

Case File Number: PLN16-393

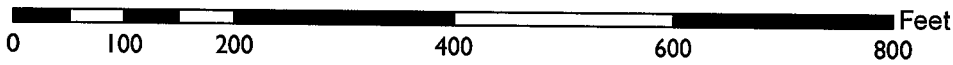
March 1, 2017

Location:	The Public Right-of-Way Adjacent to 1266 83rd Ave. (See map on reverse)
Assessor Parcel Numbers:	Nearest adjacent lot (042 425602601)
Proposal:	To establish a telecommunications facility, to enhance existing services, by attaching an antenna and equipment to an existing wooden utility pole located in the public right-of-way (sidewalk). The 45' wooden utility pole is existing.
Applicant:	Extenet Systems (California) LLC. (for T-Mobile USA, INC)
Contact Person/ Phone Number:	Ana Gomez (913) 458-9148
Owner:	Joint Pole Authority (JPA) including PG&E
Case File Number:	PLN16-393
Planning Permits Required:	Major Design Review to install a wireless Telecommunication Macro Facility on a PG&E replacement pole located in RM-1 Zone.
General Plan:	Mixed Housing Type
Zoning:	RM-1 Mixed Housing Type Residential Zone.
Environmental Determination:	Exempt, Section 15303 of the State CEQA Guidelines; New construction or conversion of small structures. Exempt, Section 15183 of the State CEQA Guidelines; Projects consistent with a Community Plan, General Plan or Zoning.
Historic Status:	Not a Potential Designated Historic Property; Survey rating: n/a
City Council District:	7
Finality of Decision:	Appealable to City Council within 10 Days
For Further Information:	Contact case Planner Danny Thai at (510) 238-3584 or dthai@oaklandnet.com

SUMMARY

The project applicant (Extenet Systems) is proposing to install a wireless telecommunication facility on a PG&E utility pole located in the public right-of-way near 1266 83rd Avenue. The project involves installation of one canister antenna on a existing 45' tall wood utility pole. The installation of one canister antenna would measure 23.5" long and 7.9" in diameter at the height of 18' and two radio units (7.9" tall, 7.9" wide and 3.9" depth) mounted at the height of 10'-6" and 13'-11" above ground . The proposed antenna and associated related equipment are compatible with the PG&E utility pole. The proposed antenna would be extended toward the street and painted matte silver. As a result, the proposed telecommunications facility is an appropriate location and would not significantly increase negative visual impacts to adjacent neighboring residential properties. The project meets all the required findings for approval of the project. Staff recommends approval, subject to the conditions described in this report.

CITY OF OAKLAND PLANNING COMMISSION



Case File: PLN16393

Applicant: Extenet Systems (California) LLC. (for T-Mobile USA, INC)

Address: The Public Right-of-Way Adjacent to 1266 83rd Avenue

Zone: RM-1

BACKGROUND

For several years in the City of Oakland, telecommunications carriers have proposed facility installation within the public right-of-way, instead of private property. These facilities typically consist of antennas and associated equipment attached to utility poles or street light poles. Poles are often replaced with replicas for technical purposes. The main purpose is to enhance existing service, given increasing technological demands for bandwidth, through new technology and locational advantages. The City exercises zoning jurisdiction over such projects in response to a 2009 State Supreme Court case decision (*Sprint v. Palos Verdes Estates*). Under the Planning Code, utility or joint pole authority (JPA) sites are classified by staff as "Macro Facilities," and street light pole sites (lamps, not traffic signals) as "Monopole Facilities." For JPA poles, only Design Review approval may be required, as opposed to Design Review and a Conditional Use Permit, for example. For non-JPA pole sites, such as City light poles, projects also require review by the City's Public Works Agency (PWA) and Real Estate Division and involve other considerations such as impacts to historical poles. The PWA may also review projects involving street lights. In either case, the practice has been to refer all such projects to the Planning Commission for decision when located in or near a residential zone.

Several projects for new DAS (distributed antenna services) facilities have come before the Planning Commission for a decision and have been installed throughout the Oakland Hills. Some applications have been denied due to view obstructions or propinquity to residences. Improved practices for the processing of all types of sites incorporating Planning Commission direction have been developed as a result. Conditions of approval typically attach requirements such as painting and texturing of approved components to more closely match utility poles in appearance. Approvals do not apply to any replacement project should the poles be removed for any reason. As with sites located on private property, the Federal Government precludes cities from denying an application on the basis of emissions concerns if a satisfactory emissions report is submitted. More recent Federal changes have streamlined the process to service existing facilities.

Currently, telecommunications carriers are in the process of attempting to deploy "small cell sites." These projects also involve attachment of antennas and equipment at public right-of-way facilities such as poles or lights for further enhancement of services. However, components are now somewhat smaller in size than in the past. Also, sites tend to be located in flatland neighborhoods and Downtown where view obstructions are less likely to be an issue. Good design and placement are given full consideration nonetheless, especially with the greater presence of historic structures in Downtown. Additionally, given the sheer multitude of applications, and, out of consideration for Federal requirements for permit processing timelines, staff may develop alternatives to traditional staffing and agendas.

Limitations on Local Government Zoning Authority under the Telecommunications Act of 1996

Section 704 of the Telecommunications Act of 1996 (TCA) provides federal standards for the siting of "Personal Wireless Services Facilities." "Personal Wireless Services" include all commercial mobile services (including personal communications services (PCS), cellular radio mobile services, and paging); unlicensed wireless services; and common carrier wireless exchange access services. Under Section 704, local zoning authority over personal wireless

services is preserved such that the FCC is prevented from preempting local land use decisions; however, local government zoning decisions are still restricted by several provisions of federal law. Specifically:

- Under Section 253 of the TCA, no state or local regulation or other legal requirement can prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service.
- Further, Section 704 of the TCA imposes limitations on what local and state governments can do. Section 704 prohibits any state and local government action which unreasonably discriminates among personal wireless providers. Local governments must ensure that its wireless ordinance does not contain requirements in the form of regulatory terms or fees which may have the “effect” of prohibiting the placement, construction, or modification of personal wireless services.
- Section 704 also preempts any local zoning regulation purporting to regulate the placement, construction and modification of personal wireless service facilities on the basis, either directly or indirectly, on the environmental effects of radio frequency emissions (RF) of such facilities, which otherwise comply with Federal Communications Commission (FCC) standards in this regard (See 47 U.S.C. Section 332(c)(7)(B)(iv)(1996)). This means that local authorities may not regulate the siting or construction of personal wireless facilities based on RF standards that are more stringent than those promulgated by the FCC.
- Section 704 mandates that local governments act upon personal wireless service facility siting applications to place, construct, or modify a facility within a reasonable time (See 47 U.S.C.332(c)(7)(B)(ii) and the FCC Shot Clock ruling setting forth “reasonable time” standards for applications deemed complete).
- Section 704 also mandates that the FCC provide technical support to local governments in order to encourage them to make property, rights-of-way, and easements under their jurisdiction available for the placement of new spectrum-based telecommunications services. This proceeding is currently at the comment stage.

For more information on the FCC’s jurisdiction in this area, consult the following:

Competition & Infrastructure Policy Division (CIPD) of the Wireless Telecommunications Bureau, main division number: (202) 418-1310.

Main division website: <https://www.fcc.gov/general/competition-infrastructure-policy-division-wireless-telecommunications-bureau>

Tower siting: <https://www.fcc.gov/general/tower-and-antenna-siting>

SITE DESCRIPTION

The existing 45' tall PG&E utility pole is located in the City of Oakland public right-of-way and is 27'-8" away from an adjacent one-story residential building located at 1266 83rd Avenue.

PROJECT DESCRIPTION

The applicant proposes to install a wireless telecommunication facility on a PG&E utility pole located in the public right-of-way near 1266 83rd Avenue. The project involves installation of one canister antenna on a existing 45' tall wood utility pole. The installation of one canister antenna would measure 23.5" long and 7.9" in diameter at the height of 18' and two radio units (7.9" tall, 7.9" wide and 3.9" depth) mounted at the height of 10'-6" and 13'-11" above ground (See Attachment C).

GENERAL PLAN ANALYSIS

The site is classified as Mixed Housing Type per the Oakland General Plan's Land Use and Transportation Element (LUTE). This classification is intended to create, maintain, and enhance residential areas typically located near the City's major arterials and characterized by a mix of single-family homes, townhouses, small multi-unit buildings, and neighborhood business where appropriate. According to the LUTE, "Future development within this classification should be primarily residential in character."

The proposed unmanned wireless telecommunication facility will not adversely affect and detract from the characteristics of the neighborhood. The proposed new pole is similar to other utility poles within the same block. The proposed antenna and associated related equipment are compatible with the typical utilities located on these poles. As a result, the proposal is an appropriate location for the proposed telecommunication facility and would not significantly increase negative visual impacts to adjacent neighboring residential properties.

ZONING ANALYSIS

The proposed telecommunications facility is located within the RM-1 Mixed Housing Type Residential Zone. The intent of the RM-1 Zone is to create, maintain, and enhance residential areas typically located on or near the City's major arterials and characterized by a mix of single family homes, duplexes, and neighborhood businesses where appropriate.

Section 17.136.040 and 17.128.070 of the City of Oakland Planning Code requires a Major Design Review permit for Macro Telecommunication facilities that are attached to utility poles in the RM-1 Zone or that are located within one hundred (100) feet of the boundary of any residential zone. Special findings are also required for Design Review approval to ensure that the facility is concealed to the greatest extent possible. The project design is discussed later in the *Key Issues and Impacts* section of this report, and the required findings for Major Design Review are listed and included in staff's evaluation later in the *Findings* section of this report.

ENVIRONMENTAL DETERMINATION

The California Environmental Quality Act (CEQA) Guidelines list the projects that qualify as categorical exemptions from environmental review. The proposed project is categorically exempt from the environmental review requirements pursuant to Section 15303 for installation of telecommunication facility (small structure) on a new proposed public utility pole. Furthermore, the project is also exempt per Section 15183, for projects consistent with a community plan, general plan or zoning.

KEY ISSUES AND IMPACTS

Project Site

Section 17.128.070A of the City of Oakland Telecommunications Regulations requires that new macro telecommunications facilities shall generally be designed according to the following development guidelines, followed by staff's analysis in relation to this application:

- A. The Macro Facilities shall be located on existing buildings, poles or other existing support structures, or shall be post mounted.
- B. The equipment shelter or cabinet must be concealed from public view or made compatible with the architecture of the surrounding structures or placed underground. The shelter or cabinet must be regularly maintained.
- C. Macro Facilities may exceed the height limitation specified for all zones but may not exceed fifteen (15) feet above the roof line or parapet. Placement of an antenna on a nonconforming structure shall not be considered to be an expansion of the nonconforming structure.
- D. Ground post mounted Macro Facilities must not exceed seventeen (17) feet to the top of the antenna.
- E. The applicant shall submit written documentation demonstrating that the emissions from the proposed project are within the limits set by the Federal Communications Commission.

The facility involves attachment to an existing utility pole hosting power lines and a City street light. Recommended conditions of approval require painting and texturing the antenna matte silver and all components matte brown to match the appearance of the wooden utility pole and power line posts. The proposal does not involve attachment to a roofed structure, exceed fifteen (15) feet above the roof line of the adjacent property, or involve a ground post mounted facility. A satisfactory emissions report has been submitted and is attached to this report (See Attachment F).

Project Site

Section 17.128.110 of Oakland's Telecommunication Regulations requires that new wireless facilities shall generally be located on designated properties or facilities in the following order of ranked preference:

- A. Co-located on an existing structure or facility with existing wireless antennas.

- B. City owned properties or other public or quasi-public facilities.
- C. Existing commercial or industrial structures in non-residential zones (excluding all HBX Zones and the D-CE3 and D-C-4 Zones).
- D. Existing commercial or industrial structures in residential zones, HBX Zones, or the D-CE-3 or D-CE-4 Zones.
- E. Other non-residential uses in residential zones, HBX Zones, or the D-CE-3 or D-CE-4 Zones.
- F. Residential uses in non-residential zones. (excluding all HBX Zones and the D-CE-3 and D-CE-4 Zones).
- G. Residential uses in residential zones, HBX Zones, or the D-CE-3 or D-CE-4 Zones.

Facilities sited on an A, B or C ranked preferences do not require a site alternatives analysis. Facilities proposing to locate on a D through G ranked preference, inclusive, must submit a site alternatives analysis as part of the required application materials. Since the proposed project involves the replacement of existing wood utility pole with a new PG&E pole within the public right-of-way and installation of a new antenna and radio units within RM-1 Zone, the proposed project meets B preferences and hence a site alternatives analysis is not required. However, the applicant has submitted an analysis which is attached (See Attachment E).

Extenet System considered alternative sites on other utility poles in this area, but none of these are as desirable from a service coverage or aesthetics perspective (See Attachment E). The proposed location is approximately equidistant from other Distributed Antenna System (DAS) nodes proposed in the surrounding area so that service coverage can be evenly distributed. The staff has reviewed the applicant's alternative sites analysis (See Attachment E) and determined that the site selected conforms to the telecommunication regulation requirements. Furthermore, staff agrees that the proposed site is the most preferable location for the new telecommunications facility.

Project Design

Section 17.128.120 of the City of Oakland Telecommunications Regulations requires that new wireless facilities shall generally be designed in the following order of ranked preference:

- A. Building or structure mounted antennas completely concealed from view.
- B. Building or structure mounted antennas set back from roof edge, not visible from public right-of-way.
- C. Building or structure mounted antennas below roof line (facade mount, pole mount) visible from public right-of-way, painted to match existing structure.
- D. Building or structure mounted antennas above roof line visible from public right-of-way.
- E. Monopoles.
- F. Towers.

