Item #5, PLN16404, was continued from the March 1, 2017, Planning Commission Meeting.

Case File Number: PLN16-404 March 1, 2017

Location: The public Right of Way in front of 2401 67th Avenue on a

PG&E Utility /Telephone Pole (See map on reverse)

Assessor Parcel Numbers: (039-3260-028-00) nearest lot adjacent to the project site.

Installation of a wireless telecommunication facility on a 37' tall

wooden utility pole located in the public right-of-way. The project

Proposal: involves installation of one (1) canister antenna (23.5" long and

7.9" in diameter) at a height of 18' and two radio units (7.9" tall

and 7.9" wide) 10'-6" and 13'-11" above ground.

Applicant: Black & Veatch for Extenet Systems

Contact Person/ Phone Ana Gomez of Black & Veatch

Number: (913) 458-9148

Owner: Pacific Gas & Electric (PG&E)

Case File Number: PLN16-404

Planning Permits Required: Major Design Review to install a wireless Macro

Telecommunications Facility on an existing PG&E pole located

in the public right -of- way in a residential zone.

General Plan: Detached Unit Residential

Zoning: RD-1 Detached Unit Residential.

Environmental Exempt, Exempt, Section 15301 of the State CEQA Guidelines;

Determination: minor additions and alterations to an existing PG&E utility pole;

Section 15303, new construction or conversion of small

structures; Section 15183, projects consistent with a community

plan, general plan or zoning.

Historic Status: No Historic Record – Utility Pole

Service Delivery District: 4
City Council District: 6

Date Filed: October 4, 2016

Finality of Decision: Appealable to City Council within 10 Days

For Further Information: Contact case planner Jason Madani at (510) 238-4790 or

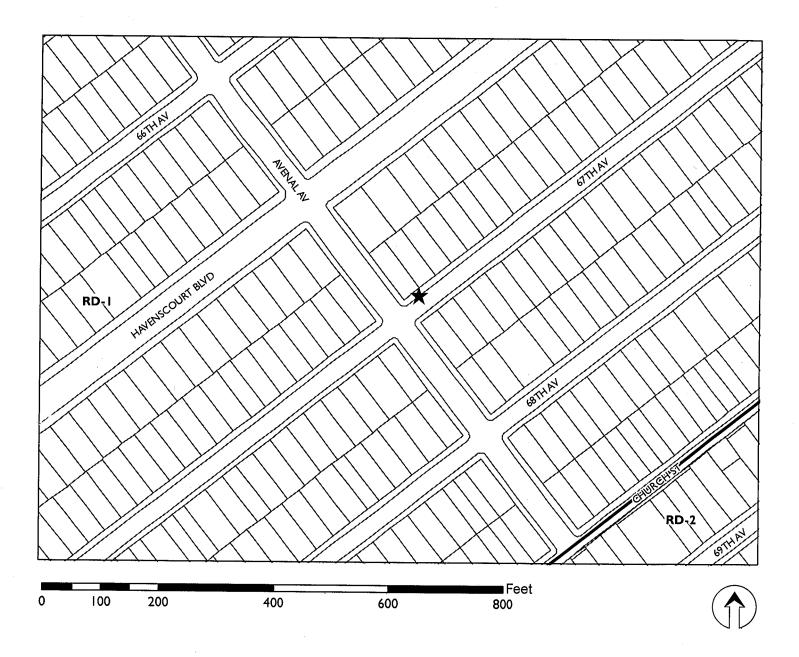
jmadani@oaklandnet.com

SUMMARY

The project applicant (Extenet Systems) is proposing to install a wireless telecommunication facility on an existing 37' tall wooden PG&E utility pole located in the public right-of-way near 2401 67th Avenue. The project involves installation of one (1) canister antenna located within antenna shroud and two radio units (7.9" tall and 7.9" wide) mounted at a height of 10'-6" and 13'-11" above ground.

Major Design Review is required for the installation of a new Macro Telecommunications Facility in a residential zone. The proposed antenna and associated equipment are compatible with the existing PG&E utility pole and typical of utility infrastructure normally found on these poles. The proposed antenna will be extended toward the street and painted a gray or brown color to blend with the site. As result, the proposed telecommunication facility is in an

CITY OF OAKLAND PLANNING COMMISSION



Case File: PLN 16404

Applicant: Black & Veatch for Extenet Systems Address: The public Right of Way in front of

2401 67th Ave on a JPA Utility Pole

Zone: RD-I

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color to blend with the site. As result, the proposed telecommunication facility is in an appropriate location and would not significantly increase negative visual impacts to adjacent neighboring residential properties. The proposed project meets all the required findings for approval of this project.

TELECOMMUNICATIONS BACKGROUND

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 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

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

PROPERTY DESCRIPTION

The existing 37' high PG&E utility pole is in the City of Oakland public right -of-way and is 26' away from an adjacent two-story residential building at 2401 67th Avenue.

PROJECT DESCRIPTION

The applicant is proposing to install a telecommunication facility on an existing PG&E utility pole located within in the public right-of-way (Attachment A). The project involves:

- Installation of one canister antenna measuring 23.5" long and 7.9" in diameter at a height of 18'.
- Installation of two radio units (7.9" tall and 7.9" wide) mounted 10'-6" and 13'-11" above ground.
- Installation of a breaker box and smart meter mounted to the pole 8' above ground.
- Painting the proposed antennas and associated equipment grey or brown to match the pole and/or other utilities located on the pole.

No portion of the telecommunication facilities will be located on the ground. The proposed antenna and associated equipment will not be accessible to the public.

GENERAL PLAN ANALYSIS

The site is classified Detached Unit Residential 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 detached, single unit structures. "Future development within this classification should be primarily residential in character."

The proposed telecommunication facilities will be mounted on an existing PG&E utility pole within the City of Oakland public right-of-way. The proposed unmanned wireless telecommunication facility will not adversely affect and detract from the characteristics of the neighborhood.

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ZONING ANALYSIS

The proposed telecommunication facility is located within the RD-1 Detached Unit Residential Zone. The intent of the RD-1 Zone is to create, maintain, and enhance areas with detached, single unit structures.

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 RD-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 section of this report, and the required findings for Major Design Review are listed and included in staff's evaluation later in this report.

ENVIRONMENTAL DETERMINATION

The California Environmental Quality Act (CEQA) Guidelines lists the projects that qualify as categorical exemptions from environmental review. The proposed project is categorically exempt from the environmental review requirements pursuant to Section 15301; minor additions and alterations to an existing PG&E utility pole; Section 15303, new construction or conversion of small structures, and Section 15183, projects consistent with a community plan, general plan or zoning.

KEY ISSUES AND IMPACTS

Project Site

Section 17.128.110 of the City of Oakland Telecommunication Regulations requires that new wireless facilities shall generally be located on designated properties or facilities in the following ranked order of 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 preference do not require a site alternatives analysis. Since the proposed project involves the installation of a new antenna on an existing PG&E utility pole located within RD-1 Zone, the proposed project meets preferences B, and a site alternatives analysis is not required. However, the applicant has provided a site alternatives analysis (Attachment B).

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Alternative Site Analysis:

The project is in an area with existing residential structures. The project applicant considered alternative sites on other utility poles in this area but none of these sites are as desirable from a service coverage perspective or from an aesthetics perspective to minimize visual impacts. The proposed project is in an underserved area. The proposed location is approximately equidistant from other Distributed Antenna Systems (DAS) nodes proposed in the surrounding area so that service coverage can be evenly distributed.

Staff has reviewed the applicant's alternative sites analysis and determined that the site selected conforms to the telecommunication regulation requirements. In addition, staff agrees that no other sites are more suitable.

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 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 the public right-of -way.
- C. Building or structure mounted antennas below roof line (facade mount, pole mount) visible from the 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 a C through F ranked preference, inclusive, must submit a site design alternatives analysis as part of the required application materials. The site design alternatives analysis shall, at a minimum, consist of:

Written evidence indicating 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.

Alternative Design Analysis:

The project applicant submitted an alternative design analysis (Attachment B). The analysis evaluated whether the equipment could be undergrounded and concealed from view. 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.

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The proposed antenna design is approximately equidistant from other DAS (Distributed Antenna Systems) 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 and concealed.

Planning staff has reviewed the applicant's alternative design analysis and determined that the site selected conforms to the telecommunication regulation requirements. Specifically, given the flat topography, streamlined equipment design, and location of the existing utility pole approximately 26' away from a two-story single-family dwelling, the facility will blend in with the existing PG&E utility pole apparatus. Furthermore, the proposed new antenna is located within a shroud screening mounted onto the PG&E utility pole 18' above ground and the two radio units will be attached to the pole at 10'-6" and 13'-11" in height above the ground. Finally, the shroud and radio units will be painted gray to match the other utilities or brown to match the pole.

