

Location:	City street light pole in public right-of-way (sidewalk) adjacent to: 1775 Broadway
Assessor's Parcel Numbers:	Adjacent to: 008-0740-012-00
Proposal:	To install a new "small cell site" telecommunications facility for T-Mobile on an existing 25' tall City street light pole located in the Public Right-of-Way (sidewalk). The project involves the installation of one (1) antenna panel measuring 23.5 inches long and 7.9 in diameter, located within a shroud, at a height of 27'-1" and equipment at 9' to 15'-1" above ground-level.
Applicant / Phone Number:	Ana Gomez/Black & Veatch & Extenet (for: T-Mobile) (913) 458-9148
Owner:	City of Oakland
Case File Number:	PLN16307
Planning Permits Required:	Major Conditional Use Permit with additional findings for Monopole Telecommunications Facility in CBD-P zone; Minor Variance for Monopole Telecommunications Facility adjacent to residential use; Regular Design Review with additional findings for Monopole Telecommunications Facility
General Plan:	Central Business District
Zoning:	Central Business District Pedestrian Retail Commercial Zone (CBD-P)
Environmental Determination:	Exempt, Section 15301 of the State CEQA Guidelines: Existing Facilities; Exempt, Section 15302: Replacement or Reconstruction; Exempt, Section 15303: New Construction of Small Structures; Section 15183: Projects Consistent with a Community Plan, General Plan or Zoning
Historic Status:	API: Uptown Commercial; OCHS: Ec1*
City Council District:	3
Date Filed:	November 14, 2016
Action to be Taken:	Decision based on staff report
Finality of Decision:	<i>Appealable to City Council within 10 days</i>
For Further Information:	Contact case planner Marilu Garcia at (510) 238-5217 or mgarcia2@oaklandnet.com

SUMMARY

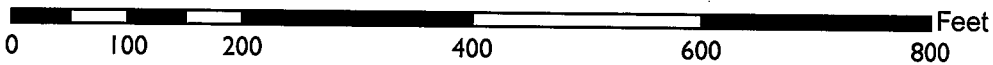
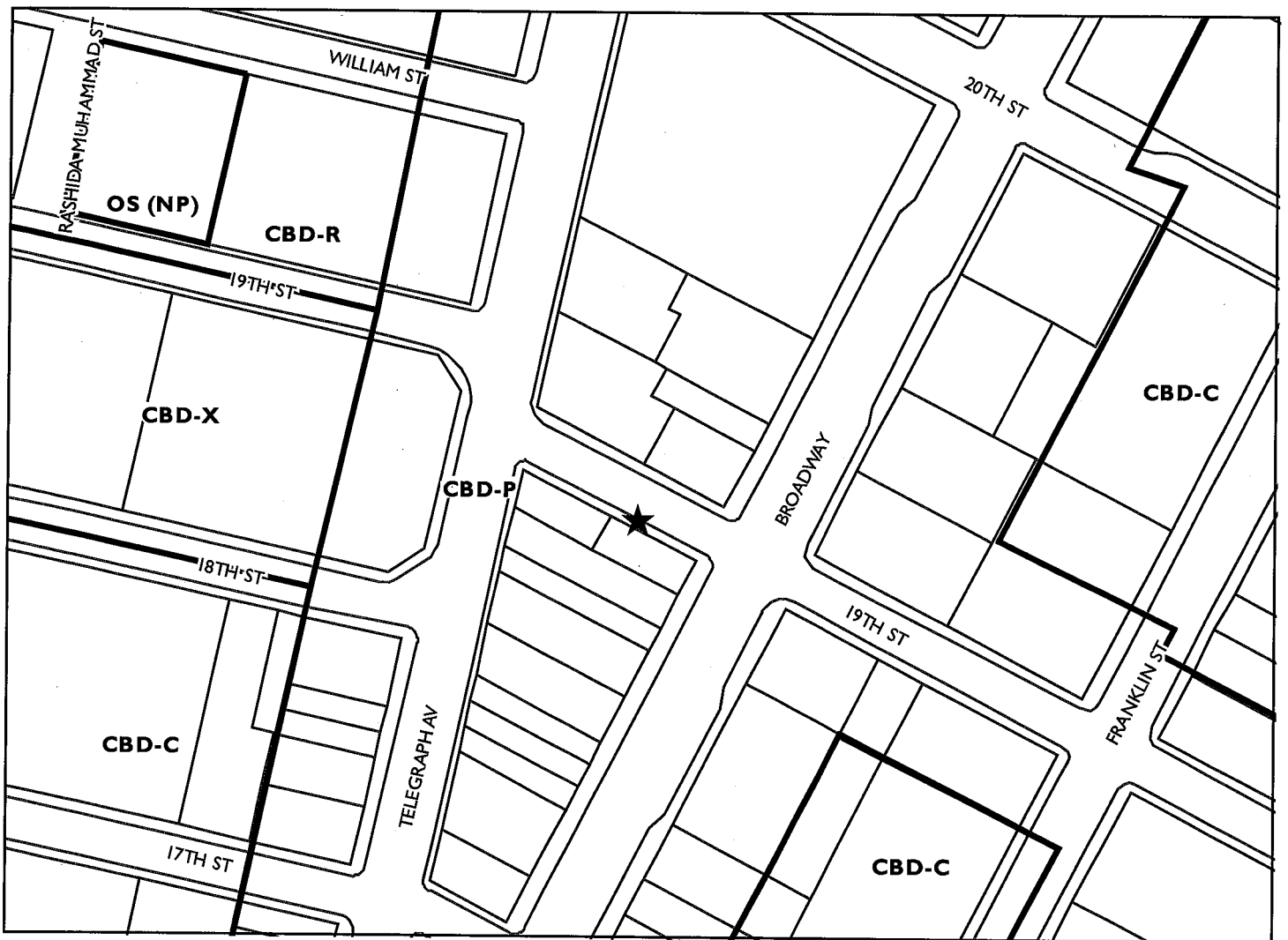
The applicant requests Planning Commission approval of a Major Conditional Use Permit, a Regular Design Review and a Minor Variance to establish a Monopole Telecommunications Facility ("small cell site"). The purpose is to enhance existing wireless services. The project involves attaching an antenna and equipment to an existing City street light pole located within the sidewalk in the public right-of-way in a residential neighborhood.

Staff recommends approval, subject to conditions, as described in this report.

BACKGROUND

For several years in the City of Oakland, telecommunications carriers have proposed facility installation within the public right-of-way, instead of private property. These facilities typically consist of antennas

CITY OF OAKLAND PLANNING COMMISSION



Case File: PLN16307

Applicant: Ana Gomez/Black & Veatch & Extenet (for: T-Mobile)

Address: City street light pole in public right-of-way (sidewalk)
adjacent to 1775 Broadway

Zone: CBD-P

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

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

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

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 Communication 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 jurisdiction available for the placement of new spectrum-based telecommunications services. This proceeding is currently at the comment stage.