Facilities designed to meet an A and B ranked preference do not require a site design alternatives analysis. Facilities designed to meet C through F ranked preference, inclusive, must submit a site design alternatives analysis as part of the required application materials. A site design alternatives analysis shall, at a minimum, consist of:

Written evidence must indicate why each higher preference design alternative cannot be used. Such evidence shall be in sufficient detail that independent

verification could be obtained if required by the City of Oakland Zoning Manager. Evidence should indicate if the reason an alternative was rejected was technical (e.g. incorrect height, interference from existing RF sources, inability to cover required area) or for other concerns (e.g. inability to provide utilities, construction or structural impediments).

Since the proposed project does not meet preference A and B, a site design alternatives analysis is required. The proposal most closely conforms to 'C' (structured mounted antennas below roof line), and the applicant has submitted a satisfactory site design alternatives analysis (See Attachment E).

Extenet System evaluated whether the equipment could be undergrounded but unfortunately this is not possible because there is insufficient right-of-way space for the necessary equipment access and the equipment would be compromised by rainwater saturation. The proposed antenna design is approximately equidistant from other DAS nodes proposed in the surrounding area so that service coverage can be evenly distributed. The proposed design is a good option because the facility is located where a signal can be adequately propagated without obstruction, which could not have been the case if the antenna was located on a building or concealed. The proposed screened antenna and associated equipment will be concealed to the extent possible by painting to match the wooden utility pole. The proposal would not significantly increase negative visual impacts to adjacent neighboring residential properties.

Project Radio Frequency Emissions Standards

Section 17.128.130 of the City of Oakland Telecommunication Regulations requires that the applicant submits the following verifications including requests for modifications to existing facilities:

a. The Telecommunications regulations require that the applicant submit written documentation demonstrating that the emission from the proposed project are within the limits set by the Federal Communications Commission. In the document (attachment B) prepared by Hammett & Edison Consulting Engineers Inc. the proposed project was evaluated for compliance with appropriate guidelines limiting human exposure to radio frequency electromagnetic fields. According to the report on the proposal, the project will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, the proposed site will operate within the current acceptable thresholds as established by the Federal Government or any such agency that may be subsequently authorized to establish such standards.

b. Prior to final building permit sign off, an RF emissions report indicating that the site is actually operating within the acceptable thresholds as established by the Federal government or any such agency who may be subsequently authorized to establish such standards.

The RF emissions report, prepared by Hammett & Edison Consulting Engineers Inc was submitted with the initial application (See Attachment F). The report states that the proposed project will comply with the prevailing standards for limiting public exposure to

radio frequency energy, and therefore, will not cause a significant impact on the environment. Furthermore, staff recommends that before the final building permit sign off, the applicant submits a certified RF emissions report stating that the facility is operating within acceptable thresholds established by the federal regulatory agency.

CONCLUSION

The proposed project meets all of the required findings for Design Review approval. The proposal will provide essential telecommunication services to the community and the City of Oakland at large. It will also be available to emergency services such as police, fire department and emergency response teams. Staff requested that the applicant provides a "slimmer" design consisting of tucking the antenna in closer to the pole. The applicant responded that this was not feasible due to the technological requirements by the Public Utilities Commission (See Attachment G). Staff, therefore, finds the proposal to provide an essential service with a least-intrusive possible design. Draft conditions of approval stipulate that the components be painted and textured to match the wooden utility pole in appearance for camouflaging.

RECOMMENDATIONS:


1. Affirm staff's environmental determination
2. Approve Major Design Review application, subject to the attached findings and conditions of approval.

Prepared by:




Danny Thai
Planner I

Reviewed by:



Scott Miller
Zoning Manager

Approved for forwarding to the
City Planning Commission



Darin Ranelletti, Interim Director
Bureau of Planning and Building

ATTACHMENTS:

- A. Findings
- B. Conditions of Approval
- C. Plans dated September 29, 2016
- D. Applicant's Photo-Simulations
- E. Site Alternatives Analysis/Site Design Alternatives Analysis dated October 20, 2016
- F. RF Emissions Report by Hammett & Edison, Inc. dated October 17, 2016
- G. CPUC Compliance Letter dated November 18, 2016
- H. Applicant-proof of public notification posting

FINDINGS FOR APPROVAL

This proposal meets the required findings under Section 17.136.050 (B) (Non-Residential Design Review criteria); and, 17.128.060(B) (Telecommunications Macro Facilities 17.128.070 (B), as set forth below. Required findings are shown in **bold** type; reasons proposal satisfies them are shown in normal type.

17.136.050(B) – NONRESIDENTIAL DESIGN REVIEW CRITERIA:

1. That the proposal will help achieve or maintain a group of facilities which are well related to one another and which, when taken together, will result in a well-composed design, with consideration given to site, landscape, bulk, height, arrangement, texture, materials, colors, and appurtenances; the relation of these factors to other facilities in the vicinity; and the relation of the proposal to the total setting as seen from key points in the surrounding area. Only elements of design which have some significant relationship to outside appearance shall be considered, except as otherwise provided in Section 17.136.060;

The project involves the installation of a new wireless Telecommunication facility on an existing 45' tall wood PG&E utility pole located in the public right-of-way. The attachment of a small antenna and equipment to a non-historic utility pole, painted and texturized to match the wooden pole and power line posts in appearance for camouflaging will be the least intrusive design.

2. That the proposed design will be of a quality and character which harmonizes with, and serves to protect the value of, private and public investments in the area;

The pole will be similar to other wood PG&E poles. The proposed antennas and radio units will be typical of the utility equipment found on poles: located high up on the pole, oriented toward the street and painted to match with the new replaced PG&E utility pole. Therefore, the facility will not adversely affect and detract from residential characteristics of the neighborhood.

3. That the proposed design conforms in all significant respects with the Oakland General Plan and with any applicable design review guidelines or criteria, district plan, or development control map which have been adopted by the Planning Commission or City Council.

The site is classified as Mixed Housing Type per the Oakland General Plan's Land Use and Transportation Element (LUTE). This classification is intended to create, maintain, and enhance residential areas typically located near the City's major arterials and characterized by a mix of single-family homes, townhouses, small multi-unit buildings, and neighborhood business where appropriate. According to the LUTE, "Future development within this classification should be primarily residential in character."

Section 17.128.120 of the City of Oakland Telecommunications Regulations describes the design criteria for wireless facilities. In general, these facilities should either be concealed from view or not visible from the public right of way. Since the project did not meet either ranked criteria, but did meet criteria D as also described in 17.128.120, an alternative site design study needed to be undertaken. The analysis shows that the proposed new pole is similar to other utility poles within the same block. The proposed antenna and associated related equipment are compatible with and

typical of the utility equipment on these poles, the proposed antenna will be extended toward the street and away from the home at 1266 83rd Avenue, and painted to match the pole. As result, the proposal is consistent telecommunication regulation requirements, in an appropriate location, and of an appropriate design that would not significantly increase negative visual impacts to adjacent neighboring residential properties

17.128.070(B) DESIGN REVIEW CRITERIA FOR MACRO FACILITIES

1. Antennas should be painted and/or textured to match the existing structure:

The antenna will be painted and texturized matte silver to match the power line posts in appearance for camouflaging to reduce visual impact as required by conditions of approval.

2. Antennas mounted on architecturally significant structures or significant architectural details of the building should be covered by appropriate casings which are manufactured to match existing architectural features found on the building:

The proposed antenna and equipment will not be mounted onto an architecturally significant structure but a proposed new wooden utility pole.

3. Where feasible, antennas can be placed directly above, below or incorporated with vertical design elements of a building to help in camouflaging:

The proposal antennas will be placed above and vertically in line with, the proposed utility pole and painted matte silver to blend with the surroundings.

4. Equipment shelters or cabinets shall be screened from the public view by using landscaping, or materials and colors consistent with surrounding backdrop:

The associated equipment cabinets will be located within a shroud attached to a replaced utility pole and painted to match the proposed wooden pole to minimize visual impacts on the neighboring properties.

5. Equipment shelters or cabinets shall be consistent with the general character of the area.

See above finding # 4

6. For antennas attached to the roof, maintain a 1:1 ratio for equipment setback; screen the antennas to match existing air conditioning units, stairs, or elevator towers; avoid placing roof mounted antennas in direct line with significant view corridors.

N/A

7. That all reasonable means of reducing public access to the antennas and equipment has been made, including, but not limited to, placement in or on buildings or structures, fencing, anti-climbing measures and anti-tampering devices.

The proposed screened antenna will be mounted at the height of 18' on a replaced PG&E utility pole and will not be accessible to the public due to its location. The radio units' equipment will be attached to the pole 10'-6" and 13'-11" above the ground. The lowest height of the facility's equipment is 7'- 4" above the ground.

ATTACHMENT B

CONDITIONS OF APPROVAL

PLN16-393

STANDARD CONDITIONS:

1. Approved Use

The project shall be constructed and operated in accordance with the authorized use as described in the approved application materials, **PLN16-393** and submitted plans dated September 29, 2016, as amended by the following conditions of approval and mitigation measures, if applicable (“Conditions of Approval” or “Conditions”).

2. Effective Date, Expiration, Extensions and Extinguishment

This Approval shall become effective immediately, unless the Approval is appealable, in which case the Approval shall become effective in ten calendar days unless an appeal is filed. Unless a different termination date is prescribed, this Approval shall expire **two calendar years** from the Approval date, or from the date of the final decision in the event of an appeal, unless within such period all necessary permits for construction or alteration have been issued, or the authorized activities have commenced in the case of a permit not involving construction or alteration. Upon written request and payment of appropriate fees submitted no later than the expiration date of this Approval, the Director of City Planning or designee may grant a one-year extension of this date, with additional extensions subject to approval by the approving body. Expiration of any necessary building permit or other construction-related permit for this project may invalidate this Approval if said Approval has also expired. If litigation is filed challenging this Approval, or its implementation, then the time period stated above for obtaining necessary permits for construction or alteration and/or commencement of authorized activities is automatically extended for the duration of the litigation.

3. Compliance with Other Requirements

The project applicant shall comply with all other applicable federal, state, regional, and local laws/codes, requirements, regulations, and guidelines, including but not limited to those imposed by the City’s Bureau of Building, Fire Marshal, and Public Works Department. Compliance with other applicable requirements may require changes to the approved use and/or plans. These changes shall be processed in accordance with the procedures contained in Condition #4.

4. Minor and Major Changes

- a. Minor changes to the approved project, plans, Conditions, facilities, or use may be approved administratively by the Director of City Planning.
- b. Major changes to the approved project, plans, Conditions, facilities, or use shall be reviewed by the Director of City Planning to determine whether such changes require

submittal and approval of a revision to the Approval by the original approving body or a new independent permit/approval. Major revisions shall be reviewed in accordance with the procedures required for the original permit/approval. A new independent permit/approval shall be reviewed in accordance with the procedures required for the new permit/approval.

5. Compliance with Conditions of Approval

- a. The project applicant and property owner, including successors, (collectively referred to hereafter as the “project applicant” or “applicant”) shall be responsible for compliance with all the Conditions of Approval and any recommendations contained in any submitted and approved technical report at his/her sole cost and expense, subject to review and approval by the City of Oakland.
- b. The City of Oakland reserves the right at any time during construction to require certification by a licensed professional at the project applicant’s expense that the as-built project conforms to all applicable requirements, including but not limited to, approved maximum heights and minimum setbacks. Failure to construct the project in accordance with the Approval may result in remedial reconstruction, permit revocation, permit modification, stop work, permit suspension, or other corrective action.
- c. Violation of any term, Condition, or project description relating to the Approval is unlawful, prohibited, and a violation of the Oakland Municipal Code. The City of Oakland reserves the right to initiate civil and/or criminal enforcement and/or abatement proceedings, or after notice and public hearing, to revoke the Approval or alter these Conditions if it is found that there is violation of any of the Conditions or the provisions of the Planning Code or Municipal Code, or the project operates as or causes a public nuisance. This provision is not intended to, nor does it, limit in any manner whatsoever the ability of the City to take appropriate enforcement actions. The project applicant shall be responsible for paying fees in accordance with the City’s Master Fee Schedule for inspections conducted by the City or a City-designated third-party to investigate alleged violations of the Approval or Conditions.

6. Signed Copy of the Approval/Conditions

A copy of the Approval letter and Conditions shall be signed by the project applicant, attached to each set of permit plans submitted to the appropriate City agency for the project, and made available for review at the project job site at all times.

7. Blight/Nuisances

The project site shall be kept in a blight/nuisance-free condition. Any existing blight or nuisance shall be abated within 60 days of approval, unless an earlier date is specified elsewhere.

8. Indemnification

- a. To the maximum extent permitted by law, the project applicant shall defend (with counsel acceptable to the City), indemnify, and hold harmless the City of Oakland, the Oakland City Council, the Oakland Redevelopment Successor Agency, the Oakland

City Planning Commission, and their respective agents, officers, employees, and volunteers (hereafter collectively called "City") from any liability, damages, claim, judgment, loss (direct or indirect), action, causes of action, or proceeding (including legal costs, attorneys' fees, expert witness or consultant fees, City Attorney or staff time, expenses or costs) (collectively called "Action") against the City to attack, set aside, void or annul this Approval or implementation of this Approval. The City may elect, in its sole discretion, to participate in the defense of said Action and the project applicant shall reimburse the City for its reasonable legal costs and attorneys' fees.

- b. Within ten (10) calendar days of the filing of any Action as specified in subsection (a) above, the project applicant shall execute a Joint Defense Letter of Agreement with the City, acceptable to the Office of the City Attorney, which memorializes the above obligations. These obligations and the Joint Defense Letter of Agreement shall survive termination, extinguishment, or invalidation of the Approval. Failure to timely execute the Letter of Agreement does not relieve the project applicant of any of the obligations contained in this Condition or other requirements or Conditions of Approval that may be imposed by the City.

9. Severability

The Approval would not have been granted but for the applicability and validity of each and every one of the specified Conditions, and if one or more of such Conditions is found to be invalid by a court of competent jurisdiction this Approval would not have been granted without requiring other valid Conditions consistent with achieving the same purpose and intent of such Approval.

