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 His

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

Contact case planner Jason Madani at (510) 238-4790 or

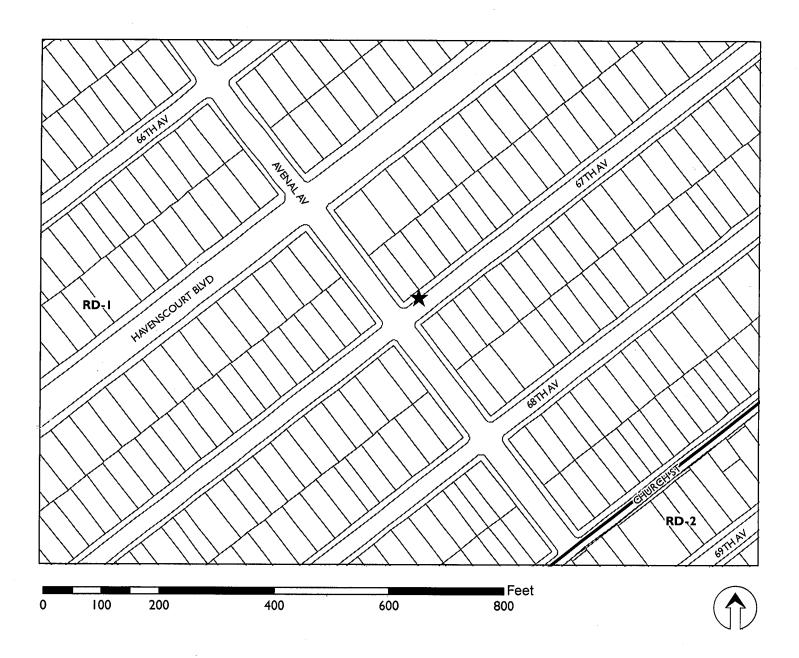
For Further Information: imadani@oaklandnet.com

# **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 67<sup>th</sup> 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

Page 3

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. <a href="https://www.fcc.gov/general/competition-infrastructure-policy-division-wireless-telecommunications-bureau">https://www.fcc.gov/general/competition-infrastructure-policy-division-wireless-telecommunications-bureau</a>

# 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 67<sup>th</sup> 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 67<sup>th</sup> 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.

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# **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 Pro	ject Applicant
Signature of	Project Applicant
Date	

# NW-CA-SANFRNMC 06275A

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



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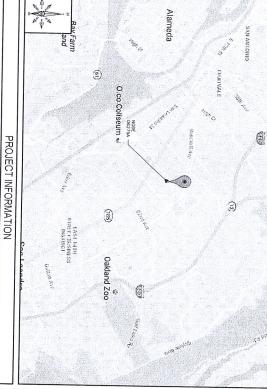
CN-1

UTILITY POLE ELEVATIONS AND RISER DETAILS

ADDRESS: 2000 CROW CANYON PL, SUITE 210 SAN RAMON, CA 94583 OWNER: EXTENET SYSTEMS CA, LLC POLE OWNER

SITE PLAN

LEGEND



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

# GENERAL PROJECT NOTES

PRIOR TO SUBMITTING A BID, THE CONTRACTOR SHALL FAMILLARIZE HIMSELF/HERSELF WITH THE SCOPE OF WORK AND ALL CONDITIONS AFFECTING THE NEW PROJECT.

ALL FIELD MODIFICATIONS BEFORE, DURING OR AFTER CONSTRUCTION SHALL BE APPROVED IN WRITING BY AN EXTENE SYSTEMS REPRESENTATIVE. CONTRACTOR SYALL 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

INSTALL ALL EQUIPMENT AND MATERIALS PER THE MANUFACTURER'S RECOMMENDATIONS, UNLESS INDICATED OTHERWISE.

NOTIFY EXTENT SYSTEMS, IN WIRTING, OF ANY MAJOR DISCREPANCES RECARDING HE CONTROL TO DULKINS, EXSTING CONDITIONS, MOD DESIGN INTENT THE CONTROLOR SHALL BE RESPONSIBLE FOR DETAINING CLAREFOLATIONS FROM AS EXTENET SYSTEMS REPRESENTATIVE, AND ADJUSTING THE BID ACCORDINGLY.

CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS AND FINISHES THAT ARE TO REMAIN, CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY OCCUR DURING 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.

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

MYERGOVICH® EXTENETSYSTEMS.COM (415) 596-3474

PROJECT DATA

ONTACT: MATTHEW YERGOVICH OMPANY: EXTENET SYSTEMS (CALIFORNIA), LLC.

**APPLICANT** 

ESPRY ALL FAM, COMPACT WITH AN EXTENCT SYSTEMS
REPRESENTATION AND THER FINAL LOCATION ARE TO BE PREPADED
BY EXTENCT SYSTEMS. THE CONTRACTOR SHALL BE RESPONSIBLE
TOR COORDINATION HIS PLATE WORK AND LOCARMACES REQUIRED BY OTHERS RELATED TO SAID
INSTALLATIONS. CONTRACTOR PLANS TO ILLUSTRATE THE AS-BUILT CONDITION OF THE SITE. FOLLOWING THE FINAL INSPECTION BY EXTENET OR TAXOBIE. THE CONTRACTOR STALL PROVIDE EXTENET SYSTEMS WITH ONE COPY OF ALL RED-LINED DRAWINGS.

# CODE COMPLIANCE

NO SCALE

SITE MAP

Redwood Regional Park

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDIDING OF THE FOLLOWING CODES AS ACOPTED BY THE LOCAL COVERNING AUTHORITIES (AS APPLICABLE) NOTHING IN THESE PLANS IS TO BE CONSTRUCTED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

1. IBC — 2012
2. CALFERMA BUILDING STANDARDS CODE — 2013
3. CALFERMA GENERAL GODER 95
4. CALFERMA DELMINAC CODE 2013
5. CALFERMA LOUBLE 2013
6. CALFERMA ELEMINAC CODE 2013
6. CALFERMA LOUBLE SAND CODE ADMINISTRATORS (BOCA)
6. BUILDING OFFECTIVE UNTIL JANUARY IS. 2017

**EXTENS** 

TERNAL REVIEW

CONSTRUCTION SIGNATURE

RF SIGNATURE

SI D

**BLACK & VEATCH** 

PRODUCED SOLELY FOR THE USE OF AND BLACK & VEATCH CORPORATION
2999 OAK ROAD
SUITE 490
WALNUT CREEK, CA 94597

192417	PROJECT NO. DRAWN BY	CLIENT. ANY REPRODUCTION ON USE OF THE COURSE OF THE CONTAINED WITHUS SAID DRAWMAGS IS PROHIBITED WITHOUT WRITTEN CONSENT BY BLACK & VEATCH.
CBC		CHENT ANY REPRODUCTION OR USE OF THE CONTROL OF THE
CAC	CHECKED BY	OR USE OF THE WITHIN SAID OWTHOUT SK & VEATCH.