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

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

Main division website:

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

Tower siting:

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

SITE DESCRIPTION

The project site consists of an existing City street light pole located in the public right-of-way (sidewalk, towards the curb) that measures 25’ in height. The cobra head-style lamp projects over 19th Street at a height of 27 feet. The light pole is placed adjacent to 1775 Broadway along the 19th Street side. This property is used as a two-story commercial structure with retail, offices and lofts. This area is within the Uptown Commercial Area of Primary Importance; however, the pole is not considered historic or fully decorative. Properties in the vicinity consist of two-story mixed-use commercial structures.

PROJECT DESCRIPTION

The proposal is to establish a Monopole Telecommunications Facility (“small cell site”). The project involves attaching one canister antenna within an antenna shroud on top of a 7” pole extension to a 25’ tall City Street light pole. One antenna, measuring 23.5” long and 7.9” in diameter, would be installed on top of the pole at a height of 27’-1” and various equipment would be mounted on the light pole between 9-feet to approximately 15’-1” in height above ground-level.

GENERAL PLAN ANALYSIS

The site is located in a Central Business District area under the General Plan’s Land Use and Transportation Element (LUTE). The intent of the area is: *“to encourage, support, and enhance the downtown area as a high density mixed use urban center of regional importance and a primary hub for business, communications, office, government, high technology, retail, entertainment, and transportation*

in Northern California.” Given residents and visitors’ increasing reliance upon cellular service for phone and internet, the proposal for a Monopole Telecommunications Facility that is not adjacent to a primary living space or historic structure conforms to this intent.

Staff therefore finds the proposal, as conditioned, to conform to the General Plan.

ZONING ANALYSIS

The site is located within the Central Business District Pedestrian Retail Commercial Zone (CBD-P). The intent of the CBD-P Zone is: *“to create, maintain, and enhance areas of the Central Business District for ground-level, pedestrian-oriented, active storefront uses. Upper story spaces are intended to be available for a wide range of office and residential activities.”* Per OMC section 17.136.040 and 17.128.080, Monopole Telecommunications Facilities on City street light poles require a Conditional Use Permit and a Regular Design Review with additional findings.

Section 17.134.020 (3)(e) indicates that a major Conditional Use Permit is required when a Monopole Telecommunications Facility is in, or within, 300 feet of the boundary of any residential zone or HBX zone. This proposal is within 300 feet from the boundary of a residential zone (CBD-R). Section 17.128.080 (A)(3) also states: “When a monopole is in a Residential Zone or adjacent to a residential use, it must be set back from the nearest residential lot line a distance at least equal to its total height”. The applicant has requested a Minor Variance for a 29’-3” monopole situated approximately 9 feet from a commercial structure with residential uses.

Additionally, new wireless telecommunications facilities may also be subject to a Site Alternatives Analysis, Site Design Alternatives Analysis, and a satisfactory radio-frequency (RF) emissions report. Staff analyzes the proposal in consideration of these requirements in the ‘Key Issues and Impacts’ section of this report. Additionally, attachment to City infrastructure requires review by the City’s Real Estate Department, Public Works Agency’s Electrical Division, and Information Technology Department. Given increased reliance upon cellular service for phone and Wi-Fi, the proposal for a Monopole Telecommunications Facility that is not adjacent to a primary living space or historic structure conforms to this intent.

Staff finds the proposal, as conditioned, to conform to the Planning Code.

ENVIRONMENTAL DETERMINATION

The California Environmental Quality Act (CEQA) Guidelines categorically exempts specific types of projects from environmental review. Section 15301 exempts projects involving ‘Existing Facilities’; Section 15302 exempts projects involving ‘Replacement or Reconstruction’; and, Section 15303 exempts projects involving ‘Construction of Small Structures.’ The proposal fits all of these descriptions. The project is also subject to Section 15183 for ‘Projects consistent with a community plan, general plan or zoning.’ The project is therefore exempt from further Environmental Review.

KEY ISSUES AND IMPACTS

The proposal to establish a Monopole Telecommunications Facility is subject to the following Planning Code development standards, which are followed by staff’s analysis in relation to this application:

17.128.080 Monopole Telecommunications Facilities.

A. General Development Standards for Monopole Telecommunications Facilities.

1. Applicant and owner shall allow other future wireless communications companies including public and quasi-public agencies using similar technology to collocate antenna equipment and facilities on the monopole unless specific technical or other constraints, subject to independent

verification, at the applicant's expense, at the discretion of the City of Oakland Zoning Manager, prohibit said collocation. Applicant and other wireless carriers shall provide a mechanism for the construction and maintenance of shared facilities and infrastructure and shall provide for equitable sharing of cost in accordance with industry standards. Construction of future facilities shall not interrupt or interfere with the continuous operation of applicant's facilities.

The proposal involves using an existing City of Oakland metal street light pole for the wireless communication facility that would be available for future collocation purposes.

2. The equipment shelter or cabinet must be concealed from public view or made compatible with the architecture of the surrounding structures or placed underground. The shelter or cabinet must be regularly maintained.

Recommended conditions of approval require painting and texturing the antenna and equipment to match the appearance of the metal pole. There is no equipment shelter or cabinet proposed, however, minimal equipment would be closely mounted on the side of the metal pole.

3. When a monopole is in a Residential Zone or adjacent to a residential use, it must be set back from the nearest residential lot line a distance at least equal to its total height.

The existing City light pole is in a commercial zone and is intended to be situated approximately 9 feet from the nearest residential use. The proposed antenna would be placed on top of the light pole at a maximum height of 29'-3" and would not create a view obstruction from any nearby living space since it is above the roof line of the adjacent structure. A Minor Variance has been requested to allow a reduction in setback requirements. Staff finds the proposal meets the variance criteria included in that section of this attachment and would not create a negative visual impact on the neighborhood.

4. In all zones other than the D-CE-5, D-CE-6, IG, CIX-2, and IO Zones, the maximum height of Monopole Telecommunications Facilities and connecting appurtenances may be increased from the otherwise required maximum height to forty-five (45) feet upon the granting of a Conditional Use Permit (see Chapter 17.134 for the Conditional Use Permit Procedure).

The facility would not exceed the height of 29'-3".

5. In the D-CE-5, D-CE-6, CIX-2, and IO Zones, the maximum height of Monopole Telecommunications Facilities and connecting appurtenances may be increased from the otherwise required maximum height to eighty (80) feet upon the granting of a Conditional Use Permit (see Chapter 17.134 for the Conditional Use Permit Procedure).

This requirement does not apply. The subject property is not located in any of the described zoning districts. Nonetheless, the facility would not exceed the height of 29'-3".

6. In the IG Zone, the maximum height of Monopole Telecommunications Facilities and connecting appurtenances may reach a height of forty-five (45) feet. These facilities may reach a height of eighty (80) feet upon the granting of Regular Design Review approval (see Chapter 17.136 for the Design Review Procedure).

This requirement does not apply. The subject property is not located in the described zoning districts. Nonetheless, the facility would not exceed the height of 29'-3".