10. Job Site Plans

A copy of the Approval letter and Conditions shall be signed by the project applicant, attached to each set of permit plans submitted to the appropriate City agency for the project, and made available for review at the project job site at all times.

11. Special Inspector/Inspections, Independent Technical Review, Project Coordination and Monitoring

The project applicant may be required to cover the full costs of independent third-party technical review and City monitoring and inspection, including without limitation, special inspector(s)/inspection(s) during times of extensive or specialized plan-check review or construction, and inspections of potential violations of the Conditions of Approval. The project applicant shall establish a deposit with the Bureau of Building, if directed by the Building Official, Director of City Planning, or designee, prior to the issuance of a construction-related permit and on an ongoing as-needed basis.

12. Public Improvements

The project applicant shall obtain all necessary permits/approvals, such as encroachment permits, obstruction permits, curb/gutter/sidewalk permits, and public improvement ("p-job") permits from the City for work in the public right-of-way, including but not limited

to, streets, curbs, gutters, sidewalks, utilities, and fire hydrants. Prior to any work in the public right-of-way, the applicant shall submit plans for review and approval by the Bureau of Planning, the Bureau of Building, and other City departments as required. Public improvements shall be designed and installed to the satisfaction of the City.

13. Construction Days/Hours

Requirement: The project applicant shall comply with the following restrictions concerning construction days and hours:

- a. Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m.
- b. Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday.
- c. No construction is allowed on Sunday or federal holidays.

Construction activities include, but are not limited to, truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in a non-enclosed area.

Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case basis by the City, with criteria including the urgency/emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. The project applicant shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

PROJECT-SPECIFIC CONDITIONS

14. Emissions Report

Requirement: A RF emissions report shall be submitted to the Planning Bureau indicating that the site is actually operating within the acceptable thresholds as established by the Federal government or any such agency who may be subsequently authorized to establish such standards.

Requirement: Prior to a final inspection

When Required: Prior to final building permit signoff

Initial Approval: N/A

Monitoring/Inspection: N/A

15. Camouflage

Requirement: The antenna shall be painted, texturized, and maintained matte silver, and the equipment and any other accessory items including cables matte brown, to better camouflage the facility to the utility pole and attached power line posts.

When Required: Prior to a final inspection

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

16. Operational

Requirement: Noise levels from the activity, property, or any mechanical equipment on site shall comply with the performance standards of Section 17.120 of the Oakland Planning Code and Section 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the Planning and Zoning Division and Building Services.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

17. Possible District Undergrounding PG&E Pole

Requirement: Should the PG &E utility pole be permanently removed for purposes of district undergrounding or otherwise, the telecommunications facility can only be re-established by applying for and receiving approval of a new application to the Oakland Planning Bureau as required by the regulations.

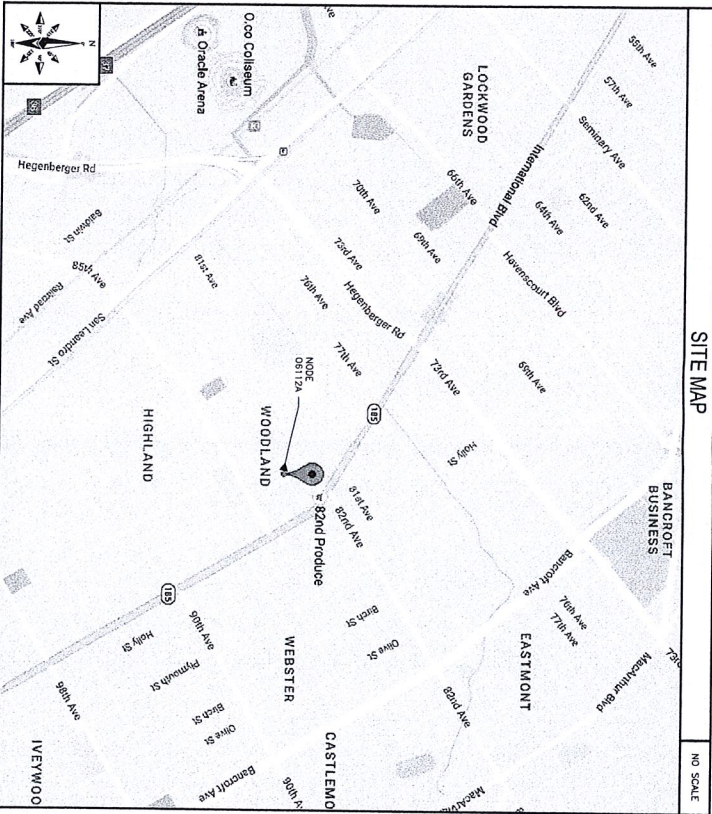
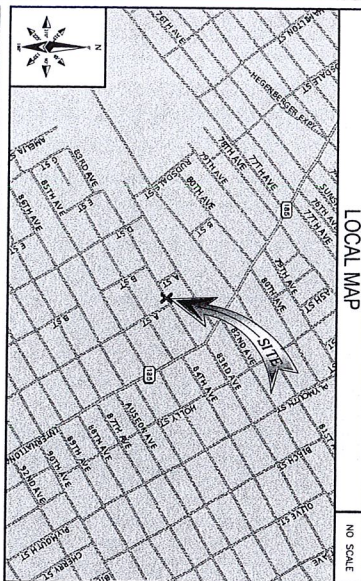
When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: N/A

NW-CA-SANFRMNC 06112A

ADJACENT TO (IN PROW)
1266 83RD AVENUE
OAKLAND, CA 94621



SHEET INDEX

SHEET NO.	SHEET TITLE
T-1	TITLE SHEET
C-1	GENERAL NOTES AND LEGEND
C-2	GENERAL SITE PLAN
C-3	UTILITY POLE ELEVATIONS AND REST DETAILS
C-4	EQUIPMENT DETAILS

Attachment C

IF USING 11"X17" PLOT, DRAWINGS WILL BE HALF SCALE

SUBCONTRACTOR SHALL VERIFY ALL PLANS & EXISTING DIMENSIONS & CONDITIONS ON THE JOB BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

PROJECT INFORMATION

POLE OWNER	COMPANY: EXTENT SYSTEMS CA, LLC ADDRESS: 2000 CROW CANYON PL., SUITE 210 SAN RAMON, CA 94583 PHONE: -
APPLICANT	COMPANY: EXTENT SYSTEMS (CALIFORNIA), LLC CONTACT: MATTHEW VERONICH ADDRESS: 2000 CROW CANYON PL., SAN RAMON, CA 94583 PHONE: (415) 586-3474 E-MAIL: MVERONICH@EXTENTSYSTEMS.COM

AGENT

COMPANY: BLACK & VEATCH
 CONTACT: AMY GOMEZ
 ADDRESS: 2899 OAK ROAD, WALNUT CREEK, CA 94597
 PHONE: (913) 458-9148
 E-MAIL: GOMEZ@BLACK&VEATCH.COM

ENGINEER

COMPANY: BLACK & VEATCH
 ENGINEER: AMYON EVANS
 PHONE: (925) 896-0751
 E-MAIL: EAMSGRABER@BVA.COM

PROJECT DATA

LATITUDE: 37.753846
 LONGITUDE: -122.180336
 ROLE #: 11014830
 ELEVATION: M
 CITY OF OAKLAND
 ZONING JURISDICTION: RM-1
 NEAREST A.P.N.: 42-4256-28-1
 OCCUPANCY: U, UNIMMATED
 CONSTRUCTION TYPE: ATTACHMENTS TO A WOOD UTILITY
 TITLE 24 REQUIREMENTS: PERMITTED BY AS SHOWN AND NOT FOR FURTHER HUMAN HABITATION. HAS PREVIOUS EXEMPT.

CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE CALIFORNIA ELECTRICAL CODE (CEC) AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. THESE PLANS IS TO BE CONSTRUCTED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

- IBC - 2012
- CALIFORNIA BUILDING STANDARDS CODE - 2013
- CALIFORNIA GENERAL ORDER 95-1013
- CALIFORNIA PLUMBING CODE 2013
- CALIFORNIA ELECTRICAL CODE 2013
- CALIFORNIA PLUMBING CODE 2013
- 2012 CALIFORNIA COUNTY ORDINANCES
- 2012 ELECTRICAL CODE
- BUILDING OFFICIALS AND CODE ADMINISTRATORS (BOCA) *EFFECTIVE UNTIL JANUARY 1ST, 2017

PROJECT DESCRIPTION

THESE DRAWINGS DEPICT THE INSTALLATION OF A WIRELESS TELECOMMUNICATIONS NODE IN THE PUBLIC RIGHT OF WAY. HARDWARE AND ANCILLARY EQUIPMENT TO BE INSTALLED AS DESCRIBED HEREIN.

GENERAL PROJECT NOTES

- BEFORE TO SUBMITTING A BID THE CONTRACTOR SHALL FURNISH AND VERIFY THE EXISTING UTILITIES AND ALL CONDITIONS AFFECTING THE NEW PROJECT.
- CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND DIMENSIONS OF THE JOB SITE AND CONFIRM THE WORK AS ACCORDING TO AS SHOWN PRIOR TO COMMENCEMENT OF WORK.
- ALL FIELD MODIFICATIONS BEFORE, DURING OR AFTER CONSTRUCTION SHALL BE APPROVED IN WRITING BY AN EXTENT SYSTEMS REPRESENTATIVE.
- INSTALL ALL EQUIPMENT AND MATERIALS PER THE OTHERWISE SPECIFIED RECOMMENDATIONS, UNLESS INDICATED OTHERWISE.
- NOTIFY EXTENT SYSTEMS IN WRITING OF ANY MAJOR DISCREPANCIES REGARDING THE CONTRACT DOCUMENTS, EXISTING CONDITIONS AND DESIGN INTENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTING UTILITIES AND SYSTEMS REPRESENTATIVE, AND ADJUSTING THE BID ACCORDINGLY.
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL PROVISIONS OF THE MANUAL UNDER THE CONTRACT.
- CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES, METHODS, TECHNIQUES, SEQUENCES AND FINISHES THAT MAY OCCUR DURING THE CONSTRUCTION TO THE SATISFACTION OF AN EXTENT SYSTEMS REPRESENTATIVE.
- CONTRACTOR PLANS TO ILLUSTRATE THE AS-BUILT CONDITION OF THE PROJECT. THE CONTRACTOR SHALL PROVIDE EXTENT SYSTEMS WITH ONE COPY OF ALL RED-LINED DRAWINGS.
- CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES REPRESENTATIVE. ALL EQUIPMENT LAYOUT, SPECS, PERFORMANCE AND DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR FOR COORDINATING HIS/HER WORK WITH THE WORK AND INSTALLATIONS. (AS SHOWN BY OTHERS RELATED TO SAND

UNDERGROUND SERVICES ALERT
 UTILITIES PROTECTION CENTER, INC.
 911
 48 HOURS BEFORE YOU DIG

exteneer
 connectivity
 systems
 everywhere

INTERNAL REVIEW	DATE
CONSTRUCTION SIGNATURE	DATE
RE SIGNATURE	DATE
REAL ESTATE SIGNATURE	DATE

BLACK & VEATCH
 CORPORATION
 2899 OAK ROAD
 WALNUT CREEK, CA 94597

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PROJECT NO	DRAWN BY	CHECKED BY
192417.4401	BOJ	GAC
B	09/29/16	ISSUED FOR REVIEW
R	09/27/16	ISSUED FOR REVIEW
REV	DATE	DESCRIPTION

PRELIMINARY

IF IT IS A VIOLATION OF LAW FOR ANY REASON, THESE PLANS ARE NOT TO BE CONSIDERED AS A BASIS FOR ANY ACTION OR TO ALTER THE CONTRACT.