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ISSUED FOR REVIEW	ISSUED F	09/14/16	,
ISSUED FOR REVIEW	ISSUED F	9/27/16	0

PRELIMINARY

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

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

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

SHEET NUMBE

TITLE SHEET

SHEET TITLE

UTILITIES PROTECTION CENTER, INC. 811 SERVICE ALERT

TITLE 24 REQUIREMENTS

CONSTRUCTION TYPE

ATTACHMENTS TO A WOOD UTILITY POLE

FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. THIS PROJECT IS EXEMPT.

DCCUPANCY: VEAREST A.P.N. ZONING DISTRICT: ZONING JURISDICTION

U. UNMANNED 39-3260-28 CITY OF DAKL

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

Attachment A

CONTACT: ANA GOMEZ OMPANY: BLACK & VEATCH

AGENT

S: 2999 OAK ROAD, SUITE 490 WALNUT CREEK, CA 94597 (913) 458-9148 GOMEZABARCAA@BV.COM

> E-MAIL: EVANSRAGBY.COM PHONE: (952) 896-0751 ENGINEER: AARON EVANS COMPANY: BLACK & VEATCH ENGINEER

> > POLE #: LONGITUDE: LATITUDE:

110135496 -122.186673 37.765395

ELEVATION:

SUBDORFRACIOR SHALL VERRY ALL PLANS & EXISTING DIVERSIONS & CONDITIONS ON THE JOB STEE & SHALL IMPEDIATELY VORDY HE WORK OR BE RESPONSIBLE ON SHALL DIVERSIANCES.

4

# GENERAL NOTES

- THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURIENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATION'S AS INDICATED ON THESE PLANS AND IN THE CONTRACT OCCUMENTS. THESE NOTES SHALL BE CONSIDERED A PART OF THE WRITTEN SPECIFICATIONS, CONTRACT AND CONSTRUCTION DOCUMENTS
- ON TO THE SUBMISSION OF BUS, THE COMMISCRICTS AND THE THE DAS SITES) AND BE REPORTED BY COMMISCRICTS AND THE COMMISCRICTS AND THE ADMISCRICTS AN
- THE CONTRACTOR SHALL RECEIVE HRITTEN AUTHORIZATION TO PROCEED ON ANY WORK NOT CLEARLY DEFINED OR DENUTED IN THE CONTRACT AND CONSTRUCTION DOCUMENTS BEFORE STARTING ANY WORK. ALL WORK PERFORMED AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDINGE WITH ALL APPLICABLE CODES, RECULATIONS, AND ORDINANCES, INCLUDING APPLICABLE MANGERAL AND UTUTY COMPANY SPECIFICATIONS.
- CONTROLEGY SHALL RESEAL ALL CORPORED AND INJERVAL IN ACCORDINGE WITH LAMBERCHISED MICHOLOGISCO CONTROLEGY AND INVESTIGATION AND ACCORDING AND CONTROLEGY CONTROLEGY AND RESOLVE THE CONTROLEGY CONTROL WITH THE CO
- THE COMPACTOR SHALL BE SOLEY RESPONSIBLE FOR ALL CONFINCTION MADE ACTIONS, TERMONES, SECURISEES, AND PROCEDERS AND FOR COMPANIONS OF ALL PORTINGS OF THE MORE MADES THE MADE MADES THE MADE MADES THE MORE MADES.
- "HE CONNECTOR SHILL MAK KICESSAM PROMSINGS TO ROBITE THIS TIME MERCHANTS INCLUDED BY NOT IMBRED TO PAMAG CHRISE, KIEETANN, CAMAKRED SHYREC OS OFFICER CHSTER CILLUTES AND UPDA CONCETTOR OF THE WORK, REPARE ANY DAMAG THAT OCCURRED DURING CONSTRUCTION TO THE SHISFACTION OF CRUSHET
- CONTRACTOR IS 10 KEEP THE GENERAL AREA CLEAN, HAZAND FREE, AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH, AND REMOVE EDUPMENT NOT SPECIFED AS REMAINING ON THE PROPERTY, LEAVE PREMISES IN CLEAN CONDITION DIACY.
- PLANS ARE HIENDED TO BE DIAGRAMANIC ORLY AND SHOULD NOT BE SCALED UNLESS OTHERWISE HOTED.
- HE CREIDER, MO OCCION DE UTILIZA MO DIREN AGLICI"S FRUIRES MERE COLMMED BY A SURGI OF AMULIER, RECORDS CHIEF AGLICIS MO COLORIO STORI TO SURGI OF CONSTRUCTION AND DES EXPREME CHIEF, AND PROFECTION OF UTILIZES OF THE PRINCIP CHIEF, CREATES CHIEF,
- THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (800) 227-2600, AT LEAST TWO WORKING DAYS PRIOR TO THE START OF ANY EXCAVATION.

# DEFINITIONS

- TYPICAL OF TYP WEARS THAT THIS TELL IS SUBSTANDALY FIE SAME ACROSS SUMULA CONDITIONS "TYP. SHALL BE UNDERSTOOD OF UNEAN THEORY WEBSE OCCURED AND SHALL HOT BE CONSIDERED AS WITHOUT EXCEPTION OR CONSIDERATION OF SPECIAL CONDITIONS.
- "SMILAR" MEANS COMPARABLE TO CHARACTERISTICS FOR THE CONDITION NOTED, VERIFY DIMENSIONS AND DRIENTATION ON PLAN.
- 'AS REQUIRED' HEAVS AS REQUIRED BY RECULATORY REQUIREMENTS, BY REFERENCED STANDARDS, BY EXISTING COMBINONS, BY GENERALLY ACCEPTED CONSTRUCTION PRACTICE. OR BY THE CONTRACT DOCUMENTS
- HE TERM "REPT" OR "YLE". SMALL BE UNDERSTOOD TO MEM "NEBFY IN FIELD WITH ENGINEER" AND RECURRES THAT THE CONTRACTOR CONFIRM INTENTION RECURDING NOTED CONDITION AND PROCEED DULY AFTER RECEDING DIRECTORS. "MUGH" MEANS ACCURATELY LOCATE FINISH FACES OF MATERIALS IN THE SAME PLANE.
- WERE THE WARDS "OR COUNE" OR WORDS OF SHUFFER HEETH FOLLOW A MATERIAL SPECIFICATION, THEY SHALL BE WERE THE WARDS "OR COUNE" SHEETE PAPPORAY OF AWAY DEVAULING US AND SPECIFICATION PRIOR TO CONTRACTOR'S ORDERING OR INSTALLATION OF SUCH PROPROSED EQUAL PRODUCE.
- FURNISH : SUPPLY ONLY, OTHERS TO INSTALL. INSTALL TIEMS FURNISHED BY OTHERS, PROVIDE FURNISH AND INSTALL.