Project Radio Frequency Emissions Standards

Section 17.128.130 of the City of Oakland Telecommunication Regulations requires that the applicant submit 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.
- 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.

In the RF emissions report (Attachment C) prepared by Hammett & Edison, 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. The RF emissions report also states that the proposed project will not cause a significant impact on the environment. Additionally, staff recommends that prior to the final building permit sign off, the applicant submit a certified RF emissions report stating that the facility is operating within acceptable thresholds established by the regulatory federal agency.

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CONCLUSION

The proposed project meets all the required findings for approval. The proposal will provide an 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 believes that the proposal is designed to meet the established zoning and telecommunication regulations and recommends supporting the Major Design Review application.

RECOMMENDATIONS:

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

Prepared by:

Jason Madani Planner II

Reviewed by:

Scott Miller Zoning Manager

Approved for forwarding to the City Planning Commission

Darin Ranelletti, Interim Director Department of Planning and Building

ATTACHMENTS:

- A. Project Plans & Photo simulations
- B. Site & Design Alternative Analysis
- C. Hammett & Edison, Inc., Consulting Engineering RF Emissions Report

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FINDINGS FOR APPROVAL

FINDINGS FOR APPROVAL:

This proposal meets all the required findings under Section 17.136.050(B), of the Non-Residential Design Review criteria and all the required findings under Section 17.128.070(B), of the telecommunication facilities (Macro) Design Review criteria and as set forth below: Required findings are shown in **bold** type; reasons your 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 proposal is to install one telecommunication canister antenna on an existing, wooden, PG&E utility pole 18' above ground with the associated equipment mounted to the pole at 10'-6" and 13'-11" high and above (breaker box and smart meter). Given the flat topography, slim equipment design, and proposal to paint the equipment, the facility will blend in with, and be typical of, utility apparatus already located on the pole. In addition, the facility is located approximately 26' away from a two-story single family dwelling. Finally, the proposed antennas and radio units will be located high up on the pole and oriented toward the street. Therefore, the proposal will have minimal visual impacts from public views.

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 proposal improves wireless telecommunication service in the residential area. The facility will be camouflaged by the slim antenna canister and painted gray or brown color to blend in with the existing surrounding area and have minimal visual impacts on public views and protect the value of private and public investments in the area. Service will also be available to emergency services such as police, fire department and emergency response teams.

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 Detached Unit Residential 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 detached, single unit structures. "Future development within this classification should be primarily residential in character."

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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 C as described above, an alternative site design study needed to be undertaken. The analysis shows that the proposed pole will be similar to other utility poles within same block and throughout the City. 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 street and away from the home at 2401 67th Avenue and painted to match either the pole or utilities. As result, the proposal is consistent telecommunication regulation requirements, is 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 proposed antenna and related equipment will be painted gray or brown to match the PG&E utility pole and blend with the surroundings.

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 antennas will not be mounted on a building or architecturally significant structure, but rather on a PG&E 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 proposed antenna will be mounted on an existing PG&E utility pole and painted gray or brown to match the utility pole. As a result, the facility will be camouflaged to blend-in with existing surrounding area. The facility will also be located approximately 10'-6" and 13'-11" above ground and head height to minimize visual impacts.

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 will be attached to an existing utility pole, oriented toward the street and painted to match pole in order to blend with the surroundings. The antenna will be located within an antenna shroud.

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

The proposed equipment will be compatible with the existing PG&E pole and other utility equipment located on the pole.

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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 one telecommunication canister antenna will placed within an antenna shroud mounted on an existing, wooden, PG&E utility pole 18' above ground. The radio units will be located approximately 10'-6" and 13'-11" above ground, while the equipment above the breaker box and smart meter will be located 8' above the ground. None of the equipment will be accessible to the public due to its location.

Case File Number: PLN16-404 Page 12

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, and the approved plans dated **September 27**, **2016** and submitted on **October 4**, **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 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

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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

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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

Ongoing throughout demolition, grading, and/or construction

At least one (1) copy of the stamped approved plans, along with the Approval Letter and Conditions of Approval, shall be available for review at the job site at all times.

11. <u>Special Inspector/Inspections, Independent Technical Review, Project Coordination</u> and Management

Prior to issuance of a demolition, grading, and/or construction permit

The project applicant may be required to pay for on-call special inspector(s)/inspections as needed during the times of extensive or specialized plan check review, or construction. The project applicant may also be required to cover the full costs of independent technical and other types of peer review, monitoring and inspection, including without limitation, third party plan check fees, including inspections of violations of Conditions of Approval. The project applicant shall establish a deposit with the Building Services Division, as directed by the Building Official, Director of City Planning or designee.

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. Days/Hours of Construction Operation

Ongoing throughout demolition, grading, and/or construction

The project applicant shall require construction contractors to limit standard construction activities as follows:

- a) Construction activities are limited to between 7:00 AM and 7:00 PM Monday through Friday, except that pile driving 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. Monday through Friday.
- b) Any construction activity proposed to occur outside of the standard hours of 7:00 am to 7:00 pm Monday through Friday for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case by case basis, with criteria including the proximity of residential uses and a consideration of resident's preferences for whether the activity is acceptable if the

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overall duration of construction is shortened and such construction activities shall only be allowed with the prior written authorization of the Building Services Division.

c) Construction activity shall not occur on Saturdays, with the following possible

exceptions:

i. Prior to the building being enclosed, requests for Saturday construction for special activities (such as concrete pouring which may require more continuous amounts of time), shall be evaluated on a case by case basis, with criteria including the proximity of residential uses and a consideration of resident's preferences for whether the activity is acceptable if the overall duration of construction is shortened. Such construction activities shall only be allowed on Saturdays with the prior written authorization of the Building Services Division.

ii. After the building is enclosed, requests for Saturday construction activities shall only be allowed on Saturdays with the prior written authorization of the Building Services Division, and only then within the interior of the building with the doors and

windows closed.

d) No extreme noise generating activities (greater than 90 dBA) shall be allowed on Saturdays, with no exceptions.

e) No construction activity shall take place on Sundays or Federal holidays.

f) 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.

14. Radio Frequency Emissions

Prior to the final building permit sign off.

The applicant shall submit a certified RF emissions report stating the facility is operating within the acceptable standards established by the regulatory Federal Communications Commission.

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

Ongoing.

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.

17. Possible District Undergrounding PG&E Pole

Ongoing

Should the PG &E utility pole be voluntarily removed for purposes of district undergrounding or otherwise, the telecommunications facility can only be re-established by

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applying for and receiving approval of a new application to the Oakland Planning Department as required by the regulations.

Applicant Statement

I have read and accept responsibility for the Conditions of Approval. I agree to abide by and conform to the Conditions of Approval, as well as to all provisions of the Oakland Planning Code and Oakland Municipal Code pertaining to the project.

Name of Project Applicant	
Signature of Project Applic	 ant
Date	

NW-CA-SANFRNMC 06275A

ADJACENT TO (IN PROW) 2401 67TH AVENUE OAKLAND, CA 94605



SHEET NO:

SHEET TITLE

SHEET INDEX

JULY SHEEL ENERAL NOTES AND LEGEND

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OVERALL SITE PLAN

OTHER SITE PLAN

EQUIPMENT DETAILS

EQUIPMENT DETAILS

ADDRESS: 2000 CROW CANYON PL SUITE 210 SAN RAMON, CA 94583

ADDRESS: 2000 CROW CANYON PLACE, SUITE 210 SAN RAMON, CA 94583

HONE: (415) 596-3474

MYERGOVICHO EXTENETSYSTEMS.COM

PROJECT DATA

COMPANY: EXTENET SYSTEMS (CALIFORNIA), LLC. CONTACT: MATTHEW YERGOVICH

APPLICANT

OWNER: EXTENET SYSTEMS CA, LLC

POLE OWNER

PROJECT INFORMATION

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			Bancroff, A _{lice}
 EAST 14 STREET BUS 14 TAS	(8)		

Oakland Zoo NO SCALE

CODE COMPLIANCE

SITE MAP

ALL WORK AND MATTERIAS SHALL BE PERFORMED AND MOTHLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADDRED BY THE LOCAL COPERNING AUTHORITIES (AS APPLICABLE), NOTHING WITHESS PLANS IS TO BE CONSTRUCTED TO PERMIT WORK NOT COMPORMING TO THESE CODES.