EXTENT SYSTEMS (CA) LLC
 2000 CROW CANYON PLACE
 SUITE 210
 SAN RAMON, CA 94583

SITE ADDRESS
 ADJACENT TO (IN PROW)
 1266 83RD AVENUE
 OAKLAND, CA 94621

SHEET TITLE
 TITLE SHEET

SHEET NUMBER
T-1

GENERAL NOTES

1. THESE NOTES SHALL BE CONSIDERED A PART OF THE WRITTEN SPECIFICATIONS, CONTRACT AND CONSTRUCTION DOCUMENTS.
2. THE WORK SHALL INCLUDE EXHAUSTIVE MATERIALS, EQUIPMENT, APPROPRIATIONS, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THESE PLANS AND IN THESE NOTES.
3. PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTOR SHALL VISIT THE JOB SITE(S) AND BE RESPONSIBLE FOR ALL CONSTRUCTION FIELD CONDITIONS AND DIFFICULTIES AND CONVEY THAT TO THE WORKMAN. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OAKLAND, THE METROPOLITAN WATER SUPPLY DISTRICT NO. 2, AND THE METROPOLITAN WATER SUPPLY DISTRICT NO. 1.
4. THE CONTRACTOR SHALL RECEIVE WRITTEN AUTHORIZATION TO PROCEED ON ANY WORK NOT CLEARLY DEFINED OR DETERMINED IN THE CONTRACT AND CONSTRUCTION DOCUMENTS BEFORE STARTING ANY WORK.
5. ALL WORK PERFORMED AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE SPECIFICATIONS.
6. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS. IF THESE RECOMMENDATIONS ARE IN CONFLICT WITH THE CONTRACT AND CONSTRUCTION DOCUMENTS, THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER AND ARCHITECT/ENGINEER PRIOR TO PROCEEDING FROM THE IMPLEMENTATION THEREOF AND ARCHITECT/ENGINEER PRIOR TO PROCEEDING.
7. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, CONSTRUCTION AND FOR COMPLETION OF ALL PORTIONS OF THE WORK UNDER THE CONTRACT. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OAKLAND, THE METROPOLITAN WATER SUPPLY DISTRICT NO. 2, AND THE METROPOLITAN WATER SUPPLY DISTRICT NO. 1.
8. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING UTILITIES, INCLUDING BUT NOT LIMITED TO, WATER, GAS, AND TELEPHONE LINES, FROM DAMAGE DURING THE CONSTRUCTION OF THE WORK. BEFORE ANY EXCAVATION OR OTHER WORK IS BEGUN, THE CONTRACTOR SHALL OBTAIN A UTILITY LOCATING SERVICE ALERT (980) 227-2800, AT LEAST TWO WORKING DAYS PRIOR TO THE START OF ANY EXCAVATION.
9. CONTRACTOR IS TO KEEP THE GENERAL AREA CLEAN, MAINTAIN AND PROTECT ALL EXISTING UTILITIES, INCLUDING BUT NOT LIMITED TO, WATER, GAS, AND TELEPHONE LINES, FROM DAMAGE DURING THE CONSTRUCTION OF THE WORK. BEFORE ANY EXCAVATION OR OTHER WORK IS BEGUN, THE CONTRACTOR SHALL OBTAIN A UTILITY LOCATING SERVICE ALERT (980) 227-2800, AT LEAST TWO WORKING DAYS PRIOR TO THE START OF ANY EXCAVATION.
10. PLANS ARE INTENDED TO BE DIMENSIONAL ONLY AND SHOULD NOT BE SCALED UNLESS OTHERWISE NOTED. FIELD CONDITIONS AND LOCATION OF UTILITIES AND OTHER AGENCY'S FACILITIES WERE OBTAINED BY A SEARCH OF RECORDS AND FIELD SURVEY. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES AND OTHER AGENCY'S FACILITIES BY FIELD SURVEY AND USE EXTREME CARE AND PREVENTIVE MEASURES TO PREVENT DAMAGE TO UTILITIES AND OTHER AGENCY'S FACILITIES WITHIN THE LIMITS OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF UTILITIES AND OTHER AGENCY'S FACILITIES WITHIN THE LIMITS OF THE WORK.
11. THE CONTRACTOR SHALL NOTIFY UTILITY LOCATING SERVICE ALERT (980) 227-2800, AT LEAST TWO WORKING DAYS PRIOR TO THE START OF ANY EXCAVATION.

DEFINITIONS

1. **SHALL** OR **SHOULD** MEANS THAT THIS ITEM IS SUBSTANTIALLY THE SAME ACROSS SIMILAR CONDITIONS. "TYPE" SHALL BE UNDERSTOOD TO MEAN THE TYPE OF MATERIALS AND SHALL NOT BE CONSIDERED AS WITHOUT EXCEPTION OR CONSIDERATION OF SPECIFIC CONDITIONS.
2. **SHOULD** MEANS COMPAREABLE TO CHARACTERISTICS FOR THE CONDITION NOTED. VERY DIMENSIONS AND OPERATIONS ON PLAN.
3. **AS REQUIRED** MEANS AS REQUIRED BY REGULATORY REQUIREMENTS BY APPLICABLE STANDARDS, BY EXISTING CONDITIONS, BY CONTRACT, ACCEPTED CONSTRUCTION PRACTICE OR BY THE CONTRACT DOCUMENTS.
4. **ACTION** MEANS ACTIVELY LOCATE FINISH FACIES OF MATERIALS IN THE SAME PLANE.
5. **THE TERM "VERIFY"** SHALL BE UNDERSTOOD TO MEAN VERIFY IN FIELD WITH ENGINEER AND ARCHITECT/ENGINEER ON SITE. THE CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION FROM THE ENGINEER AND ARCHITECT/ENGINEER BEFORE PROCEEDING WITH ANY WORK.
6. **WHERE THE WORDS "OR EQUAL"** OR WORDS OF SIMILAR MEANING FOLLOW A MATERIAL SPECIFICATION, THEY SHALL BE UNDERSTOOD TO REQUIRE SIGNED APPROVAL OF ANY DESIGN OR MATERIAL SPECIFICATION PRIOR TO THE COMMENCEMENT OF SUCH PROPOSED EQUAL PRODUCT.
7. **FURNISH** MEANS TO FURNISH TO INSTALL. INSTALL MEANS TO INSTALL. PROVIDE.

FIELD WELDING NOTES:

1. WELDING TO BE PERFORMED BY THE CONTRACTOR SHALL BE THE TYPE OF AND POSITION INDICATED. ALL WORK SHALL BE IN CONFORMANCE WITH LATEST EDITION OF AWS D1.1.
2. **GENCO SURFACES** TO BE WELDED WITH A SILICON CARBIDE WHEEL PRIOR TO WELDING TO REMOVE ALL OXIDES AND DEBRIS WHICH MAY OTHERWISE BE CONSIDERED IN THE WELD METAL. APPLY ANTI-SPLATTER COMPOUND TO ALL SURFACES TO BE WELDED.
3. WELDING TECHNIQUE MUST MAINTAIN TEMPERATURE SET ON THE WELD SURFACE OF THE JOINT AND ALSO MAINTAIN WELD METAL TEMPERATURE COMPATIBLE WITH WELDING POSITION AND METAL THICKNESS. STRICTLY FOLLOW MANUFACTURER'S PACKAGING AND WELDING POSITION AND METAL THICKNESS RECOMMENDATIONS. ELECTRODES FROM MANUFACTURER'S PACKAGING UNTIL READY FOR IMMEDIATE USE. REMOVE REMAINING WELDING ANY PRODUCT TOXIC FUMES REFER TO AND STANDARD Z99.1 "SAFETY IN WELDING AND CUTTING" FOR PROPER PRECAUTIONS.
4. **WELDING** SHALL BE PERFORMED BY A WELDER WHO IS QUALIFIED TO WELD THE JOINT AND POSITION.
5. **POST WELD TREATMENT** SHALL BE PERFORMED AS SPECIFIED IN THE CONTRACT DOCUMENTS. IF NECESSARY, APPLY A FINAL COAT OF CORROSIVE PROTECTANT TO MATCH SURROUNDING SURFACES.

ANTENNA MOUNTING

1. DESIGN AND CONSTRUCTION OF ANTENNA SUPPORTS SHALL CONFORM TO CURRENT ANSI/AIA-222 OR IEC-60295.
2. ALL STEEL ANTENNA SUPPORTS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATING OF IRON AND STEEL PRODUCTS" UNLESS NOTED OTHERWISE.
3. ALL BOLTS, ANCHORS AND UNUSUALS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE" UNLESS NOTED OTHERWISE.
4. DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED BY COAT GALVANIZING IN ACCORDANCE WITH ASTM A780.
5. ALL ANTENNA MOUNTS SHALL BE INSTALLED WITH LOCK NUTS, DOUBLE NUTS AND SHALL BE TORQUED TO MANUFACTURER'S RECOMMENDATIONS.
6. CONSTRUCTION SHALL INSTALL ANTENNA PER MANUFACTURER'S RECOMMENDATION FOR INSTALLATION AND PROTECTION.
7. PRIOR TO STARTING ANTENNA MOUNTING AND CONSTRUCTION, ANTENNA CONTRACTOR SHALL CHECK THE ANTENNA MOUNT FOR CORRUPTION AND CORROSION. ANTENNA CONTRACTOR SHALL NOTIFY THE ENGINEER AND ARCHITECT/ENGINEER IMMEDIATELY IN WRITING IF CORRUPTION AND CORROSION IS OBSERVED WITHIN 7' ± 5% AS DEFINED BY THE PROS. ANTENNA MOUNTS SHALL BE WITHIN 1/4" ± 0.25 AS DEFINED BY THE PROS.

TORQUE REQUIREMENTS

1. ALL RF CONNECTIONS SHALL BE TORQUED BY A TORQUE WRENCH.
2. IN A CONTINUOUS STRAIGHT LINE FROM BOTH SIDES OF THE CONNECTION.
 - A. RF CONNECTION BOTH SIDES OF THE CONNECTION.
 - B. GROUNDING AND ANTENNA HARDWARE ON THE UT SITE STARTING FROM THE HEADS TO THE SQUAD SURFACE. EXAMPLE OF SOLID SURFACE GROUND BAR, ANTENNA BRACKET METAL.
 - C. ALL 8W ANTENNA HARDWARE SHALL BE TORQUED TO 9 LB-FT (12 NM).
 - D. ALL 12W ANTENNA HARDWARE SHALL BE TORQUED TO 4.3 LB-FT (58 NM).
 - E. ALL GROUNDING HARDWARE SHALL BE TORQUED TO 18-22 LB-FT (24.4 - 29.8 NM).
 - F. ALL DRY TYPE CONNECTIONS SHALL BE TORQUED TO 18-22 LB-FT (24.4 - 29.8 NM).
3. ALL DRY TYPE CONNECTIONS SHALL BE TORQUED TO 18-22 LB-FT (24.4 - 29.8 NM).
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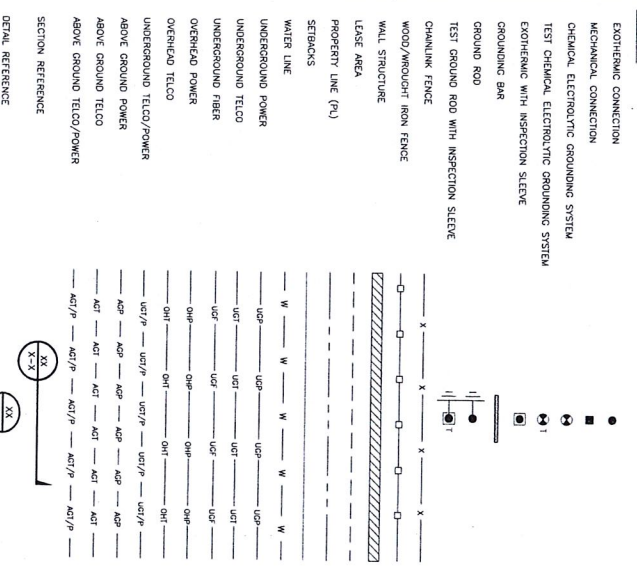
ROW UTILITY POLE CONSTRUCTION NOTES

1. NO BOLT HEADS TO PROTRUDE MORE THAN 1-1/2" (38MM).
2. FILL ALL HOLES LEFT IN POLE FROM REARRANGEMENT OF CLAMBERS.
3. ALL CLAMBER STEPS NEXT TO CONDUIT SHALL HAVE EXTENDED STEPS.
4. CABLE NOT TO INTERFERE 15" (381MM) CLEAR SPACE OFF POLE FACE (1280).
5. 90 SHIRT SLEEVES UNDER ANTENNA ARM. ALL CABLES MUST ONLY TRANSITION ON THE INSIDE OR BOTTOM OF ARMS (NO CABLE ON TOP OF ARMS).
6. USE 90 CONNECTOR AT CABLE CONNECTION TO ANTENNAS.
7. USE 1/2" (12.7MM) CABLE ON ANTENNAS UNLESS OTHERWISE SPECIFIED.
8. FILL VOID AROUND CABLES AT CONDUIT OPENING WITH FOAM SEALANT TO PREVENT WATER INTRUSION.

NODE SITE POWER SHUT DOWN PROCEDURES

1. FOR NON EMERGENCY/SCHEDULED POWER SHUT DOWN
 - A. CALL EXTEND SYSTEMS NOC (NETWORK OPERATIONS CENTER) (866)992-5227
 - B. 24 HOURS PRIOR TO SCHEDULED POWER SHUT OFF
 - C. PROVIDE THE FOLLOWING INFORMATION
 - NOC SITE NUMBER IDENTIFIED ON SITE NUMBERING STICKER
 - YOUR NAME AND REASON FOR POWER SHUT OFF
 - PROVIDE LOCATION OF OUTAGE
 - D. UNLOCK DISCONNECT BOX, FLIP BOTH BREAKERS TO THE OFF POSITION
 - E. POWER SHUT OFF VERIFICATION WITH APPROVED POLE PROCEDURES
 - F. NOTIFY EXTEND NOC UPON COMPLETION OF WORK
 - G. REINSTALL LOCK ON DISCONNECT BOX
 - H. EMERGENCY POWER SHUT OFF
2. CALL EXTEND SYSTEMS NOC (NETWORK OPERATIONS CENTER) (866)992-5227
 - A. PROVIDE THE FOLLOWING INFORMATION
 - NOC SITE NUMBER IDENTIFIED ON SITE NUMBERING STICKER
 - PROVIDE LOCATION OF OUTAGE
 - B. UNLOCK DISCONNECT BOX, FLIP BOTH BREAKERS TO THE OFF POSITION
 - C. POWER SHUT OFF VERIFICATION WITH APPROVED POLE PROCEDURES
 - D. NOTIFY EXTEND NOC UPON COMPLETION OF WORK
 - E. REINSTALL LOCK ON DISCONNECT BOX

LEGEND



GENERAL NOTES AND LEGENDS

extenei connectivity systems everywhere

ANTENNA REVIEW

CONSTRUCTION SIGNATURE _____ DATE _____

RF SIGNATURE _____ DATE _____

REAL ESTATE SIGNATURE _____ DATE _____

BLACK & VEATCH

BLACK & VEATCH CORPORATION
2993 OAK ROAD
WALWIT CREEK, CA 94597

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PROJECT NO: 19241714401
DRAWN BY: BJU
CHECKED BY: CAC

REV: 09/29/16 ISOLATED FOR RAINING
09/27/16 ISOLATED FOR RAINING
REV: DATE DESCRIPTION

IT IS A VERSION OF LAW FOR THE PERSONS WHOSE INTERESTS ARE AFFECTED BY THESE DRAWINGS TO ALTER THE DOCUMENT.

