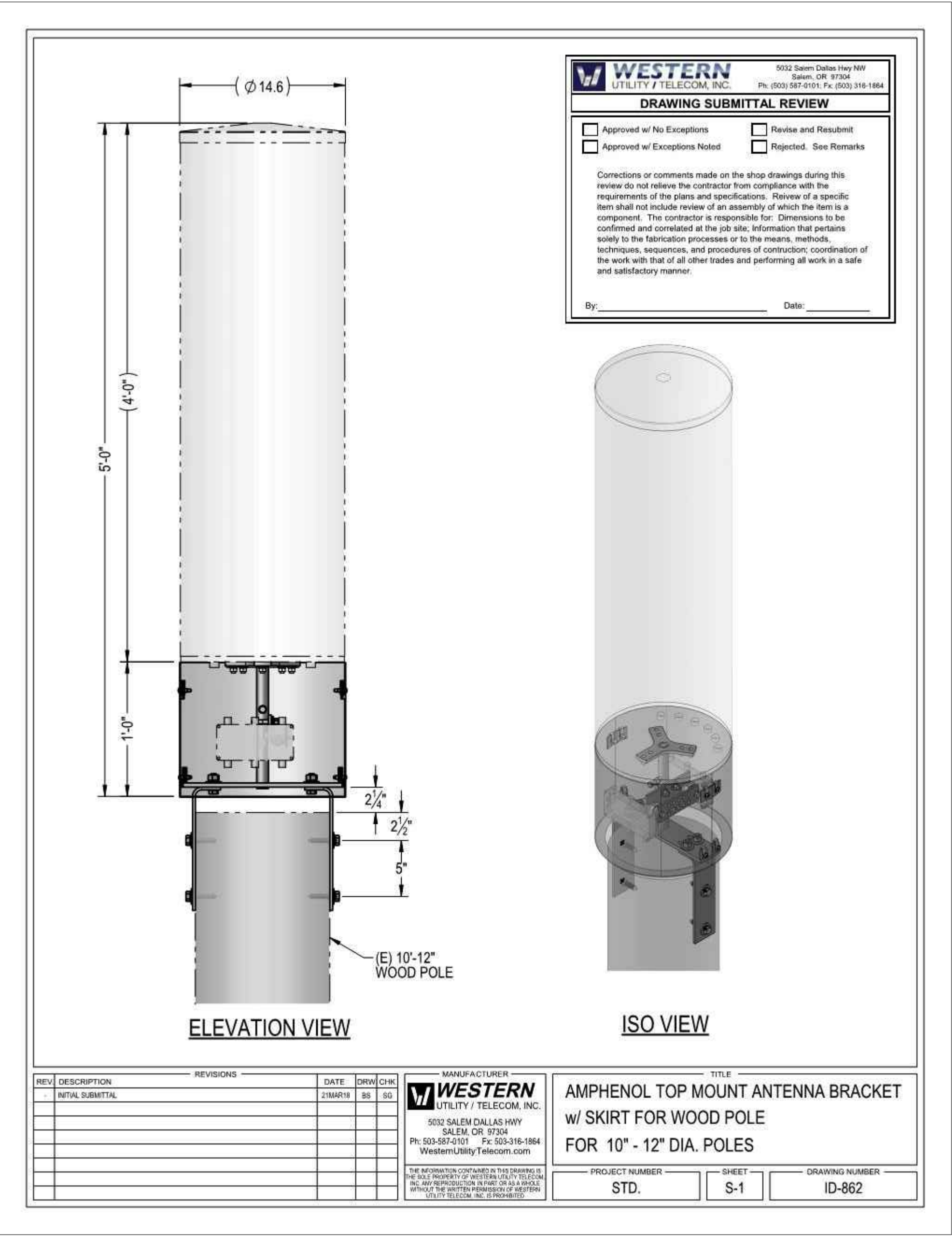
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Sheet No.:

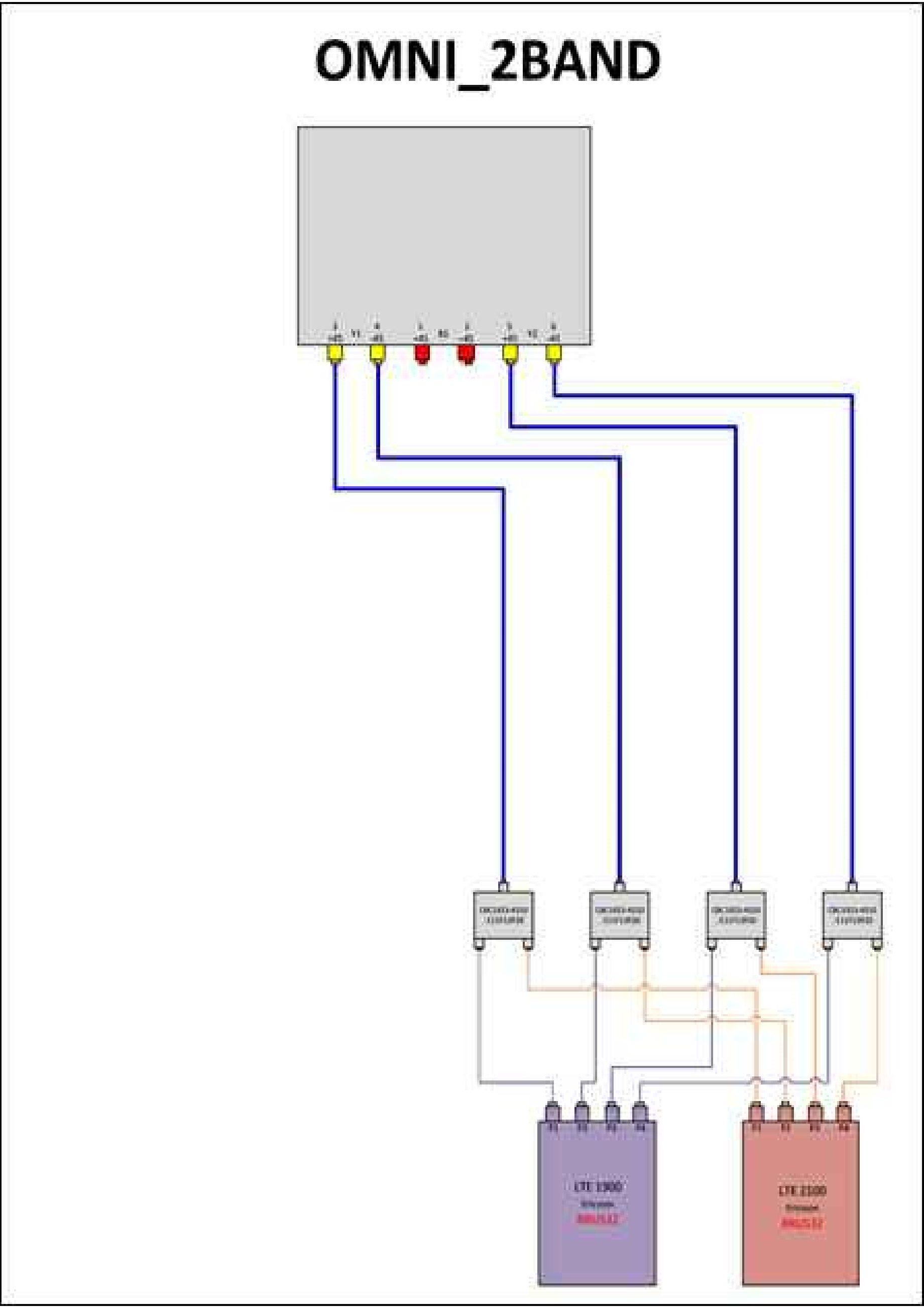
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<div>UNIT: ERICSSON RRU32 B2 OR EQUAL</div> <div>HEIGHT: 27.2 INCHES</div> <div>WIDTH: 12.1 INCHES</div> <div>LENGTH: 7.0 INCHES</div> <div>WEIGHT: 53 LBS (EXCLUDES MOUNTING HARDWARE)</div> <div></div>		<div></div> <div>HEIGHT: 4.6 INCHES</div> <div>WIDTH: 4.6 INCHES</div> <div>DEPTH: 1.9 INCHES</div> <div>WEIGHT: 2.4 LBS</div>		<div><div>REV. DESCRIPTION DATE APPR.</div><div>1 RELEASE FOR CUSTOMER APPROVAL 2/19/2018 SFS</div></div> <div></div> <div><table><tr><th colspan="2">FOR INTERNAL USE ONLY</th><th colspan="2">EQUIPMENT DETAILS</th><th colspan="2">MANUFACTURE DATE</th><th colspan="2">DATE OF ORDER</th><th colspan="2">DATE OF DELIVERY</th><th colspan="2">DATE OF INSTALLATION</th></tr><tr><td>ITEM</td><td>QTY</td><td>ITEM</td><td>QTY</td><td>ITEM</td><td>QTY</td><td>ITEM</td><td>QTY</td><td>ITEM</td><td>QTY</td><td>ITEM</td><td>QTY</td></tr><tr><td>1</td><td>1</td><td>2</td><td>1</td><td>3</td><td>1</td><td>4</td><td>1</td><td>5</td><td>1</td><td>6</td><td>1</td></tr><tr><td colspan="12">JOB # IF DIFFERENT FROM TITLE BLOCK</td></tr></table><div>OUTDOOR POLE MNT TYPE 505 OT</div></div>		FOR INTERNAL USE ONLY		EQUIPMENT DETAILS		MANUFACTURE DATE		DATE OF ORDER		DATE OF DELIVERY		DATE OF INSTALLATION		ITEM	QTY	ITEM	QTY	ITEM	QTY	ITEM	QTY	ITEM	QTY	ITEM	QTY	1	1	2	1	3	1	4	1	5	1	6	1	JOB # IF DIFFERENT FROM TITLE BLOCK											
FOR INTERNAL USE ONLY		EQUIPMENT DETAILS		MANUFACTURE DATE		DATE OF ORDER		DATE OF DELIVERY		DATE OF INSTALLATION																																											
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1	1	2	1	3	1	4	1	5	1	6	1																																										
JOB # IF DIFFERENT FROM TITLE BLOCK																																																					
RRUS32 OR EQUAL		1 SINGLE DIPLEXER OR EQUAL		4																																																	
<div>UNIT: FIBER DEMARC ENCLOSURE BOX</div> <div>HEIGHT: 8.54 INCHES</div> <div>WIDTH: 10 INCHES</div> <div>DEPTH: 2.88 INCHES</div> <div></div>		<div></div> <div>HEIGHT: 8.3 INCHES</div> <div>WIDTH: 4.6 INCHES</div> <div>DEPTH: 1.8 INCHES</div> <div>WEIGHT: 4.2 LBS</div>		<div><div>CONTRACTOR NOTE: 1. SITE ID; MARKET #-CELL SITE #- SMALL CELL NAME 2. THE SIDE ID SHALL BE ENGRAVED OR APPLIED IN A PERMANENT MANNER, ABLE TO RESIST ALL WEATHER CONDITIONS</div><div>NOTE: NEW PHENOLIC SIGN ATTACHED TO OUTSIDE PANEL</div><div><div>NORMAL SHUT-DOWN PROTOCOLS: 1. Call 800-264-6620 NOC 24 HRS prior to schedule a shutdown day and time. 2. Give NOC the Node number 3. On scheduled day of shutdown, pull the disconnect handle to the "OFF" position. 4. Call NOC when work is completed.</div><div>EMERGENCY SHUT-DOWN PROTOCOLS: 1. Call 800-264-6620 NOC immediately. 2. Give NOC the Node number 3. Pull the disconnect handle to the "OFF" position. 4. Call NOC when work is completed.</div><div></div><div></div></div></div>																																																	
FIBER DEMARC BOX OR EQUAL		2 TWIN DIPLEXER OR EQUAL		6																																																	
<div>UNIT: 100 AMP AC DISTRIBUTION PANEL</div> <div>HEIGHT: 12.65 INCHES</div> <div>WIDTH: 8.9 INCHES</div> <div>DEPTH: 4.27 INCHES</div>		<div></div> <div>ON WOOD POLES - SIGN ON ALUMINUM WITH SS SCREW TO THE POLE ON METAL POLES - ADHESIVE VINYL OR PLACARD STRAPPED WITH SS TIES ON CONCRETE / COMPOSITE - PLACARD STRAPPED WITH SS TIES SIGN PLACEMENT: AFFIX TO THE STRUCTURE 3'-4" BELOW THE COMMERCIAL RF ANTENNA(S) SIZE APPROX. 8" x 5"</div>		<div><div>STEP: WEIGHT PER 100: MANUFACTURER: MODEL #:</div><div>DESCRIPTION:</div><div>POLE 8" X 10 INCH GALVANIZED 99 LBS AERIAL SERVICE COMPANY, INC. 1-800-256-5186 http://www.linemen-tools.com/ J1118 - PERMANENT, J6235 - TEMPORARY BUTT, J6236 TEMPORARY</div><div>POLE STEPS ARE USED ON WOOD POLES WHERE FREQUENT ACCESS TO POLE MOUNTED EQUIPMENT IS REQUIRED. FLAT DRIVING SURFACE AND SHARP POINT EASE INSTALLATION. FETTER-DRIVE THREAD PERMITS REMOVAL WITH A WRENCH. HOT-DIPPED GALVANIZED FOR CORROSION RESISTANCE. NOTCHED MARK ON STEP INDICATES PROPER DRIVING DEPTH.</div><div></div></div>																																																	
DISCONNECT/DISTRIBUTION PANEL W/ SIGNAGE		5 RF WARNING SIGNAGE		7 POLE STEPS																																																	
		9																																																			



ANTENNA BRACKET AND SHROUD OR APPROVED EQUAL

1



PLUMBING DIAGRAM

2

UNIT: ERICSSON PSU AC 08

HEIGHT: 2.72 INCHES

WIDTH: 10.79 INCHES

DEPTH: 7.0 INCHES

WEIGHT: 11.46 LBS



POWER SUPPLY UNIT (PSU AC 08) OR EQUAL

3

HEIGHT: 48.0 INCHES

DIAMETER: 14.6 INCHES

WEIGHT: 38.1 LBS (WITHOUT MOUNTING BRACKET)



CANTENNA

CANTENNA OR APPROVED EQUAL

4

NOT USED

5

verizon

Verizon Wireless
2785 Mitchell Drive, Suite 9
Walnut Creek, CA 94598

Client:

MM Meridian Management LLC
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Concord, CA 94518
T 707.592.5924
www.meridian.management

Project Architect:

VINCULUMS

575 LENNON LANE
SUITE 125
WALNUT CREEK, CA 94598
T 925.482.8500

Site Agent:

100% Construction Drawings

Drawing Phase:

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Project No.:

Date: 08/07/18

Job No.:

Scale: AS SHOWN

CAD File:

Designed By: JG

Checked: RB

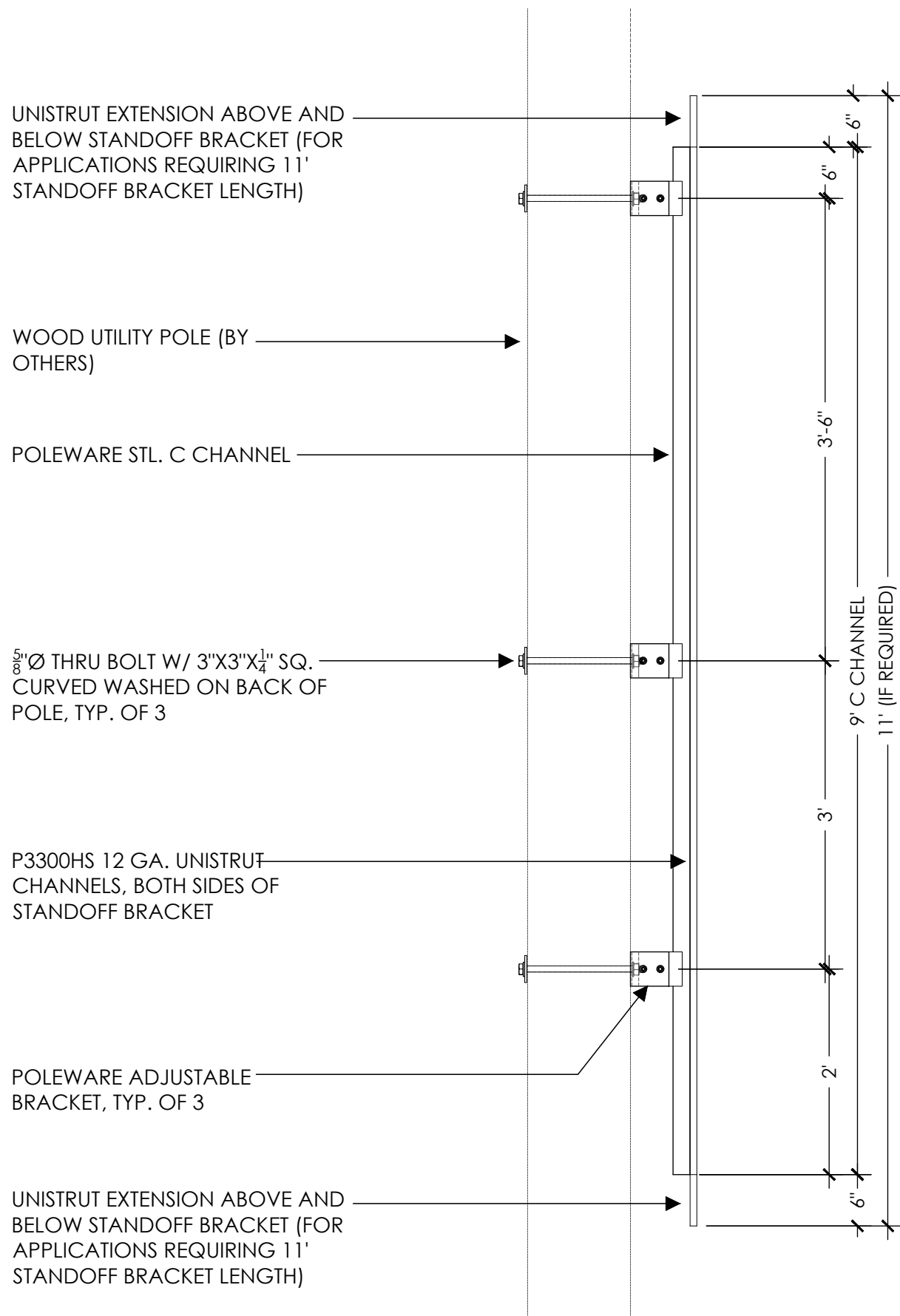
EQUIPMENT DETAILS / PLUMBING DIAGRAM

Sheet Title:

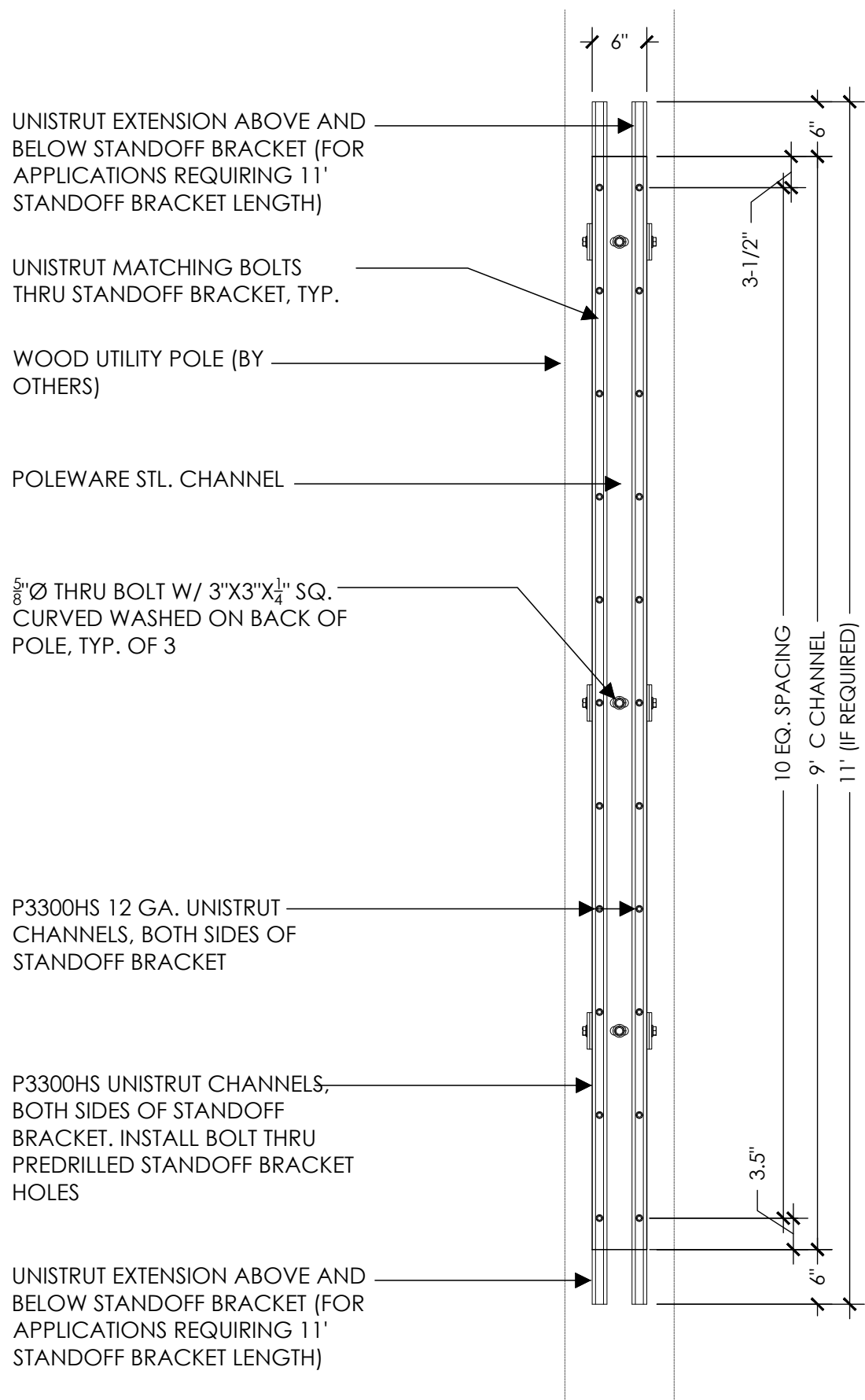
A.6

Sheet No.:

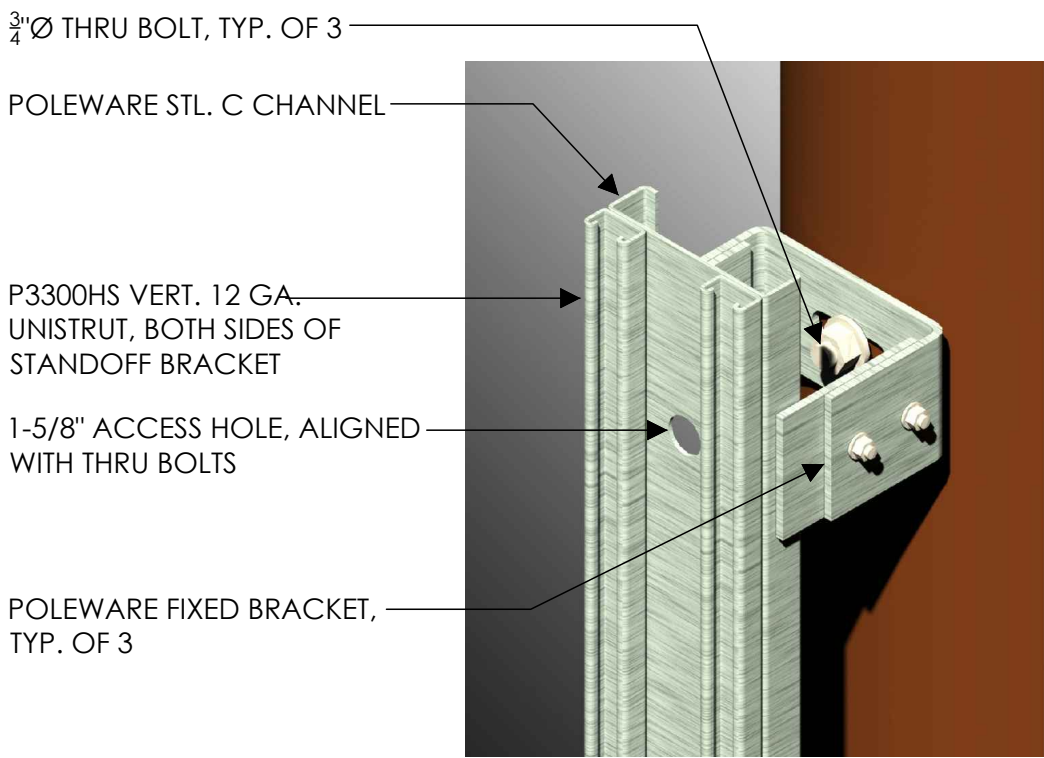
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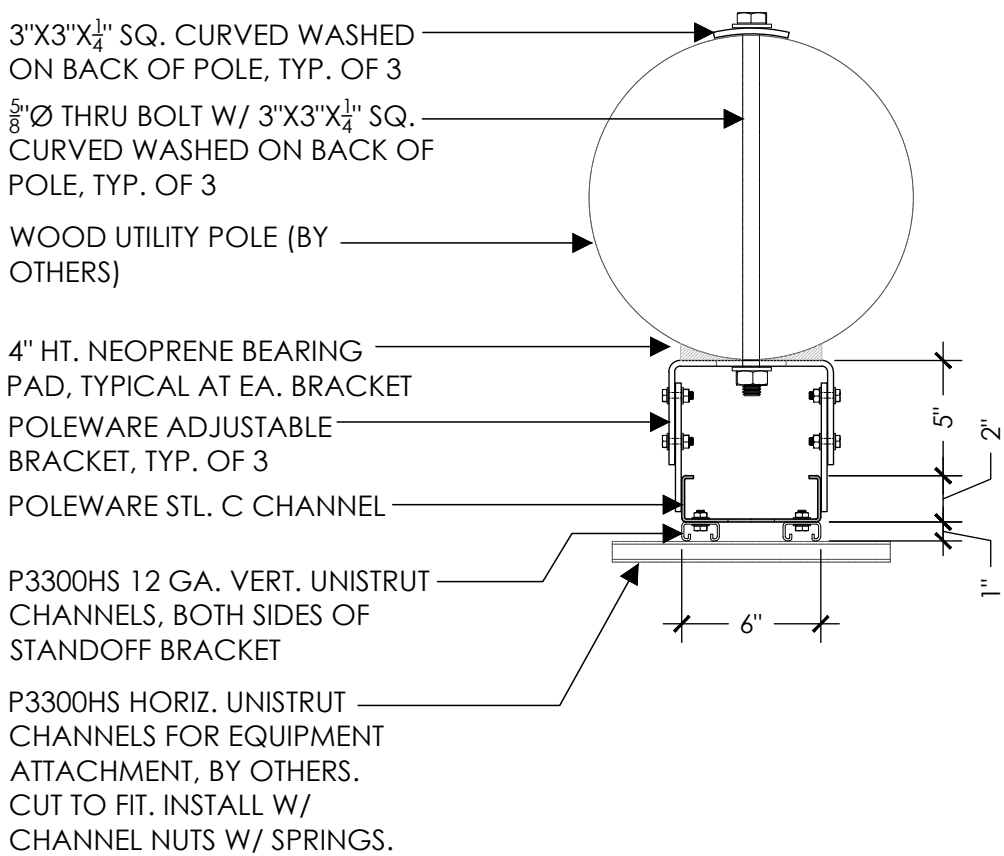
STANDOFF BRACKET SIDE ELEVATION



STANDOFF BRACKET FRONT ELEVATION



STANDOFF BRACKET BRACKET ISO



STANDOFF BRACKET PLAN

- NOTE:
1. STANDOFF BRACKET MODEL #PW-SOB-10L-ADJ-SP AS MFG. BY POLEWARE, LLC, (475) 215-5119, OR EQUAL OR APPROVED EQUIVALENT
 2. ALL COMPONENTS TO BE SHOP PRIMED PAINTED
 3. UNISTRUT COMPONENTS TO BE MFG BY UNISTRUT CORPORATION, 1140 W. THORNDAL AVE., ITASCA IL, 60143, (800) 468-9510.
 4. HORIZONTAL UNISTRUTS (P3300HS) FOR EQUIPMENT INSTALLATION NOT INCLUDED
 5. ADJUSTABLE BRACKETS FOR SLANTED POLES AVAILABLE BY SPECIAL ORDER

OR APPROVED EQUAL

Client:

MM

Meridian Management LLC
785 Oak Grove Road E2
Suite 251
Concord, CA 94518
T 707.592.5924
www.meridian.management

Project Architect:

Site Agent:

100% Construction
Drawings

Drawing Phase:

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Date: 08/07/18 Job No.:

Scale: AS SHOWN CAD File:

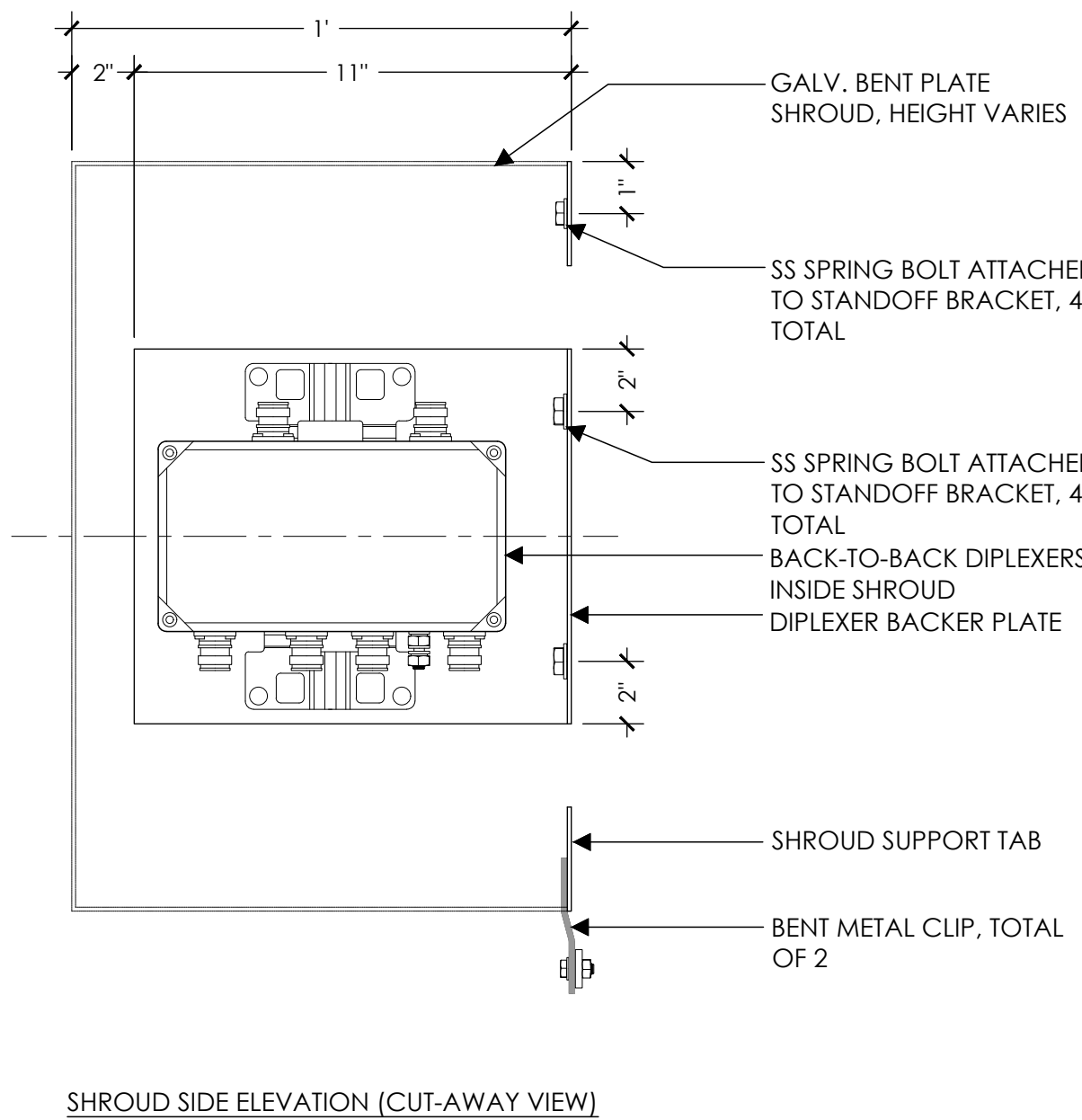
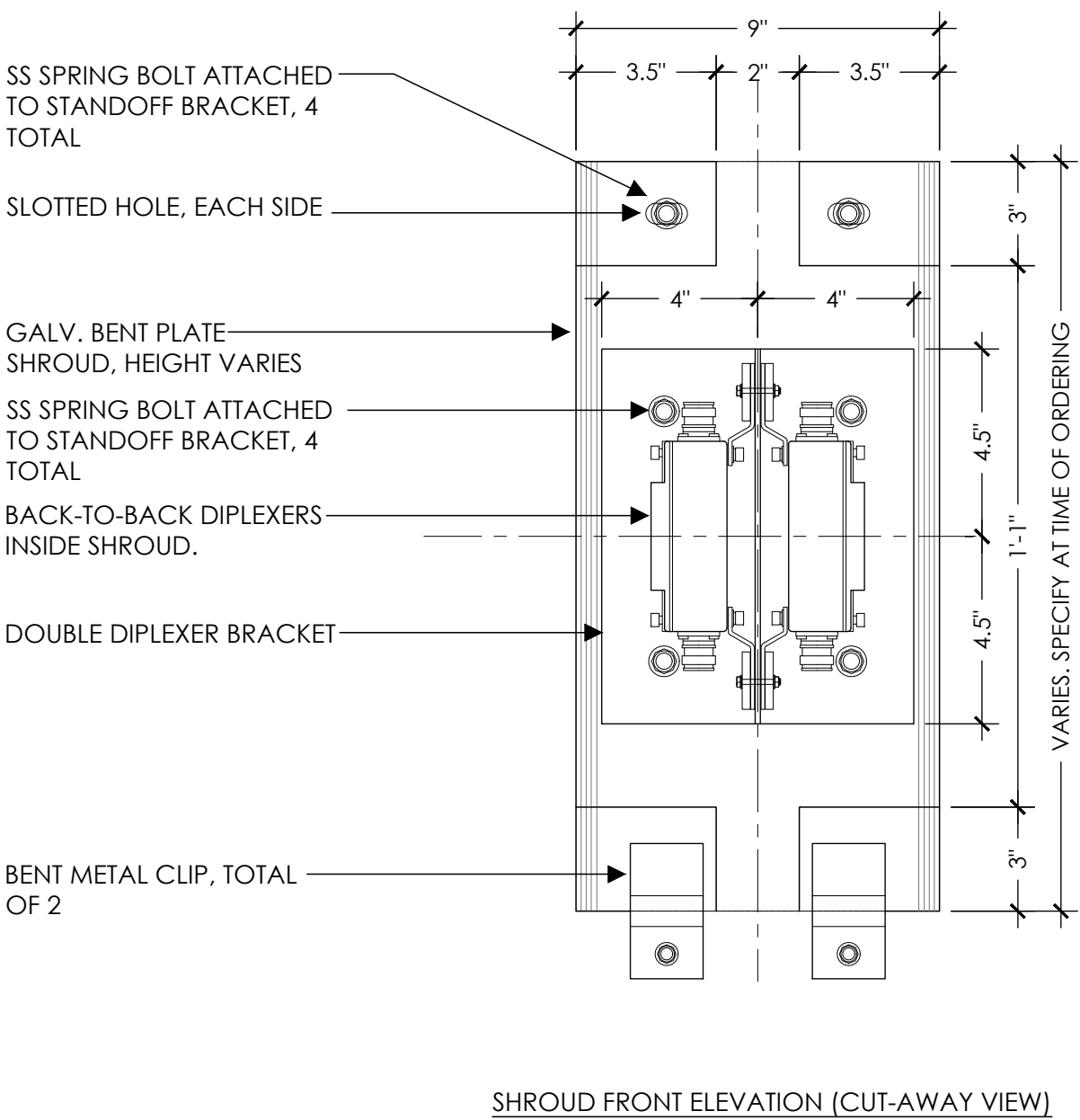
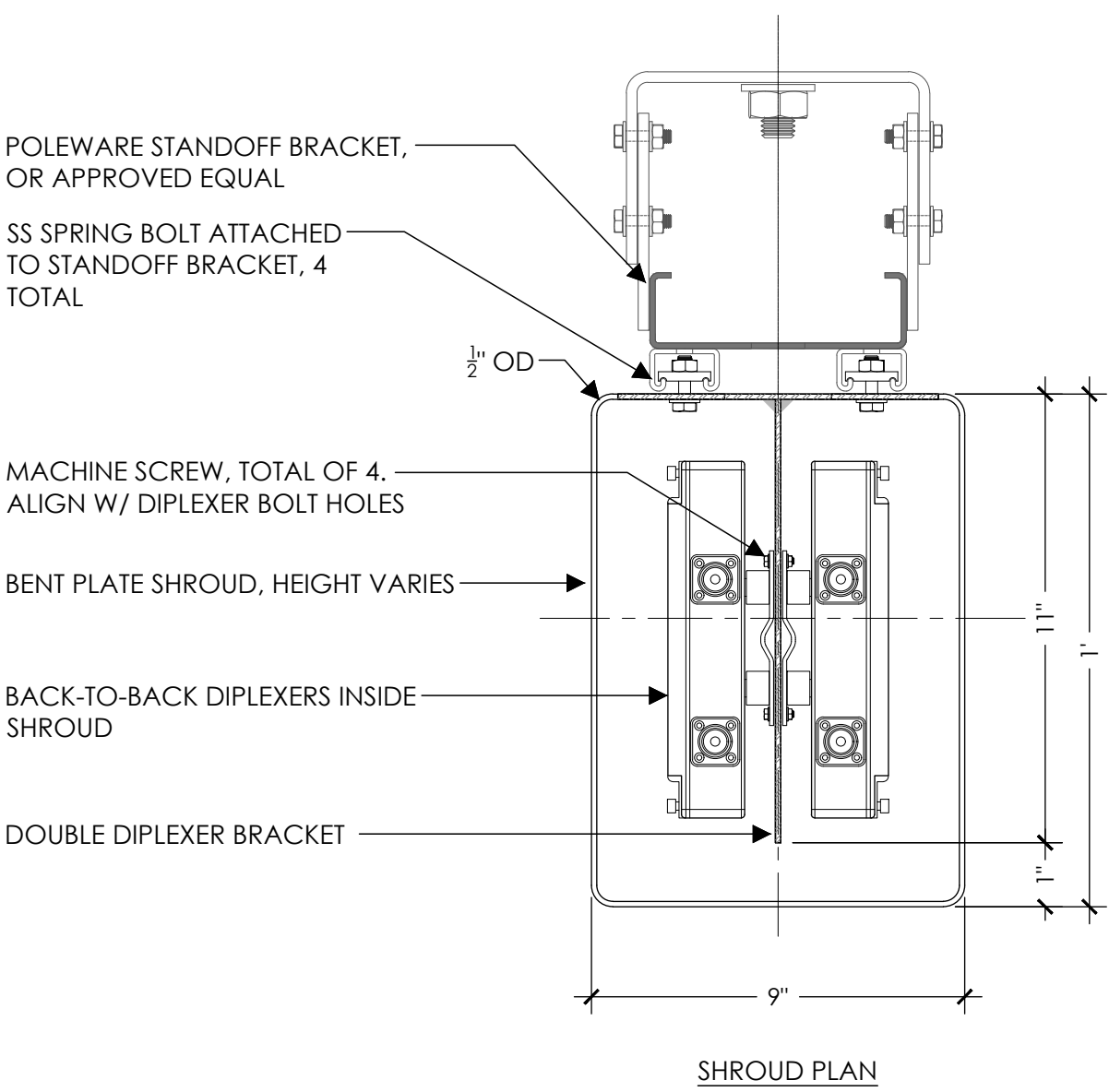
Designed By: JG Checked: RB

EQUIPMENT
DETAILS

Sheet Title:

A.7

Sheet No.:



NOTE:

- DIPLEXER SHROUD MODEL #PW-DIS-18L-002-SP AND DOUBLE DIPLEXER BRACKET MODEL #PW-DOB-009L-SP-ST AS MFG. BY POLEWARE, LLC, (475) 215-5119, OR EQUAL
- ALL COMPONENTS TO BE SHOP PRIMED PAINTED
- UNISTRUT COMPONENTS TO BE MFG BY UNISTRUT CORPORATION, 1140 W. THORNDALE AVE., ITASCA IL 60143, (800) 468-9510.
- CUSTOMER TO SPECIFY SHROUD HEIGHT AT TIME OF ORDERING.

OR APPROVED EQUAL



Verizon Wireless
2785 Mitchell Drive, Suite 9
Walnut Creek, CA 94598

Client:



Project Architect:



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SUITE 125
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T 925.482.8500

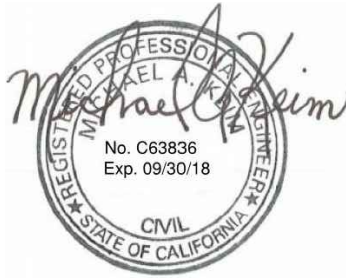
Site Agent:

100% Construction
Drawings

Drawing Phase:

SANTA CRUZ 124
PROW (IFO) 1930 CHANTICLEER
SANTA CRUZ, CA 95062
PSL #437787
PROJECT ID #P-139495
PG&E ORDER/PM #31334117
PG&E APP/PM #112957670

Site Name:



Professional Seal:

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04	04/25/18	Construction Dwgs 100%
05	08/07/18	Construction Dwgs 100%

Project No.:

Date: 08/07/18 Job No.:

Scale: AS SHOWN CAD File:

Designed By: JG Checked: RB

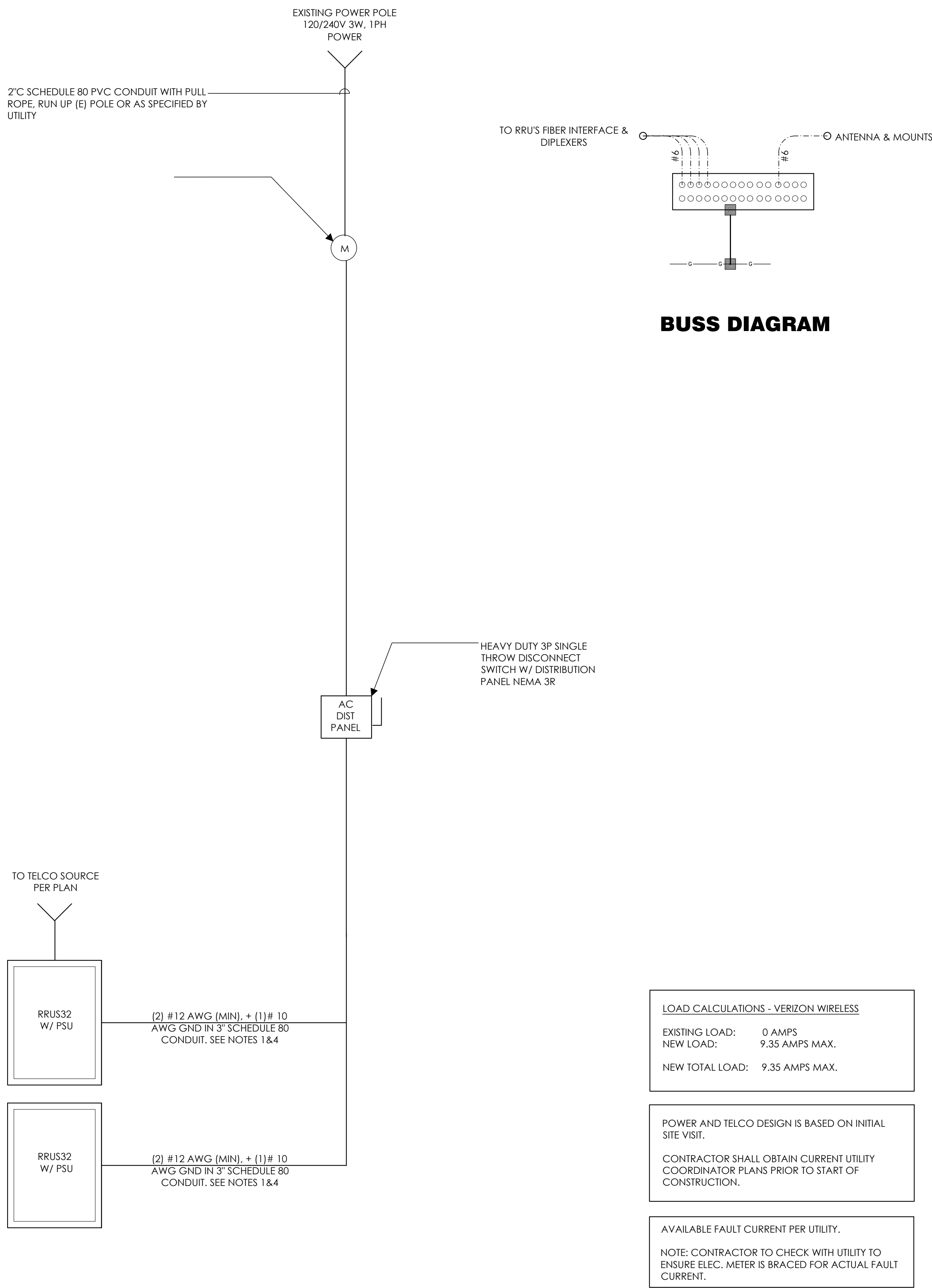
EQUIPMENT
DETAILS

Sheet Title:

A.8

Sheet No.:

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POWER AND TELCO NOTES:

- POWER AND TELCO POINTS OF CONNECTION AND ANY EASEMENTS ARE PRELIMINARY AND SUBJECT TO CHANGE BY THE UTILITY COMPANIES.
- CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY FOR FINAL AND EXACT WORK/MATERIALS REQUIREMENTS AND CONSTRUCT TO UTILITY ENGINEERING PLANS AND SPECIFICATIONS ONLY WHERE APPLICABLE PER PROJECT SCOPE OF WORK.
- CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT, PULL WIRES, CABLE PULL BOXES, CONCRETE ENCASEMENT OF CONDUIT, TRANSFORMER PAD, BARRIERS, POLE RISER TRENCHING, BACK FILL, AND UTILITY FEES, AND INCLUDE REQUIREMENTS IN SCOPE.
- CONTRACTOR SHALL LABEL ALL MAIN AC DISTRIBUTION PANELS AS REQUIRED BY CODE.

GENERAL ELECTRICAL NOTES:

- PROVIDE ALL ELECTRICAL WORK & MATERIALS AS SHOWN ON THE DWGS, AS CALLED FOR HEREIN, & AS IS NECESSARY TO FURNISH A COMPLETE INSTALLATION.
- THE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ADOPTED CALIFORNIA ELECTRICAL CODE, STATE OF CALIFORNIA TITLE 24, ALL OTHER APPLICABLE CODES AND ORDINANCES & THE REQUIREMENTS OF THE FIRE MARSHALL. ALL EQUIPMENT & WIRING SHALL BEAR THE APPROVAL STAMP OF UNDERWRITERS LABORATORY (UL) OR AN APPROVED TESTING LABORATORY. PAYMENT FOR ALL INSPECTION FEES AND PERMITS ARE PART OF THIS CONTRACT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY AND GOOD CONDITION OF ALL MATERIALS & EQUIPMENT FOR THE ENTIRE INSTALLATION & UNIT COMPLETION OF WORK. ERECT & MAINTAIN APPROVED & SUITABLE BARRIERS, PROTECTIVE DEVICES & WARNING SIGNS, BE FULLY RESPONSIBLE FOR ANY LOSS OR INJURY TO PERSONS OR PROPERTY RESULTING FROM NEGLIGENCE AND/OR ENFORCEMENT OF ALL SAFETY PRECAUTIONS & WARNINGS.
- COORDINATE THE ELECTRICAL INSTALLATION WITH ALL OTHER TRADES.
- ALL SAW CUTTING, TRENCHING, BACK FILLING & PATCHING SHALL BE PART OF THIS CONTRACT.
- FINALIZE ALL ELECTRICAL SERVICE ARRANGEMENTS, INCLUDING VERIFICATION OF LOCATIONS, DETAILS, COORDINATION OF THE INSTALLATION & PAYMENT OF ACCRUED CHARGES WITH LOCAL POWER COMPANY. VERIFY LOCATION FOR FACILITIES & DETAILS WITH POWER UTILITY, IN ADDITION TO THE REQUIREMENTS SHOWN IN THE CONTRACT DOCUMENTS. WORK SHALL COMPLY WITH CONSTRUCTION STANDARDS & SERVICE REQUIREMENTS OF THE RESPECTIVE UTILITIES, INCLUDING ANY SUPPLEMENTAL DWGS ISSUED & SHALL BE SUBJECT TO APPROVAL OF THESE UTILITIES.
- ALL WIRING SHALL BE COPPER. INSULATION FOR BRANCH CIRCUIT CONDUCTORS SHALL BE TYPE "THWN" CONDUCTORS LARGER AND #6 AWG MAY BE TYPE "THWN" OR "TWN".
- PROVIDE CONDUIT SEALS FOR ALL CONDUITS PENETRATING WEATHERPROOFING OR WEATHERPROOF ENCLOSURE ENVELOPE. MASTIC SEAL ALL CONDUIT OPENING PENETRATIONS COMPLETELY WATERTIGHT.
- UNLESS SHOWN OTHERWISE, FUSED AC DISTRIBUTION PANELS SHALL BE PROVIDED WITH LOW-PEAK, S/DUAL ELEMENT FUSES SIZED TO EQUIPMENT NAMEPLATE FUSE CURRENT RATING. MOTOR STARTERS SHALL BE PROVIDED WITH SIMILARLY SIZED FUSIBLE ELEMENTS, SWITCHES AND OTHER OUTDOOR EQUIPMENT SHALL BE RATED NEMA 3R AND/OR UL LISTED FOR WET ENVIRONMENT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING THE GROUNDING SYSTEM AND ENSURING A 5 OHM OR LESS GROUNDING PATH. ADDITIONAL GROUND RODS AND/OR CHEMICAL ROD SYSTEM SHALL BE USED TO ACHIEVE THIS REQUIREMENT IF THE GIVEN DESIGN CANNOT BE MADE TO ACHIEVE THIS REQUIREMENT.