1: IBC — 2012
2: CLEFORMA BILLING STANDARDS CODE — 2013
3: CLIFORMA GERERA GORER 35
4: CLEFORMA FLUMENC CODE 2013
5: CLEFORMA FLUMENC CODE 2013
7: CRY VORMA ELECTRICA CODE 2013
7: CRY VORMA ELECTRICA CODE 2013
7: CRY VORMA CELEVANIOL CODE 2013
7: CRY VORMA ELECTRICA CODE 2013
7: CRY VORMA CELEVANIOL CODE 2013
7: CRY VORMA ELECTRICA CODE 2013
8: DILLUNG GETERAL AND CODE ANNIETRATORS (BOCA)
8: FIFECTIME UNTIL LANUARY 157, 2017

REAL ESTATE SIGNATURE

SIGNATURE

CONSTRUCTION SIGNATURE

PROJECT DESCRIPTION

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

BLACK & VEATCH

8

E PAR BLACK & VEATCH CORPORATION 2999 OAK ROAD SUITE 490 WALNUT CREEK, CA 94597

JECT NO	HESE DRAW RE THE PRO RODUCED S ROTLANY RE NFORMATIC DRAWINGS BRITTEN CO
JECT NO DRAWN BY CHECKED	HESE DRAWINGS ARE COPYRIGHTED AN RET THE PROPERTY OF BLACK & VERTON CODUCED SOLELY FOR THE USE OF CUIT SHET, MAY REPRODUCTION OR USE OF IT NEORAKATION CORLINATED WITHOUT DRAWINGS IS PROHIBITED WITHOUT BRITTEN CONSENT BY BLACK & VEATCH.
ŝ	SAID SAICH

192417 989 G GAC BY

GENERAL PROJECT NOTES

NOTIFY EXTENSE INSTEADS, IN WRITING, OF ANY MAJOR DECRETANCES RESIDENCE THE CONTRACTION SHALL BE RESPONSED FOR THE CONTRACTION SHALL BE SYSTEMS REPRESENTATIVE, AND ADMISSION SHALL AN EXTENSE SYSTEMS REPRESENTATIVE, AND ADMISSION SHE WAS ACCORDINGLY.

INSTALL ALL EQUIPMENT AND MATERIALS PER THE MANUFACTURER'S RECOMMENDATIONS, UNLESS INDICATED OTHERWISE. ALL FIELD MODIFICATIONS BEFORE, DURING OR AFTER CONSTRUCTION SMALL BE APPROVED IN WRITING BY AN EXTENSIONS REPRESENTATIVE. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND DIMENSIONS OF THE JOB SITE AND CONFIRM THAT WORK AS INDICATED ON THESE CONSTRUCTION DOCUMENTS CAN BE ACCOMPLISHED AS SHOWN PRIOR TO COMMENCEMENT OF ANY WORK. PRIOR TO SUBMITTING A BID, THE CONTRACTOR SHALL FAMILABIZE HIMSELF/HERSELF WITH THE SCOPE OF WORK AND ALL CONDITIONS AFFECTING THE NEW PROJECT.

IT IS A VOLATION OF LAW FOR AMY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A USENEED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT. PRELMINARY

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

CONTRACTOR PLANS TO ILLUSTRATE THE AS-BUILT CONDITION OF THE STEL FOLLOWING: THE FINAL INSPECTION BY EXTENS! OR IMMOBILE, THE CONTRACTOR SHALL PROVIDE EXTENSITY OR WITH ONE COPY OF ALL RED-LINED DRAWINGS.

CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS AND FINISHES THAT ARE TO REJAIN, CONTRACTOR SHALL REPAIR ANY DAMAGE THAT CHAY GOCUR DISHING THE CONSTRUCTION. TO THE SATISFACTION OF AN EXTENET SYSTEMS REPRESENTATIVE. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF THE WORK UNDER THE CONTRACT.

ADJACENT TO (IN PROW) 2401 67TH AVENUE OAKLAND, CA 94605 SHEEL JILLE

SHEET NUMBER

TITLE SHEET

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

Attachment A

ADDRESS: 2999 OAK ROAD, SUITE 490 WALNUT CREEK, CA 94597

PHONE: (952) 896-0751 E-MAIL: EVANSRA@BV.COM ENGINEER: AARON EVANS OMPANY: BLACK & VEATCH ENGINEER

> POLE #: LONGITUDE:

> > -122.186675

ZONING DISTRICT:

CONTACT: ANA GOMEZ

OMPANY: BLACK & VEATCH

AGENT

E-MAIL:

COMEZABARCAA CBV.COM (913) 458-9148

TITLE 24 REQUIREMENTS

FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION, THIS PROJECT IS EXEMPT. ATTACHMENTS TO A WOOD UTILITY POLE

CONSTRUCTION TYPE OCCUPANCY: VEAREST A.P.N.: ZONING JURISDICTION ELEVATION:

> U. UNMANNED 39-3260-28 CITY OF DAKLAN 110135496

SUBCONTRACTOR SHALL YERRY ALL PLANS & DYSTRIC DIMENSIONS & CONDITIONS ON THE JOB STEE & SPALL MANELAGETY AND TOTAL THE ADDRESS ON WITHING OF ANY DISCREPANCIES OF SPALL MANELAGE WITH THE WORK ON BE ACCOMPANIED FOR SWALL