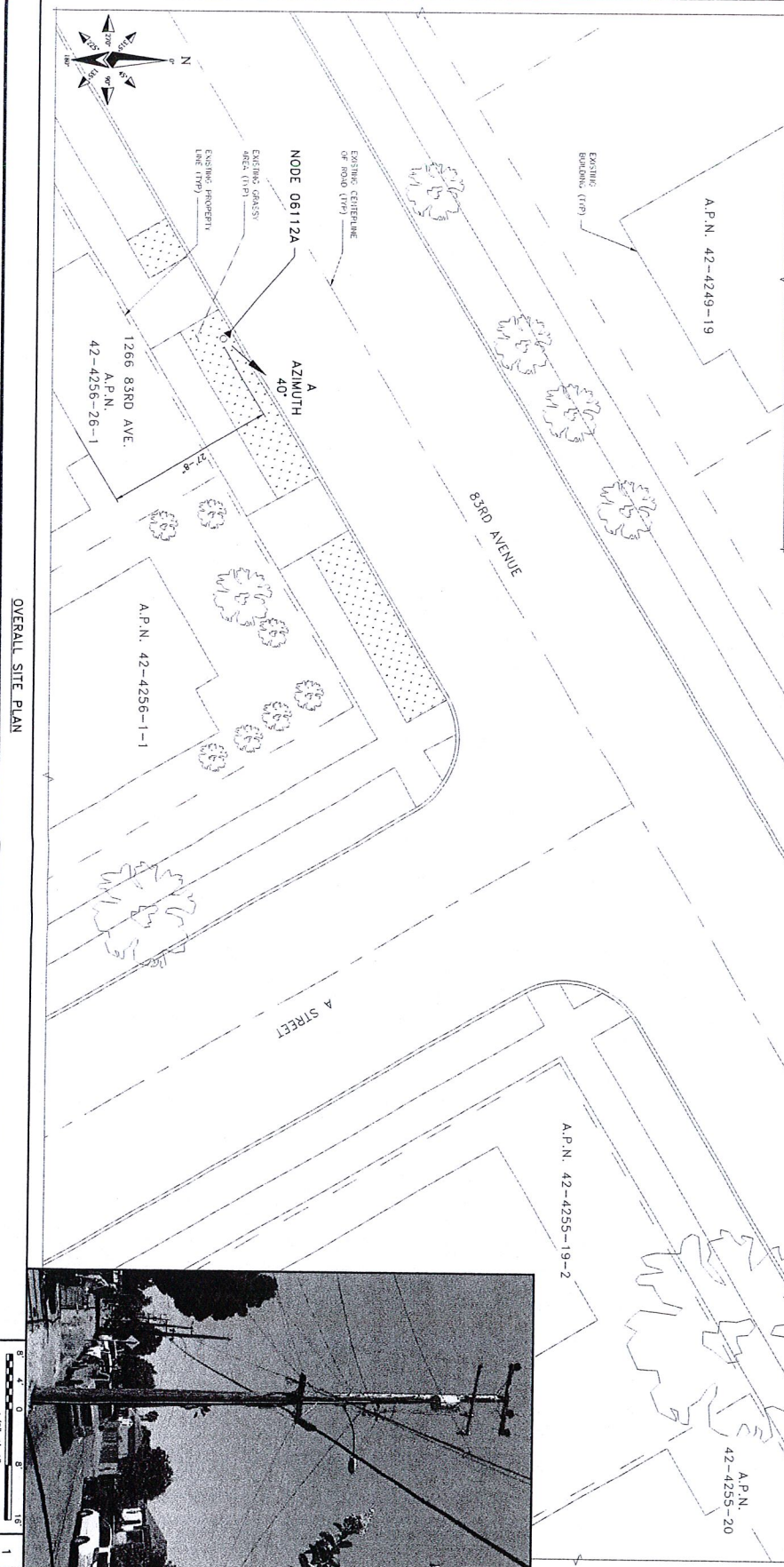
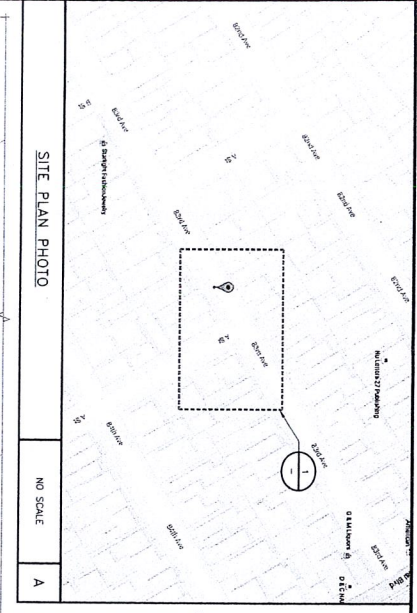
EXTENET SYSTEMS (CA) LLC
2000 CROW CANYON PLACE
SUITE 210
SAN RAMON, CA 94583

SITE ADDRESS
ADJACENT TO (IN PROW)
1266 83RD AVENUE
OAKLAND, CA 94621

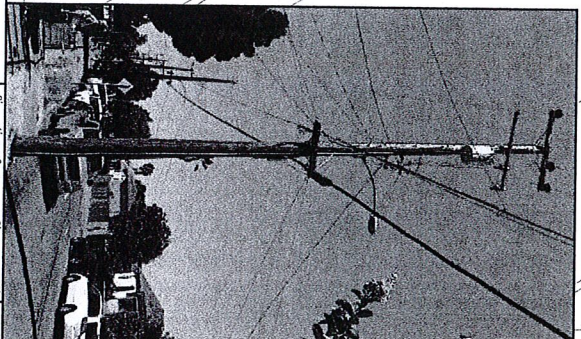
SHEET TITLE
GENERAL NOTES AND LEGEND

SHEET NUMBER
GN-1

PRELIMINARY



THIS DRAWING IS NOT A SITE SURVEY. THE PURPOSE OF THIS DRAWING IS TO SHOW THE PROPOSED LAYOUT RELATES TO THE PARENT PARCEL AND MORTGAGEE'S AND ASSIGNMENT'S.



0 4 8 16
1/8" = 1'-0"



INTERNAL REVIEW
CONSTRUCTION SIGNATURE _____ DATE _____
RF SIGNATURE _____ DATE _____
REAL ESTATE SIGNATURE _____ DATE _____

BLACK & VEATCH
BLACK & VEATCH CORPORATION
2999 OAK GARDEN
SUITE 490
WALNUT CREEK, CA 94597

PROJECT NO. DRAWN BY CHECKED BY
1924174401 BDU GAC

REV	DATE	DESCRIPTION
1	09/27/16	ISSUED FOR REVIEW
2	09/27/16	ISSUED FOR REVIEW

PRELIMINARY

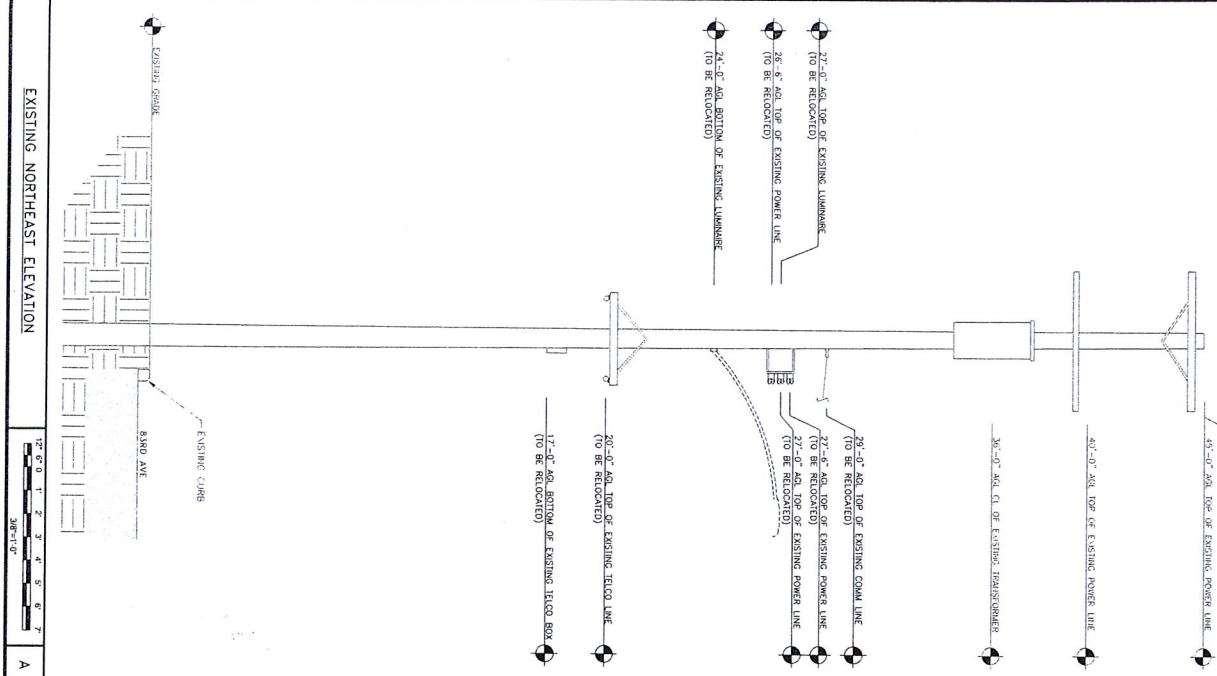
IF IS A VIOLATION OF LAW FOR ANY PERSON, FIRM OR COMPANY TO REPRODUCE OR TRANSMIT THIS DRAWING OR TO ALTER THIS DOCUMENT.

EXIENET SYSTEMS (CA) LLC
2000 CROW CANYON PLACE
SUITE 210
SAN RAMON, CA 94583

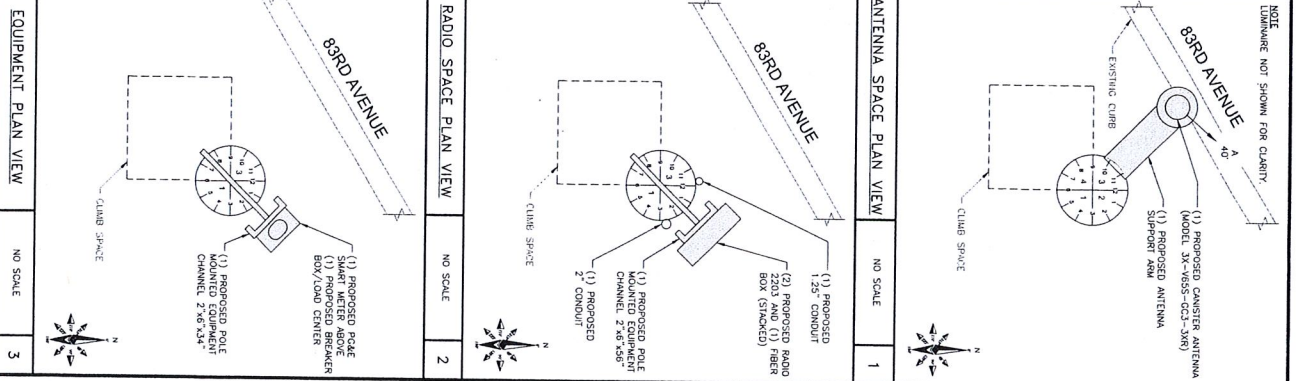
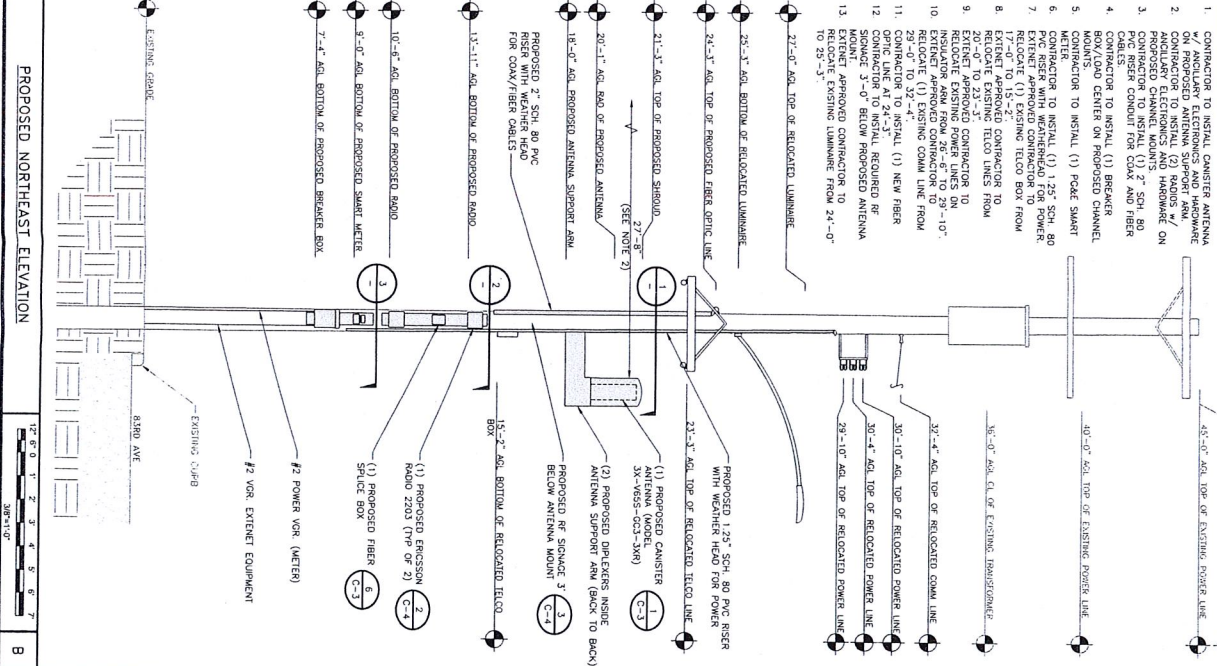
SITE ADDRESS
ADJACENT TO (IN PROW)
1266 83RD AVENUE
OAKLAND, CA 94621

SHEET TITLE
OVERALL SITE PLAN
SHEET NUMBER
C-1

NOTE
THESE DRAWINGS HAVE BEEN CREATED BASED ON THE ASSUMPTION THAT THE STRUCTURE HAS SUFFICIENT CAPACITY TO SUPPORT THE WEIGHT OF THE ANTENNA EQUIPMENT. IT IS THE RESPONSIBILITY OF THE POLE OWNER TO CONSULT WITH THE DESIGN PROFESSIONAL TO WITHIN THE STRUCTURE DESIGN CAPACITY OF THE STRUCTURE.