# FIELD WELDING NOTES:

- WELDING TO BE PERFORMED BY AWS CERTIFIED WELDER FOR THE TYPE OF AND POSITION INDICATED ALL WORK MUST BE IN CONTORNANCE WITH LATEST EDITION OF AWS DI.T.
- ASINO SUNFACES TO BE WELDED WITH A SILICON CARBIDE WHEEL PRIOR TO WELDING TO REMOVE ALL CALVANZING WHICH MAY OTHERWISE BE CONSULED IN THE WELD METAL APPLY AMIT—SPATTER COMPOUND AFTER CRINDING.
- ACHORICE PROCES MAS IMMUSIT TEMPRIANS RES ON HE MASS SWIFTED IN PERSON AND ASSOCIATION OF WITHOUT STREET, AND ASSOCIATION OF A WELDING MAY PRODUCE TOXIC FUMES. REFER TO ANSI STANDARD 249.1 "SAFETY IN WELDING AND CUTTING" FOR PROPER PRECAUTIONS.
- UPON COMPETED OF NEUMA, APRIL CALVA-STEE ZING COSTING IN LIMPROTECTED SURFACES, APRIL A SECONO WARE OF COLD CALVAREINE SPANG COUPANION CONSTINUED A MICHAEL ZING CONTENT OF SOME RECESSARY, APRIL A FINAL COAT OF COMPATIBLE PAINT TO MATCH SURROUMNING SURFACES.

# ANTENNA MOUNTING

- DESIGN AND CONSTRUCTION OF ANTENNA SUPPORTS SHALL CONFORM TO CURRENT ANSI/TIA-222 OR APPLICABLE LOCAL CODES.
- ALL STEEL HATERIALS SHALL BE GALVARIZED ATER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (NOT-DIP CALVARIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS NOTED OTHERWISE.
- ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCONDANICE WITH ASTA A153 ZIMC-COATING (HOT-DIP) ON IROM AND STEEL HARDWARE", UNLESS MOTED OTHERWISE.
- ALL ANTERINA MOUNTS SHALL BE INSTALLED WITH LOCK NUTS, DOUBLE NUTS AND SHALL BE TOROUED TO MANUFACTURER'S RECOMMENDATIONS. DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED BY COLD GALVANIZING IN ACCORDANCE WITH ASTA AZBO
- COMTRACTOR SHALL INSTALL ANTENNA PER MANUFACTURER'S RECOMMENDATION FOR INSTALLATION AND
- PROPO TO SETTING AMERINA AZAUTIS AND DEWRITES, ANTENIA CONVOCEDE SHALL CHECK HE ANTENIA AUDINT ORD INTENIES AND ENSIRE THAT THEY ARE THANK AUDINATIONS SHALL IS SETT FROM THOS AUDINT AND IS CHRESTED MITHIN 4/- 5% AS DEFINED BY THE REDS. ANTENIA COMMITTES SHALL BE WINDOWN.

- ALL RE CONNECTIONS SHALL BE TIGHTENED BY A TOROUE WRENCH
- ALL RE CONNECTIONS, CROUNDING HARDWARE AND ANIEMA HARDWARE SIALL HAVE A TORQUE MARK IN A CONTINUOUS STRACHT UNE FROM BOTH SIDES OF THE CONNECTION.
- A. RF CONNECTION BOTH SIDES OF THE CONNECTOR
- B. GROUNDING AND ANTENNA HARDWARE ON THE NUT SIDE STARTING FROM THE THREADS TO THE SOLID SURFACE. EXAMPLE OF SOLID SURFACE: GROUND BAR, ANTENNA BRACKET NETAL
- ALL BM ANTENNA HARDWARE SHALL BE TIGHTENED TO 9 LB-FT (12 NM).
- ALL 12M ANTENNA HARDWARE SHALL BE TIGHTENED TO 43 LB-FT (58 NM).
- ALL GROUNDING HARDWARE SHALL BE TIGHTENED UNTIL THE LOCK WASHER COLLAPSES AND HARDWARE IS NO LONGER LOOSE.

- FILL ALL HOLES LEFT IN POLE FROM REARRANGEMENT OF CLIMBERS
- ALL CLIMB STEPS NEXT TO CONDUIT SHALL HAVE EXTENDED STEPS
- CABLE NOT TO IMPEDE 15" (381M) CLEAR SPACE OFF POLE FACE (12.00)
- 90 SHORT SWEEPS UNDER ANTEINA ARM. ALL CABLES MUST ONLY TRANSITION ARMS (NO CABLE ON TOP OF ARMS). MOLLOB SO 3015NII

# NODE SITE POWER SHUT DOWN PROCEDURES

- CALL EXTENET SYSTEMS MOC (NETWORK OPERATIONS CENTER) (866)892-5327

- UNLOCK DISCONNECT BOX, FLIP BOTH BREAKERS TO THE OFF POSITION

- NOTIFY EXTENS! NOC UPON COMPLETION OF WORK

- EMERGENCY POWER SHUT OFF
- CALL EXTENET SYSTEMS NOC (NETWORK OPERATIONS CENTER) (866)892-5327

- PROVIDE THE FOLLOWING INFORMATION

  NOC SITE MUNGER IDENTIFIED OF SITE MUNGERING STICKER

  YOUR NAME AND GESON FOR POWER SHUTOFF

  PROVIDE DURATION OF OUTAGE
- POWER SHUT OFF VERIFICATION WITH APPROVED POWE PROCEDURES

- REINSTALL LOCK ON DISCONNECT BOX

# TORQUE REQUIREMENTS

- ALL N TYPE CONNECTIONS SHALL BE TIGHTENED TO 15-20 LB-IN (1.7 2.3 NM) ALL DIM TYPE CONNECTIONS SHALL BE TIGHTENED TO 18-22 LB-FT (24.4 - 29.8