NOTES:

- SUBCONTRACTOR SHALL PROVIDE DIST. PANEL AND BREAKERS FOR POWER TO THE PSU FOR EACH RRU.
- ALL SERVICE EQUIPMENT AND INSTALLATIONS SHALL COMPLY WITH THE N.E.C. AND UTILITY COMPANY AND LOCAL CODE REQUIREMENTS.
- SUBCONTRACTOR SHALL PROVIDE ELECTRICAL SERVICE ENTRANCE EQUIPMENT WITH FAULT CURRENT RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT FROM THE POWER UTILITY.
- MAXIMUM ONE WAY CIRCUIT RUN NOT TO EXCEED 75 FEET.



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Client:



Project Architect:



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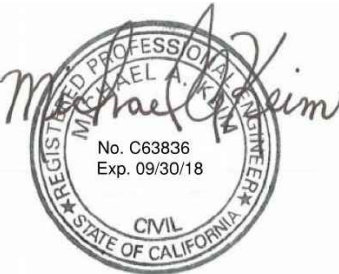
Site Agent:

100% Construction
Drawings

Drawing Phase:

SANTA CRUZ 124
PROW (IFO) 1930 CHANTICLEER
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PSL #437787
PROJECT ID #P-139495
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Site Name:



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05	08/07/18	Construction Dwgs 100%

Project No.:

Date: 08/07/18

Job No.:

Scale: AS SHOWN

CAD File:

Designed By: JG

Checked: RB

SINGLE LINE DIAGRAM
BUSS DIAGRAM

Sheet Title:

E.1

Sheet No.:

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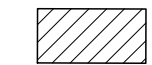


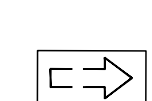
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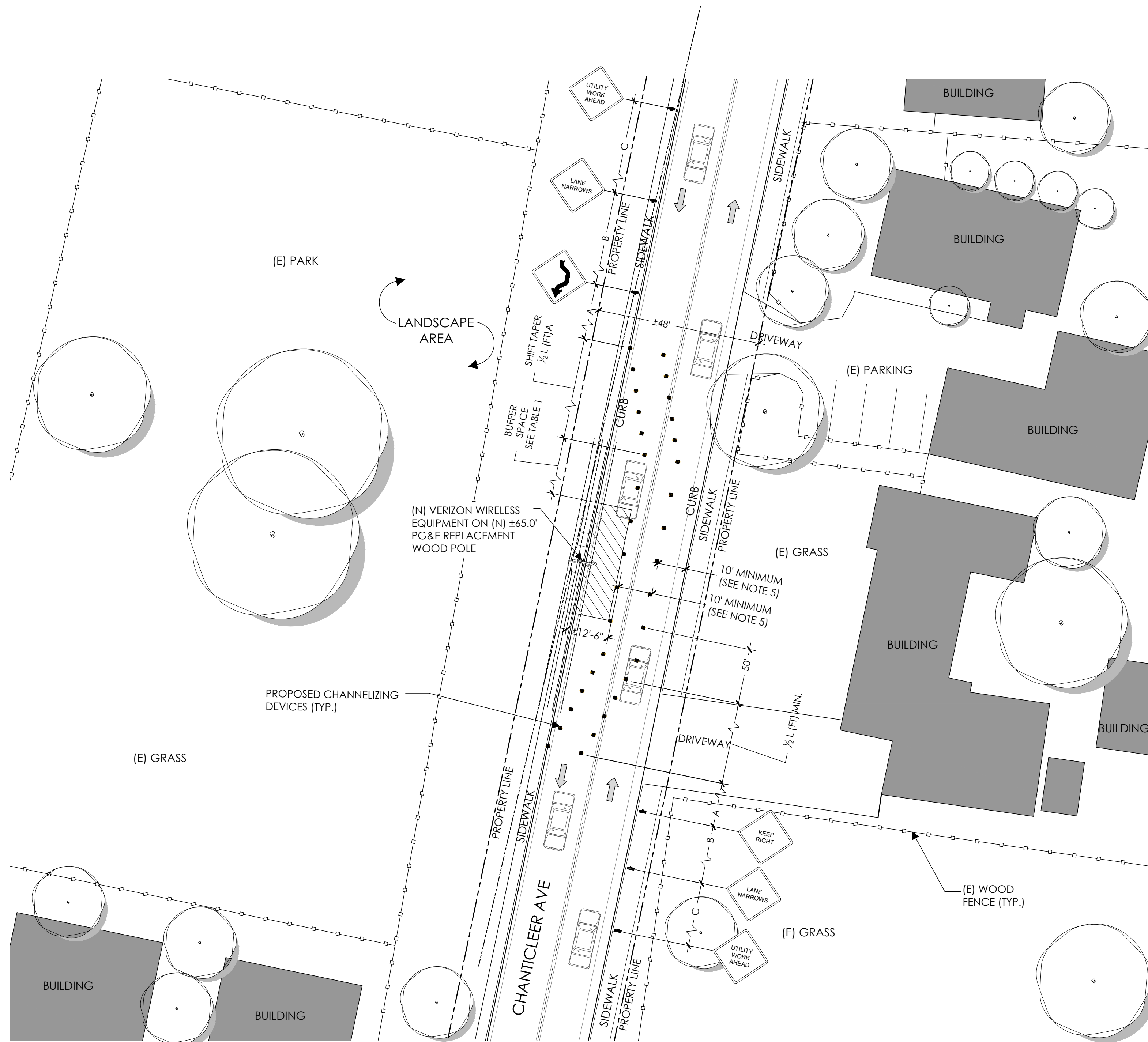
1. PLANS DEPICTED ARE GENERAL GUIDELINES FOR TEMPORARY VEHICULAR TRAFFIC CONTROL PLANS (TCP) TO INCLUDE PEDESTRIAN AND WORKER SAFETY. CONTRACTOR IS REQUIRED TO HAVE PREPARED A SITE-SPECIFIC TCP FOR REVIEW AND APPROVAL BY THE HIGHWAY AUTHORITY HAVING JURISDICTION. IF REQUIRED, THE FIRM PREPARING THE TCP SHALL BE AUTHORIZED OR CERTIFIED BY THE AUTHORITY HAVING JURISDICTION.
2. EXTEND CHANNELIZATION DEVICES INTO SHOULDER WHERE APPLICABLE.
3. DISTANCES AS INDICATED IN TABLE 1 SHOULD BE INCREASED FOR CONDITIONS THAT WOULD AFFECT STOPPING. DISTANCE SUCH AS DOWNGRADES OR LIMITED SIGHT DISTANCES. DISTANCES CAN BE DECREASED FOR LOW-SPEED (RESIDENTIAL) AREAS WITH APPROVAL BY THE AUTHORITY HAVING JURISDICTION. NIGHT-TIME WORK IS PROHIBITED UNLESS IT IS REQUIRED AS A CONDITION OF APPROVAL BY THE HIGHWAY AND LOCAL AUTHORITY HAVING JURISDICTION.
4. SHOULDER TAPERS SHOULD BE 1/3 OF THE ON-STREET TAPER LENGTH.
5. MAINTAIN A MINIMUM LANE WIDTH OF 10'.

DOT NOTES:

1. WHEN LANE CLOSURE IS REQUIRED, THE TRAFFIC CONTROL PLAN SHOULD BE PROVIDED AND NOTARIZED BY AN INDIVIDUAL/COMPANY THAT HAS FLAGGER CONTROL TRAINING CERTIFICATION.
2. "BLUE-LIGHTS" (OFF-DUTY POLICE OFFICERS) WILL BE ON SITE FOR LANE CLOSURES AND IF REQUIRED.

LEGEND

-  CHANNELIZING DEVICE
-  SIGN
-  WORK SPACE
-  FLAGGER
-  DIRECTION OF TRAFFIC
-  FLASHING ARROW SIGN (FAS)



-  SIGN
-  FLAGGER

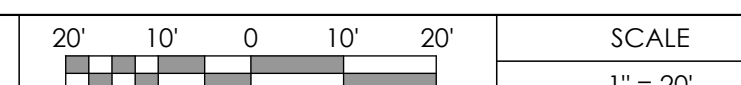
TABLE 1

POSTED SPEED (MPH)	DISTANCE BETWEEN SIGNS			TAPER	BUFFER
	A	B	C	L (SEE NOTE)	
15	100'	100'	100'	45'	100'
20	100'	100'	100'	80'	115'
25	100'	100'	100'	125'	155'
30	200'	200'	200'	180'	200'
35	200'	200'	200'	245'	250'
40	350'	350'	350'	320'	305'
45	350'	350'	350'	540'	360'
50	500'	500'	500'	600'	425'
55	500'	500'	500'	660'	495'
60	500'	500'	500'	720'	570'
65	500'	500'	500'	780'	645'

- NOTES:
- A) DISTANCES IN FEET UNLESS OTHERWISE NOTED.
 - B) CONTRACTOR TO VERIFY EXISTING SPEED LIMIT.
 - C) DISTANCES SHOWN ARE NOT VALID FOR LIMITED ACCESS HIGHWAYS. CONSULT STATE DOT MANUAL FOR DISTANCES.
 - D) ADJUST DISTANCES TO COMPLY WITH REQUIREMENT OF THE STATE OR LOCAL HIGHWAY AUTHORITY HAVING JURISDICTION. SEE NOTE 1, SHEET TC-2.
 - E) TAPER LENGTHS SHOWN BASED ON 12' LANE WIDTH.



OVERALL SITE PLAN



1

verizon

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Walnut Creek, CA 94598

Client:



Project Architect:



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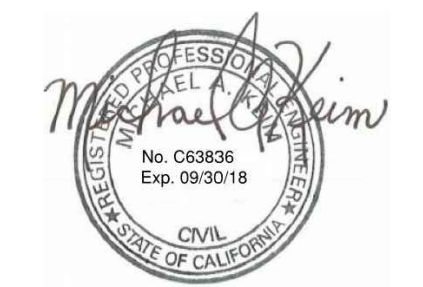
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Project No.:

Date: 08/07/18 Job No.:

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Designed By: JG Checked: RB

SITE SPECIFIC VEHICLE
TRAFFIC CONTROL PLAN

Sheet Title:

TC.1

Sheet No.:

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**Verizon Wireless • Proposed Small Cell (No. 437787 “Santa Cruz 124”)
1930 Chanticleer Avenue • Santa Cruz, California**

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of Verizon Wireless, a personal wireless telecommunications carrier, to evaluate its small cell (No. 437787 “Santa Cruz 124”) proposed to be sited in Santa Cruz, California, for compliance with appropriate guidelines limiting human exposure to radio frequency (“RF”) electromagnetic fields.

Executive Summary

Verizon proposes to install a cylindrical antenna on a utility pole to be sited in the public right-of-way near 1930 Chanticleer Avenue in Santa Cruz. The proposed operation will comply with the FCC guidelines limiting public exposure to RF energy.

Prevailing Exposure Standard

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

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

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

General Facility Requirements

Small cells typically consist of two distinct parts: the electronic transceivers (also called “radios”) that are connected to the traditional wired telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units. The transceivers are



HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
SAN FRANCISCO

P4D6
Page 1 of 3

EXHIBIT E

**Verizon Wireless • Proposed Small Cell (No. 437787 “Santa Cruz 124”)
1930 Chanticleer Avenue • Santa Cruz, California**

typically mounted on the support pole or placed in a cabinet at ground level. Because of the short wavelength of the frequencies assigned by the FCC for wireless services, the antennas require line-of-sight paths for their signals to propagate well and so are installed at some height above ground. The antennas are designed to concentrate their energy toward the horizon, with very little energy wasted toward the sky or the ground. This means that it is generally not possible for exposure conditions to approach the maximum permissible exposure limits without being physically in front of the antennas.

Computer Modeling Method

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

Site and Facility Description

Based upon information provided by Verizon, including drawings by Meridian Management LLC, dated February 23, 2018, it is proposed to install one Amphenol Model CUUT360X12F, 4-foot tall omnidirectional antenna on a new utility pole to replace the existing utility pole sited in the public right-of-way on the west side of Chanticleer Avenue, opposite the single-story residence located at 1930 Chanticleer Avenue in Santa Cruz. The antenna would employ 4° downtilt and would be mounted at an effective height of about 60 feet above ground. The maximum effective radiated power in any direction would be 1,580 watts, representing simultaneous operation at 840 watts for AWS and 740 watts for PCS service. There are reported no other wireless telecommunications base stations at this site or nearby.

Study Results

For a person anywhere at ground, the maximum RF exposure level due to the proposed Verizon operation is calculated to be 0.0020 mW/cm², which is 0.20% of the applicable public exposure limit. The maximum calculated level at the second-floor elevation of any nearby building is 0.29% of the public exposure limit. It should be noted that these results include several “worst-case” assumptions and therefore are expected to overstate actual power density levels from the proposed operation.



**Verizon Wireless • Proposed Small Cell (No. 437787 "Santa Cruz 124")
1930 Chanticleer Avenue • Santa Cruz, California**

Recommended Mitigation Measures

Due to its mounting location and height, the Verizon antenna would not be accessible to unauthorized persons, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. To prevent occupational exposures in excess of the FCC guidelines, it is recommended that appropriate RF safety training, to include review of personal monitor use, be provided to all authorized personnel who have access to the antenna. No access within 3 feet at the same height as the antenna, such as might occur during certain maintenance activities at the top of the pole, should be allowed while the small cell is in operation, unless other measures can be demonstrated to ensure that occupational protection requirements are met. It is recommended that an explanatory sign* be posted at the antenna and/or on the pole below the antenna, readily visible to persons who might need to work within that distance.

Conclusion

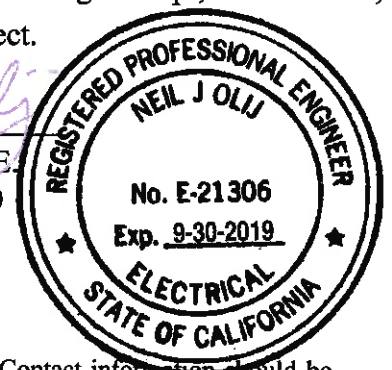
Based on the information and analysis above, it is the undersigned's professional opinion that operation of the small cell proposed by Verizon Wireless near 1930 Chanticleer Avenue in Santa Cruz, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating small cells. Training authorized personnel and posting explanatory signs are recommended to establish compliance with occupational exposure limits.

Authorship

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration No. E-21306, which expires on September 30, 2019. This work has been carried out under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.

705

Neil J. Olij, P.E.
707/996-5200



April 23, 2018

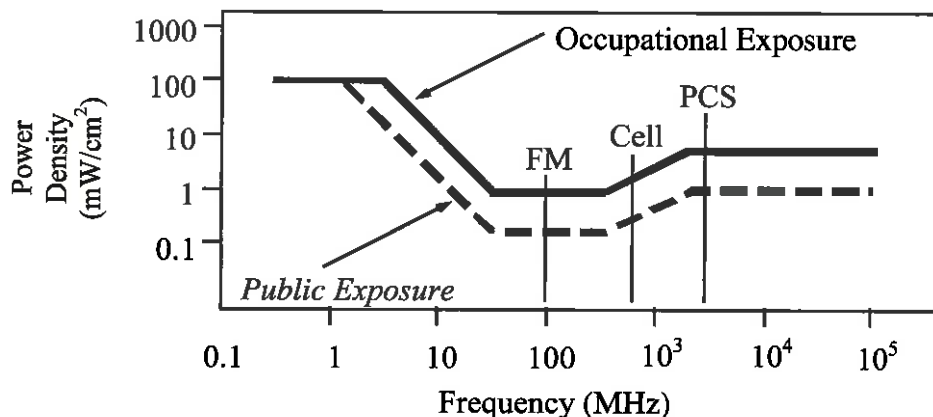
* Signs should comply with OET-65 color, symbol, and content recommendations. Contact information should be provided (e.g., a telephone number) to arrange for access to restricted areas. The selection of language(s) is not an engineering matter, and guidance from the landlord, local zoning or health authority, or appropriate professionals may be required. Signage may also need to comply with the requirements of California Public Utilities Commission General Order No. 95.

FCC Radio Frequency Protection Guide

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

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

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



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



HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
SAN FRANCISCO

FCC Guidelines
Figure 1

EXHIBIT E

Assessment by Calculation of Compliance with FCC Exposure Guidelines

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

Near Field.

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

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

and for an aperture antenna, maximum power density $S_{max} = \frac{0.1 \times 16 \times \eta \times P_{net}}{\pi \times h^2}$, in mW/cm²,

where θ_{BW} = half-power beamwidth of the antenna, in degrees, and

P_{net} = net power input to the antenna, in watts,

D = distance from antenna, in meters,

h = aperture height of the antenna, in meters, and

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

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

Far Field.