NOTES
1. ALL PROPOSED EQUIPMENT TO BE INSTALLED MUST MEET EXISTING CONDITIONS.
2. DISTANCE FROM ANTENNA FACE TO NEAREST BUILDING (1266 83RD AVE). SEE SHEET C-1 FOR ORIENTATION.
3. CARRIER NAME-CREDELY

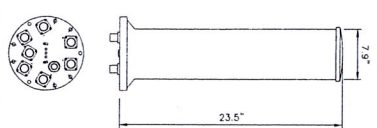


NOTE
LUMINAIRE NOT SHOWN FOR CLARITY.

<p>extenef CONNECTIVITY SYSTEMS ENVIRONMENT</p> <p>ANTENNA REVIEW _____ DATE _____ CONSTRUCTION SIGNATURE _____ DATE _____ RF SIGNATURE _____ DATE _____ REAL ESTATE SIGNATURE _____ DATE _____</p>	<p>BLACK & VEATCH</p> <p>BLACK & VEATCH CORPORATION 2993 OAK ROAD WALWUTI CREEK, CA 94597</p>	<p>THESE DRAWINGS ARE PREPARED BY BLACK & VEATCH AND ARE THE PROPERTY OF BLACK & VEATCH. NO PART OF THESE DRAWINGS IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF BLACK & VEATCH.</p> <table border="1"> <tr> <td>PROJECT NO.</td> <td>924174401</td> </tr> <tr> <td>DRAWN BY</td> <td>BOU</td> </tr> <tr> <td>CHECKED BY</td> <td>CAC</td> </tr> </table>	PROJECT NO.	924174401	DRAWN BY	BOU	CHECKED BY	CAC	<p>PRELIMINARY</p> <p>IT IS A VIOLATION OF LAW FOR ANY PERSON TO REPRODUCE, TRANSMIT, OR IN ANY MANNER TO DISSEMINATE THESE DRAWINGS OR ANY INFORMATION CONTAINED THEREIN.</p> <table border="1"> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> <tr> <td>0</td> <td>09/29/16</td> <td>ISSUED FOR REVIEW</td> </tr> <tr> <td>1</td> <td>09/27/16</td> <td>ISSUED FOR REVIEW</td> </tr> </table>	REV	DATE	DESCRIPTION	0	09/29/16	ISSUED FOR REVIEW	1	09/27/16	ISSUED FOR REVIEW	<p>EXTENET SYSTEMS (CA) LLC 2000 CROW CANYON PLACE SUITE 210 SAN RAMON, CA 94583</p> <p>SITE ADDRESS ADJACENT TO (IN PROW) 1266 83RD AVENUE OAKLAND, CA 94621</p> <p>SHEET TITLE UTILITY POLE ELEVATIONS AND RISER DETAILS</p> <p>SHEET NUMBER C-2</p>
PROJECT NO.	924174401																		
DRAWN BY	BOU																		
CHECKED BY	CAC																		
REV	DATE	DESCRIPTION																	
0	09/29/16	ISSUED FOR REVIEW																	
1	09/27/16	ISSUED FOR REVIEW																	

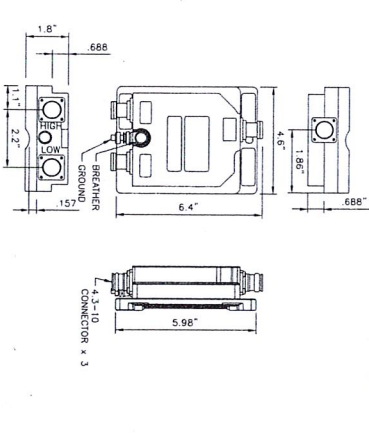
COMMSCOPE 3X-V655-CC3-3XR

ROOM COLOR: LIGHT GREY
 FIBERGLASS UV RESISTANT
 ROOM MATERIAL: 7.9" (200mm) DIAMETER
 HEIGHT: 23.5" (596mm)
 TOTAL WEIGHT (MINIHOUS BRACKETS): 7.2 kg (15.9 LB)
 CONNECTOR INTERFACE: 4.1-9.9 MM FEMALE
 RF CONNECTOR LOCATION: BOTTOM
 RF CONNECTOR QUANTITY: 6



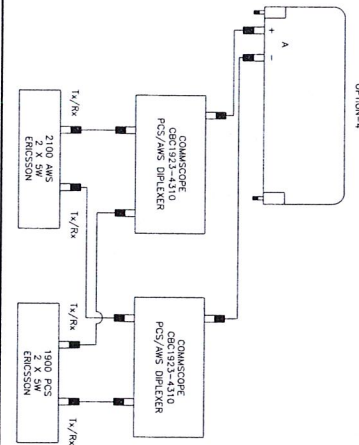
PROPOSED ANTENNA

NO SCALE 1



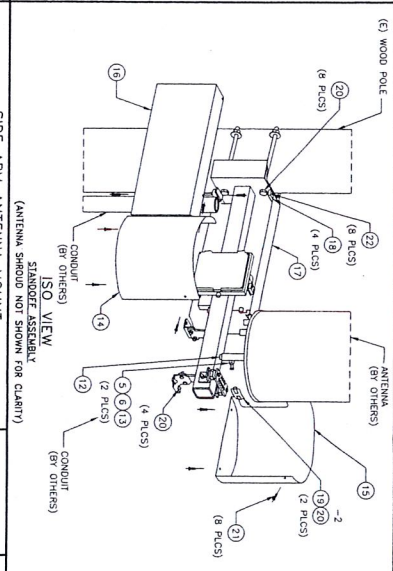
COMMSCOPE CBC 1923-4310 / E11F13P20

NO SCALE 4



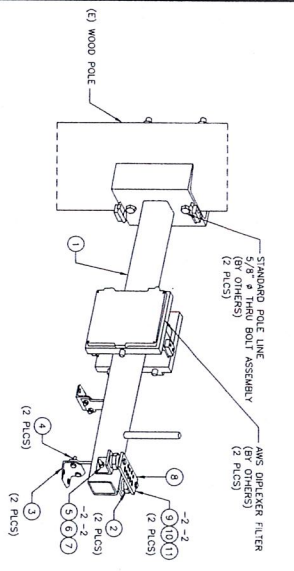
ANTENNA CONFIGURATION

NO SCALE 7



SIDE ARM ANTENNA MOUNT
2'-0" STANDOFF FOR WOOD POLE

NO SCALE 2

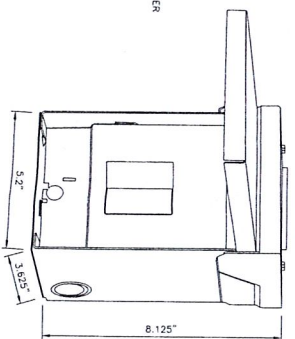


SIDE ARM ANTENNA MOUNT
2'-0" STANDOFF FOR WOOD POLE

NO SCALE 5

MURRAY LW002GRU SPECIFICATION

LOAD CENTER DEPTH: 3.625"
 LOAD CENTER HEIGHT: 8.125"
 WEIGHT: 4.55 LB
 LOAD CENTER TYPE: MAIN LUG
 MOUNTING TYPE: PLUG IN
 NUMBER OF PHASES: 2
 VOLTAGE (VOLTS): 120/240
 INDOOR/OUTDOOR: OUTDOOR
 ELECTRICAL PRODUCT TYPE: LOAD CENTER



MURRAY LW002GRU

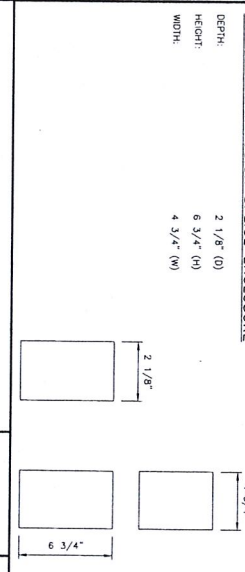
NO SCALE 8

ITEM #	PART #	DESCRIPTION	QTY	UNIT	WT. (LBS)
1	WA-714	3"x3/4"x1/2"x2'-2" STANDOFF ARM W/DMNT	1		4.3
2	SS-514	2"x2"x1/2"x2" ANGLE	2		0.5
3	SS-516	2"x2"x1/2"x2" ANGLE	2		0.4
4	19230	3/8"x1" ADJUSTABLE BOLT/NUT/PLATE	4		0.1
5	41010	3/8"x1" ANS-I HEX NUT	2		0.01
6	51000	3/8"x1" ANS-I HEX NUT	2		0.01
7	80226	3/8"x1" ANS-I HEX NUT	1		0.19
8	PL-216	BUS BAR ASSEMBLY PARTS / NDMR	1		0.8
9	43010	1/4"x2"x6" COPPER BUS BAR	1		0.4
10	71017	3/8" LOCK COPPER BUS BOLT	4		0.04
11	80880	3/8" STANDOFF INSULATOR (S98840)	2		0.1
12	WA-088	3/8"x2" 0.0 ASL TOP CAP W/DMNT	1		2.2
13	162001	3/8"x1 1/2" ADJUSTABLE BOLT	2		0.1
14	41010	3/8" LOCK WASHER	2		0.01
15	51000	3/8" ANS-I HEX NUT	2		0.02
14	WA-715L	14GAx13 1/8"x14 5/8" 1D. E.G. FORMED PLATE W/DMNT	1		8
15	WA-715R	14GAx13 1/8"x14 5/8" 1D. E.G. FORMED PLATE W/DMNT	1		8
16	PL-1264	14GAx17 5/8"x2'-0" 7/8" E.G. FORMED COVER	1		9.9
17	PL-1267	14GAx17 5/8"x2'-0" 15/16" E.G. FORMED COVER	1		9.9
18	PL-1581	1/2"x11/2" ANS. PLATE	4		0.3
19	14203--4	11GAx1 1/2"x2 15/16" ANS. FORMED PLATE	2		0.1
20	55500	1/4"-20 U-SHIELD SPEED NUT, BLACK PHOSPHATE	18		0.02
21	70217	1/4"x4" SS FLOD BUTT-ON SOFT CAP SCREW	18		0.02
22	70218	1/4"x4" 1/4" SS FLOD BUTT-ON SOFT CAP SCREW	18		0.023

TOTAL CAL. WT. = 89lbs

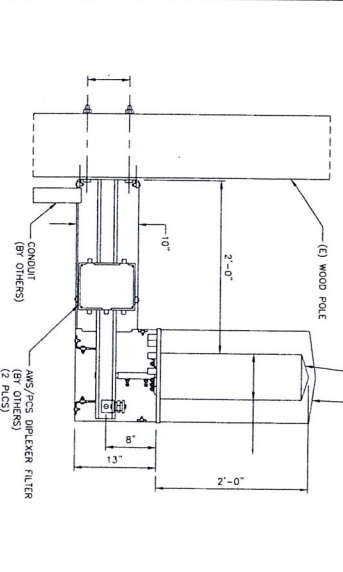
ANTENNA SHROUD PARTS TABLE

NO SCALE 3



FIBER SPLICE BOX

NO SCALE 6



SIDE ARM ANTENNA MOUNT
2'-0" STANDOFF FOR WOOD POLE

NO SCALE 9

extenet connectivity STRONG Everywhere

INTERNAL REVIEW DATE _____

CONSTRUCTION SIGNATURE DATE _____

RF SIGNATURE DATE _____

REAL ESTATE SIGNATURE DATE _____

BLACK & VEATCH

BLACK & VEATCH CORPORATION
 2959 OAK ROAD
 WALNUT CREEK, CA 94597

PROJECT NO: DRAWN BY: CHECKED BY:
 1924174401 BDU GAC

REV	DATE	DESCRIPTION
B	09/29/18	ISSUED FOR REVIEW
A	09/27/18	ISSUED FOR REVIEW

PRELIMINARY

IF IT IS NECESSARY TO MAKE ANY CHANGES TO THIS DRAWING, THE USER SHALL OBTAIN THE WRITTEN CONSENT OF THE DESIGNER.