7. The applicant shall submit written documentation demonstrating that the emissions from the proposed project are within the limits set by the Federal Communications Commission.

This standard is met by the proposal; a satisfactory emissions report has been submitted and is attached to this report (Attachment F).

8. Antennas may not extend more than fifteen (15) feet above their supporting structure.

The proposed antenna would not be more than fifteen feet above the City light pole.

17.128.110 Site location preferences.

New wireless facilities shall generally be located on the following properties or facilities in 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 Nonresidential Zones (excluding all HBX Zones and the D-CE-3 and D-CE-4 Zones).
- D. Existing commercial or industrial structures in Residential Zones, HBX Zones, or the DCE-3 or D-CE-4 Zones.
- E. Other Nonresidential uses in Residential Zones, HBX Zones, or the D-CE-3 or D-CE-4 Zones.
- F. Residential uses in Nonresidential 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 locating on an A, B or C ranked preference do not require a site alternatives analysis. Facilities proposing to locate on a D through G ranked preference, inclusive, must submit a site alternatives analysis as part of the required application materials. A site alternatives analysis shall, at a minimum, consist of: a. The identification of all A, B and C ranked preference sites within one thousand (1,000) feet of the proposed location. If more than three (3) sites in each preference order exist, the three such closest to the proposed location shall be required. b. Written evidence indicating why each such identified alternative cannot be used. Such evidence shall be in sufficient detail that independent verification, at the applicant's expense, 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. refusal to lease, inability to provide utilities).

A site alternatives analysis is not required because the proposal conforms to 'B' as it would be located on a public facility (City light pole). Nonetheless, the applicant has submitted an analysis which is attached to this report (Attachment E).

17.128.120 Site design preferences.

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 public right-of-way.
- C. Building or structure mounted antennas below roof line (facade mount, pole mount) visible from public right-of-way, painted to match existing structure.
- D. Building or structure mounted antennas above roof line visible from public right-of-way.
- E. Monopoles.
- F. Towers.

Facilities designed to meet an A or 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. A site design alternatives analysis shall, at a minimum, consist of: a. Written evidence indicating why each such 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).

The proposal most closely conforms to 'E' (monopole) and the applicant has submitted a satisfactory site design alternatives analysis (Attachment E).

17.128.130 Radio frequency emissions standards.

The applicant for all wireless facilities, including requests for modifications to existing facilities, shall submit the following verifications:

- a. With the initial application, a RF emissions report, prepared by a licensed professional engineer or other expert, indicating that the proposed site will operate within the current acceptable thresholds as established by the Federal government or any such agency who may be subsequently authorized to establish such standards.**
- b. Prior to commencement of construction, a RF emissions report indicating the baseline RF emissions condition at the proposed site.**
- c. 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.**

A satisfactory report is attached to this report (Attachment F).

Analysis

The proposed Monopole Wireless Communications Facility would be placed on an existing City street light pole that is not historic and is not fully decorative. The antenna is intended to be placed at the top of the pole and above the roof line of the closest structure. This indicates that the antenna would not cause a view obstruction and would have no projection over the sidewalk or street. The applicant had originally requested to use a different pole for the installation of the facility. However, due to public safety concerns, a more suitable site was chosen. Staff, therefore, finds the proposal to provide an essential service with a least-intrusive possible design. Draft conditions of approval stipulate that the components be painted and textured to match the metal pole in appearance for camouflaging.

Outreach

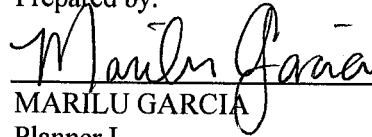
The applicant held a community meeting open to the public to introduce the technology in Downtown Oakland on February 24, 2017. The applicant conducted additional outreach on April 10, 2017 in East Oakland and on June 20, 2017 in uptown Oakland.

In conclusion, staff recommends approval subject to recommended Conditions of Approval.


RECOMMENDATIONS:

1. Affirm staff's environmental determination.
2. Approve the Major Conditional Use Permit, Regular Design Review and Minor Variance subject to the attached Findings and Conditions of Approval.

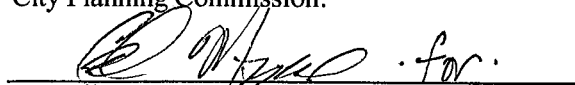
Prepared by:


MARILU GARCIA
Planner I

Approved by:


SCOTT MILLER
Zoning Manager

Approved for forwarding to the
City Planning Commission:


DARIN RANELLETTI, Interim Director
Planning and Building Department

ATTACHMENTS:

- A. Findings
- B. Conditions of Approval
- C. Plans
- D. Applicant's Photo-Simulations
- E. Site Alternatives Analysis/Site Design Alternatives Analysis
- F. RF Emissions Report by Hammett & Edison, Inc. dated December 8, 2016
- G. Applicant's Proof of Public Notification Posting

ATTACHMENT A: FINDINGS

This proposal meets the required findings under General Use Permit Criteria (OMC Section 17.134.050); Conditional Use Permit Criteria for Monopole Facilities (OMC Section 17.128.080 (C)), Regular Design Review Criteria for Nonresidential Facilities (OMC Sec. 17.136.050(B)) and Telecommunications Regulations/Design Review Criteria for Monopole Telecommunications Facilities (OMC Sec. 17.128.080(B)) and Minor Variance Criteria (OMC 17.148.050(A)) as set forth below. Required findings are shown in **bold type**; explanations as to why these findings can be made are in normal type.

GENERAL USE PERMIT CRITERIA (OMC SECTION 17.134.050)

A. That the location, size, design, and operating characteristics of the proposed development will be compatible with and will not adversely affect the livability or appropriate development of abutting properties and the surrounding neighborhood, with consideration to be given to harmony in scale, bulk, coverage, and density; to the availability of civic facilities and utilities; to harmful effect, if any, upon desirable neighborhood character; to the generation of traffic and the capacity of surrounding streets; and to any other relevant impact of the development.

The proposal involves the placement of a Monopole Wireless Communication Facility in a commercial zone. Specifically, it will provide for one new antenna to the upper portion of an existing City light pole located in the public right-of-way along 19th Street. The antenna and equipment is to be camouflaged and match the metal pole. The project will be compatible with the neighborhood; it meets special findings and is intended to improve wireless services in the neighborhood.

That the location, design, and site planning of the proposed development will provide a convenient and functional living, working, shopping, or civic environment, and will be as attractive as the nature of the use and its location and setting warrant.

The intent is to place a Monopole Facility in a commercial zone with mixed uses to improve wireless services in the area. The inclusion of camouflaging paint will lessen the impacts of the proposed facility.

That the proposed development will enhance the successful operation of the surrounding area in its basic community functions, or will provide an essential service to the community or region.

The placement of the proposed monopole facility will provide wireless communication services in the neighborhood.

That the proposal conforms to all applicable design review criteria set forth in the design review procedure at Section 17.136.070.

The proposal conforms to Design Review findings which are included in that section of this attachment of Findings for Approval.