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

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

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

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

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

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



SANTA CRUZ COUNTY PLANNING DEPARTMENT

Parcel Location Map

Mapped Area



Parcel: 02907169

- Study Parcel
- Assessor Parcel Boundary
- Existing Park

Map printed: 27 Nov. 2018

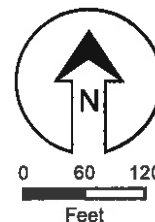


EXHIBIT F






SANTA CRUZ COUNTY PLANNING DEPARTMENT

Parcel General Plan Map

Mapped
Area



-  **P** *Public Facilities*
-  **R-UH** *Res. Urban High Density*
-  **R-UL** *Res. Urban Low Density*



0 60 120
Feet

EXHIBIT F



Parcel Zoning Map

Mapped
Area



- PF Public/Community Facilities
- PR Parks, Recreation, & Open Space
- R-1 Single-Family Residential
- RM Residential Multi-Family

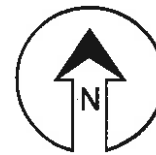
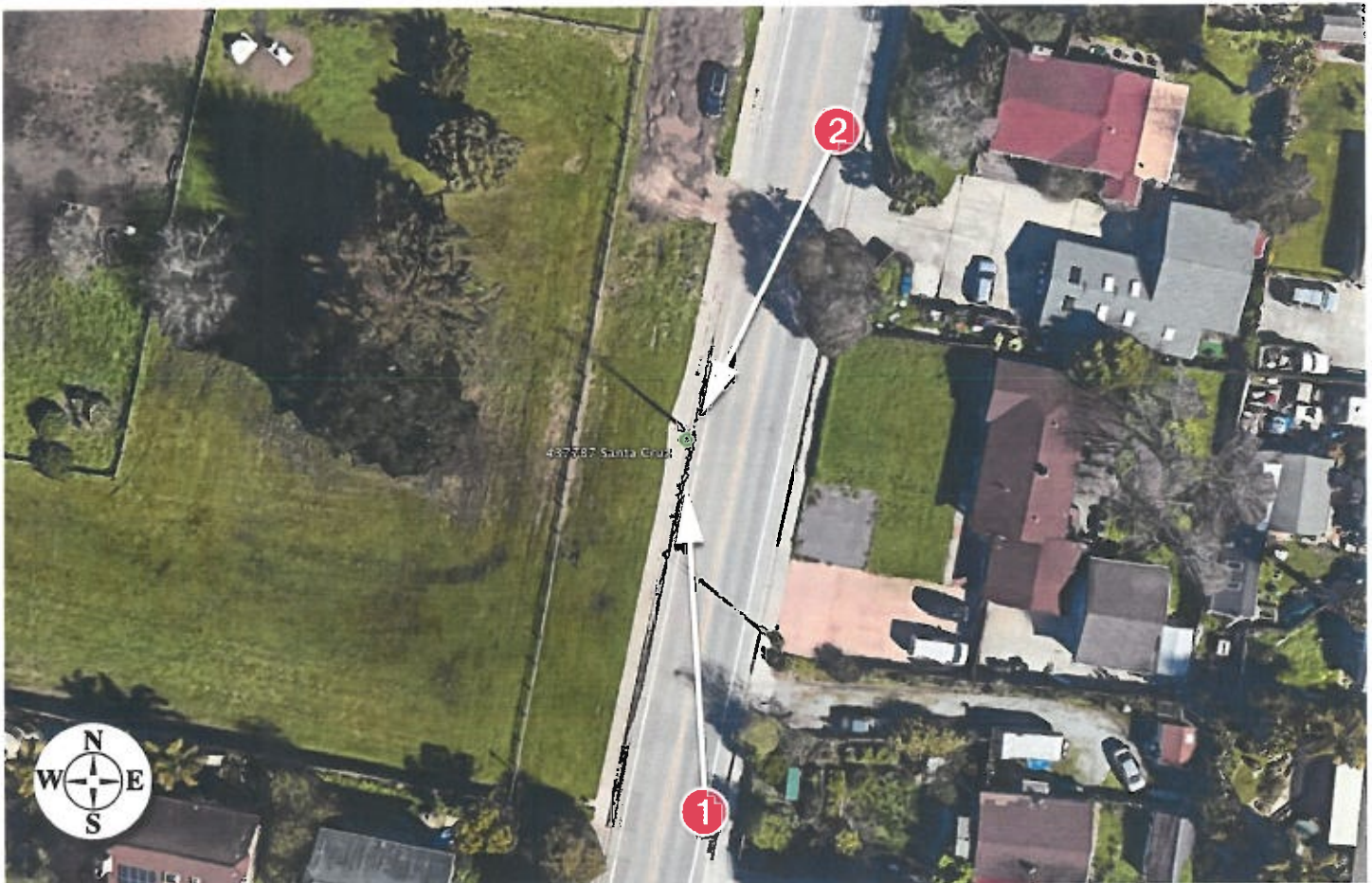
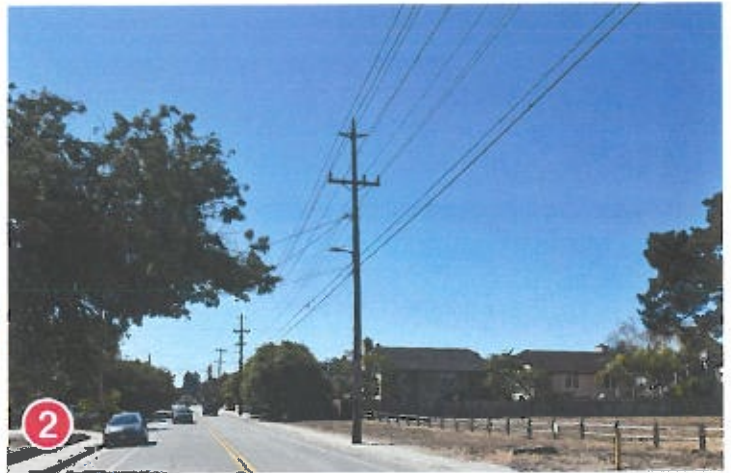
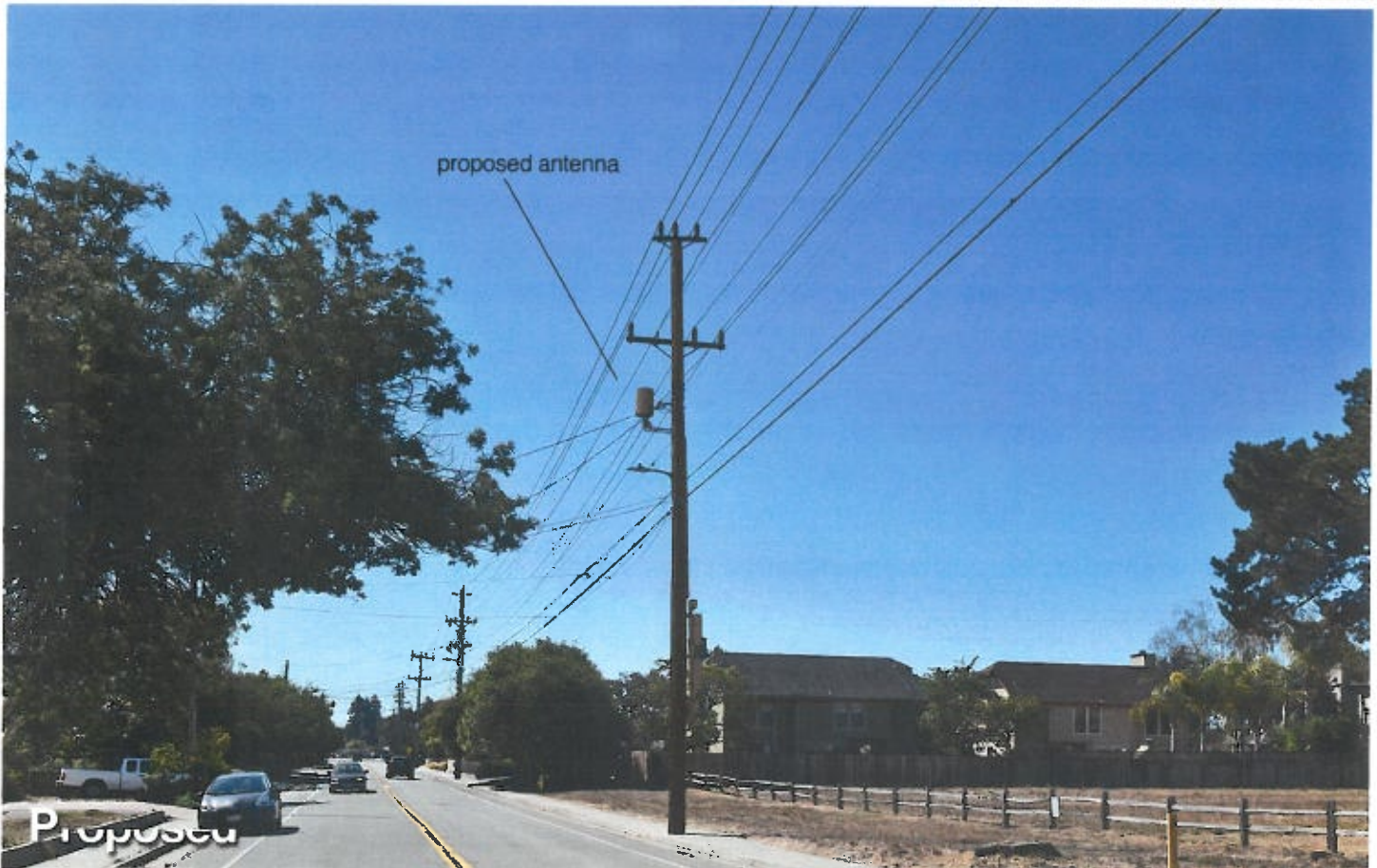


EXHIBIT F

0 60 120
Feet







From: Debbie Klein <debra_klein@hotmail.com>
Sent: Sunday, December 9, 2018 11:33 AM
To: Jonathan DiSalvo; John Leopold; Bryce Florian
Subject: Item #6. 181100

Dear John and Jonathan:

Greetings! I hope this note finds you both well.

Since I was unable to attend our public hearing on Friday, December 7, I'm writing this message to express my concern about the proposed cell phone tower at Chanticleer Avenue park. I'm also including my partner, Bryce, in this correspondence.

Bryce and I have been living in our home on Chanticleer Ave. (2076) for almost 14 years. We love Live Oak and appreciate the relatively new park in the middle of our street. We are concerned about the long-term health effects of a cellular antenna located so close to our home. I have conducted research about the effects of constant radiation on people whose homes and businesses happen to be in the "line of fire" of unsafe amounts zone of radiation. These zones are determined by the angle and distance of radiation.

As you probably know, the US government banned research into the health effects of radiation from cell phone towers due to the successful lobbying efforts of the US-based cellular technology industries. This is why most of the studies have taken place in Europe and have been conducted by European scientists. I'm including some recent, peer-reviewed studies here:

1. <https://www.scientificamerican.com/article/major-cell-phone-radiation-study-reignites-cancer-questions/>.



Major Cell Phone Radiation Study Reignites Cancer Questions - Scientific American - Science News, Articles, and Information - Scientific American

Scientific American is the essential guide to the most awe-inspiring advances in science and technology, explaining how

they change our understanding of the world and shape our lives.

www.scientificamerican.com

2. <https://www.collective-evolution.com/2018/08/17/worlds-largest-animal-study-on-cell-tower-radiation-confirms-cancer-link/>



World's Largest Study On Cell Tower Radiation Confirms Cancer Link – Collective Evolution

In Brief. The Facts: A groundbreaking study shows the strong connection between Cell Phone towers and cancer. It's one of many showing how electromagnetic radiation is harming human health at an exponential rate, and another example of industry trumps science.

www.collective-evolution.com

3. <https://www.cancer.gov/about-cancer/causes-prevention/risk/radiation/cell-phones-fact-sheet>



Cell Phones and Cancer Risk Fact Sheet - National Cancer Institute

Radiofrequency radiation is a form of electromagnetic radiation. Electromagnetic radiation can be categorized into two types: ionizing (e.g., x-rays, radon, and cosmic rays) and non-ionizing (e.g., radiofrequency and extremely low frequency, or power frequency). Electromagnetic radiation is

EXHIBIT H

defined according to its wavelength and frequency, which is the number of cycles of a wave that pass a ...

www.cancer.gov

It would be a tragedy for me and Bryce if your decision to build a new cellular antenna threatened our health in any way. Please consider the research provided as well as the health of people in our neighborhood. Please say "no" to this commercial endeavor. I know our health and safety are your priority.

Thank you,
~Debbie

Debbie Klein, Ph.D.
Professor, Anthropology
President-elect, FACCC
Gavilan College
Gilroy, CA

EXHIBIT H

From: kyrsten buzzard <garlicgirl69@yahoo.com>
Sent: Thursday, December 6, 2018 11:24 AM
To: Jonathan DiSalvo; John Leopold
Subject: Item #6. 181100

Hello,

As a member of the Live Oak community, I would like to voice my concerns about building a cell tower in the neighborhood. Not only does a cell tower not belong in a residential neighborhood, but especially not in front of a park that is soon to develop an all inclusive playground, which will most certainly attract CHILDREN, and not only that, but children with compromised immune systems.

Please take this into consideration, and build the tower somewhere where children and dogs do not play.

Thanks,

Kyrsten Buzzard

EXHIBIT H

Joshua Logan
2192 Persimmon Ct.
Santa Cruz, CA 95062
(831) 334-2221
joshblogan@gmail.com

December 6, 2018

Zoning Administrator, c/o Jonathan DiSalvo
Santa Cruz County Planning Commission
701 Ocean St
Santa Cruz, CA 95060

RE: Item #6. 18100

I'm a long-time homeowner and resident at 2192 Persimmon Ct. in Live Oak. I live at that location with my wife and two young children. I've recently learned of the proposal to locate a cellular communication tower on a PG&E utility pole on Chanticleer Ave.. This is less than 250 feet. from my home, in the middle of a residential zone, and adjacent to the much-anticipated Chanticleer Ave. Park and Leo's Haven playground. Allowing this project to be built at this location would be inappropriate and incompatible with the residential surroundings. I strongly object to this proposal and I urge you to deny the application on the following grounds:

- 1. It is inconsistent with Santa Cruz County Zoning regulation *SCCC 13.10.660*, and alternate non-residential sites exist nearby:** Santa Cruz County Zoning Regulations (*SCCC 13.10.660 Regulations for the siting, design, and construction of wireless communication facilities*) establishes regulations related to siting wireless communications facilities. *SCCC 13.10.660, Section B, subsection 5* states:

Commercial wireless communication facilities are commercial uses and as such are generally incompatible with the character of residential zones in the County and, therefore, should not be located on residentially zoned parcels unless it can be proven that there are no alternative nonresidential sites from which can be provided the coverage needed to eliminate or substantially reduce significant gaps in the applicant carrier's coverage network.

The proposed project is located entirely within a residential zone. **Attachment A** shows a map of the proposed location, along with parcel boundaries and zoning for the surrounding area. There are 66 parcels zoned residential within a 500 foot radius of the proposed location (parcels within 500 foot radius shown in light blue).

Alternate sites in non-residential zones exist within 0.4 mile from the proposed location, at the intersection of Chanticleer and Soquel Ave (Frontage Rd.).

Attachments B and C show a map of the alternate sites located in areas zoned Light Industrial and Commercial, along with a photo of numerous candidate PG&E utility

poles. These locations are not close any residences and would pose none of the problems presented by the current proposed location.

Lastly, there is no gap in Verizon coverage in our neighborhood. I and many of my neighbors use Verizon, and our coverage is strong and consistent. We never experience drop outs or dead zones anywhere in the neighborhood.

2. **Visual Impact:** This proposal would allow the applicant to increase the height of the PG&E utility pole by 35%, to a total height of 64 feet. At that height, it would be one of the tallest objects in the vicinity, taller than all of the trees in the park, except for the largest redwood. The significant negative visual impact from this will be unavoidable. It would be visible from my front door, my bedroom, my kids' bedroom, my yard and everywhere on my street. The auxiliary equipment would be located vertically along the side of the pole, exposed and in clear view between 8 and 18 ft. above the sidewalk. **Attachment D**, shows a photo of a similar, but smaller installation located at the intersection of Brommer and 17th st.. Despite the equipment being painted "brown", the negative aesthetic impact of this is extremely undesirable.
3. **Other California Communities have rejected similar proposals:** The City of Monterey denied 10 out of 13 such proposals at their Planning Commission Meeting on March 15, 2018. The details of their reasoning can be found in the supporting documents of that meeting (see City of Monterey (2018) in references below). In short, they found that the applicants had not thoroughly investigated alternative sites in locations outside of residential zones, and that their proposed locations were incompatible with the residential neighborhood. The cities of Mill Valley, San Anselmo, and Ross, CA have all passed legislation to restrict such installations to non-residential areas.
4. **Negative impact on property value:** For a variety of reasons, many people do not want to live near cell phone towers. This includes future potential buyers of my home. I fear that the proximity of this project to my property will significantly reduce its value.
5. **Possible future additions at the site:** Once this installation is permitted, the cellular carriers would be legally allowed to add additional equipment, and up to 10 additional feet in height (to 74 feet) to the installation without seeking further permission from the county. This is permitted under "Section 6409(a) of the Federal Middle Class Tax Relief and Job Creation Act of 2012". See City of Concord (2017), *Staff Report 11a*. in references, for legal description.