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UTILITIES PROTECTION CENTER, INC.
811 SERVICE ALERT

ANTENNA MOUNTING FIELD WELDING NOTES: DEFINITIONS GENERAL NOTES CONTRACTOR SHALL INSTALL ANTENNA PER MANUFACTURER'S RECOMMENDATION FOR INSTALLATION AND GROUNDING. ALL BOLTS, ANCHORS AND MESCELLANCOUS HARDWARE SHALL BE GALVANZEO IN ACCORDANCE WITH ASTA A153 (2MC-COATING (MOT-OIP) ON WOOM AND STEEL HARDWARE. UNLESS MOTED OTHERWISE. "ACLINES (ESPANCIE MES) MANUES (TROPSCHUSE RES CO) HE MORE SURFACE OF HE POLE AND ALSO VOLVILLE ANT REALMING ZUIC STAND, HE ROSE LEVEL MES HAMMEN SURFACE AND ETO ÉLON HEROSCOS STREILY TOLLOW, ALL MONIFICIES SURFACINES OF RESIDENCE MOST SURFACE AND ETO ÉLON HEROSCOS STREILY TOLLOW, ALL MONIFICIES SURFACINCIONS FOR STREAMER MORE AND ESPANSE AND RELIGIORES. MORE REALMINE ELETRODES TROM MANUFICITIES S MONARIOS UNIT. REMOY FOR MARCHATE USE. ALL STEEL MATERMAS, SMALL BE GALVANIZED ATTER FABRICATION IN ACCORDANCE WITH ASTA A 123. "ZINC (HOT-DIP CALVANIZED) COATROS ON BROW AND STEEL PRODUCTS". UNLESS NOTED OTHERWISE. DESIGN AND CONSTRUCTION OF AMTERNIA SUPPORTS SHALL CONTORM TO CURRENT ANSI/TIA-222 OR APPLICABLE LOCAL CODES. A PECAN LATER OF MEIDME, APPLY CALLY—STEE: JAME COATING TO ALL UNPROTECTED SURFACES, APPLY A PECAN LATER OF SALVEY AND CONTENT OF COMPANIES, PANY TO JACTAY SERGOLDWANG SURFACES. WELDING MAY PRODUCE TOXIC FUMES. REFER TO ANSI STANDARD 249.1 "SAFETY IN MELDING AND CUTTING" FOR PROPER PRECAUTIONS. CHIND SUNFACES TO BE WEIDED MITH A SUICOM CHABIDE WHEEL PRIOR TO WELDING TO REMOVE ALL GALVANIZHIG WHICH MAY OTHERWISE BE CONSUMED IN THE WELD METAL APPLY ANTI-SPATTER COMPOUND AFTER CRINDENG. WELDING TO BE PERFORMED BY ANS CERTIFIED WELDER FOR THE TYPE OF AND POSITION INDICATED. ALL WORK MUST BE IN CONTORMANCE WITH LATEST EXHIDN OF AWS DI.I. FURNISH : SUPPLY ONLY, OTHERS TO INSTALL INSTALL ITEMS FURNISHED BY OTHERS. PROVIDE FURNISH AND INSTALL. UL ANTENNA MOUNTS SHALL BE INSTALLED WITH LOCK NUTS, DOUBLE NUTS AND SHALL BE TOROUED TO WAITFACTURER'S RECOMMENDATIONS. 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THE CONTRACTOR SHALL NOTITY UNDERCROUND SERVICE ALERT (800) 227-2600, AT LEAST TWO WORKING DAYS PRIOR TO THE START OF AMY EXCANATION. THE CREDICAL AND OCKAINS OF UTHILES AND INTER ACCURACY MUCKLES YERE GRIMAND BY A SUMEN OF AMALIESE RECORDS UNFOR ACCURACY AND AND THE CREDICAL PROPERTY OF SUME OF CONTRACTION AND USES DIRECTED AND PROPERTY INCUSIONS OF THE WORK OF THE WORLD AND PROPERTY OF THE WORK OF T rely only on amounte dimensions and request incommunion is additioned dimensions are required. PRIOR TO THE SEMENSION OF BISE, THE COMPACTORIS) SHALL WIST THE JOB SITE(S) AND DE RESPONSIBLE TOR ALL COMPACT COMMENTS, PROD. COMMENTS AND DURNISTORS, AND COMPAN HAT THE MORE MAY BE ACCOMPLISHED FOR THE COMPACT PRODUCTIONS AND TO DESCRIPTION. THE CAMPACT AND THE COMPACT AND ACCOUNTING THE ACCOUNTING WOMEN AND ACCOUNTED FROM TO DO DO SUBMITUAL. 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ALL BH ANTENNA HARDWARE SHALL BE TIGHTENED TO 9 LB-FT (12 HM). B. GROUMOWIC AND ANTEINA HARDWARE ON THE NUT SIDE STARTING FROM DIE THREADS TO THE SOLID SURFACE. EXAMPLE OF SOLID SURFACE, GROUND BAR, ANTEINA BRACKET METAL. all of connections, grounding hardware and antenna hardware shall have a torque mark installe in a continuous straight line from both sides of the connection. ALL RE CONNECTIONS SHALL BE TIGHTENED BY A TOROUE WRENCH all grounding hardware shall be tightened until the lock washer collapses and the grounding hardware is no longer loose. 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FLIP BOTH BREAKERS TO THE OFF POSITION PROVOE THE FOLLOWING INFORMATION NOC SITE MULBER DENTIFIED ON SITE NUMBERING STICKER VOUR NAME, AND REASON FOR POWER SHUTDFF PROVIDE DURALION OF OUTAGE 24 HOURS PRIOR TO SCHEDULED POWER SHUT OFF DETAIL REFERENCE SECTION REFERENCE NBOVE GROUND TELCO/POWER ABOVE GROUND TELCO ABOVE CROUND POWER JNDERGROUND TELCO/POWER OVERHEAD TELCO OVERHEAD POWER JADERGROUND FIBER JNDERGROUND TELCO UNDERGROUND POWER WATER LINE SETBACKS PROPERTY UNE (PL) LEASE AREA CHAIRUNK FENCE CHEMICAL ELECTROLYTIC GROUNDING SYSTEM MECHANICAL CONNECTION EXDTHERMIC CONNECTION TEST CROUND ROD WITH INSPECTION SLEEVE GROUND ROD EXOTHERMIC WITH IMSPECTION SLEEVE TEST CHEMICAL ELECTROLYTIC CROUNDING SYSTEM WALL STRUCTURE 1000/WROUGHT IRON FENCE - ACT -- ACT -- ACT -- ACT -- ACT vei/b - vei/b - vei/b - vei/b --AGP - AGP - AGP - AGP - AGP me1/9 -- 4/130 --UGI/P | X ğ et I 101/5 uci/p AGI/P , AG EXTENET SYSTEMS (CA) LLC 2000 CROW CANYON PLACE ADJACENT TO (IN PROW) 2401 67TH AVENUE OAKLAND, CA 94605 II IS A MOLATION OF LAW FOR ANY PERSON. UNILES THEY ARE ACTIVIC UNDER THE EMECTION OF A LICENSED PROFESSIONAL ENGRETER, TO ALICE THIS DOCUMENT, SUITE 210 SAN RAMON, CA 94583 PROJECT NO. DRAWN BY BLACK & VEATCH REAL ESTATE SIGNATURE RF SIGNATURE CONSTRUCTION SIGNATUR SYSTEMS EVERywhere INTERNAL REVIEW PRIMINAPL BLACK & VEATCH CORPORATION 2999 DAK ROAD SUITE 490 WALNUT CREEK, CA 94597 GENERAL NOTES AND LEGEND SITE ADDRESS SHEET THE