That the proposal conforms in all significant respects with the Oakland Comprehensive Plan and with any other applicable plan or development control map which has been adopted by the City Council.

The project is consistent with the following Objectives of the Oakland General Plan's Land Use & Transportation Element (adopted 1998):

Civic and Institutional Uses, Objective N2: Encourage adequate civic, institutional, and educational facilities located within Oakland, appropriately designed and sited to serve the community.

Infrastructure, Objective N12: Provide adequate infrastructure to meet the needs of Oakland's growing community.

The proposal to expand a wireless telecommunications facility will not create functional issues for the area and the project possesses a satisfactory emissions report.

CONDITIONAL USE PERMIT CRITERIA FOR MONOPOLE FACILITIES (OMC SEC. 17.128.080(C))

1. The project must meet the special design review criteria listed in subsection B of this section.

The proposal conforms to Design Review findings which are included in that section of this attachment of Findings for Approval.

2. Monopoles should not be located any closer than one thousand five hundred (1,500) feet from existing monopoles unless technologically required or visually preferable.

The request is part of proposed small cell network. This network consists of a series of radio access nodes connected to small telecommunications antennas to distribute wireless communication signals. Monopoles within the network may be located within one thousand five hundred feet and the applicant has submitted documentation to demonstration that such arrangement is technologically required and/or visually preferable to a minimum distance separation. (Attachment E)

3. The proposed project must not disrupt the overall community character.

The Monopole Facility will not alter or disrupt the current overall character of the community as it will be attached to an existing City light pole and will not create a view obstruction. The antenna will be painted and texturized to match existing metal pole in appearance for camouflaging providing for a the least intrusive design, as required by conditions of approval.

4. If a major conditional use permit is required, the Planning Director or the Planning Commission may request independent expert review regarding site location, collocation and facility configuration. Any party may request that the Planning Commission consider making such request for independent expert review.

An independent expert review may be requested by the specified parties. No expert review has been requested as of now.

REGULAR DESIGN REVIEW CRITERIA FOR NON-RESIDENTIAL FACILITIES (OMC SEC. 17.136.050(B))

1. That the proposed design will create a building or set of buildings that are well related to the

surrounding area in their setting, scale, bulk, height, materials, and textures:

The attachment of a small antenna and equipment to a non-historic City light pole, painted and texturized to match the pole in appearance for camouflaging, will be the least intrusive design. The antenna will be placed on top of the pole and will have no projection over the streets. The facility will not adversely affect and detract from the characteristics of the neighborhood.

2. That the proposed design will protect, preserve, or enhance desirable neighborhood characteristics;

The proposal will not create a view obstruction, be directly adjacent to a primary living space such as a living room or bedroom window, or be located on an historic structure. Improving wireless services in this area will enable better response from emergency services such as police, fire department and emergency response teams.

3. The project will provide a necessary function without negatively impacting surrounding opens pace and hillside residential properties.

The proposal will enhance essential services in an urbanized neighborhood.

4. That the proposed design will be sensitive to the topography and landscape.

The proposal will not be ground mounted.

5. That, if situated on a hill, the design and massing of the proposed building relates to the grade of the hill.

This finding is inapplicable because the site is level.

6. 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 located in a Central Business District area under the General Plan's Land Use and Transportation Element (LUTE). The intent of the area is: *"to encourage, support, and enhance the downtown area as a high density mixed use urban center of regional importance and a primary hub for business, communications, office, government, high technology, retail, entertainment, and transportation in Northern California."* Given visitors and residents increasing reliance upon cellular service for phone and internet, the proposal for a Monopole Telecommunications Facility that is not adjacent to a primary living space or historic structure conforms to this intent.

TELECOMMUNICATIONS REGULATIONS/DESIGN REVIEW CRITERIA FOR MONOPOLE TELECOMMUNICATIONS FACILITIES (OMC SEC. 17.128.080(B))

1. Collocation is to be encouraged when it will decrease visual impact and collocation is to be discouraged when it will increase negative visual impact.

The project does not involve collocation as it involves the establishment of a new telecommunications facility; however, the project should not preclude any future proposals for location at the site.

2. Monopoles should not be sited to create visual clutter or negatively affect specific views.

The Monopole Facility is sited in an existing City street light pole where it will not create clutter or negatively affect specific views. The closest structure is a commercial structure with a mix of retail and residential uses and the Facility would be placed top above the roof line.

3. Monopoles shall be screened from the public view wherever possible.

The Monopole Facility will be camouflaged and placed as an attachment to an existing light pole. The antenna and equipment will be texturized to match the pole in appearance. The antenna will be placed on top of the City light pole and will have not projection over the sidewalk or street.

4. The equipment shelter or cabinet must be concealed from public view or made compatible with the architecture of the surrounding structures or placed underground. The shelter or cabinet must be regularly maintained.

Recommended conditions of approval require painting and texturing the antenna and equipment to match the appearance of the metal pole. There is no equipment shelter or cabinet proposed, however minimal equipment would be closely mounted on the side of the metal pole.

5. Site location and development shall preserve the preexisting character of the surrounding buildings and land uses and the zone district as much as possible. Wireless communication towers shall be integrated through location and design to blend in with the existing characteristics of the site to the extent practical. Existing on-site vegetation shall be preserved or improved, and disturbance of the existing topography shall be minimized, unless such disturbance would result in less visual impact of the site to the surrounding area.

The proposed Monopole Facility will be placed in an existing City Light pole. This enables the preservation of character in the area and will not pose a negative visual impact as the proposal will be camouflaged to match the pole. There is no impact on existing vegetation or topography as this is an existing City light pole.

6. 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 minimal clearance to the facility will be nine-feet.

MINOR VARIANCE FINDINGS (OMC 17.148.050(A))

1. That such strict compliance would preclude an effective design solution improving livability, operational efficiency, or appearance.

The applicant intends to improve wireless communication services and fill a gap in service in this neighborhood. Strict compliance would preclude this intent.

2. That such strict compliance would preclude an effective design solution fulfilling the basic intent of the applicable regulation.

Strict compliance would preclude an effective design solution to improve wireless communication services in this area. The City light pole is existing and the antenna would not cause view obstruction since it would be placed at the top of the metal light pole and have no projections.

3. That the variance, if granted, will not adversely affect the character, livability, or appropriate development of abutting properties or the surrounding area, and will not be detrimental to the public welfare or contrary to adopted plans or development policy.

The proposal would not be detrimental to the public welfare or contrary to adopted plans or development policy. The monopole would be placed on an existing City light pole and would not adversely affect the character of the surroundings. The antenna and equipment would be camouflaged to reduce visual impacts and would provide wireless communications services.

4. That the variance will not constitute a grant of special privilege inconsistent with limitations imposed on similarly zoned properties or inconsistent with the purposes of the zoning regulations.

The variance would not constitute a grant of privilege. Monopole wireless communication facilities are allowed as a Conditional Use in this zoning district. Findings for the Conditional Use Permit are included above. The antenna would be placed on an existing light pole and the proposal is consistent with the purposes of the zoning regulations.