# UTILITY POLE CONSTRUCTION NOTES

- NO BOLT THREADS TO PROTRUDE MORE THAN 1-1/2" [ D3BM]

- USE 90 CONNECTOR AT CABLE CONNECTION TO ANTENNAS.
- USE 1/2" [013M] CABLE ON ANTENNAS UNLESS OTHERWISE SPECIFIED.
- FILL YORD AROUND CABLES AT CONDUIT OFENING WITH FOAM SEALANT TO PREVENT WATER INTRUSION

- FOR NON EMERGENCY/SCHEDULED POWER SHUT DOWN

- 24 HOURS PRIOR TO SCHEDULED POWER SHUT OFF

- PROVIDE THE FOLLOWING INFORMATION :

  NOC SITE NUMBER DENIFIEE ON SITE NUMBERING STICKER

  VOUR NAME AND REASON FOR POWER SHUIGEF

  PROVIDE DURATION OF DUTAGE
- POWER SHUT OFF VERIFICATION WITH APPROVED POWE PROCEDURES

- REINSTALL LOCK ON DISCONNECT BOX

- UNLOCK DISCONNECT BOX, FLIP BOIH BREAKERS TO THE OFF POSITION
- NOTICY EXTENST NOC UPON COMPLETION OF WORK

# DETAIL REFERENCE

ABOVE GROUND TELCO/POWER ABOVE GROUND TELCO ABOVE CROUND POWER JNDERGROUND TELCO/POWER OVERHEAD TELCO OVERHEAD POWER UNDERGROUND FIBER UNDERGROUND TELCO

SECTION REFERENCE

MECHANICAL CONNECTION

TEST GROUND ROD WITH INSPECTION SLEEVE GROUND ROD GROUNDING BAR

CHAIRLINK FENCE

PROPERTY LINE (PL) LEASE AREA WALL STRUCTURE WOOD/WROUGHT IRON FENCE

UNDERGROUND POWER WATER LINE SETBACKS

--- AGT --- AGT --- AGT --- AGT ----AGI/P -- AGI/P -- AGI/P -- AGI/P --AGP -- AGP --- AGP --- AGP --- AGP nc1/b -- 4/150 -- 4/150 -- 4/150 ---AGI/P ACT -



# EXOTHERMIC CONNECTION

CHEMICAL ELECTROLYTIC GROUNDING SYSTEM EXOTHERMIC WITH INSPECTION SLEEVE TEST CHEMICAL ELECTROLYTIC GROUNDING SYSTEM

> Z 2

NIERNAL REVIEW

SYSTEMS INConnection

RE SIGNATURE CONSTRUCTION SIGNATURE

AL ESTATE SIGNATURE

0 0

BLACK & VEATCH BLACK & VEATCH CORPORATION 2999 OAK ROAD SUITE 490 WAINUT CREEK, CA 94597 Ţ

PROJECT NO. DRAWN BY CHECKED BY

686

GAC







IT IS A VOLATION OF LAW FOR ANY PERSON,
UNICSS THEY ARE ACTING UNDER THE DIRECTION
OF A LICENSEED PROFESSIONAL ENGINEER,
TO ALTER THIS DOCUMENT,