6. **Health concerns:** This would be emitting radio frequency (RF) energy 24 hours a day, 7 days a week within a stone's throw from my children's bedroom. The science related to the effects of this is inconclusive. I'm a career scientist, and I find this insufficient to feel comfortable exposing my family to such emissions continuously in our homes and at close range. I would ask that the Planning Commissioners consider if they, themselves, would find it acceptable to have such an installation so close to their own homes and families.

Allowing this cellular installation to be located within the middle of our neighborhood within a stone's throw from our homes, next to a long-awaited public park would be inappropriate and unacceptable. I and my neighbors urge you to do everything in your power to protect our homes and our families by denying this application.

Thank you for your consideration.

Sincerely,

Joshua Logan
Owner and resident, 2192 Persimmon Ct.

CC Supervisor John Leopold

References:

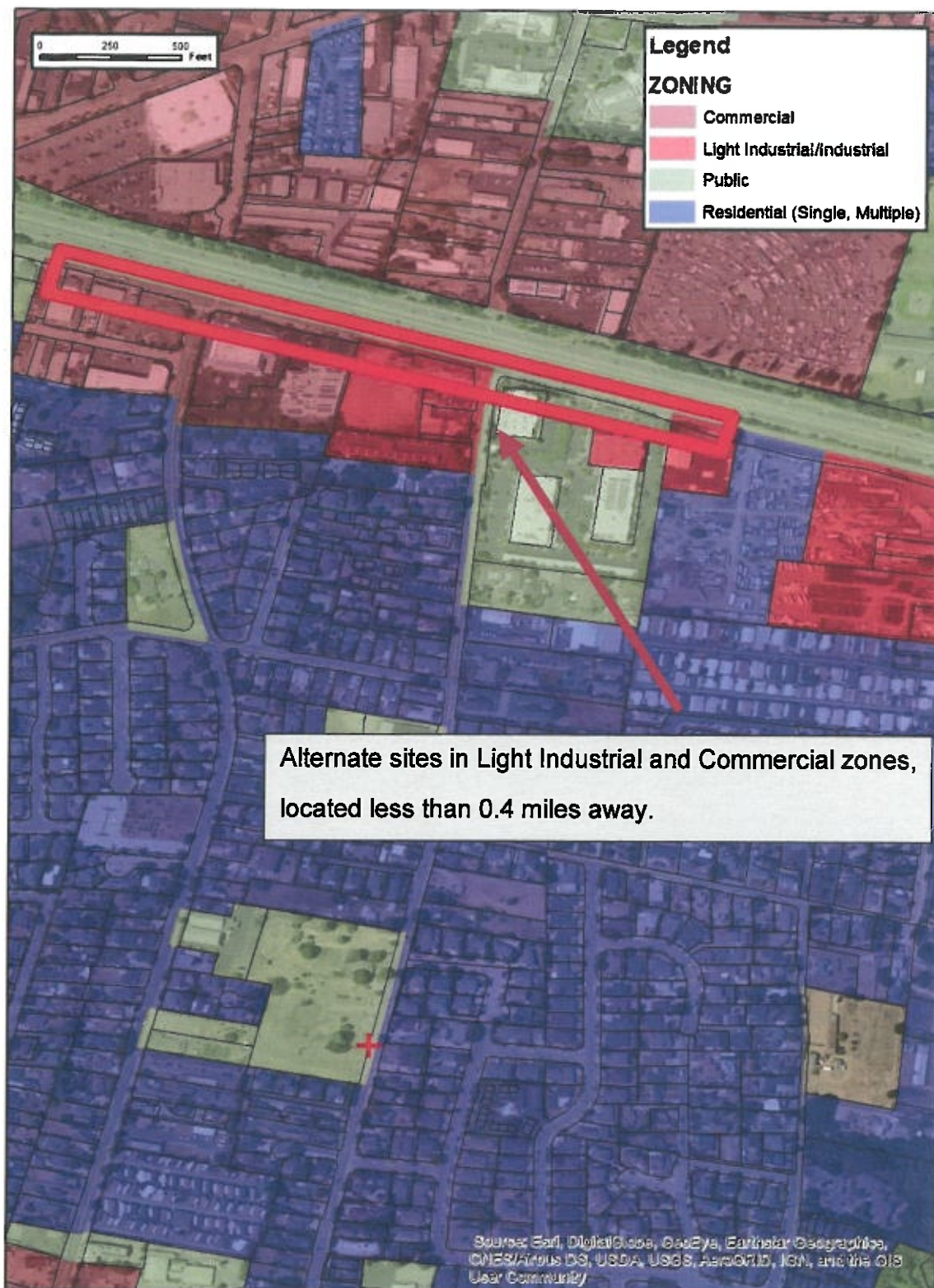
City of Concord. (2017). *Staff Report 11a*. [PDF file]. Retrieved from <http://www.cityofconcord.org/pdf/citygov/agendas/council/2017/0905/11A.pdf>

City of Monterey (2018). *Planning Commission Meeting Documents, March 15, 2018*

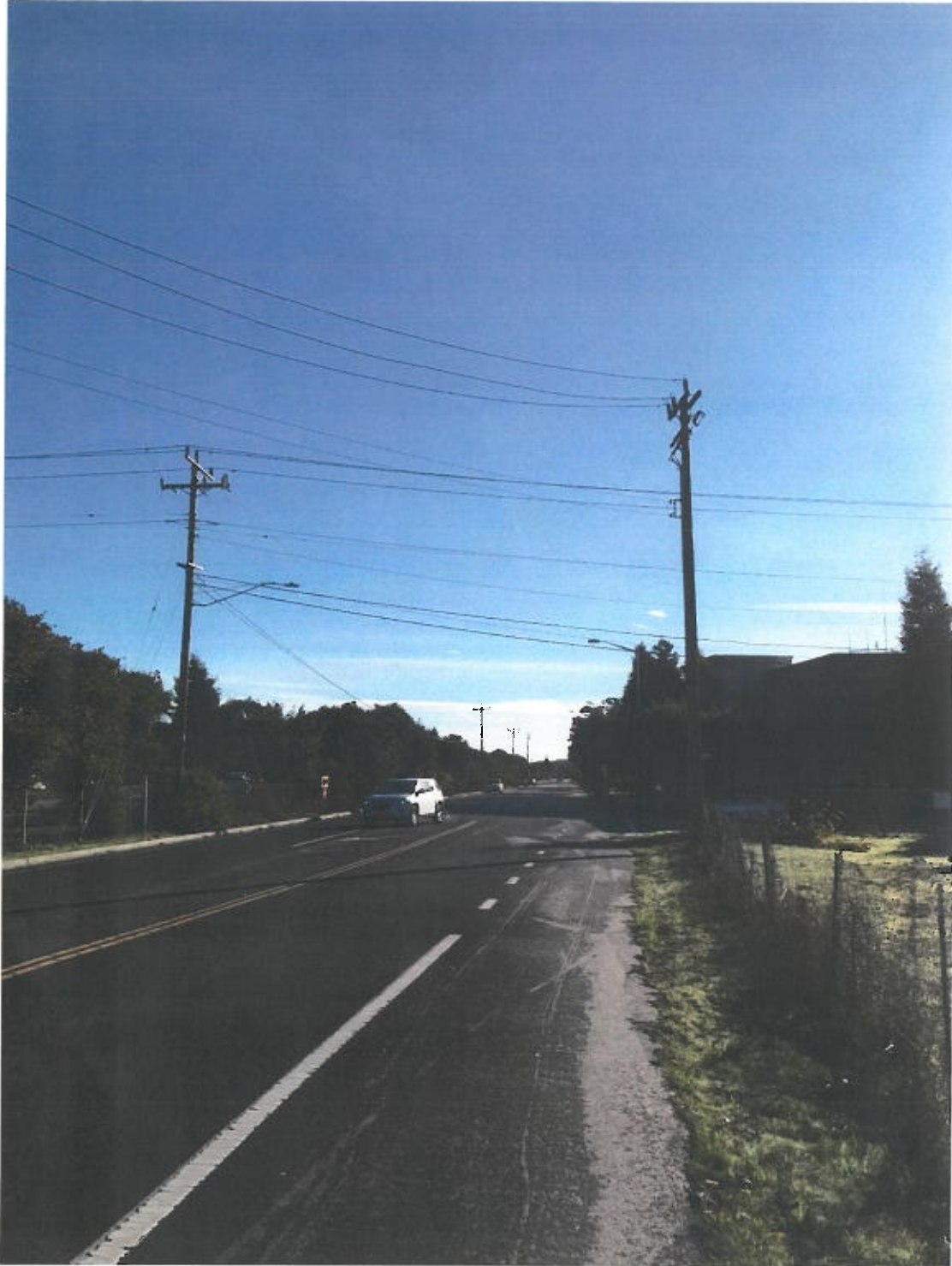
Retrieved from http://isearchmonterey.org/meeting.aspx?cabinet=published_meetings&docid=108660



Attachment A. Map of proposed location with Assessors Parcels and Zoning. Parcels within a 500 ft. radius of the proposed location are shown in light blue. There are 66 residential parcels and 3 public parcels within a 500 ft. radius.



Attachment B. Map of proposed location and alternate locations in Light Industrial/Commercial zones less than 0.4 miles away.



Attachment C. Photo from near intersection of Chanticleer Ave. and Soquel Rd (Frontage Rd.), near Sherriff's Station. Numerous candidate PG&E poles exist, and zoning is light industrial and commercial.

From: Stanford Jim <jimouida@yahoo.com>
Sent: Thursday, December 6, 2018 10:57 AM
To: Jonathan DiSalvo; John Leopold
Subject: Project Item # 6. 181100 APN (near) 029-071-69

Dear Supervisor Leopold and Project Manager DiSalvo:

I appreciate the advance notification of this proposed project. I urge you to oppose the siting of new cell phone transmitters in close proximity to residential homes, specifically mine at 2191 Persimmon Court, for the following reasons:

1. Unnecessary. My wife's smart phone uses the Verizon network and her reception is just fine as is. There is no need for a local transmitter two doors down from my home.
2. Aesthetics: Installing a higher pole festooned with transmitters will be an aesthetic downgrade to the neighborhood. We currently enjoy underground utilities on our street (Persimmon Court) which enhances the appearance of our neighborhood. Adding a new cell phone transmitter to Chanticleer will downgrade the neighborhood. It will be an eyesore from my back window. A perk of this location is the lovely vista of Chanticleer Park from our bedroom windows. This proposed transmitter would be an unwelcome intrusion into our otherwise nice view.
3. Property values: Any downgrade in aesthetics is a downgrade in property values. Further, many potential buyers will be driven away from my home - not only by aesthetics but also by their perception of health risk, regardless of a final societal agreement on such risks.
4. Health effects: I regard this proposed installation as an experiment on humans without their consent. I frankly do not know what the actual risks may be. I do know that there is much controversy. It would help to have a double PhD in cellular biology and the physics of electromagnetic radiation to understand the issues. Meanwhile, as was the case with links between tobacco-cancer and petroleum-global warming, powerful wealthy corporations fund and control much of the information, legislation, and regulation. Until there is a body of independent conclusive research, I object to being a non-consenting subject in this experiment. Many countries around the world have seen fit to set much lower limits on electromagnetic exposure, for preserving human health. Why can't we be similarly conservative?

Thank You, James Stanford, 2191 Persimmon Court, 95062

EXHIBIT H

From: Judy Kessler <judyannpaul@sbcglobal.net>
Sent: Tuesday, December 4, 2018 6:12 PM
To: Jonathan DiSalvo; John Leopold
Subject: Proposed cell phone tower Item #6. 181100

Follow Up Flag: Follow up
Flag Status: Flagged

To whom it may concern,

I represent the **7 homeowners on Persimmon Court** which is located adjacent to the proposed cell phone tower *Project item #6. 181100, near APN: 029-071-69*. The homeowners request that this project is **declined** due to the following factors:

- 1) This proposed tower is to be located next to an area that is zoned Residential. There are many homes that will be looking at this tower and it will be an eyesore to each homeowner.
- 2) The proposed tower will negatively impact home values as most people do not want to look at cell phone towers from their windows or backyards.
- 3) The proposed tower is in a public park which should be a beautiful area for all residents to go to; they should not have to look at this eyesore while walking their dog or playing with their children.
- 4) The proposed tower will negatively impact home values as some people believe cell phone towers can impact a person's health. Just the *perceived* health issues alone can impact home values and the tower should not be placed near our homes.
- 5) The tower should go in a area zoned *commercial*- which there are many such zoned areas located nearby, such as Soquel Avenue and Chanticleer, where the tower will not negatively impact homeowners.

Please do not approve this tower in this location. The homeowners do not want this tower as it is an eyesore and will negatively impact our lives as outlined above. There are nearby places that are better suited to this type of tower.

Respectfully yours,

Judy Kessler, President of Persimmon Court HOA
2195 Persimmon Court
Santa Cruz, CA 95062

EXHIBIT H

From: mdsutton@aol.com
Sent: Thursday, November 29, 2018 5:42 PM
To: Jonathan DiSalvo; MDSutton@aol.com
Subject: Re: Approve Application for new cell phone tower

M. Dean Sutton
Adriana F. Sutton
2240 Muriel Drive
Santa Cruz, CA 95062
408-837-3740
mdsutton@aol.com

November 29, 2018

County of Santa Cruz Zoning Administrator
Donathan DiSalvo, Project Planner
jonathan.disalvo@santacruzcounty.us

Hrg: 12/07/2018, 9:00 am

Re: Application for new cell phone tower; Chanticleer at APN 029-071-69

We strongly support installation of a new cell phone tower and antennae on Chanticleer.

Our cell phone coverage is unacceptable, weak, and drops often. (We use AT&T).

Our cell system in Santa Cruz County is embarrassing -- dead spots, dropping calls, weak and whistling audio, and no coverage at all in too many places. Many "third world" countries I have traveled in have cell coverage far better than we have here. There no coverage down on the Capitola beach around Zelda's, for example.

Please approve the suggested cell phone tower. And, encourage and approve more towers for better service.

Dean Sutton

EXHIBIT H

From: Kris <kristinaannemitchell@gmail.com>
Sent: Tuesday, December 11, 2018 9:56 AM
To: Jonathan DiSalvo
Subject: opposition to cell sites in live oak

Follow Up Flag: Follow up
Flag Status: Flagged

opposition to the 4 new cell sites in Live Oak; opposition to Applications 181099, 181100, 181103 and 181104 because they will be ugly, will have a significant adverse visual impact on our public streets and viewsheds, will "incommode the public use" of the right-of-way, pose a fire risk, and will negatively impact the residential character of our communities, and not enough proof of public health safety, possible cancer risk, fcc is allowing tech to roll out before health risks are fully known.

EXHIBIT H 1

From: SYLVIA SKEFICH <skefich@sbcglobal.net>

Sent: Tuesday, December 11, 2018 7:21 PM

To: Jonathan DiSalvo

Subject: Applications to install cell towers

Follow Up Flag: Follow up

Flag Status: Flagged

Dear Mr. DiSalvo,

I am writing to voice my concern over Applications 181099, 181100, 181103, and 181104. These cell sites are ugly, intrusive, possibly dangerous (fire), and certainly experimental in nature.

Please see my two points below in regard to the Nuremberg code and the Nuremberg principle which applies to you personally...

I believe this trend of cellphone microwave technology that is put on the people without consent is a true experiment on humans and on other living things (plants, birds, insects, and mammals). The World Health Organization indicates that they think it is an experiment too, because they say that they are and will be keeping a close eye on the outcomes of this microwave technology on people's health.

Did you know that the United States government is in support of the principles of the Nuremberg Code, and the first listed item in the code is:

"1. Required is the voluntary, well informed, understanding consent of the human subject at full legal capacity"

of experiments made on them."

EXHIBIT H

I am saying, the WHO suggests that microwave technology is a big experiment with uncertain outcomes, and also has put microwave cell radiation on the list of possible carcinogens, and yet the people who are subject to this experiment are unable to get out of the experiment which is against the Nuremberg Code.

Additionally, Principle IV of the Nuremberg Principles states that officers of the government (soldiers and what have you) cannot get off the hook just because their superiors have given them orders to do something illegal or unethical.

The FCC has given orders based on an unethical law that says that community cannot prevent the installation of cell technology for health reasons.

How will you, as an agent of the government reconcile this?

Cell technology is only going to get more dangerous with 5G. I do observe that PG&E is putting taller utility poles everywhere. Why is this? Is it because there is really only one loophole where the people can stop cell providers from putting in cell technology, and that is that if the cell provider has to heighten a pole by more than 10 feet?