ISSUED FOR PENEW

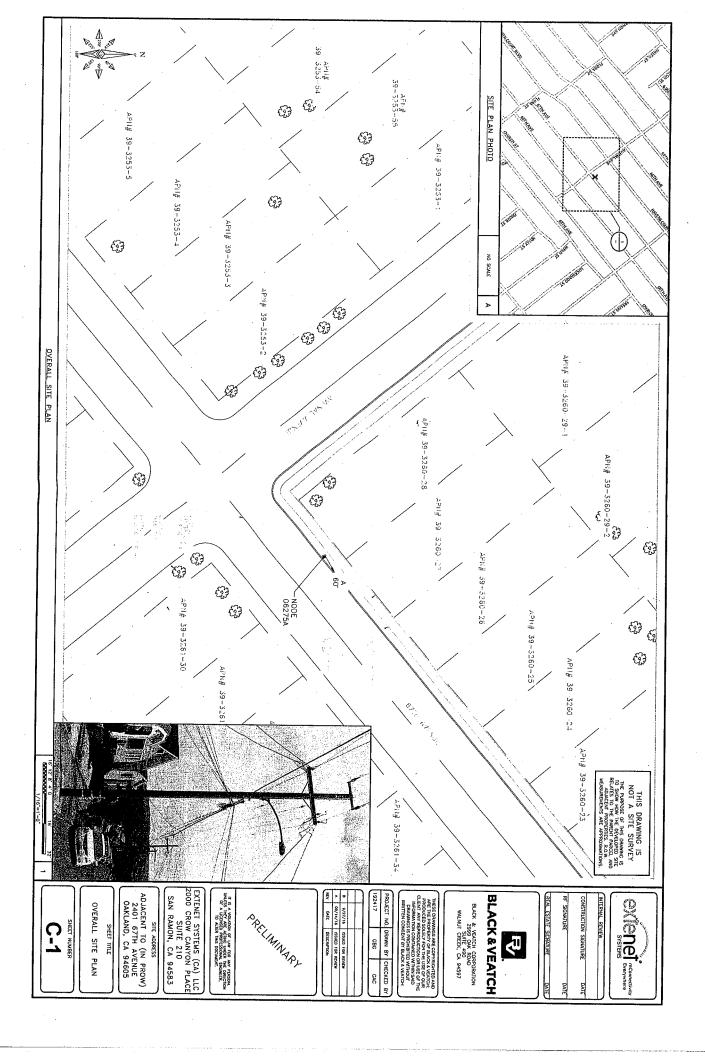
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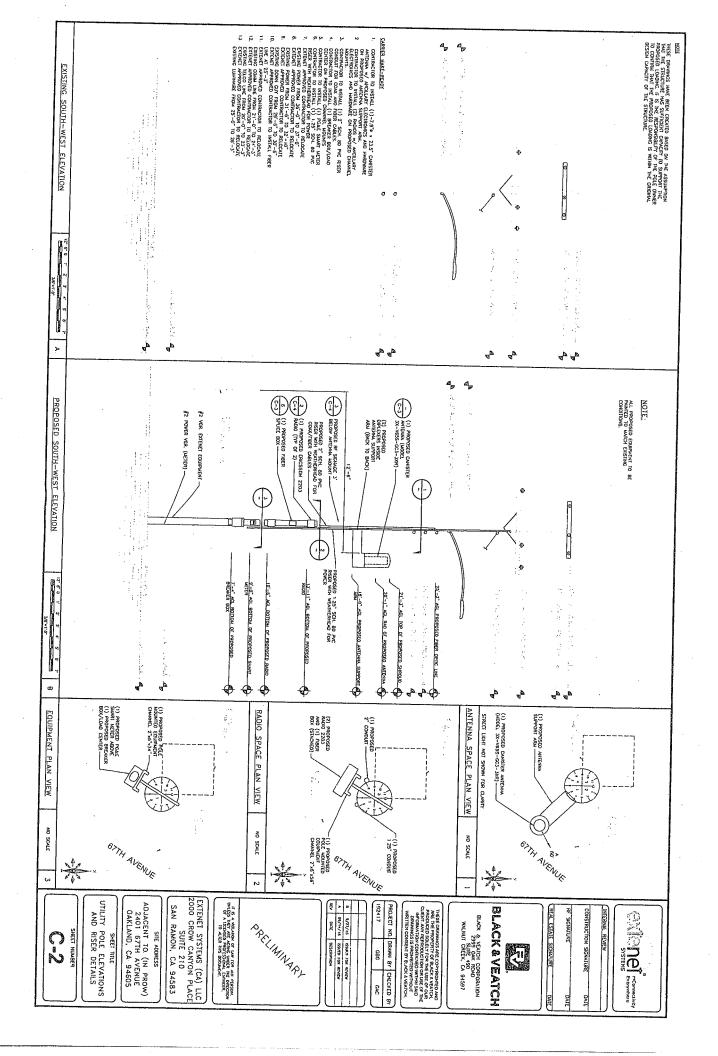
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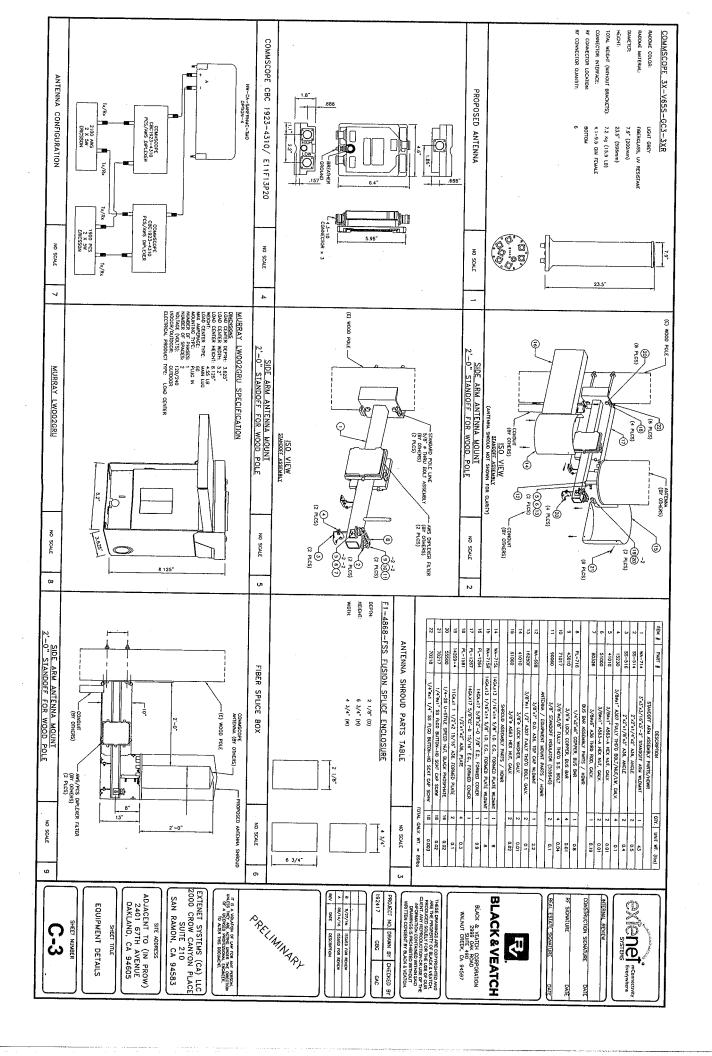
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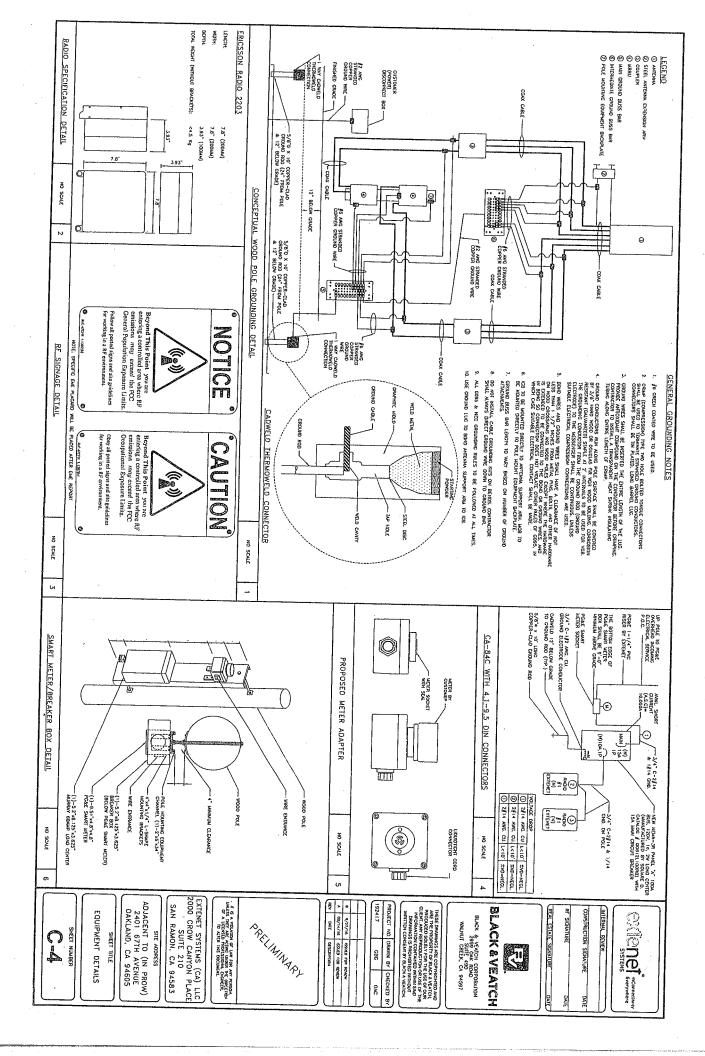
GENERAL NOTES AND LEGENDS

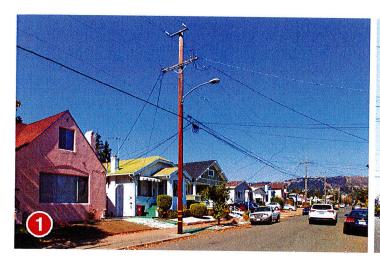
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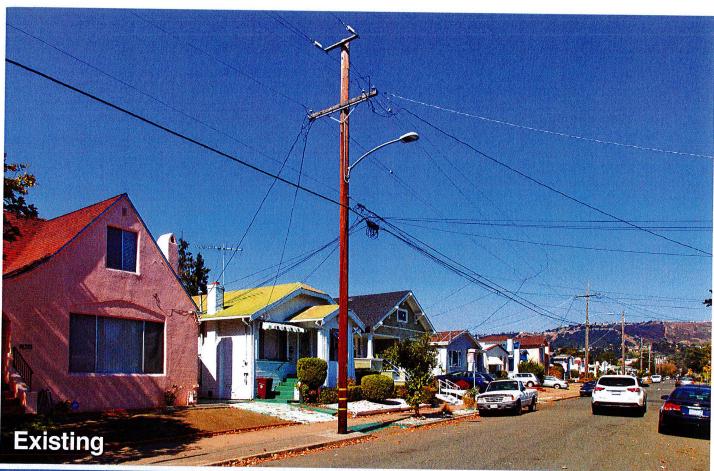