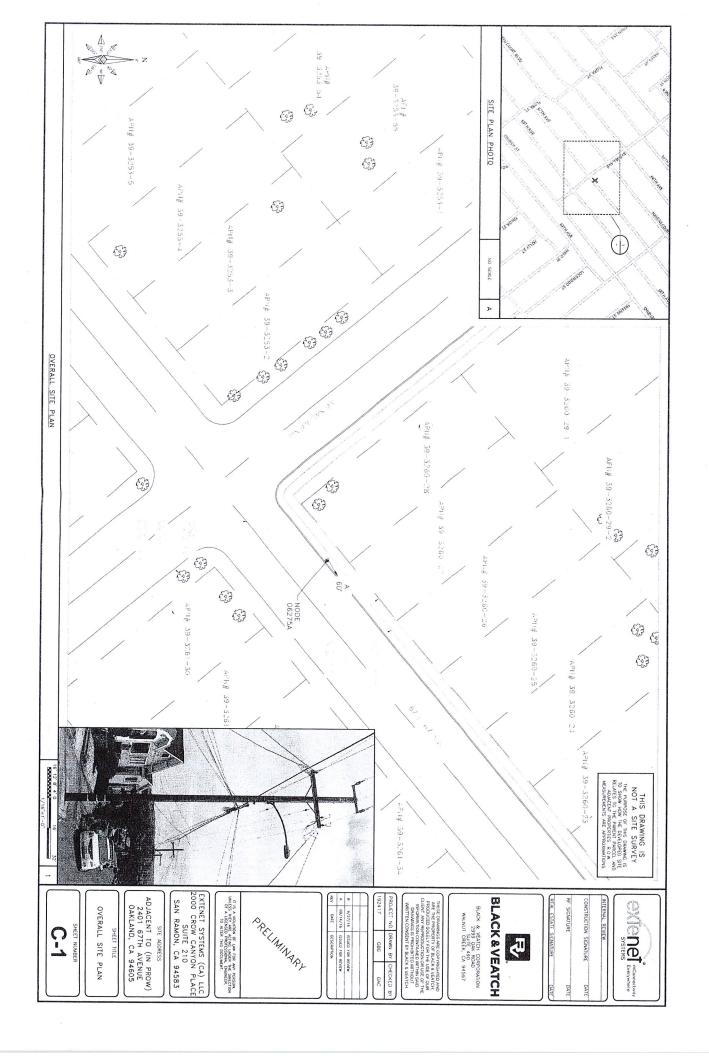
EXTENET SYSTEMS (CA) LLC 2000 CROW CANYON PLACE SUITE 210 SAN RAMON, CA 94583

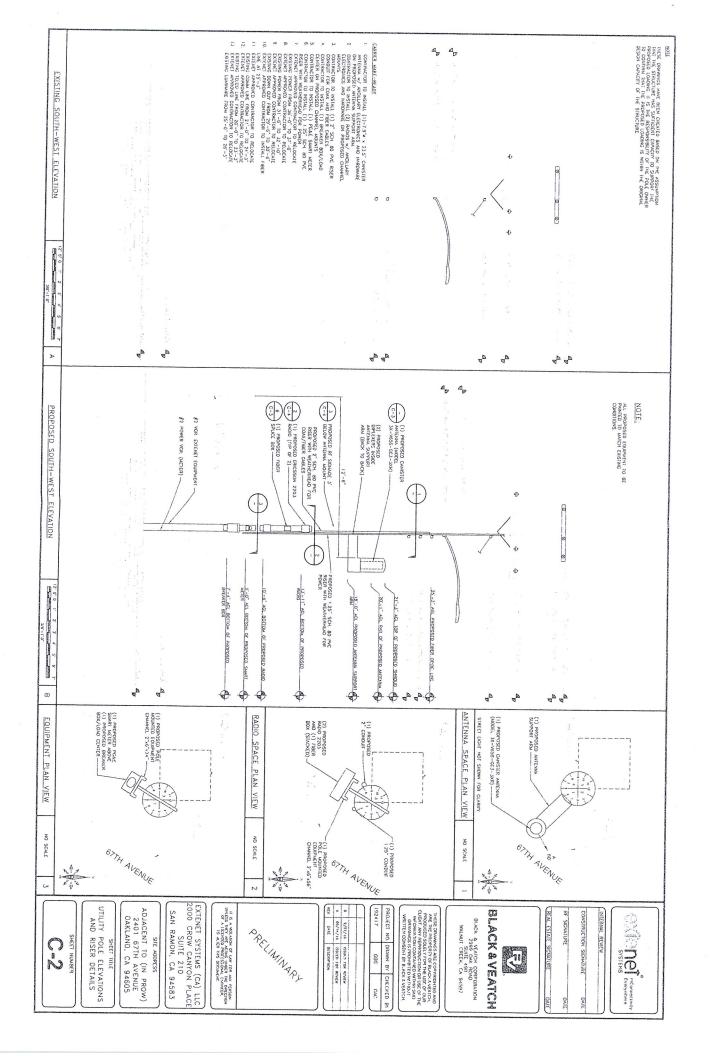
SITE ADDRESS

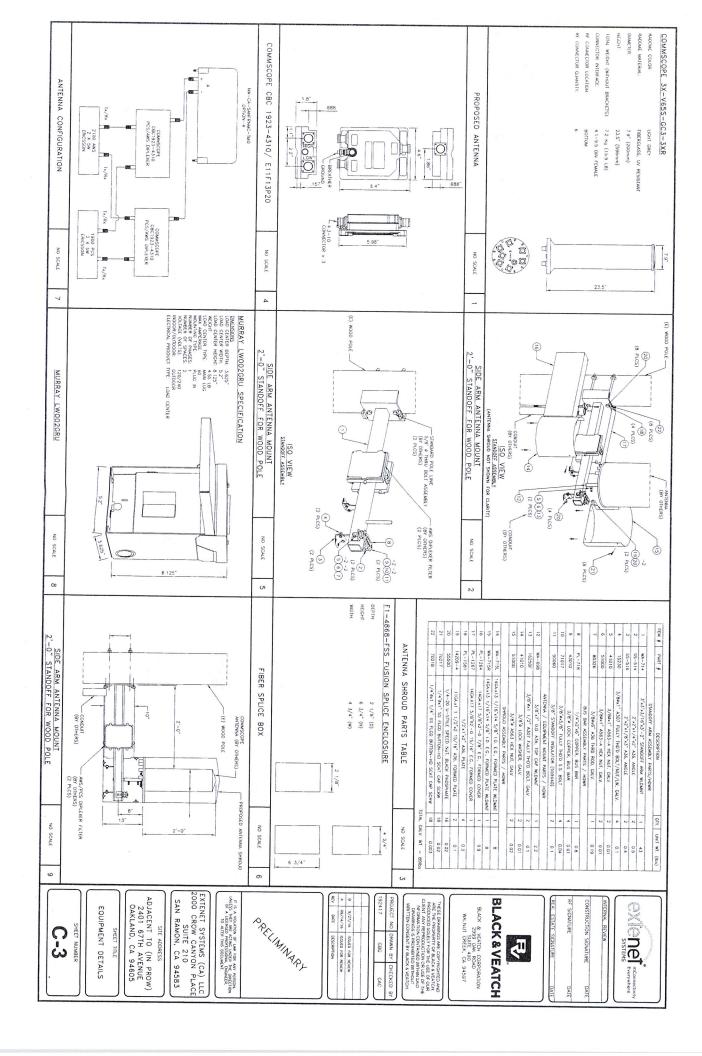
ADJACENT TO (IN PROW)
2401 67TH AVENUE
OAKLAND, CA 94605 SHEET TITLE