So is there a collusion between PG&E and the cell services? Is this an illegal collaboration--a conspiracy to prevent the will of the people, and pave the way to the will of the big businesses?

I urge you to do your due diligence. There are communities who have blocked 5G (another topic) from coming to their areas. Do not believe the company-line that 5G is really weak radiation and just bounces off the skin. That determination was made from false formulas. (That determination assumes that the 5G tower works in a "spray" like current towers, but it does not...the focus of the energy is emitted in a beam.)

Vote down this tower, please.

Sincerely,

Sylvia Skefich, D.C.

Sylvia Skefich, D.C.

(831) 475-1995

920 41st Ave., Ste. G
Santa Cruz, CA 95062

EXHIBIT H

From: R Gerbs <riley.gerbrandt@gmail.com>
Sent: Thursday, December 6, 2018 2:32 AM
To: Jonathan DiSalvo
Subject: Comments regarding Applications 181098, 181099, 181100 and 181103

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Jonathan and the Zoning Administrator,

Pertaining to the application for a new "small cell" wireless facilities (Applications 181098, 181099, 181100 and 181103), I require clarification on the following and/or make an argument to the Zoning Administrator that the Application should be changed or denied:

Clarification required: Were the public hearing notices for these Applications sent to properties within 1,000 feet of the "outer boundary of the subject parcel" in accordance with SCCC 13.10.661(H)?

Pursuant to SCCC 13.10.662, several items are required with the Application for a wireless communication facility. The Applicant has not provided several of these items in its Application. Namely, the Applicant has not provided the following:

- SCCC 13.10.662(B)(5) - A description of the applicant service provider's existing wireless communication facilities network, and the provider's currently proposed facilities and anticipated future facilities for all proposed sites for which an application has been submitted, and for all proposed sites for which site access rights or agreements have been secured by the provider. This must include a map, and a table (in hardcopy and digital formats) listing facility situs/addresses, site names/identification, facility types, and precise latitude/longitude coordinates (NAD 83) in decimal degree format, for all of the applicant carrier's existing and proposed facilities, within both the unincorporated and incorporated areas of Santa Cruz County, for inclusion on the County's wireless communication facility GIS map. In lieu of submitting this information with multiple applications, if this information has been previously submitted by the applicant, the applicant alternatively may certify in writing that none of the submitted information has changed. Information regarding proposed network expansions will be kept confidential by the County if identified in writing as trade secrets by the applicant.
- SCCC 13.10.662(B)(12)(a) - a copy of a portion of the most recent U.S.G.S. Quadrangle topographical map (with 20-foot contour intervals), at a scale of 1:24,000, indicating the proposed wireless communication facility site, and showing the area within at least two miles from the proposed site.
- SCCC 13.10.662(B)(12)(b) - Proximity Map and Aerial Photo. Prepare a map and an aerial photo at a scale of approximately one inch equals 200 feet (1:2,400), with contour intervals (for map only) no greater than 20 feet, showing the entire vicinity within a 1,500-foot radius of the wireless communication facility site, and including topography (map only), public and private roads, driveways on the subject parcel, buildings and structures, bodies of water, wetlands, landscape features, and historic sites. Draw a 1,500-foot radius circle on the map and aerial photo with the proposed facility at its center and indicate all structures within 1,500 feet of the proposed tower/antennas. Indicate property lines of the proposed tower/facility site parcel and of all parcels and rights-of-way abutting the tower/facility site parcel.
- SCCC 13.10.662(B)(13)(a) - Proposed Site Plan. Proposed wireless communication facility site layout, grading and utilities at a scale no smaller than one inch equals 40 feet (1:480) with topography drawn at a minimum of 10-foot contour intervals, showing existing utilities, property

EXHIBIT H

lines, existing buildings or structures, walls or fence lines, existing trees, areas with natural vegetation, existing water wells, springs, and the boundaries of any wetlands, watercourses and/or floodplains.

- SCCC 13.10.662(B)(13)(b)(iv) - Indicate relative height of the tower/facility as compared to the tops of surrounding trees as they presently exist, and to existing and proposed finished grades.
- SCCC 13.10.662(B)(13)(b)(vi) - A structural professional engineer's written description of the proposed tower/facility structure and its capacity to support additional antennas or other communication facilities at different heights and the ability of the tower to be shortened if future communication facilities no longer require the original height.

Since the Applicant did not provide this required information with the Application, the Zoning Administrator should DENY this Application.

The Zoning Administrator should deny these Applications on the basis that the Applicant(s) did not provide all the required information with the Applications, per the SCCC.

I look forward to hearing back from you and to receive confirmation that this information has been provided to the Zoning Administrator.

Respectfully,
Riley Gerbrandt

--

Riley Gerbrandt, P.E., CPEng(NZ), M.ASCE
Professional Civil & Geotechnical Engineer

Email: Riley.Gerbrandt@gmail.com

EXHIBIT H

From: R Gerbs <riley.gerbrandt@gmail.com>
Sent: Monday, December 10, 2018 8:21 PM
To: Jonathan DiSalvo
Subject: Applications 181099, 18110, 181103 and 181104 - mock-ups

Follow Up Flag: Follow up
Flag Status: Flagged

To the Zoning Administrator,

It is the opinion of the community members of Live Oak (whereby these facilities are proposed) and the group EMF Aware Santa Cruz, that the co-located microcell facilities proposed in Applications 181099, 18110, 181103 and 181104 would - as proposed - create a Major Modification to Visual Impact (as defined by SCC Code 13.10.660(D)) because the proposed cantennas to be sited on top of the existing power poles and the equipment to be installed on the sides of the poles would increase the dimensions and intensity of the existing facilities in such a way that the changes would result in an increase of the visual impact of the facility.

Since these cantennas would be *above* the existing power poles and utility lines, they would make impacts in new and excessive ways with respect to the visual impacts of the facilities as they currently are. The equipment to be mounted on the sides of the poles would look like a "junkyard on a pole", and would increase the visual impact of the pole itself.

Therefore, these Applications should denied and the Applicant instructed - if they want the facility installed - to include on-site visual mock-ups with the new applications in conformance with SCCC 13.10.661(H).

Only when on-site visual mock-ups are erected in conformance with the SSC Code requirements will the Zoning Administrator and the Public be able to properly assess the visual impact of the proposed facilities.

Respectfully,
Riley Gerbrandt

--

Riley Gerbrandt, P.E., CPEng(NZ), M.ASCE
Professional Civil & Geotechnical Engineer

Email: Riley.Gerbrandt@gmail.com

EXHIBIT H

From: Keith Otto <keith_otto@yahoo.com>
Sent: Friday, December 7, 2018 8:10 AM
To: Jonathan DiSalvo
Cc: Steven Guiney; Wanda Williams
Subject: Applications 181098 181099 181100 181103 181104 - Fri Dec 7 2018

Jonathan,

Several important items need to be reviewed and discussed regarding these projects:

Application 181098 APN: (Near) 027-411-34
Application 181099 APN: (Near) 029-031-10
Application 181100 APN: (Near) 029-071-69
Application 181103 APN: (Near) 026-031-44
Application 181104 APN: (Near) 026-681-01

No Staff Reports

No staff reports have been posted for any of these projects (even as of early morning of the scheduled public hearing - Fri Dec 7 2018).

Noticing - Notice of Public Hearing Signs

No 'Notice of Public Hearing' signs have been posted for any of these projects - as required. Reference 18.10.223

Noticing - Notice of Proposed Development Signs

Almost all of the projects do not have a 'Notice of Proposed Development' sign - as required. Application 181098, at one point, did have a sign, but it is no longer present. Application 181100 does have a sign, but it is faced completely away from vehicle traffic and would not qualify as 'clearly seen and readily readable'. Even the lettering on that sign is not code compliant. Reference 18.10.224

Mock Up

No mock ups have been done for these projects. Reference 13.10.662

Shot Clock

The shot clock details need to be examined and carefully evaluated.

Thank you for your attention to these important items.

Regards,
Keith

EXHIBIT H

Riley Gerbrandt, P.E. (Civil)
1742 Grey Seal Road
Santa Cruz, CA 95062
riley.gerbrandt@gmail.com

December 12, 2018

Zoning Administrator
County of Santa Cruz Planning Department
701 Ocean Street, Room 400
Santa Cruz, CA 95060

SUBJECT: Requesting Denial of Applications 181099, 18110, 181103 and 181104

Dear Zoning Administrator:

Verizon, through its consultants, has requested permits to install "small cell" towers in the unincorporated area of Santa Cruz County, namely four locations in Live Oak. One is adjacent to 2688 Mattison Lane in a light industrial (M-1) Planning Zone, one is adjacent to Chanticleer Avenue Park in a Parks, Recreation and Open Space (PR and PR-L) Planning Zone and surrounded by Single-Family Residential (R-1) Planning Zone properties, one is adjacent to 801 Bostick Lane *across the street from Green Acres Elementary School* in a Community Commercial (C-2) Planning Zone and adjacent to Single-Family Residential (R-1) and MultiFamily Residential (RM) zoned properties, and one is adjacent to 1723 Grey Seal Road within a Single-Family Residential (R-1) Planning Zone. These application would begin to lay the groundwork for 5G, which requires a dense network of cell towers. Our group, EMF Aware Santa Cruz, has been told by Verizon that it plans to install 100 5G wireless facilities in our communities in 2019.

The currently proposed facilities would add unsightly equipment, overload poles, devalue property, and increase radio frequency radiation (RFR) in our neighborhoods. Peer-reviewed published science shows RFR can cause a wide range of health problems: sleep problems, heart arrhythmias, anxiety, headaches, ringing in the ears, cancer and more. Peer-reviewed published science shows RFR is harmful to the environment. Children, the elderly, and those already ill are more vulnerable.

EMF Aware Santa Cruz¹ requests the Zoning Administrator deny Applications 181099, 18110, 181103 and 181104 and uphold the County of Santa Cruz's General Plan, Community Health and Wellness Goals, to minimize community exposure to unsafe EMF radiation. We support the County to prioritize wired over wireless for the health, safety, and welfare of our community.

A sister group of ours, EMF Safety Network of Sebastopol, California recently presented Sebastopol with a letter² from attorney Gail Karish of Best Best and Krieger (BBK) which outlines the legal reasons a California agency can deny "small cell" towers in the public rights-of-way. In general, local governments still have some

¹ EMF Aware Santa Cruz is a community action group, whose mission is to educate and empower people by providing science and solutions to reduce EMFs, achieve public policy change, and obtain environmental justice. We have participated in EMF issues at the local, state and federal level.

² <http://emfsafetynetwork.org/wp-content/uploads/2018/04/April-24-2018-Letter-to-EMF-Safety-Network-re-Wireless-c1.pdf>

control over cell towers, including visual impacts and aesthetics, lack of a significant coverage gap, public utilities code protections, land use, and process rights. Please refer to this letter (attached) for ways in which the County of Santa Cruz can legally deny these applications.

"Small cell" is a junkyard on a pole.



"Small cell" towers are not small, they are many feet taller than other telephone poles and loaded with electrical equipment. These photos to the left are of "small cell" towers on Link Lane and Sebastopol Road in Santa Rosa, California.

Overloading poles can cause a tower to fall or spark a fire like what happened in Malibu in 2007. *"When Santa Ana winds swept through the canyon on Oct. 21, 2007, three utility poles next to Malibu Canyon Road toppled and ignited the fire. The blaze burned 3,836 acres and destroyed or damaged dozens of structures and vehicles. The poles were jointly owned by SoCal Edison, AT&T Mobility, Verizon Wireless and NextG Networks of California."*³ (Note the Sebastopol Rd. tower in the photo on the left is newly installed and already leaning.)



³ <http://articles.latimes.com/2013/may/20/local/la-me-ln-edison-admits-errors-in-malibu-fire-settles-now-top-60-million-20130520>

Loss of property value:

Home or business owners risk property value loss where a cell tower is installed in the neighborhood. A survey by the National Institute for Science, Law & Public Policy found that 94 percent of homebuyers are "less interested and would pay less" for a property located near a cell tower or antenna.⁴

Public Utilities Code Section 7901 provides that use of the roads by telephone companies cannot "incommodate the public use of the road..." The phrase "incommodate the public use" in Section 7901 means "to unreasonably subject the public use to inconvenience or discomfort; to unreasonably trouble, annoy, molest, embarrass, inconvenience; to unreasonably hinder, impede, or obstruct the public use."⁵ If ever there was a situation that caused discomfort, or unreasonably troubled residents, it is the case of cell towers near homes. Cell towers emit RFR and peer-reviewed published science shows RFR harms public health and the environment. The International Agency for Research on Cancer at the World Health Organization classifies RFR as a 2B (possible) carcinogen.⁶

Why we cannot rely on the Federal Communications Commission: FCC proceedings 13-84 and 03-137 were initiated to determine whether their RFR exposure limits and policies created in 1996 need to be reassessed. These proceedings which were filed in 2013 remain incomplete. The federal government has taken sole responsibility for the radiation safety of personal wireless service deployment⁷, however, no federal agency is acting responsibly, or being accountable for protecting the public and the environment from the health effects of RFR. The science has evolved greatly since 1996 meanwhile wireless devices have been widely adopted, as well as forced upon the public, for example: cell towers, wireless in schools, and smart meters. This rampant explosion is set to get much worse with 5G, Internet of Things, Smart Cities, radar in cars and more.

The FCC is a regulatory captured agency: Investigative journalist Norm Alster wrote: Captured Agency: How the Federal Communications Commission is dominated by the industries it presumably regulates⁸ published by Harvard University. Alster calls on the FCC to acknowledge there may be wireless health risks, to back off wi-fi promotion, to acknowledge children and pregnant women may be especially vulnerable, and more. He writes, *"Personally, I don't believe that just because something can be done it should heedlessly be allowed. Murder, rape and Ponzi schemes are all doable but subject to prohibition and regulation. Government regulators have the responsibility to examine the consequences of new technologies and act to at least contain some of the worst. Beyond legislators and regulators, public outrage and the courts can also play a role but these can be muffled indefinitely by misinformation and bullying."*

Peer-reviewed published science shows wireless radiation harms public health.

The BioInitiative Reports reference more than 3800 peer-reviewed published studies. Summary of key scientific evidence includes:

- Evidence for Damage to Sperm and Reproduction

⁴ <https://www.businesswire.com/news/home/20140703005726/en/Survey-National-Institute-Science-Law-Public-Policy#.VNRBPp3F-So>

⁵ BBK letter page 2 paragraph 2: <http://emfsafetynetwork.org/wp-content/uploads/2018/04/April-24-2018-Letter-to-EMF-Safety-Network-re-Wireless-c1.pdf>

⁶ LARC/WHO <https://goo.gl/BrkoG8>

⁷ 47 U.S.C. § 332(c)(7); 47 C.F.R. 1.1307(b) and 1.1310, which are based on perceived harm of overheating of human tissues by RFR.

⁸ http://ethics.harvard.edu/files/center-for-ethics/files/capturedagency_alster.pdf

- Evidence that Children are More Vulnerable
- Evidence for Effects on Autism (Autism Spectrum Disorders)
- Evidence for Electrohypersensitivity
- Evidence for Effects from Cell Tower-Level RFR Exposure
- Evidence for Effects on the Blood-brain Barrier
- Evidence for Effects on Brain Tumors
- Evidence for Effects on Genes (Genotoxicity)
- Evidence for Effects on the Nervous System (Neurotoxicity)
- Evidence for Effects on Cancer (Childhood Leukemia, Adult Cancers)
- Melatonin, Breast Cancer and Alzheimer's Disease
- Stress, Stress Proteins and DNA as a Fractal Antenna

"There is now much more evidence of risks to health affecting billions of people world-wide. The status quo is not acceptable in light of the evidence for harm." David O. Carpenter, MD, co- editor Bioinitiative Report. The authors conclude, "EMF and RFR are preventable toxic exposures. We have the knowledge and means to save global populations from multi- generational adverse health consequences by reducing both ELF and RFR exposures. Proactive and immediate measures to reduce unnecessary EMF exposures will lower disease burden and rates of premature death."^{9, 10}

The National Toxicology Program published a 25 million dollar study which is one of the largest and most comprehensive studies on cell phone radiation and cancer in the United States. Results showed that rats exposed to cell phone radiation developed two types of cancers: glioma, a brain tumor, and schwannoma, a heart tumor."¹¹ A recent Italian study produced similar results.¹²

International scientists are calling for immediate measures to reduce RFR. The International EMF Scientist Appeal¹³ signed by 235 scientists from 41 nations warn: *"We are scientists engaged in the study of biological and health effects of non-ionizing electromagnetic fields (EMF). Based upon peer-reviewed, published research, we have serious concerns regarding the ubiquitous and increasing exposure to EMF generated by electric and wireless devices. These include—but are not limited to—radiofrequency radiation (RFR) emitting devices, such as cellular and cordless phones and their base stations, Wi-Fi, broadcast antennas, smart meters, and baby monitors as well as electric devices and infra-structures used in the delivery of electricity that generate extremely-low frequency electromagnetic field (ELF EMF)." "Effects include increased cancer risk, cellular stress,*

⁹ BioInitiative Reports <http://www.sciencedirect.com/science/journal/09284680/16/2-3> and www.bioinitiative.org

¹⁰ http://www.bioinitiative.org/report/wp-content/uploads/pdfs/section_1_table_1_2012.pdf

¹¹ NTP cell phone study, general info <http://ntp.niehs.nih.gov/results/areas/cellphones/index.html> Results of 3/2018 peer review: https://ntp.niehs.nih.gov/ntp/about_ntp/trpanel/2018/march/actions20180328_508.pdf

¹² Report of final results regarding brain and heart tumors in Sprague-Dawley rats exposed from prenatal life until natural death to mobile phone radio frequency field representative of a 1.8GHz GSM base station environmental emission <https://www.sciencedirect.com/science/article/pii/S0013935118300367>

¹³ EMF Scientist appeal <https://www.emfscientist.org/index.php/emf-scientist-appeal>

increase in harmful free radicals, genetic damages, structural and functional changes of the reproductive system, learning and memory deficits, neurological disorders, and negative impacts on general well-being in humans."