5. That the elements of the proposal requiring the variance (e.g., elements such as buildings, walls, fences, driveways, garages and carports, etc.) conform with the regular design review criteria set forth in the design review procedure at Section 17.136.050

The proposal for a Monopole Wireless Communication Facility conforms with the Regular Design Review criteria specified in that section of this attachment of Findings of Approval.

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

The proposal for a Monopole Wireless Communication Facility conforms with the General Plan and applicable guidelines as specified in a previous sections of this attachment of Findings of Approval.

Attachment B: Conditions of Approval

Approved Use

The project shall be constructed and operated in accordance with the authorized use as described in the approved application materials, **staff report** and the approved plans **dated November 21, 2016 and submitted November 14, 2016**, as amended by the following conditions of approval and mitigation measures, if applicable (“Conditions of Approval” or “Conditions”).

2. Effective Date, Expiration, Extensions and Extinguishment

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

3. Compliance with Other Requirements

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

4. Minor and Major Changes

- a. Minor changes to the approved project, plans, Conditions, facilities, or use may be approved administratively by the Director of City Planning.
- b. Major changes to the approved project, plans, Conditions, facilities, or use shall be reviewed by the Director of City Planning to determine whether such changes require submittal and approval of a revision to the Approval by the original approving body or a new independent permit/approval. Major revisions shall be reviewed in accordance with the procedures required for the original permit/approval. A new independent permit/approval shall be reviewed in accordance with the procedures required for the new permit/approval.

5. Compliance with Conditions of Approval

- a. The project applicant and property owner, including successors, (collectively referred to hereafter as the “project applicant” or “applicant”) shall be responsible for compliance with all the Conditions of Approval and any recommendations contained in any submitted and approved technical report at his/her sole cost and expense, subject to review and approval by the City of Oakland.
- b. The City of Oakland reserves the right at any time during construction to require certification by a licensed professional at the project applicant’s expense that the as-built project

conforms to all applicable requirements, including but not limited to, approved maximum heights and minimum setbacks. Failure to construct the project in accordance with the Approval may result in remedial reconstruction, permit revocation, permit modification, stop work, permit suspension, or other corrective action.

- c. Violation of any term, Condition, or project description relating to the Approval is unlawful, prohibited, and a violation of the Oakland Municipal Code. The City of Oakland reserves the right to initiate civil and/or criminal enforcement and/or abatement proceedings, or after notice and public hearing, to revoke the Approval or alter these Conditions if it is found that there is violation of any of the Conditions or the provisions of the Planning Code or Municipal Code, or the project operates as or causes a public nuisance. This provision is not intended to, nor does it, limit in any manner whatsoever the ability of the City to take appropriate enforcement actions. The project applicant shall be responsible for paying fees in accordance with the City's Master Fee Schedule for inspections conducted by the City or a City-designated third-party to investigate alleged violations of the Approval or Conditions.

6. Signed Copy of the Approval/Conditions

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

7. Blight/Nuisances

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

8. Indemnification

- a. To the maximum extent permitted by law, the project applicant shall defend (with counsel acceptable to the City), indemnify, and hold harmless the City of Oakland, the Oakland City Council, the Oakland Redevelopment Successor Agency, the Oakland City Planning Commission, and their respective agents, officers, employees, and volunteers (hereafter collectively called "City") from any liability, damages, claim, judgment, loss (direct or indirect), action, causes of action, or proceeding (including legal costs, attorneys' fees, expert witness or consultant fees, City Attorney or staff time, expenses or costs) (collectively called "Action") against the City to attack, set aside, void or annul this Approval or implementation of this Approval. The City may elect, in its sole discretion, to participate in the defense of said Action and the project applicant shall reimburse the City for its reasonable legal costs and attorneys' fees.
- b. Within ten (10) calendar days of the filing of any Action as specified in subsection (a) above, the project applicant shall execute a Joint Defense Letter of Agreement with the City, acceptable to the Office of the City Attorney, which memorializes the above obligations. These obligations and the Joint Defense Letter of Agreement shall survive termination, extinguishment, or invalidation of the Approval. Failure to timely execute the Letter of Agreement does not relieve the project applicant of any of the obligations contained in this Condition or other requirements or Conditions of Approval that may be imposed by the City.

9. Severability

The Approval would not have been granted but for the applicability and validity of each and every one of the specified Conditions, and if one or more of such Conditions is found to be invalid by a

court of competent jurisdiction this Approval would not have been granted without requiring other valid Conditions consistent with achieving the same purpose and intent of such Approval.

10. Job Site Plans

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

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

12. Public Improvements

The project applicant shall obtain all necessary permits/approvals, such as encroachment permits, obstruction permits, curb/gutter/sidewalk permits, and public improvement ("p-job") permits from the City for work in the public right-of-way, including but not limited to, streets, curbs, gutters, sidewalks, utilities, and fire hydrants. Prior to any work in the public right-of-way, the applicant shall submit plans for review and approval by the Bureau of Planning, the Bureau of Building, and other City departments as required. Public improvements shall be designed and installed to the satisfaction of the City.

13. Construction Days/Hours

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

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

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

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

the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

PROJECT-SPECIFIC CONDITIONS

14. Emissions Report

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

Requirement: Prior to a final inspection

When Required: Prior to final building permit inspection sign-off

Initial Approval: N/A

Monitoring/Inspection: N/A

15. Camouflage

Requirement: The antenna shall be painted, texturized, and maintained light gray-green, and the equipment and any other accessory items including cables light gray-green, to better camouflage the facility to the City light pole.

When Required: Prior to a final inspection

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

16. Operational

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

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

17. Possible District Undergrounding PG&E Pole

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

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: N/A

18. Graffiti Control Requirement:

- a. During construction and operation of the project, the project applicant shall incorporate best management practices reasonably related to the control of graffiti and/or the mitigation of the impacts of graffiti. Such best management practices may include, without limitation:
- b. The project applicant shall remove graffiti by appropriate means within seventy-two (72) hours. Appropriate means include the following:
 - i. Removal through scrubbing, washing, sanding, and/or scraping (or similar method) without damaging the surface and without discharging wash water or cleaning detergents into the City storm drain system.
 - ii. For galvanized poles, covering with new paint to match the color of the surrounding surface.
 - iii. Replace pole numbers.