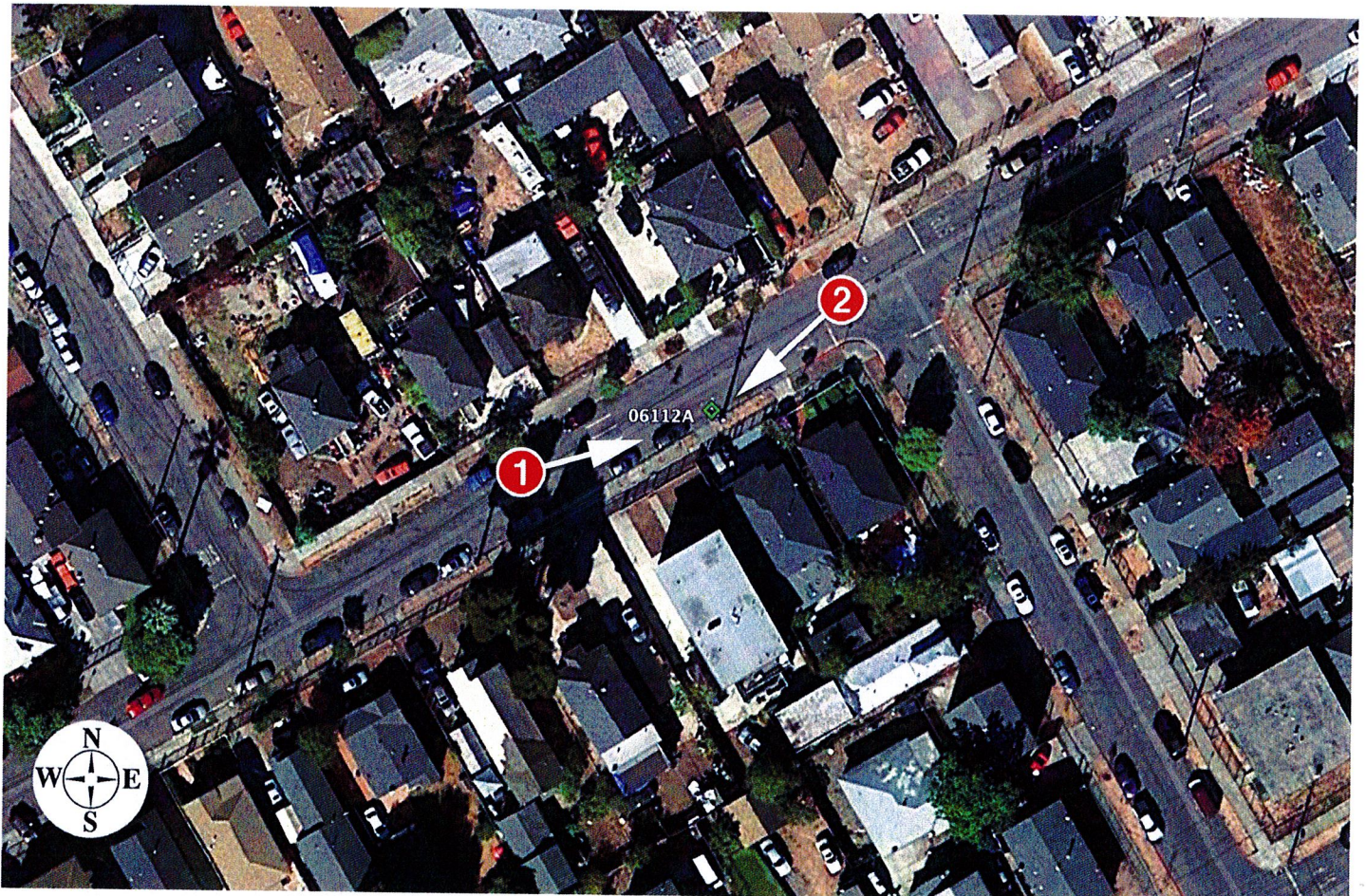
EXTENET SYSTEMS (CA) LLC
 2000 CROW CANYON PLACE
 SUITE 210
 SAN RAMON, CA 94583

SITE ADDRESS:
 ADJACENT TO (IN FRONT)
 1266 83RD AVENUE
 OAKLAND, CA 94621

SHEET TITLE:
EQUIPMENT DETAILS

SHEET NUMBER:
C-3

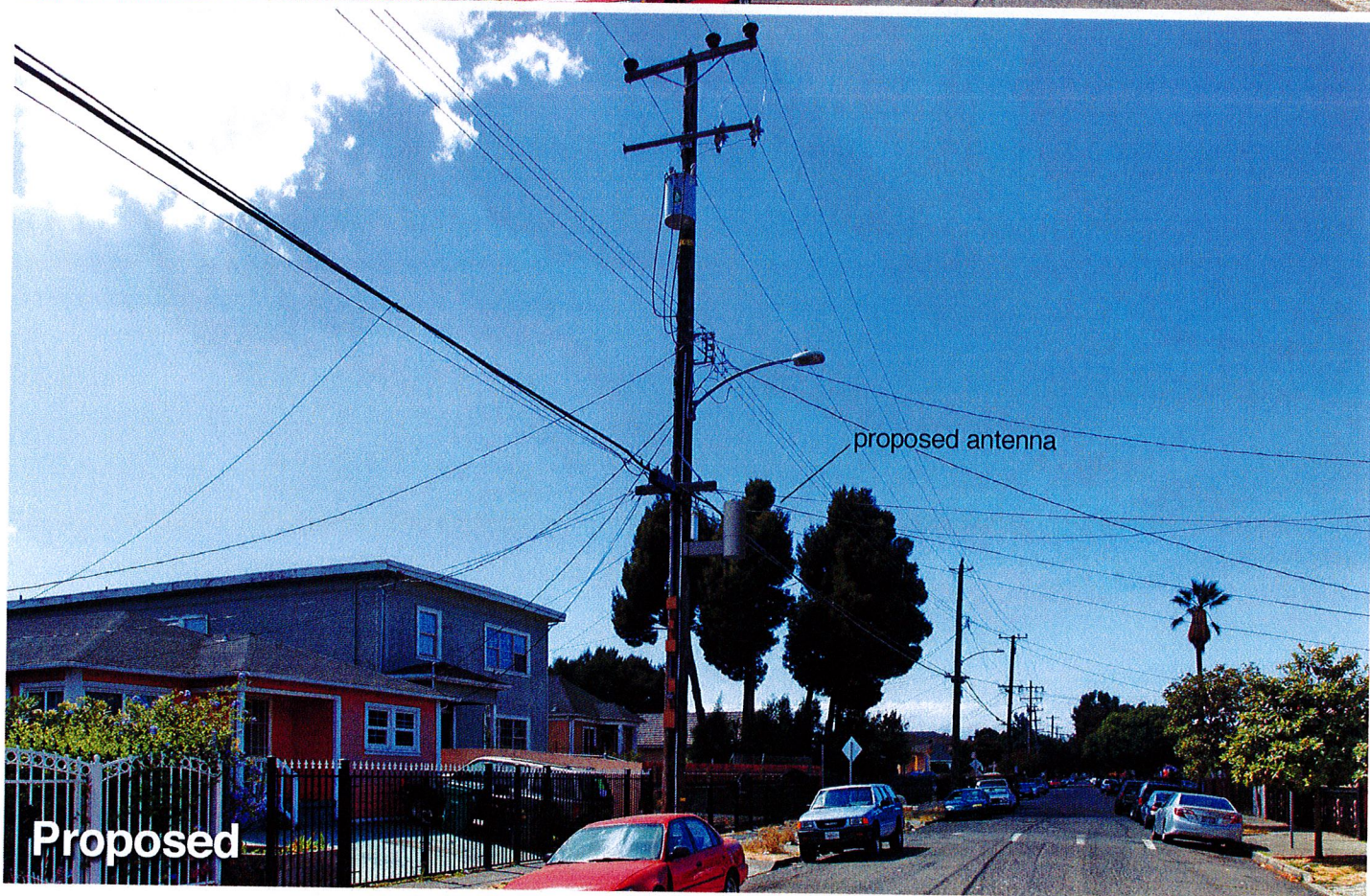
Attachment D







Existing



proposed antenna

Proposed



**EXTENET OAKLAND
NODE 06112A
ALTERNATIVE SITE ANALYSIS**

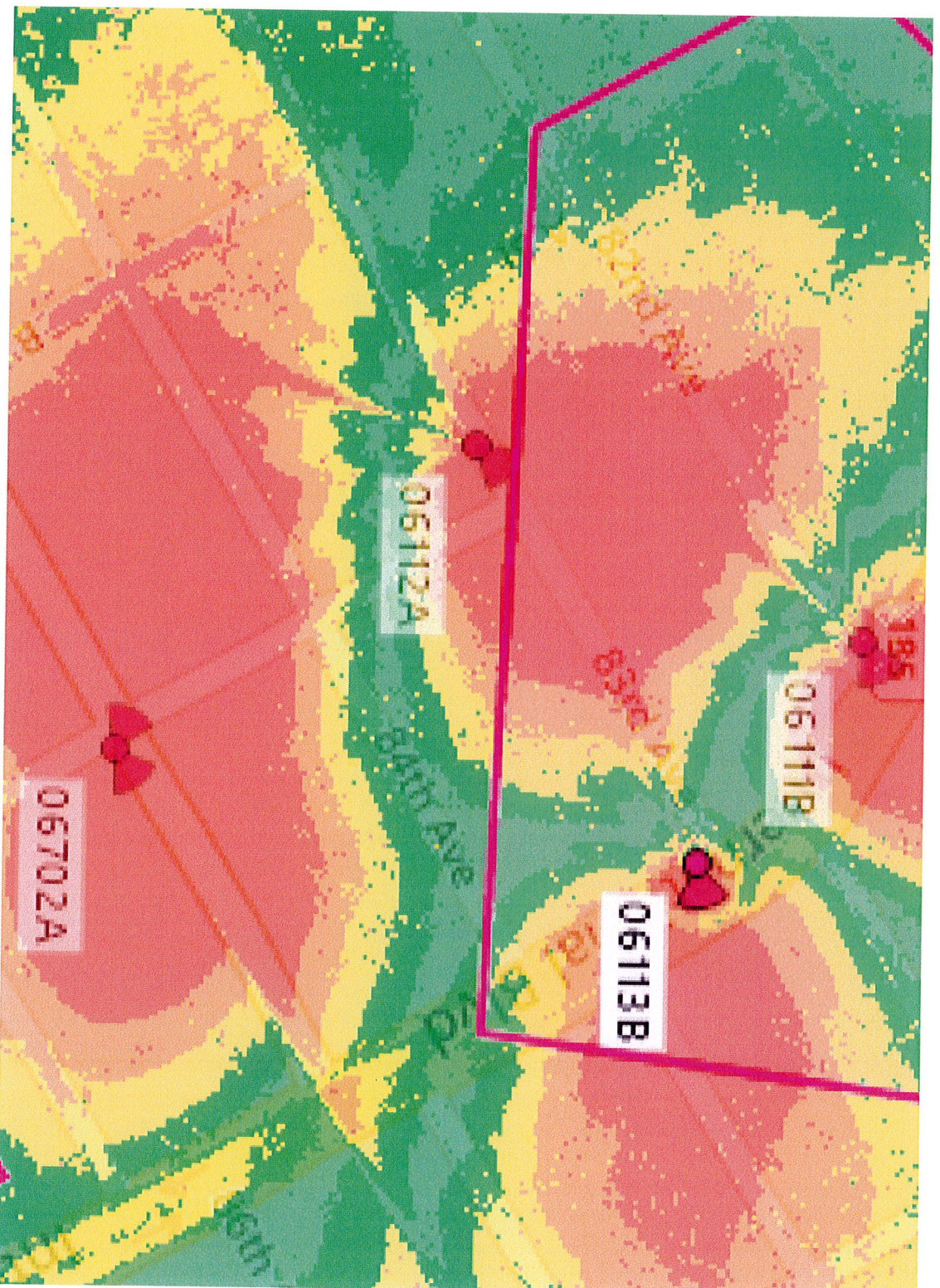
ATTACHMENT E

MAP OF ALTERNATIVE POLES EVALUATED FOR NODE 06112A



- The above maps depict ExteneNet's proposed Node 06112A in relation to other poles in the area that were evaluated as possibly being viable alternative candidates.
- The following is an analysis of each of those 3 alternative locations.

PROPAGATION MAP OF NODES 06112A



This propagation map depicts the ExteNet proposed Node 06112A in relation to surrounding proposed ExteNet small cell nodes.

06112A - PROPOSED LOCATION



- The location for ExteNet's proposed Node 06112A is a joint utility pole located at 1266 83rd Avenue (37.753846, -122.180336).
- ExteNet's objective is to provide T-Mobile 4G wireless coverage and capacity to the Oakland area.
- ExteNet evaluated this site and nearby alternatives to verify that the selected site is the least intrusive means to close T-Mobile's significant service coverage gap.

ALTERNATIVE NODE 06112B



- Node 061128B is a joint utility pole next to located in front of 1304 83rd Street (blue colored home), (37.753996, -122.179963)
- This pole is not a viable alternative candidate because cross lines and cross arms prevent adequate climbing space on the pole pursuant to CPUC General Order 95, thus prohibiting a wireless facility from being installed at this location.
- This pole is not a viable alternative candidate because this pole is located too close to primary Node 06702A.

ALTERNATIVE NODE 06112C



- Node 06112C is a joint utility pole at 1304 83rd Street Oakland (pole located on side of house on A street), (37.753884, -122.179927)
- This pole is not a viable alternative candidate because cross lines and cross arms prevent adequate climbing space on the pole pursuant to CPUC General Order 95, thus prohibiting a wireless facility from being installed at this location.
- This pole is not a viable alternative candidate because this pole is located too close to primary Node 06702A.