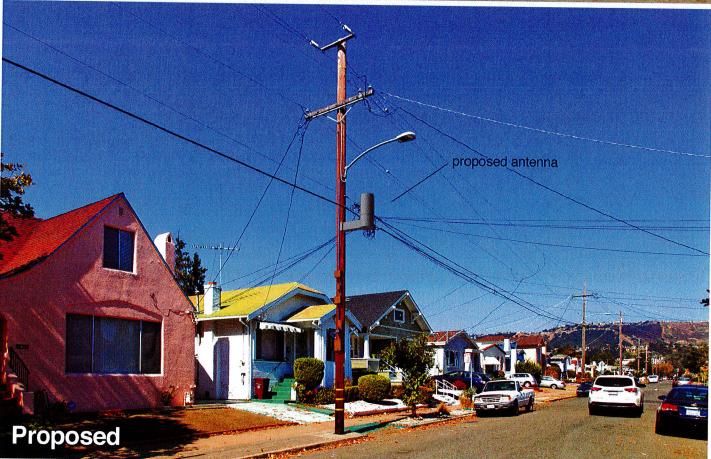




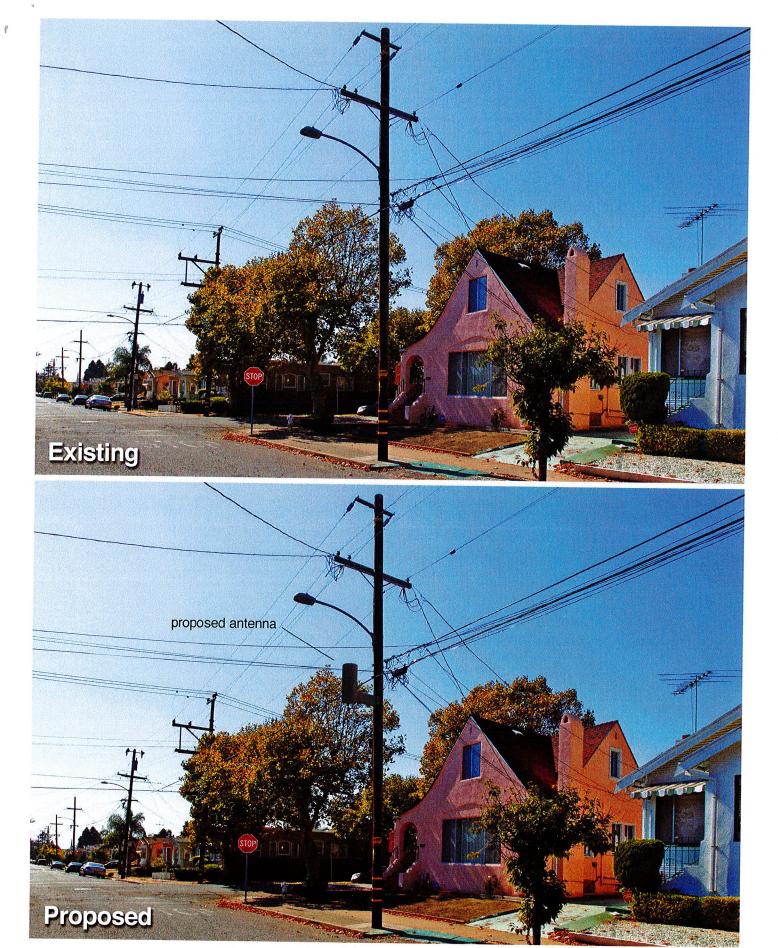
NW-CA-SANFRNMC-06275A

Aerial Map











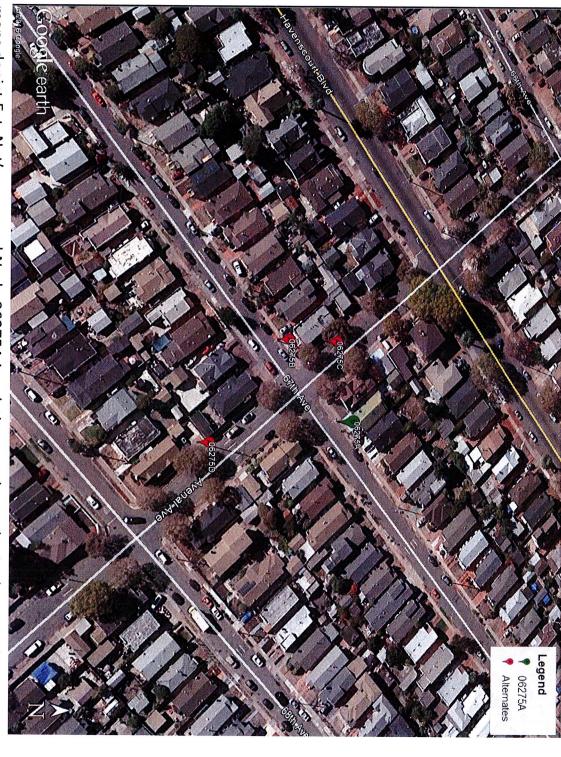
NW-CA-SANFRNMC-06275A

Looking Southwest from 67th Avenue



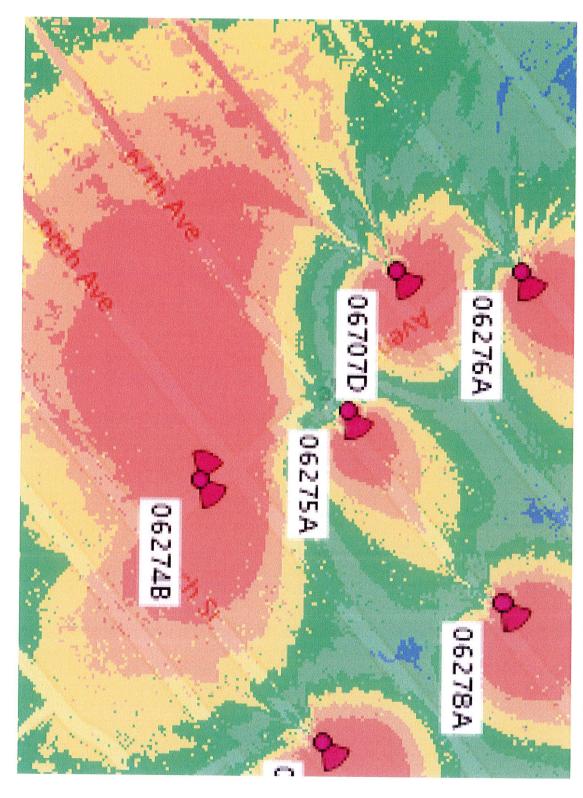


EXTENET OAKLAND



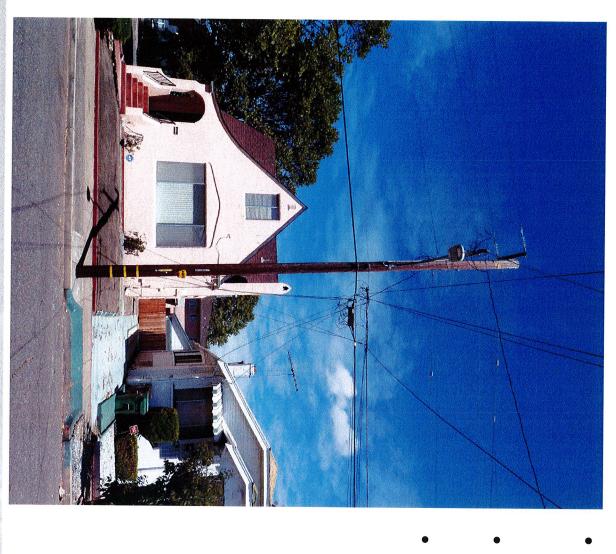
- The above maps depict ExteNet's proposed Node 06275A in relation to other poles in the area that were evaluated as possibly being viable alternative candidates.
- The following is an analysis of each of those 3 alternative locations.

PROPAGATION MAP OF NODES 06275A



This propagation map depicts the ExteNet proposed Node 06275A in relation to surrounding proposed ExteNet small cell nodes.

06275A - PROPOSED LOCATION



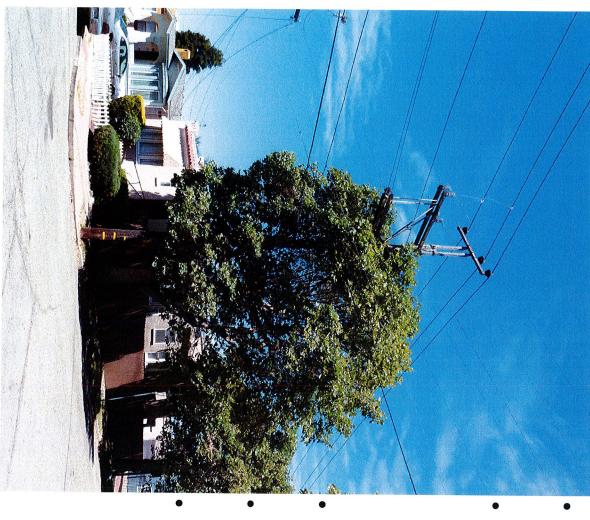
- The location for ExteNet's proposed Node 06275A is a joint utility pole located adjacent to PROW 2401 67th Avenue (37.765395,- 122.186673).
- ExteNet's objective is to provide T-Mobile 4G wireless coverage and capacity to the Oakland area.
- ExteNet evaluated this site and nearby alternatives to verify that the selected site is the least intrusive means to close T-Mobile's significant service coverage gap.