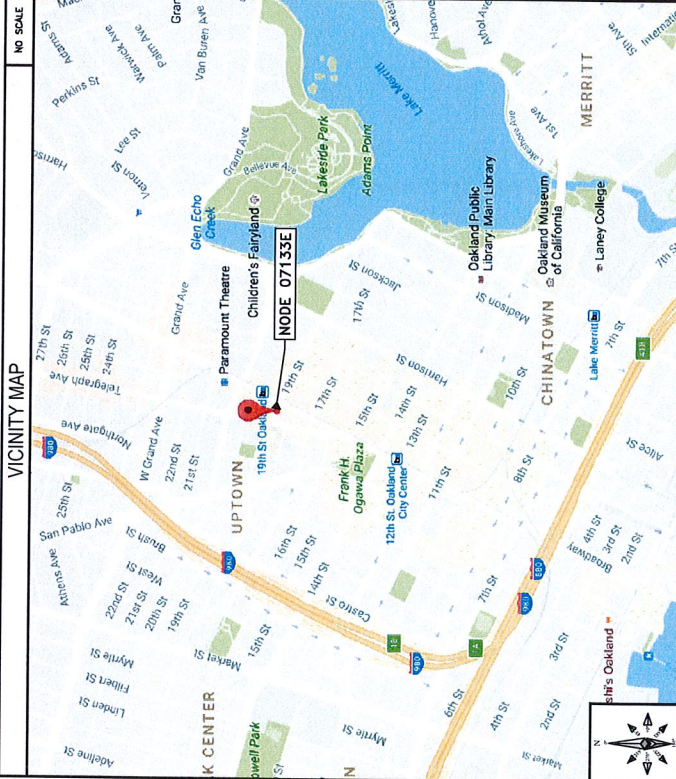
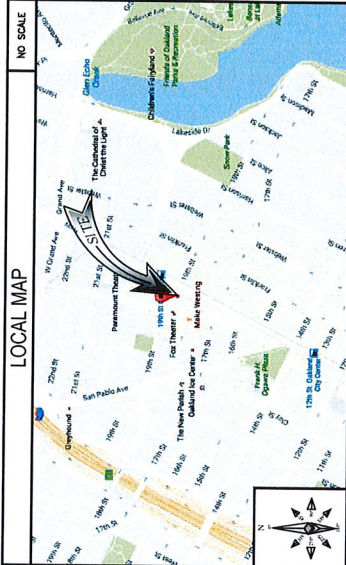
When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

NW-CA-DT0AKLAN 07133E

ADJACENT TO (IN PROW)
1775 BROADWAY
OAKLAND, CA 94612



SHEET INDEX

SHEET NO:	SHEET TITLE
T-1	TITLE SHEET
GN-1	GENERAL NOTES AND LEGEND
C-1	OVERALL SITE PLAN
C-2	UTILITY POLE ELEVATIONS AND RISER DETAILS
C-3	EQUIPMENT DETAILS
C-4	EQUIPMENT DETAILS
C-5	CONCEPTUAL WIRING DIAGRAMS

Attachment C

IF PRINTED IN AIR PLOT, DRAWINGS WILL BE HALF SCALE

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

CODE COMPLIANCE

- ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES (AS APPLICABLE). NOTHING IN THESE DRAWINGS IS TO BE CONSIDERED TO PERMIT WORK NOT CONFORMING TO THESE CODES.
- IRC - 2015
- CALIFORNIA BUILDING STANDARDS CODE - 2013
- CALIFORNIA GENERAL ORDER 95
- CALIFORNIA ELECTRICAL CODE, 2013
- CALIFORNIA ELECTRICAL CODE, 2013
- CITY AND/OR COUNTY ORDINANCES
- STATE OF CALIFORNIA REGULATIONS
- BUILDING OFFICIALS AND CODE ADMINISTRATORS (BOCA) EFFECTIVE UNTIL JANUARY 1ST, 2017

PROJECT DESCRIPTION

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

GENERAL PROJECT NOTES

- BEFORE SUBMITTING A BID, THE CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND DIMENSIONS OF THE JOB SITE AND CONFORM TO THE ACCOMPLISH AS SHOWN PRIOR TO COMMENCEMENT OF ANY WORK.
- ALL FIELD MODIFICATIONS BEFORE, DURING OR AFTER CONSTRUCTION SHALL BE APPROVED IN WRITING BY AN EXTENET SYSTEMS REPRESENTATIVE.
- INSTALL ALL EQUIPMENT AND MATERIALS PER THE MANUFACTURER'S RECOMMENDATIONS, UNLESS INDICATED OTHERWISE.
- NOTIFY EXTENET SYSTEMS, IN WRITING, OF ANY MAJOR CONDITIONS OR DESIGN CHANGES THAT MAY BE RESPONSIBLE FOR OBTAINING CONTRIBUTIONS FROM AN EXTENET REPRESENTATIVE, AND ADJUSTING THE BID ACCORDINGLY.
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF THE WORK UNDER THE CONTRACT.
- CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS AND DAMAGE THAT MAY OCCUR DURING THE CONSTRUCTION TO THE SATISFACTION OF AN EXTENET SYSTEMS REPRESENTATIVE.
- CONTRACTOR PLANS TO ILLUSTRATE THE AS-BUILT CONDITION OF THE CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CONTRIBUTIONS FROM AN EXTENET REPRESENTATIVE. ALL EQUIPMENT LAYOUT, SPECS, PERFORMANCE REQUIREMENTS, AND DIMENSIONS MUST BE WITH THE WORK AND CLEARANCES REQUIRED BY OTHERS RELATED TO SAID INSTALLATIONS.

CONNECTIVITY EVERYWHERE

INTERNAL REVIEW

CONSTRUCTION SIGNATURE _____ DATE _____

RF SIGNATURE _____ DATE _____

REAL ESTATE SIGNATURE _____ DATE _____

BLACK & VEATCH CORPORATION
2045 RAYBURN DRIVE
SUITE 400
WALNUT CREEK, CA 94697

THESE DRAWINGS ARE CONTRACTORS AND ARE THE PROPERTY OF BLACK & VEATCH. NO PART OF THESE DRAWINGS OR INFORMATION CONTAINED HEREIN IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT WRITTEN CONSENT BY BLACK & VEATCH.

PROJECT NO. DRAWN BY CHECKED BY

192417.000000 JAT LW

REV	DATE	DESCRIPTION
B	11/27/16	ISSUED FOR REVIEW
A	11/27/16	ISSUED FOR REVIEW

PRELIMINARY

IT IS THE POLICY OF BLACK & VEATCH TO EMPLOY ONLY QUALIFIED PROFESSIONALS AND TO INSURE THEM AGAINST NEGLIGENCE AND OTHER PROFESSIONAL LIABILITY.