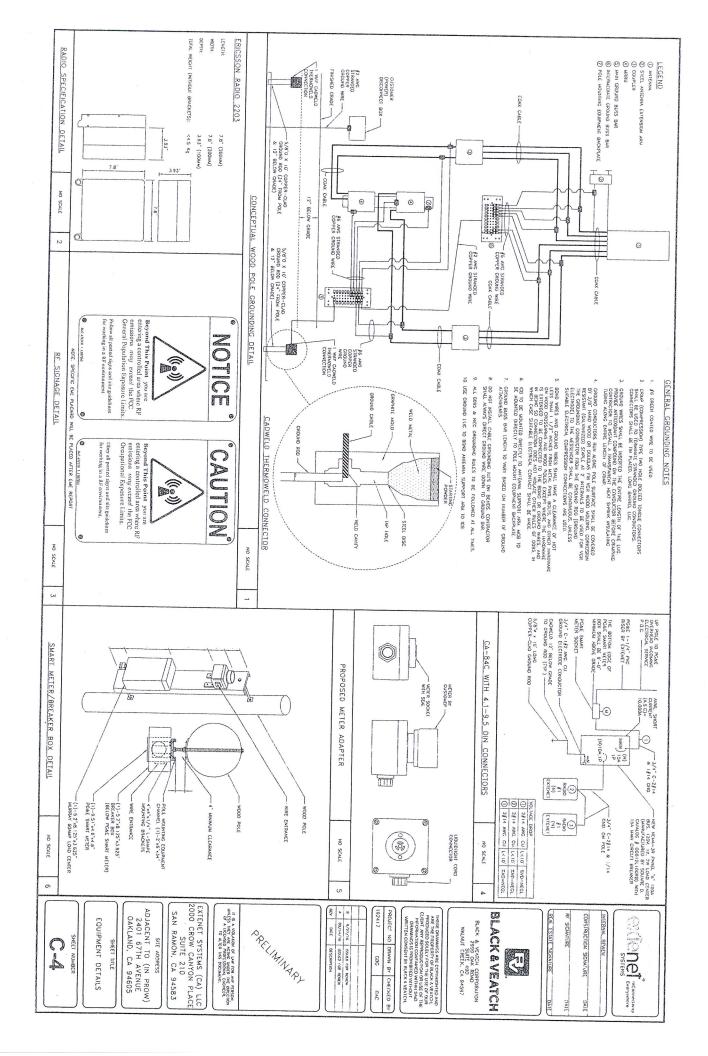
AND LEGEND SHEET NUMBER

GENERAL NOTES AND LEGENDS









# Attachment A





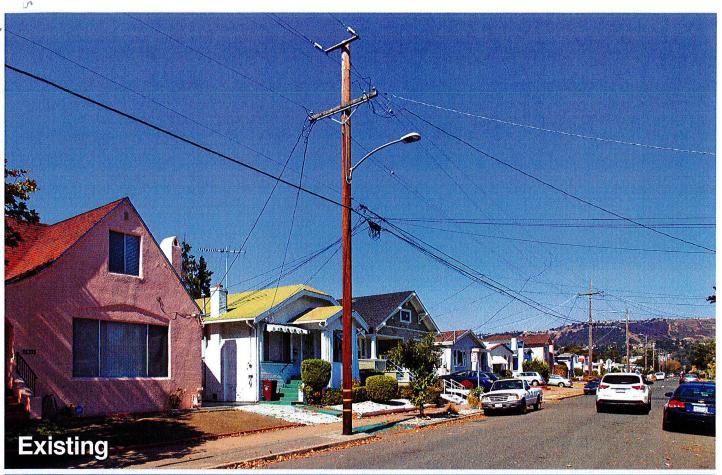


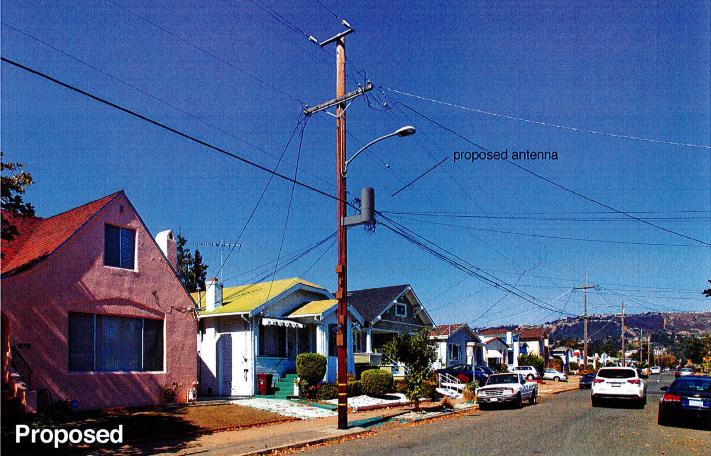


NW-CA-SANFRNMC-06275A

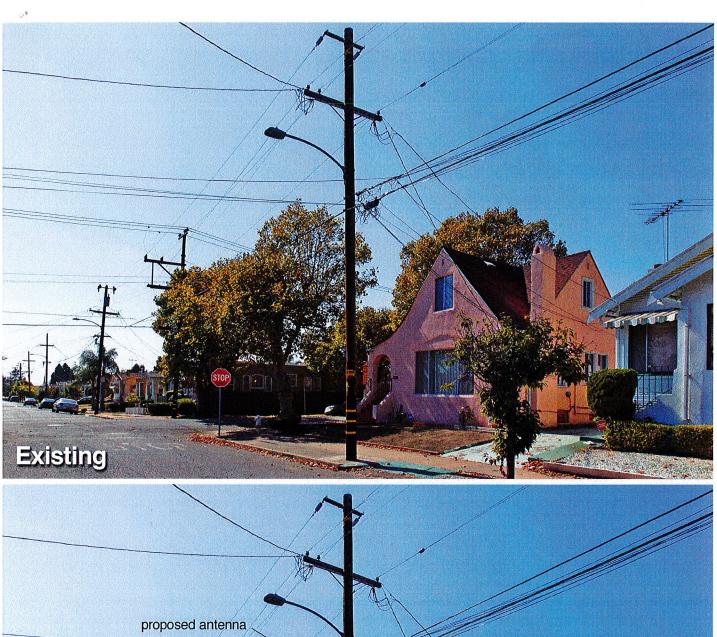
**Aerial Map** 

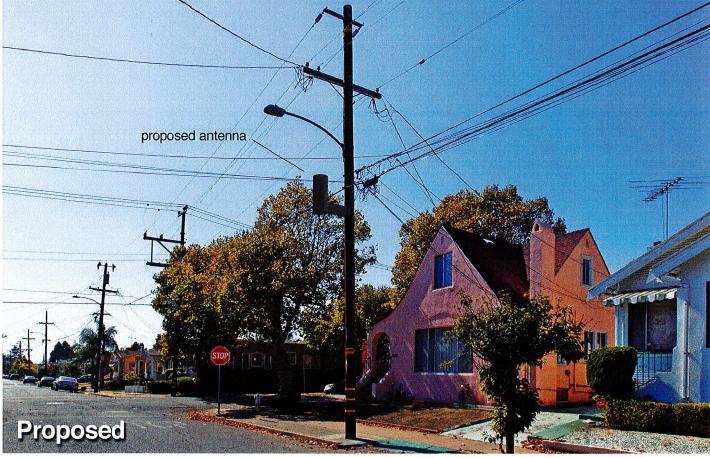
Adjacent to (IN PROW) 2401 67th Avenue. Oakland, CA