ALTERNATIVE NODE 06275B



- Node 06275B is a joint utility pole located in front of 1851 67th Avenue (37.767760, -122.184586).
- This pole is not a viable alternative candidate because the existing transformer on the pole would need to be relocated to an uncertain destination in order to facilitate our proposed wireless installation.
- This pole is not a viable alternative because the minimum antenna height needed at this pole would violate CPUC General Order-94 Regulation safety clearances. This configuration does not allow ExteNet the proper 2' of separation from the communication lines.
- 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.

ALTERNATIVE NODE 06275C



- Node 06275C is a joint utility pole located at 67th Oakland (Tree in the way), (37.765349, 122.187014)
- This pole is not a viable alternative because the minimum antenna height needed at this pole would violate CPUC General Order-94 Regulation safety clearances. This configuration does not allow ExteNet the proper 2' of separation from the communication lines.
- Nearby tree trimming would be required to facilitate a wireless facility here, possibly requiring tree removal.
- This pole is not a viable alternative because the signal would be blocked by trees.
- This pole is not a viable alternative candidate because this pole is located too close to primary Node 06707D.

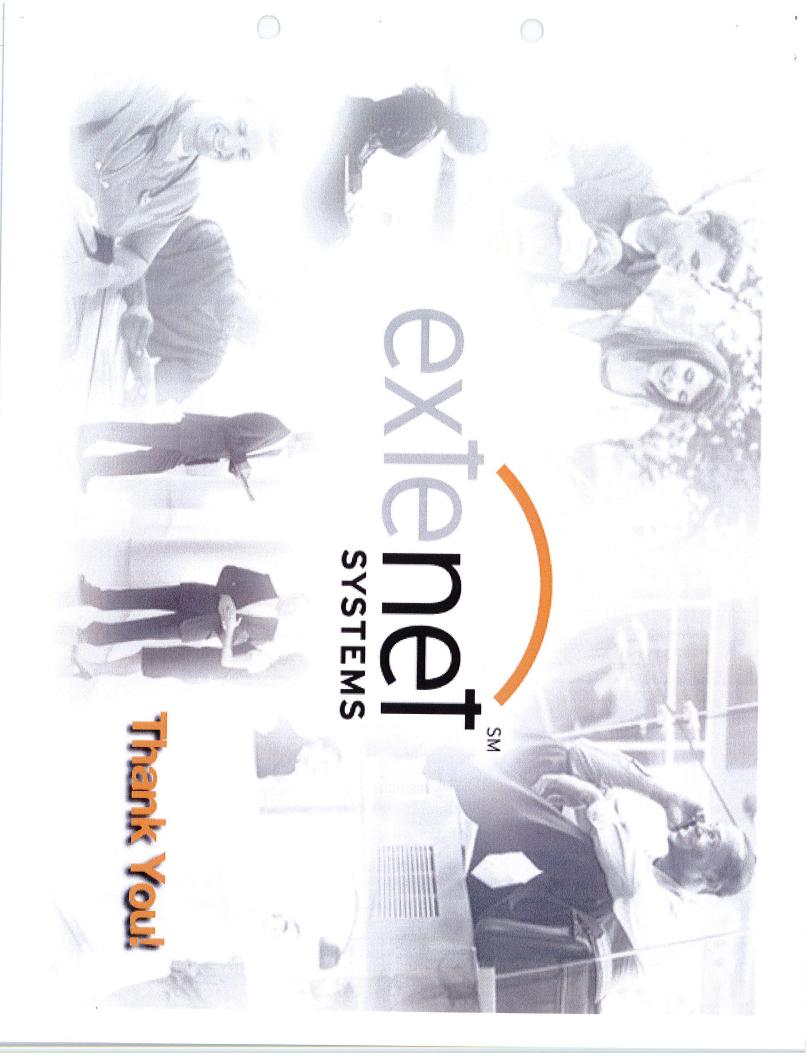
ALTERNATIVE NODE 06275D



- Node 06275D is a joint utility pole near Across from 2601 Havencourt Boulevard (37.764900, 122.186607).
- This pole is not a viable alternative candidate because this pole is located too close to primary Node 06274B.
- This pole is not a viable alternative candidate because this pole is located too close to primary Node 06274B.

ALTERNATIVE SITE ANALYSIS CONCLUSION

intrusive location from which to fill the surrounding significant wireless coverage gaps. Based on ExteNet's analysis of alternative sites, the currently proposed Node 06275A is the least



ExteNet Systems CA, LLC • Proposed DAS Node (Site No. 06275A) 2401 67th 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. 06275A 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 2401 67th 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	0) 855	2.85	0.57
700 MHz	700	2.35	0.47
[most restrictive frequency rang	[e] 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. 06275A) 2401 67th 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 27, 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 2401 67th 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 60°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 1.5% of the public exposure limit. It should be noted that these results include several "worst-case" assumptions and therefore are expected to overstate actual power density levels from the proposed operation.



ExteNet Systems CA, LLC • Proposed DAS Node (Site No. 06275A) 2401 67th 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 2401 67th 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 PROFESSIONAL CHEER 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, 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.



HAMMETT & EDISON, INC. CONSULTING ENGINEERS SAN FRANCISCO

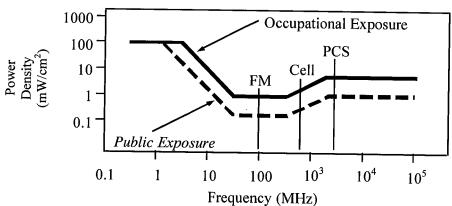
Exp.6-30-2017

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	Electromagnetic Fields (f is frequency of emission in MHz)					
Applicable Range (MHz)	Electric Field Strength (V/m)		Magnetic Field Strength (A/m)		Equivalent Far-Field Power Density (mW/cm²)	
0.3 - 1.34	614	614	1.63	1.63	100	100
1.34 - 3.0	614	823.8/f	1.63	2.19/f	100	$180/f^2$
3.0 - 30	1842/ f	823.8/f	4.89/ f	2.19/f	900/ f ²	180/ f²
30 - 300	61.4	27.5	0.163	0.0729	1.0	0.2
300 – 1,500	3.54 √ f	1.59√f	√ f/106	$\sqrt{f}/238$	f/300	f/1500
1,500 - 100,000	137	61.4	0.364	0.163	5.0	1.0



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

RFR.CALC[™] Calculation Methodology

Assessment by Calculation of Compliance with FCC Exposure Guidelines

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

Near Field.

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

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

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

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

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

D = distance from antenna, in meters,

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

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

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

Far Field.