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


SITE ADDRESS
ADJACENT TO (IN PROW)
1775 BROADWAY
OAKLAND, CA 94612

SHEET TITLE
TITLE SHEET


SHEET NUMBER
T-1



UNDERGROUND SERVICE ALERT
UTILITIES PROTECTION CENTER, INC.
811
48 hours before you dig



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



BLACK & VEATCH
BLACK & VEATCH CORPORATION
2501 W. 10TH AVENUE
SUITE 400
WALNUT CREEK, CA 94597

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PROJECT NO	192417.XXXX	JAN	LW
DESIGNED BY			
CHECKED BY			
DATE			

PRELIMINARY

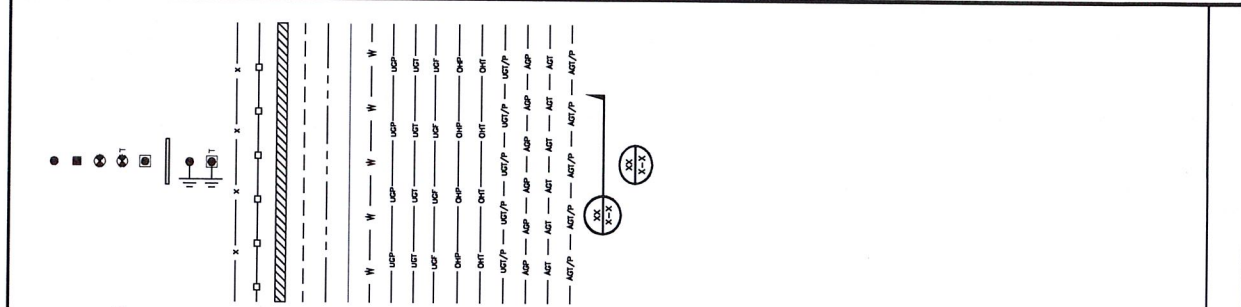
IT IS A VIOLATION OF LAW FOR ANY PERSON, OTHER THAN A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

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

SITE ADDRESS
ADJACENT TO (IN ROW)
1775 BROADWAY
OAKLAND, CA 94612

SHEET TITLE
GENERAL NOTES AND LEGEND

SHEET NUMBER
GN-1



LEGEND

EXOTHERMIC CONNECTION
MECHANICAL CONNECTION
TEST CHEMICAL ELECTROLYTIC GROUNDING SYSTEM
EXOTHERMIC WITH INSPECTION SLEEVE
GROUNDING BAR
GROUND ROD
TEST GROUND ROD WITH INSPECTION SLEEVE
CHAINLINK FENCE
WOOD/PORCH/IRON FENCE
WALL STRUCTURE
LEASE AREA
PROPERTY LINE (PL)
SETBACKS
WATER LINE
UNDERGROUND POWER
UNDERGROUND TELCO
OVERHEAD POWER
UNDERGROUND TELCO/POWER
ABOVE GROUND POWER
ABOVE GROUND TELCO
ABOVE GROUND TELCO/POWER

SECTION REFERENCE

DETAIL REFERENCE

TORQUE REQUIREMENTS

- ALL RF CONNECTIONS SHALL BE TIGHTENED BY A TORQUE WRENCH.
- ALL RF CONNECTIONS, GROUNDING HARDWARE AND ANTENNA HARDWARE SHALL HAVE A TORQUE MARK INSTALLED IN A CONTINUOUS STRAIGHT LINE FROM BOTH SIDES OF THE CONNECTION.
 - RF CONNECTION BOTH SIDES OF THE CONNECTOR.
 - GROUNDING AND ANTENNA HARDWARE ON THE INSIDE SIDE STARTING FROM THE THROUGH TO THE SOLDER SURFACE. EXAMPLE OF SOLDER SURFACE GROUND BAR, ANTENNA BRACKET METAL.
- ALL 6M ANTENNA HARDWARE SHALL BE TIGHTENED TO 9 LB-FT (12 NM).
- ALL 1/2" ANTENNA HARDWARE SHALL BE TIGHTENED TO 43 LB-FT (58 NM).
- ALL GROUNDING HARDWARE SHALL BE TIGHTENED UNTIL THE LOCK WASHER COLLAPSES AND THE GROUNDING HARDWARE IS NO LONGER LOOSE.
- ALL DIN TYPE CONNECTIONS SHALL BE TIGHTENED TO 18-22 LB-FT (24.4 - 29.8 NM).
- ALL N TYPE CONNECTIONS SHALL BE TIGHTENED TO 15-20 LB-FT (1.7 - 2.3 NM).

ROW UTILITY POLE CONSTRUCTION NOTES

- NO BOLT THREADS TO PROTRUDE MORE THAN 1-1/2" (38MM).
- FILL ALL HOLES LEFT IN POLE FROM REARRANGEMENT OF CUMBERS.
- ALL CLAMP STEPS NEXT TO CONDUIT SHALL HAVE EXTENDED STEPS.
- CABLE NOT TO IMPDE 15' (3.81M) CLEAR SPACE OFF POLE FACE (1250).
- 90 SHORT SHEEPS UNDER ANTENNA JAW. ALL CABLES MUST ONLY TRANSITION ON THE INSIDE OR BOTTOM OF ARMS (NO CABLE ON TOP OF ARMS).
- USE 90 CONNECTOR AT CABLE CONNECTION TO ANTENNAS.
- USE 1/2" (12.7MM) CABLE ON ANTENNAS UNLESS OTHERWISE SPECIFIED.
- FILL VOID AROUND CABLES AT CONDUIT OPENING WITH FOAM SEALANT TO PREVENT WATER INTRUSION.

NODE SITE POWER SHUT DOWN PROCEDURES

- FOR NON EMERGENCY/SCHEDULED POWER SHUT DOWN
 - CALL EXTENET SYSTEMS NOC (NETWORK OPERATIONS CENTER) (860)982-4327
 - 24 HOURS PRIOR TO SCHEDULED POWER SHUT OFF
 - PROVIDE THE FOLLOWING INFORMATION
 - YOUR NAME AND REASON FOR POWER SHUTOFF
 - PROVIDE DURATION OF OUTAGE
 - UNLOCK DISCONNECT BOX, FLIP BOTH BREAKERS TO THE OFF POSITION
 - POWER SHUT OFF VERIFICATION WITH APPROVED POLE PROCEDURES
 - NOTIFY EXTENET NOC UPON COMPLETION OF WORK
 - REINSTALL LOCK ON DISCONNECT BOX
 - EMERGENCY POWER SHUT OFF
- CALL EXTENET SYSTEMS NOC (NETWORK OPERATIONS CENTER) (860)982-4327
 - PROVIDE THE FOLLOWING INFORMATION
 - YOUR NAME AND REASON FOR POWER SHUTOFF
 - PROVIDE DURATION OF OUTAGE
 - UNLOCK DISCONNECT BOX, FLIP BOTH BREAKERS TO THE OFF POSITION
 - POWER SHUT OFF VERIFICATION WITH APPROVED POLE PROCEDURES
 - NOTIFY EXTENET NOC UPON COMPLETION OF WORK
 - REINSTALL LOCK ON DISCONNECT BOX