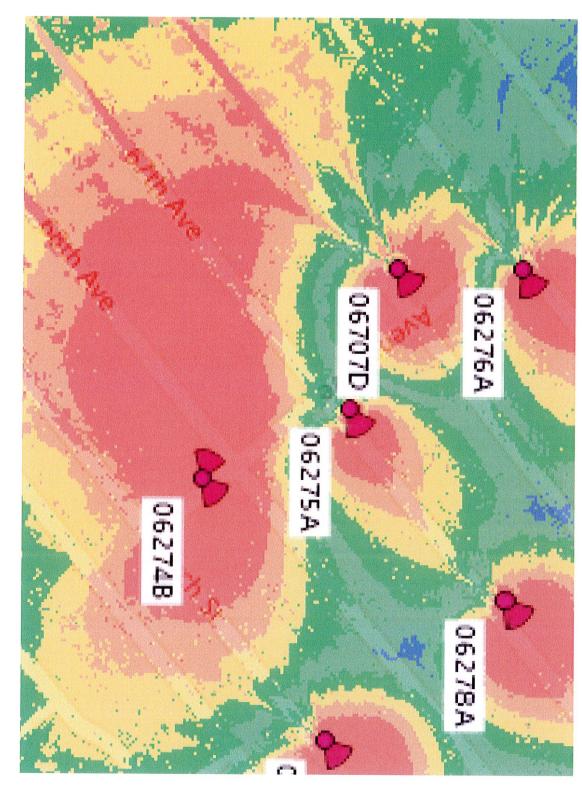






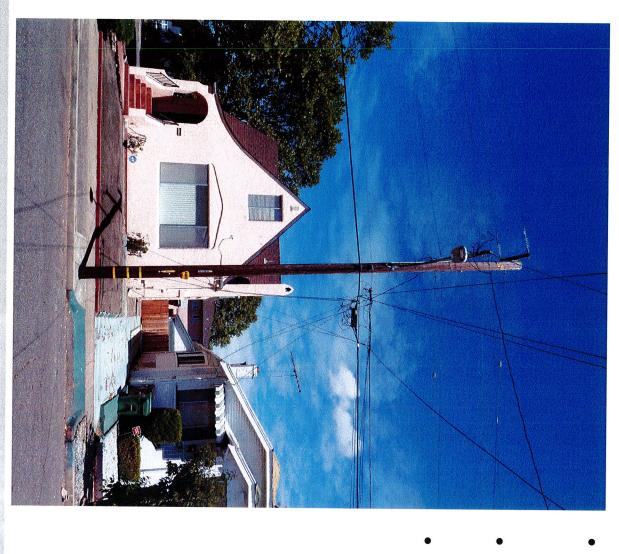
- possibly being viable alternative candidates. The above maps depict ExteNet's proposed Node 06275A in relation to other poles in the area that were evaluated as
- The following is an analysis of each of those 3 alternative locations.

# 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



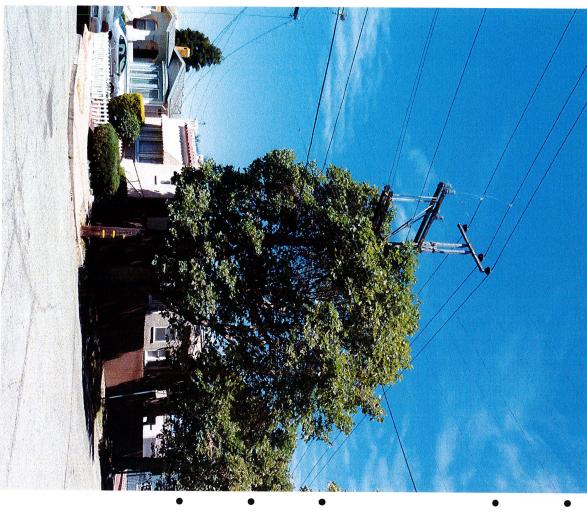
- The location for ExteNet's proposed Node 06275A is a joint utility pole located adjacent to PROW 2401 67th Avenue (37.765395,- 122.186673).
- ExteNet's objective is to provide T-Mobile 4G wireless coverage and capacity to the Oakland area.
- ExteNet evaluated this site and nearby alternatives to verify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

# **ALTERNATIVE NODE 06275B**



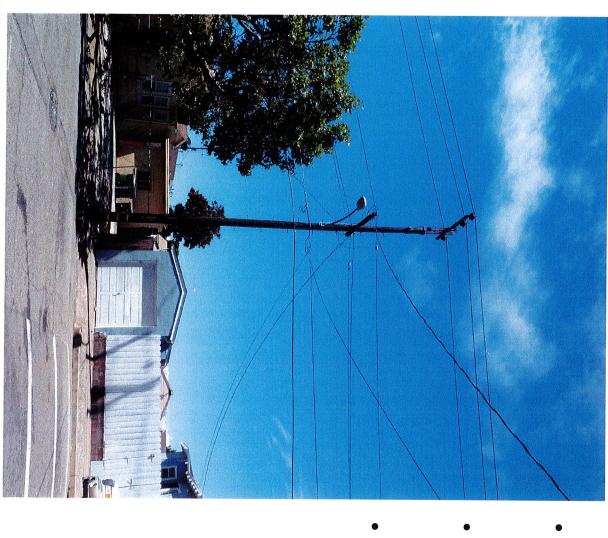
- Node 06275B is a joint utility pole located in front of 1851 67th Avenue (37.767760, -122.184586).
- This pole is not a viable alternative candidate because the existing transformer on the pole would need to be relocated to an uncertain destination in order to facilitate our proposed wireless installation.
- 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





November 18, 2016

City Planner Planning Department City of Oakland 250 Frank H. Ogawa Plaza, 2<sup>nd</sup> 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 67<sup>th</sup> Avenue

Site ID:

NW-CA-SANFRNMC-TMO Node 06275A

Latitude/Longitude:

37.765395, -122.186673

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 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.

ana Gomes By tox Extellet

Thank you.

Best Regards,

Ana Gomez

ExteNet Permitting Contractor

# 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 <sup>2</sup>	1.00 mW/cm <sup>2</sup>
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	o) 855	2.85	0.57
700 MHz	700	2.35	0.47
[most restrictive frequency rang	ge] 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/cm<sup>2</sup>, 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 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

<sup>\*</sup> 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.



No. E-18063

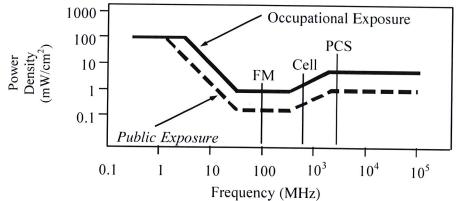
Exp.6-30-2017

# **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	Electro	magnetic F	ields (f is fr	equency of	emission in	MHz)
Applicable Range (MHz)	Field S	etric trength m)	Field S	netic Strength /m)	Power	t Far-Field Density /cm <sup>2</sup> )
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	$900/ f^2$	$180/f^2$
30 - 300	61.4	27.5	0.163	0.0729	1.0	0.2
300 - 1,500	3.54 <b>√</b> f	1.59 <b>√</b> f	<b>√</b> 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.