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

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

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

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

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

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



CITY OF **O**AKLAND

BUREAU OF PLANNING

250 Frank H. Ogawa Plaza, Suite 2114, Oakland, CA 94612-2031

Phone: 510-238-3911 Fax: 510-238-4730

PLANNING COMMISSION PUBLIC NOTICE

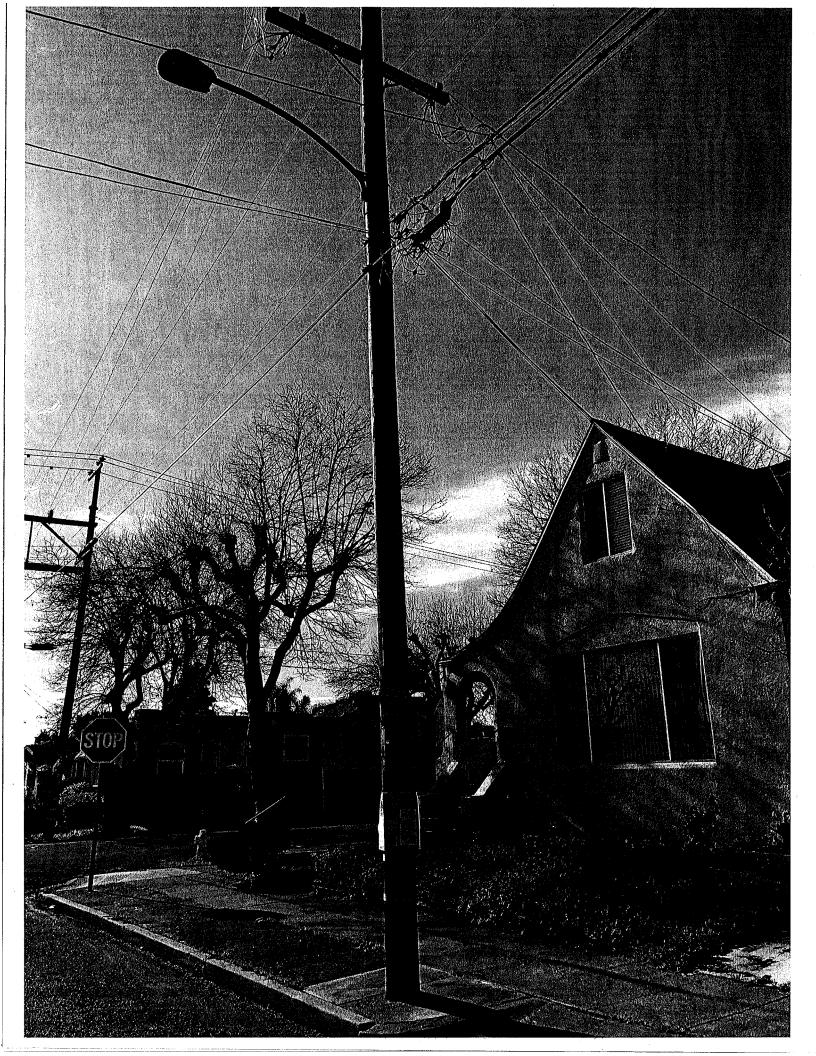
Location: T	he public Right of Way in front of 2401 67 th Ave on a JPA Utility Pole
Assessor's Parcel Number(s): (039-3260-028-00) nearest lot adjacent to the project site.
Proposal:	Installation of a wireless telecommunication facility on an existing 37' tall wooden utility pole located in the public right-of-way. The project involves installation of one (1) canister antenna measuring 23.5" long and 7.9" in diameter at a height of 18' and two radio units (7.9" tall and 7.9" wide) mounted at a height of 10'-6" and 13'-11" above ground.
Applicants	Black & Veatch for Extenet Systems
Contact Person/Phone Number:	Ana Gomez of Black & Veatch (913) 458-9148
Owner:	Pacific (Con & Miss) (PC & E)
Case File Number: Planning Permits Required:	Major Design Review to install a wireless Macro Telecommunications Facility
General Plan. Zoning Environmental Determination Historic Statu City Council District Days No.	one (1) teleconfinumications canister antenna on an existing. PG&E pole located in the public right of way in a residential zone. Detached Unit Residential. RD-1 Detached Unit Residential. Exempt, Section 15301 of the State CEQA/Guidelines; installation of telecommunication facility on an existing PG&E utility pole; Exempt, Section 15183 of the State CEOA Guidelines; projects consistent with a community plan, general plan or zoning. No Historic Record—Utility Pole.
Finality of Decision For Further Information Your comments and premium, 15 any, should be all produced by the produced by th	d; Ootober 4:2016 Appealable to City Council within 10 Days Contact case planner Jason Madani at (510) 238-4790 or by email at Imadani@osklandnet.com.

50 Frank H. Ogawa Plaza, 2nd Floor, Oakland, California 94612-2031 at of prior to the Li Frank H. Ogawa Plaza, Oakland, California 94612. The public hearing will start at 6,00

Will be limited to issues raised at the public hearing or in correspondence delivered to the Bureau id of the decision of any of these cases, please provide the case planner with a regular mail or

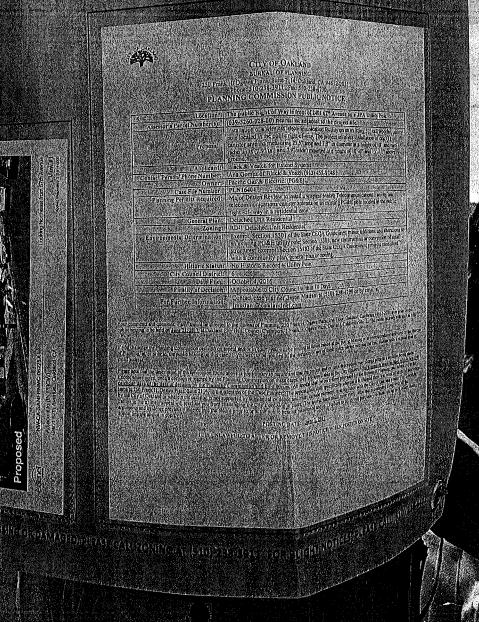
sture and that the protect and/or such description may change prior to a decision being made, these bases they are appealable to the City Council. Such appeals must be filed within ten (ii) and submitted to the city of the Bureau of Plannine, and submitted to the Bureau of Plannine, and the Bureau of Plannine, an

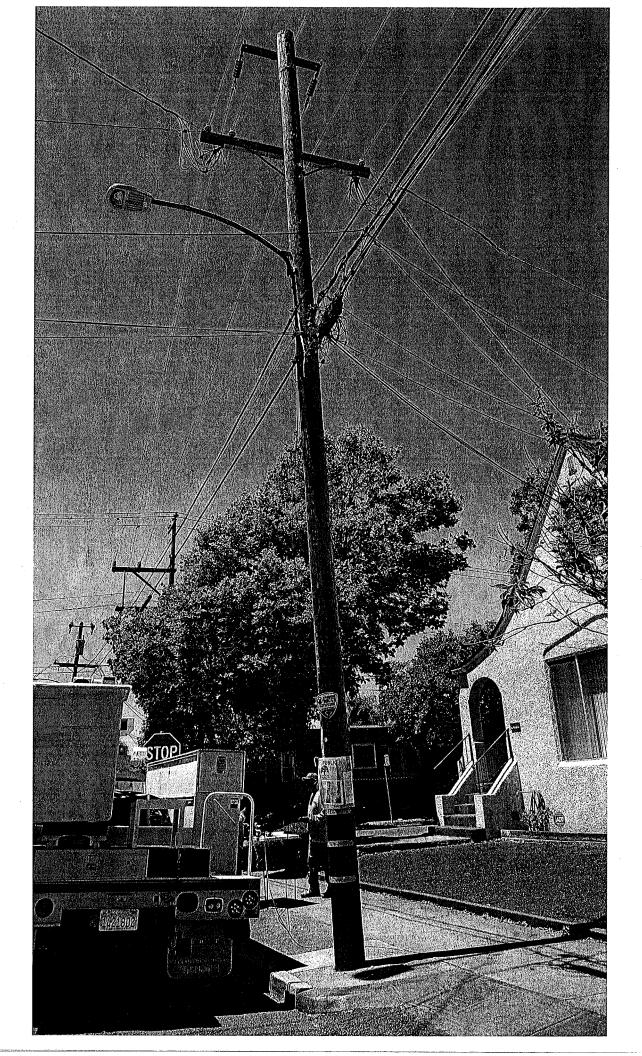
COMING DATE OF THE MOTICE WHEN POSTED ON SITE



6/2/17 Posting

NOTIFICE OFOAKEAND







June 2, 2017

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 2401 67th Avenue

Site ID:

NW-CA-SANFRNMC-TMO Node 06275A

Latitude/Longitude:

37.765395, -122.186673

Planning Application: PLN16404

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(E) 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 ExteNet from placing the antennas flush mounted to the utility pole when there is a power source attached to the pole. ExteNet 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.

Orna Gomez BV BR Extellet

Thank you.

Best Regards,

Ana Gomez

ExteNet Permitting Contractor



February 13, 2017

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

Re:

Public Outreach Summary

Applicant:

ExteNet Systems (California) LLC

Nearest Site Address: Public Right of Way near 2401 67th Avenue.

Site ID:

NW-CA-SANFRNMC-TMO Node 06275A

Latitude/Longitude:

Planning Application: PLN16-404

<u>37.765395, -122.186673</u>

Dear City Planner,

This week we notified the following groups by sending them the attached project flier:

Oakland Community Organizations

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

Ora Gomes By Ba Extellet

Best Regards,

Ana Gomez

ExteNet Permitting Contractor



ExteNet is improving wireless service in Oakland!

January 4, 2017

ExteNet Systems is a neutral host telecommunications infrastructure provider that is working to improve wireless service in Oakland.

We will soon be proposing to install fiberoptic cables and state-of-the-art small cell wireless facilities at existing telephone pole and light pole locations in the Oakland public right-of-way.

Telecommunications carriers transmit their signal through ExteNet's facilities to improve wireless voice, data, and public safety connectivity.

Although experiences with wireless services vary based on specific location and usage times, the wireless service proposed by this infrastructure will help meet existing, fluctuating and future demands.

Please see attached examples of actual ExteNet facilities like the ones we will be proposing in Oakland.

Want to learn more?

Please visit http://www.extenetsystems.com/ or email myergovich@extenetsystems.com/.