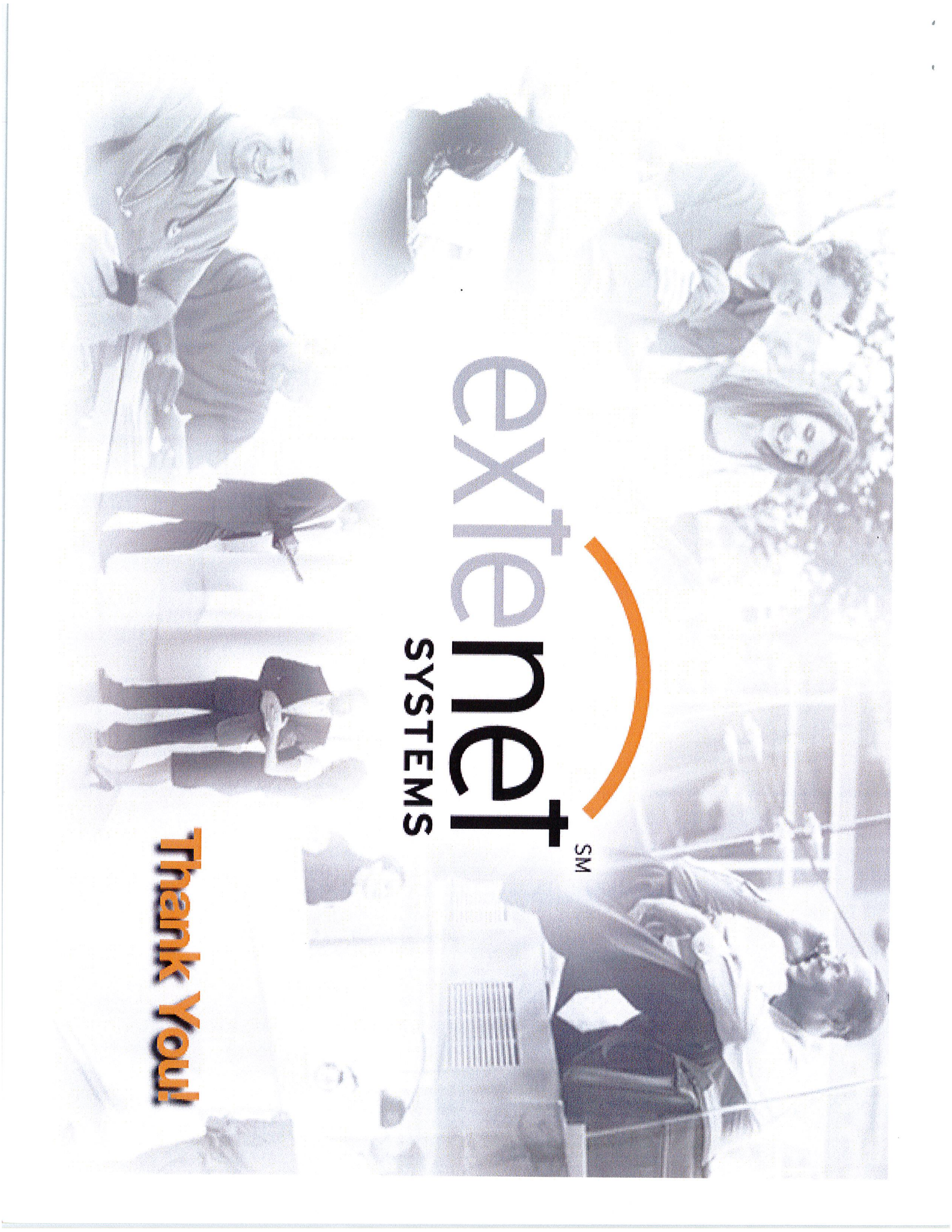
ALTERNATIVE NODE 06112D



- Node 06112D is a joint utility pole near 1301 83rd Street (37.754039, -122.180124).
- This pole is not a viable alternative candidate because this pole is located too close to primary Node 06702A.
- This pole is not a viable alternative candidate because this pole overlaps with primary Node 06113B.

ALTERNATIVE SITE ANALYSIS CONCLUSION

Based on ExteneNet's analysis of alternative sites, the currently proposed Node 06112A is the least intrusive location from which to fill the surrounding significant wireless coverage gaps.



extenet

SYSTEMS



SM

Thank You!

**ExteNet Systems CA, LLC • Proposed DAS Node (Site No. 06112A)
1266 83rd Avenue • Oakland, California**

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of ExteNet Systems CA, LLC, a wireless telecommunications facilities provider, to evaluate the addition of Node No. 06112A to be added to the ExteNet distributed antenna system (“DAS”) in Oakland, California, for compliance with appropriate guidelines limiting human exposure to radio frequency (“RF”) electromagnetic fields.

Executive Summary

ExteNet proposes to install a directional panel antenna on a utility pole sited in the public right-of-way at 1266 83rd Avenue in Oakland. The proposed operation will comply with the FCC guidelines limiting public exposure to RF energy.

Prevailing Exposure Standards

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

Wireless Service	Frequency Band	Occupational Limit	Public Limit
Microwave (Point-to-Point)	5,000–80,000 MHz	5.00 mW/cm ²	1.00 mW/cm ²
BRS (Broadband Radio)	2,600	5.00	1.00
AWS (Advanced Wireless)	2,100	5.00	1.00
PCS (Personal Communication)	1,950	5.00	1.00
Cellular	870	2.90	0.58
SMR (Specialized Mobile Radio)	855	2.85	0.57
700 MHz	700	2.35	0.47
[most restrictive frequency range]	30–300	1.00	0.20

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

General Facility Requirements

Base stations typically consist of two distinct parts: the electronic transceivers (also called “radios” or “channels”) that are connected to the traditional wired telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units. The transceivers are often located at ground level and are connected to the antennas by coaxial cables.

ExteNet Systems CA, LLC • Proposed DAS Node (Site No. 06112A)
1266 83rd Avenue • Oakland, California

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

Computer Modeling Method

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

Site and Facility Description

Based upon information provided by ExteNet, including drawings by Black & Veatch Corporation, dated September 29, 2016, it is proposed to install one CommScope Model 3X-V65S-GC3-3XR, 2-foot tall, tri-directional cylindrical antenna, with one direction activated, on a cross-arm to be added to a utility pole sited in the public right-of-way in front of the residence located at 1266 83rd Avenue in Oakland. The antenna would employ no downtilt, would be mounted at an effective height of about 20 feet above ground, and its principal direction would be oriented toward 40°T. T-Mobile proposes to operate from this facility with a maximum effective radiated power in any direction of 214 watts, representing simultaneous operation 107 watts for AWS and 107 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 T-Mobile operation is calculated to be 0.0046 mW/cm², which is 0.46% of the applicable public exposure limit. The maximum calculated level at the second-floor elevation of any nearby building is 0.71% 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.

**ExteNet Systems CA, LLC • Proposed DAS Node (Site No. 06112A)
1266 83rd Avenue • Oakland, California**

Recommended Mitigation Measures

Due to its mounting location and height, the ExteNet antenna would not be accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. To prevent occupational exposures in excess of the FCC guidelines, it is recommended that appropriate RF safety training be provided to all authorized personnel who have access to the antenna, including employees and contractors of the utility companies. No access within 2 feet directly in front of the antenna itself, such as might occur during certain activities, should be allowed while the base station is in operation, unless other measures can be demonstrated to ensure that occupational protection requirements are met. Posting explanatory signs* on the pole at or below the antenna, such that the signs would be readily visible from any angle of approach to persons who might need to work within that distance, would be sufficient to meet FCC-adopted guidelines.

Conclusion

Based on the information and analysis above, it is the undersigned's professional opinion that operation of the node proposed by ExteNet Systems CA, LLC, at 1266 83rd Avenue in Oakland, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations. Training personnel and posting signs is recommended to establish compliance with occupational exposure limitations.

Authorship

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration No. E-18063, which expires on June 30, 2017. This work has been carried out under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.

Rajat Mathur
Rajat Mathur, P.E.
707/996-5200



October 17, 2016

* 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.

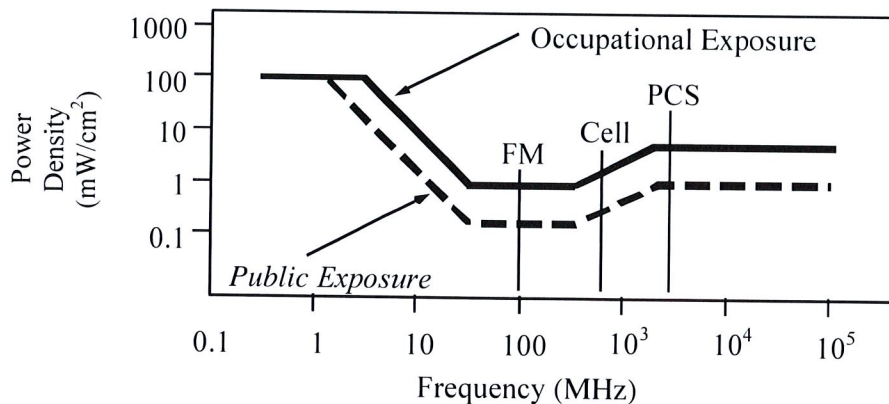


FCC Radio Frequency Protection Guide

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 (<i>f</i> 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√ <i>f</i>	<i>1.59√f</i>	√ <i>f</i> /106	<i>√f/238</i>	f/300	<i>f/1500</i>
1,500 – 100,000	137	<i>61.4</i>	0.364	<i>0.163</i>	5.0	<i>1.0</i>



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



RFR.CALC™ Calculation Methodology

Assessment by Calculation of Compliance with FCC Exposure Guidelines

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

Near Field.

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

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

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

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

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

D = distance from antenna, in meters,

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

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

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

Far Field.

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

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

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

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

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

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





ATTACHMENT G

November 18, 2016

City Planner
Planning Department
City of Oakland
250 Frank H. Ogawa Plaza, 2nd Floor
Oakland, CA 94612

Re: GO 95 Required Two Feet Clearance Between Antenna and Pole
Applicant: ExteNet Systems (California) LLC
Nearest Site Address: Public Right of Way near 1266 83rd Avenue
Site ID: NW-CA-SANFRNMC-TMO Node 06112A
Latitude/Longitude: 37.753846, -122.180336

Dear City Planner,

This letter is in response to discussions with City of Oakland Planning Department seeking clarification on the proposed antenna placement on the utility pole.

Wireless facility attachments to utility poles must comply with CPUC General Order 95 design, safety and clearance standards. Specifically, Rule 94.4(B) states: *Antennas shall maintain a 2 ft horizontal clearance from centerline of pole when affixed between supply and communication lines or below communication lines.* This rule precludes ExteneNet from placing the antennas flush mounted to the utility pole when there is a power source attached to the pole. ExteneNet minimized the clearance as much as possible by placing the antenna shroud just over two feet from the centerline of the utility pole.

Feel free to contact me if you have any questions. Thank you.

Thank you.

Best Regards,

A handwritten signature in blue ink that reads "Ana Gomez/BV for ExteneNet".

Ana Gomez
ExteneNet Permitting Contractor



November 18, 2016

City Planner
Planning Department
City of Oakland
250 Frank H. Ogawa Plaza, 2nd Floor
Oakland, CA 94612

Re: GO 95 Required Two Feet Clearance Between Antenna and Pole
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Thank you.

Best Regards,

A handwritten signature in blue ink that reads "Ana Gomez/BV for ExteneNet".

Ana Gomez
ExteneNet Permitting Contractor



PUBLIC NOTICE
NOTICE TO THE PUBLIC

ATTACHMENT H

CITY OF OAKLAND PUBLIC NOTICE



CITY OF OAKLAND
BUREAU OF PLANNING
 250 Frank H. Ogawa Plaza, Suite 2114, Oakland, CA 94612-2051
 Phone: 510-238-3911 Fax: 510-238-4730
PLANNING COMMISSION PUBLIC NOTICE

Location:	The Public Right-of-Way Adjacent to 1266 83 rd Ave.
Assessor's Parcel Number(s):	Nearest adjacent lot (042 425602601)
Proposal:	To establish a telecommunications facility, to enhance existing services, by attaching an antenna and equipment to an existing wooden utility pole located in the public right-of-way (sidewalk). The 45' tall wooden utility pole is existing.
Applicant:	Extenet Systems (California) LLC. (for T-Mobile USA, INC)
Contact Person/ Phone Number:	Ana Gomez (913) 458-9148
Owner:	Joint Pole Authority (JPA) including PG&E
Case File Number:	PLN16393
Planning Permits Required:	Major Design Review to install a wireless Telecommunication Macro Facility on a PG&E replacement pole located in RM-1 Zone.
General Plan:	Mixed Housing Type
Zoning:	RM-1 Mixed Housing Type Residential Zone.
Environmental Determination:	Exempt, Section 15303 of the State CEQA Guidelines; New construction or conversion of small structures, Exempt, Section 15183 of the State CEQA Guidelines; Projects consistent with a Community Plan, General Plan or Zoning.
Historic Status:	Not a Potential Designated Historic Property; Survey rating: n/a
City Council District:	7
Finality of Decision:	Appealable to City Council within 10 Days
For Further Information:	Contact case planner Dany Thal at (510) 238-3584 or by email at dthal@oaklandnet.com .

Your comments and questions, if any, should be directed to the Bureau of Planning, 250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, California 94612-2051 at or prior to the public hearing to be held on **March 1, 2017**, at Oakland City Hall, Council Chambers, 1 Frank H. Ogawa Plaza, Oakland, California 94612. The public hearing will start at 6:00 p.m.

If you challenge the Planning Commission decision on appeal and/or in court, you will be limited to issues raised at the public hearing or in correspondence delivered to the Bureau of Planning, at, or prior to, the public hearing on this case. If you wish to be notified of the decision of any of these cases, please provide the case planner with a regular mail or email address.

Please note that the description of the application found above is preliminary in nature and that the project and/or such description may change prior to a decision being made. Except where noted, once a decision is reached by the Planning Commission on these cases, they are appealable to the City Council. **Such appeals must be filed within ten (10) calendar days of the date of decision by the Planning Commission and by 4:00 p.m.** An appeal shall be on a form provided by the Bureau of Planning, and submitted to the City of Oakland or wherein the decision is not supported by substantial evidence and must include payment in accordance with the City of Oakland Master Fee Schedule. Failure to file a timely appeal will preclude you from challenging the City's decision in court. The appeal itself must raise every issue that is contested along with all the arguments and evidence previously entered into the record prior to or at the public hearing mentioned above. Failure to do so will preclude you from raising such issues during the appeal process.

POSTING DATE: **February 16, 2017**

IT IS UNLAWFUL TO ALTER OR REMOVE THIS NOTICE WHEN POSTED ON SITE
 July 1, 2016
 July 17, 2016

PLAN VIEW NO. SCALE: 1

PLAN VIEW NO. SCALE: 2

PLAN VIEW NO. SCALE: 3

exinet systems

BLACK & VEATCH CORPORATION

PRELIMINARY

EXTENET SYSTEMS (CA) LLC

ADJACENT TO (IN FRONT) 1266 83RD AVENUE OAKLAND, CA 94621

UTILITY POLE (ELEVATIONS AND RIGID DETAILS)

C-2

IF PARTS ARE MISSING OR DAMAGED, PLEASE CALL (510) 238-3911. FOR BLIGHT NOTICES, PLEASE CALL (510) 238-6402