The following are quotes from science experts who signed the The International EMF Scientist Appeal.¹⁴

- *"Based upon epidemiological studies there is consistent evidence of increased risk for brain tumors (glioma and acoustic neuroma) associated with use of wireless phones."* Lennart Hardell, MD, PhD University Hospital, Orebro, Sweden
- *"The harmful effects of electromagnetic fields, regardless of their frequencies, are now scientifically settled. Pregnant women (the fetus) and children and adolescents are particularly vulnerable."* - Dominique Belpomme, MD, MPH, Paris V Descartes University, European Cancer & Environment Research Institute.
- *"U.S. regulatory standards and international guidelines only control for short-term heating of tissue. The standards do not protect us from the low-intensity, chronic exposures to electromagnetic fields (EMF) that are common today. The scientists who signed the Appeal request that the UN and member nations protect the global human population, and animal and plant life from EMF exposures. There has been strong support from the international scientific community for the Appeal, even among those who believe that scientists should not take public policy positions. Some have taken personal risks to sign the Appeal because this is a public health issue that affects everyone now, as well as future generations."* Joel Moskowitz, Ph.D., Director of the Center for Family and Community Health, School of Public Health, University of California, Berkeley, USA.

Proximity to RFR antennas is harmful

The following peer-reviewed, published studies examine the adverse effects of wireless radiation in relation to antenna location.

- Biological effects from exposure to electromagnetic radiation emitted by cell tower base stations and other antenna arrays "Both anecdotal reports and some epidemiology studies have found headaches, skin rashes, sleep disturbances, depression, decreased libido, increased rates of suicide, concentration problems, dizziness, memory changes, increased risk of cancer, tremors, and other neurophysiological effects in populations near base stations."¹⁵
- Neurobehavioral effects among inhabitants around mobile phone base stations "The prevalence of neuropsychiatric complaints as headache (23.5%), memory changes (28.2%), dizziness (18.8%), tremors (9.4%), depressive symptoms (21.7%), and sleep disturbance (23.5%) were significantly higher among exposed inhabitants than controls..."¹⁶
- Epidemiological Evidence for a Health Risk from Mobile Phone Base Stations "We found that eight of the 10 studies reported increased prevalence of adverse neurobehavioral symptoms or cancer in populations living at distances < 500 meters from base stations."¹⁷

Peer-reviewed, published science shows RFR harms nature

¹⁴ <https://www.emfscientist.org/index.php/science-policy/expert-emf-scientist-quotations>

The US Department of the Interior states RFR threatens birds, and criticizes the FCC's radiation guidelines, stating, "the electromagnetic radiation standards used by the Federal Communications Commission (FCC) continue to be based on thermal heating, a criterion now nearly 30 years out of date and inapplicable today." Two hundred forty-one bird species suffer mortality risk from both tower collisions and from exposure to the radiation towers emit. This includes birds that are endangered or threatened, Birds of Conservation Concern, migratory birds, and eagles. Studies of radiation impacts on wild birds documented nest abandonment, plumage deterioration and death. Birds studied included House Sparrows, White Storks, Collared Doves, and other species. Studies in laboratories of chick embryos documented heart attacks and death.¹⁸

Scientists in Germany studied tree damage in relation to wireless radiation from 2006-2015. They monitored, observed and photographed unusual or unexplainable tree damage, and measured the radiation which the trees were exposed. "The aim of this study was to verify whether there is a connection between unusual (generally unilateral) tree damage and radio frequency exposure." They found significant differences between the damaged side of a tree facing a phone mast and the opposite side, as well as differences between the exposed side of damaged trees and all other groups of trees in both sides. The scientists concluded, "Statistical analysis demonstrated that electromagnetic radiation from mobile phone masts is harmful for

trees."¹⁹ The following studies show insects are harmed by radiation:

- Food collection and response to pheromones in an ant species exposed to electromagnetic radiation found exposure to radiation caused colony deterioration and affected social insects' behavior and physiology.²⁰
- Oxidative and genotoxic effects of 900 MHz electromagnetic fields in the earthworm concluded radiation caused genotoxic effects and DNA damage in earthworms²¹.
- Mobile Phone Induced Honey Bee Worker Piping. The study abstract states, "The worldwide maintenance of the honeybee has major ecological, economic, and political implications." Cell phone RFR was tested for potential effects on honeybee behavior. Handsets were placed in the close vicinity of honeybees and the sound made by the bees was recorded and analyzed. The information revealed that active cell phone handsets induced the bees worker piping signal. "In natural conditions, worker piping either announces the swarming process of the bee colony or is a signal of a disturbed bee colony." ²²

The following are observations by International scientists of RFR effects on nature²³ :

- "Migratory birds -- incredibly important to the global economy and for the ecological services they provide -- now appear to be negatively affected by non-ionizing radiation." Dr. Albert Manville, Adjunct Professor, Johns Hopkins University; Senior Wildlife Biologist, U.S. Fish & Wildlife Service (FWS), Emeritus/Retired
- "Man-made electromagnetic fields impact all living organisms, acting first on the unit membrane. We must reduce our dependence on 'wireless' technologies, reduce the numbers of masts (i.e., cell towers), of Wi-Fi apparatus, of cordless phones and so on, and clearly indicate, in public spaces, the intensity of the ambient electromagnetic field." Prof. Marie-Claire Cammaerts, PhD., Free University of Brussels, Faculty of Science, Belgium.

Riley Gerbrandt, Personal Letter
Requesting Denial of Applications 181099, 18110, 181103 and 181104

5G millimeter waves are harmful

The desired future of the telecommunications industry is 5G which incorporates millimeter waves. A 5G deployment would require many cell towers close together throughout communities. Peer-reviewed published science shows millimeter waves penetrate the skin and affect human health.²⁴ A meta-analysis of studies on millimeter waves (MMWs) "State of knowledge on biological effects at 40–60 GHz"²⁵ states, "At the cellular level, it stands out from the literature that skin nerve endings are probably the main targets of MMWs and the possible starting point of numerous biological effects." Effects reviewed include effects on capillaries and nerve endings, protein insults, epigenetic regulation, and the risk of homeostasis disruption, which would have dramatic consequences. In addition, millimeter wave technology has been developed as a crowd control weapon which causes acute burning pain, as if the body is on fire.²⁶

International independent scientists have called for a moratorium on the deployment of 5G²⁷. They state, "We the undersigned, more than 180 scientists and doctors from 35 countries, recommend a moratorium on the roll-out of the fifth generation, 5G, for telecommunication until potential hazards for human health and the environment have been fully investigated by scientists independent from industry."

Conclusion

The telecommunication industry's unbounded profit motive should never outweigh the safety and well being of the public and our environment! Communications are safer using wired and corded connections. Please deny Verizon's cell tower application. These facilities are not consistent with the County of Santa Cruz's goals in its purpose for writing the section of its Code that pertains to wireless facilities. These facilities are significant visual impacts to our neighborhoods, decrease property values, are ugly (non-aesthetic), and are better sited in locations not within or near residentially zoned areas or parks. Deny them.

Respectfully,

Riley Gerbrandt, P.E. (civil)
Legislative Outreach Committee Chair
EMF Aware Santa Cruz
and
Private Resident at
1742 Grey Seal Road
Santa Cruz, CA 95062
riley.gerbrandt@gmail.com

¹⁵<http://www.nrcresearchpress.com/doi/pdf/10.1139/A10-018?src=recsys&>

¹⁶ Neurobehavioral effects among inhabitants around mobile phone base stations <https://www.ncbi.nlm.nih.gov/pubmed/16962663>

Riley Gerbrandt, Personal Letter

Requesting Denial of Applications 181099, 18110, 181103 and 181104

¹⁷ Epidemiological Evidence for a Health Risk from Mobile Phone Base Stations <https://goo.gl/Zz6dhk>

¹⁸ US Department of Interior letter and background: http://www.ntia.doc.gov/files/ntia/us_doi_comments.pdf

¹⁹ Radiofrequency radiation injures trees around mobile phone base stations. <https://www.ncbi.nlm.nih.gov/pubmed/27552133?dopt=Abstract#>

²⁰ Food collection and response to pheromones in an ant species exposed to electromagnetic radiation <https://www.ncbi.nlm.nih.gov/pubmed/23320633>

²¹ Oxidative and genotoxic effects of 900 MHz electromagnetic fields in the earthworm *Eisenia fetida*. <https://www.ncbi.nlm.nih.gov/pubmed/?term=23352129>

²² <https://link.springer.com/article/10.1007/s13592-011-0016-x>

²³ <https://www.emfscientist.org/index.php/science-policy/expert-emf-scientist-quotations>

²⁴ State of knowledge on biological effects at 40–60 GHz <https://goo.gl/gbBKHL>

²⁵ C. R. Physique 14 (2013) 402–411

²⁶ US Military Active Denial System <http://inlwp.defense.gov/About/Frequently-Asked-Questions/Active-Denial-System-FAQs/>

²⁷ <http://emfsafetynetwork.org/wp-content/uploads/2017/11/Scientist-5G-appeal.pdf>

From: Paul Desomma <blakerdesomma@mac.com>
Sent: Wednesday, December 12, 2018 4:51 PM
To: Jonathan DiSalvo
Subject: Letter

Follow Up Flag: Follow up
Flag Status: Flagged

To Zoning Administration of Santa Cruz County,

Please submit the following letter in regards to the pending applications for Verizon wireless facilities.

This letter is in regards to the current applications by Verizon for small cell installations in the County.
(Applications 181099, 18110, 181103, 18110)

According to county code, residential districts are "prohibited districts." The applicant, has not shown adequate alternate sites for those proposed in residential areas.

The applicant has not shown the need for these installations to close a "gap in coverage".

The public has not been given timely information as to the appearance of these installations..

The Zoning Administration should not decide until the public has a fair opportunity to address the aesthetics.

There are potential safety and fire hazard impacts that aren't addressed.

Lastly and most important, the members of the public have not given their consent to any of this.

County residents deserve more consideration from our officials, rather than having them defer to blatant corporate interests over the needs and concerns of the community.

Marsha Blaker
Live Oak Resident

Joshua Logan
2192 Persimmon Ct.
Santa Cruz, CA 95062
(831) 334-2221
joshblogan@gmail.com

December 13, 2018

Zoning Administrator, c/o Jonathan DiSalvo
Santa Cruz County Planning Commission
701 Ocean St
Santa Cruz, CA 95060

RE: Application 181100

I have reviewed the application for project #181100 and find that, if approved, the project would violate numerous sections the Santa Cruz County Code (SCCC). As proposed, it does not meet the definition of a "Microcell site" as defined in the SCCC. Additionally, the application is missing required items and does not describe any alternatives analysis as required by SCCC. This application should be denied on these grounds.

1. Proposed equipment does not meet SCCC 13.10.660 (D) definition of a "Microcell site":

- Under the definition, *"antenna must be one omni-directional whip antenna with a maximum length of five feet, or up to three small (approximately one foot by two feet or one foot by four feet) directional panel antennas..."*
- Maximum approved antenna size would be 12" x 48" (12.57 ft³)
- The proposed antenna is a 14.6" diameter x 48" long omnidirectional cylindrical "cantenna" (18.7 ft³).
- This is almost **50% larger by volume** than the size listed in the SCCC definition.
- This is a cylindrical antenna, not a whip antenna.
- A 1 ft. high antenna mount with the same diameter (14.6") would be added to bottom, bringing overall height to 5 ft. (23.38 ft³).
- All public notifications incorrectly referred to this proposal as a "Microcell wireless communication facility", the definition for which it does not meet.

- 2. The application fails to prove that the project will not significantly affect any Significant County resources, including... open space, and community character resources," SCCC 13.10.665 (A).**
 - The project would have a significant negative visual impact at a County Park (Chanticleer Park), and on LEO'S Haven playground, which is the first and only inclusive playground designed for children with disabilities.
 - The project is located 150 ft. from a designated historic site (Historic Miller House), with zoning PR-L.
- 3. The application fails to prove that there are no other "equivalent alternatives... with less visual and/or other resource impacts," SCCC 13.10.665 (A).**
 - Suitable alternative sites exist within 0.4 miles, yet no evidence of any alternatives analysis was submitted with the application.
- 4. The applicant did not submit an alternatives analysis as described by SCCC 13.10.662(C) as required under SCCC 13.10.661 (B-4).**
 - SCCC 13.10.661 Section B-4 requires that applicants proposing new facilities in prohibited areas must submit an alternative analysis as described by SCCC 13.10.662(C).
 - No evidence of the required alternatives analysis was provided in the application.
- 5. The application is missing numerous items required by SCCC 13.10.662(B).**
 - No description of the providers existing wireless facilities network was provided as required by SCCC 13.10.662(B-5).
 - No description of the wireless services that the applicant intends to provide was provided as required by SCCC 13.10.662(B-6).
 - No computer photo simulations of the proposed installation were provided as required by SCCC 13.10.662(B-11).
 - No aerial photo and map with 1:2,400 scale, with "1,500 ft. radius circle" was provided in the application as required by SCCC 13.10.662(B-12-b).
 - No 1:24,000 topographic map was provided in the application as required by SCCC 13.10.662(B-12-a).
- 6. Proposed site is surrounded on 3 sides by parcels zoned R-1, which is a "Prohibited Area" as defined by SCCC 13.10.661 (B-1). On the 4th side, it borders parcels with zone PR and is 150 ft from a parcel with "historic landmark" designation, zone PR-L (Historic Miller House).**
 - Wireless communication facilities are prohibited in these zoning districts unless a Telecommunications Act exception is approved pursuant to SCCC 13.10.668.

7. The applicant provides no evidence of Telecommunications Act exceptions or any alternatives analysis, as required by SCCC 13.10.668.

- Under this code, the *".. applicant shall have the burden of proving that application of (a) requirement or limitation would violate the Federal Telecommunications Act, and that no alternatives exist which would render the approval of a Telecommunications Act exception unnecessary. [Ord. 4769 § 2, 2004; Ord. 4743 § 2, 2003; Ord. 4714 § 2, 2003]."*
- The applicant provides no proof that requirements in the SCCC 13.10.660 through 13.10.668 would violate the Federal Telecommunications Act.
- The applicant provides no evidence of any alternatives analysis to prove that *"..no alternatives exist which would render the approval of a Telecommunications Act exception unnecessary"*.

8. The application incorrectly lists the height of nearby trees on sheet C.1

- Trees in APN 029-071-69 are labeled as "Avg." height 110'.
- Actual measurement of trees shows height of tallest adjacent redwood to be 68 ft.
- The height of the proposed new utility pole and antenna is 64 ft.; this is only 4 feet shorter than tallest tree in the area. The proposed antenna would dominate the public viewshed in this area.

9. The proposed project would fail to meet the General Requirements provisions of SCCC 13.10.661 (B), and the Site Selection requirements of SCCC 13.10.661 (F).

- It would clearly be visible from public vantage points.
- It would not be screened or camouflaged to be inconspicuous, nor would it blend seamlessly into the existing public view.
- It would not be sited in the "least visually obtrusive location".

I find that the proposed project would present an unacceptable visual impact for the public, area residents, and all future users of Chanticleer Park and LEOs Haven playground. The height of the existing pole would be increased by 35%, and equipment enclosures would be hung 8 ft. over the narrow sidewalk. The only attempt the applicants would make to mitigate this impact would be to paint the boxes brown.

Because no photo-simulation was provided in the application, I produced one to scale, shown below. This clearly shows the negative street-level impact that would result from this project. In addition, the increased height of the proposed installation would make it nearly the tallest object in the vicinity. It would dominate the public viewshed for the entire area, creating an extremely negative visual impact on a County Park.

The application should be denied because of this, and because of the numerous problems outlined above. Thank you for your time.

Sincerely,
Joshua Logan