# RFR.CALC<sup>™</sup> 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/cm<sup>2</sup>,

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/cm<sup>2</sup>,

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

P<sub>net</sub> = net power input to the antenna, in watts,

D = distance from antenna, in meters,

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

 $\eta$  = 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/cm<sup>2</sup>,

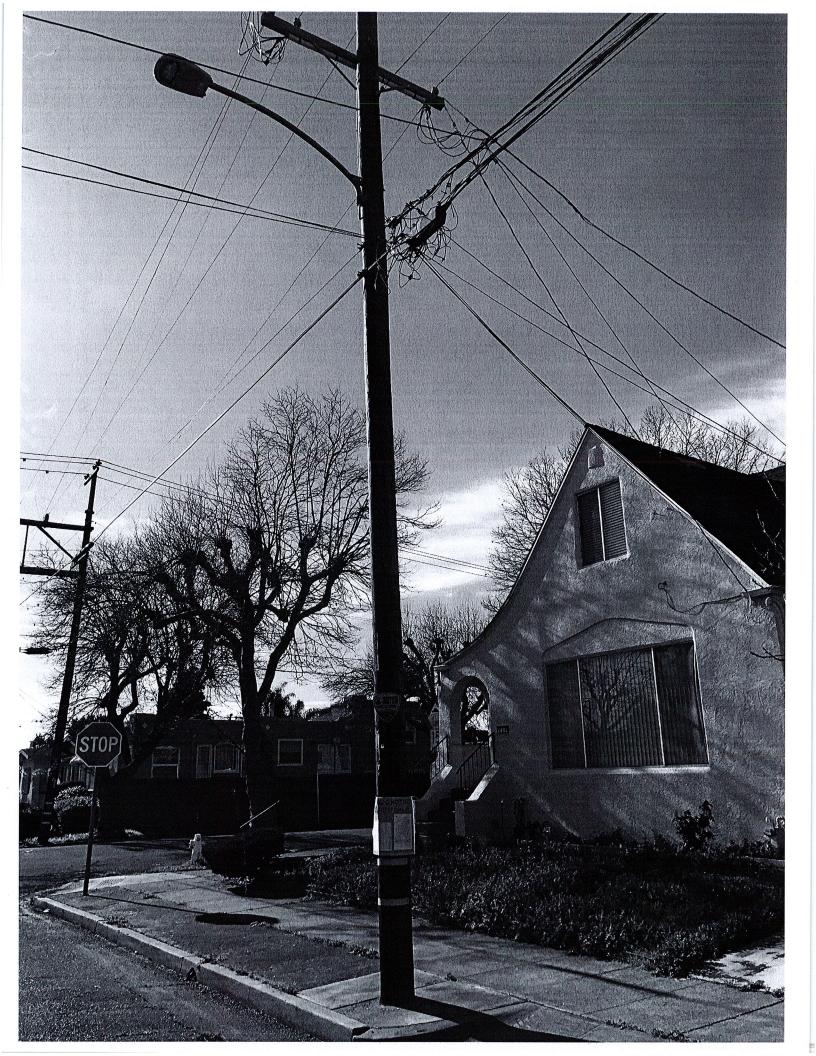
where ERP = total ERP (all polarizations), in kilowatts,

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 OAKLAND

# 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:	The public Right of Way in front of 2401 67th 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.
Applicant:	Black & Veatch for Extenet Systems
Contact Person/ Phone Number:	Ana Gomez of Black & Veatch (913) 458-9148
Owner:	Pacific Gas & Flootric (PG&F)
Case File Number	DYNA
Planning Permits Required  General Pla  Zonin	one (1) telecommunications canister antenna on an existing PG&E pole located in the public right -of- way in a residential zone.  Detached Unit Residential
Environmental Determination	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 CEQA Guidelines; projects consistent with a community
Historic Sta City Council Distr Date F	rict: 6
Finality of Decis	sion: Appeal 11
Comments and questions, if any short	tion: Contact case planner Jason Madani at (510) 238-4790 or by email at imadani@oaklandnet.com.

Planning Commission decision at Oakland City Hall, Council Chambers, 1 Frank H. Ogawa Plaza, Oakland, California 94612. The public hearing will start at 6:00 Planning Commission decision at City Hall, Council Chambers, 1 Frank H. Ogawa Plaza, Oakland, California 94612. The public hearing will start at 6:00 Planning Commission decision at the public hearing will start at 6:00 Planning Commission decision at the public hearing will start at 6:00 Planning Commission decision at the public hearing will start at 6:00 Planning Commission decision at the public hearing will start at 6:00 Planning Commission decision at the public hearing will start at 6:00 Planning Commission decision at the public hearing will start at 6:00 Planning Commission decision at the public hearing will start at 6:00 Planning Commission decision at the public hearing will start at 6:00 Planning Commission decision at the public hearing will start at 6:00 Planning Commission decision at the public hearing will start at 6:00 Planning Commission decision at the public hearing will start at 6:00 Planning Commission decision at the public hearing will start at 6:00 Planning Commission decision at the public hearing will start at 6:00 Planning Commission decision at the public hearing will start at 6:00 Planning Commission decision at the public hearing will be at the pu

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 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 a decision is a decision found of the decision of any of these cases, please provide the case planner with a regular mail or a decision is a decision is a decision is a decision of any of these cases.

and above is preliminary in nature and that the project and/or such description may change prior to a decision being made.

Explaining Commission on these cases, they are appealable to the City Council.

Such appeals must be filed within ten (10) the attention of the Case Planning. An appeal shall be on a form provided by the Bureau of Planning, and submitted to the attention of the Case Planner. The appeal shall state specifically wherein it is claimed there was error or abuse of discretion at supported by substantial evidence and must include payment in accordance with the City of Oakland Master Fee Schedule.

Tecord prior to or at the City's decision in court. The appeal itself must raise every issue that is contested along with all the public hearing mentioned above.

Failure to do so will preclude you from raising such issues during the MAAWER.

POSTING DATE: <u>February 10, 2017</u>

THE UNLAWFUL TO ALTER OR REMOVE THIS NOTICE WHEN POSTED ON SITE

LASE CALL ZONING AT (51)