GENERAL NOTES

- THESE NOTES SHALL BE CONSIDERED A PART OF THE WRITTEN SPECIFICATIONS, CONTRACT AND CONSTRUCTION DOCUMENTS.
- THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THESE PLANS AND IN THE CONTRACT DOCUMENTS.
- BEFORE THE SUBMITTAL OF BIDS, THE CONTRACTORS SHALL VISIT THE JOB SITE(S) AND BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE CONTRACT DOCUMENTS AND CONSIDER THAT THE WORK MAY BE ACCOMPLISHED PER THE CONTRACT DOCUMENTS AND CONDITIONS AND NOT BE SUBJECT TO THE ATTENTION OF THE SUPERVISION ENGINEER AND ARCHITECT/ENGINEER PRIOR TO BID SUBMITTAL.
- THE CONTRACTOR SHALL RECEIVE WRITTEN CONSTRUCTION DOCUMENTS BEFORE SINKING ANY WORK.
- ALL WORK PERFORMED AND MATERIALS INCLUDING PARTS, FABRICATING AND WELDING SHALL BE APPLICABLE TO THE SPECIFICATIONS.
- REVISIONS TO THESE SPECIFICATIONS AND MATERIALS SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND/OR APPLICABLE CODES OR REGULATIONS, REVIEW AND RESOLVE THE CONTACT WITH DIRECTION FROM THE SUPERVISION ENGINEER AND ARCHITECT/ENGINEER PRIOR TO PROCEEDING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL UTILITIES, TELECOMMUNICATIONS, AND PROCEEDURES AND FOR CONSTRUCTION OF ALL UTILITIES UNDER THE AUTHORIZED REPRESENTATIVE OF ANY OUTSIDE POLE OR PROPERTY OWNER.
- THE CONTRACTOR SHALL HAVE NECESSARY PROVISIONS TO PROTECT EXISTING UTILITIES INCLUDING BUT NOT LIMITED TO: MARKING, IDENTIFICATION, CALIBRATION, SURFACE OR OTHER EXISTING UTILITIES AND UPON COMPLETION OF THE WORK, RETURN ANY DAMAGE THAT OCCURRED DURING CONSTRUCTION TO THE SATISFACTION OF EXISTING.
- CONTRACTOR IS TO KEEP THE GENERAL AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DIRT, DEBRIS, CLEAN CONDITION DIRT.
- PLANS ARE INTENDED TO BE DIAGNOSTIC ONLY AND SHOULD NOT BE SCALED UNLESS OTHERWISE NOTED.
- THE DISTANCE AND LOCATION OF UTILITIES AND OTHER AGENCY'S FACILITIES WERE OBTAINED BY A SEARCH OF CONSTRUCTION AND USE EXISTING DATA AND PROTECTIVE MEASURES TO PREVENT DAMAGE TO THESE FACILITIES, LIMITS OF THE WORK, WHETHER THEY ARE IDENTIFIED IN THE CONTRACT DOCUMENTS OR NOT.
- THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (800) 277-2900, AT LEAST TWO WORKING DAYS PRIOR TO THE START OF ANY EXCAVATION.

DEFINITIONS

- "TYPICAL" OR "TYP" MEANS THAT THIS ITEM IS SUBSTANTIALLY THE SAME AS THE SIMILAR COMPONENTS "TYP," EXCEPT ON CONSIDERATION OF SPECIFIC CONDITIONS.
- "AS SHOWN" MEANS ACCURATELY LOCATE FINISH FACES OF MATERIALS IN THE SAME PLANE.
- "AS REQUIRED" MEANS AS REQUIRED BY REGULATORY REQUIREMENTS, BY REFERENCED STANDARDS, BY EXISTING CONDITIONS, BY GENERALLY ACCEPTED CONSTRUCTION PRACTICE, OR BY THE CONTRACT DOCUMENTS.
- "ALWAYS" MEANS ALWAYS ACCURATELY LOCATE FINISH FACES OF MATERIALS IN THE SAME PLANE.
- THE TERM "VERIFY" OR "CHECK" SHALL BE UNDERSTOOD TO MEAN "VERIFY IN FIELD WITH ENGINEER" AND RECEIVING DIRECTION.
- WHERE THE WORDS "TO EQUIP" OR "WITH" OR "WITHIN" OR "WITH" ARE USED IN THE CONTRACT DOCUMENTS, THEY SHALL BE UNDERSTOOD TO REQUIRE SHOWN APPROVAL OF ANY DEVIATION TO SAID SPECIFICATION PRIOR TO FURNISH AND INSTALL.
- ONLY OTHERS TO INSTALL- INSTALL ITEMS FURNISHED BY OTHERS. PROVIDE:

FIELD WELDING NOTES:

- WELDING TO BE PERFORMED BY THE CONTRACTOR, UNLESS THE TYPE OF WELD AND POSITION INDICATED. ALL WORK MUST BE IN CONFORMANCE WITH LATEST EDITION OF AWS D.1.1.
- GRIND SURFACES TO BE WELDED WITH A SILICON CARBIDE WHEEL PRIOR TO WELDING TO REMOVE ALL AFTER GRINDING.
- WELDING TECHNIQUE MUST MINIMIZE TEMPERATURE RISE ON THE INSIDE SURFACE OF THE POLE AND ALSO VOLTAGE. ANY REMAINING ZINC WITHIN THE BASE METAL WITH MANUFACTURER'S USE ALL ETC. (ADVANCED) STRICTLY FOLLOW ALL MANUFACTURER'S INSTRUCTIONS FOR STORAGE AND USE OF ELECTRODES, WOOD REMOVING ELECTRODES FROM MANUFACTURER'S PLACING UNTIL READY FOR IMMEDIATE USE.
- WELDING MAY PRODUCE TOXIC FUMES. REFER TO AWS STANDARD Z49.1 "SAFETY IN WELDING AND CUTTING"
- UPON COMPLETION OF WELDING, APPLY GALVANIZING TO ALL UNPROTECTED SURFACES. APPLY A SECOND LAYER OF COLD GALVANIZING SPRAY COMPOUND CONTAINING A MINIMUM ZINC CONTENT OF 80% IF NECESSARY. APPLY A FINAL COAT OF COMPATIBLE PAINT TO MATCH SURROUNDING SURFACES.

ANTENNA MOUNTING

- DESIGN AND CONSTRUCTION OF ANTENNA SUPPORTS SHALL CONFORM TO CURRENT ANSI/TIA-222 OR APPLICABLE LOCAL CODES.
- ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS NOTED OTHERWISE.
- "ZINC-COATING (HOT-DIP)" MEANS GALVANIZING HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP)" UNLESS NOTED OTHERWISE.
- DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED BY COLD GALVANIZING IN ACCORDANCE WITH ASTM A780, MANUFACTURER'S RECOMMENDATIONS.
- ALL ANTENNA MOUNTS SHALL BE IDENTIFIED WITH LOCK NUTS, DOUBLE NUTS AND SHALL BE TORQUED TO CONTRACTOR.
- CONTRACTOR SHALL INSTALL ANTENNA PER MANUFACTURER'S RECOMMENDATION FOR INSTALLATION AND GROUNDING.
- PRIOR TO SETTING ANTENNA MOUNTS AND DOWNLINES, ANTENNA CONTRACTOR SHALL CHECK THE ANTENNA MOUNTS AND DOWNLINES SHALL BE SET FROM THE NORTH AND BE ORIENTED WITHIN +/- 5 DEG AS DEFINED BY THE PER. ANTENNA DOWNLINES SHALL BE WITHIN +/- 0.5M AS DEFINED BY THE PER.

GENERAL NOTES AND LEGENDS

exinet mConnectivity
SYS TENS Everywhere

INTERNAL REVIEW

CONSTRUCTION SIGNATURE _____ DATE _____

RF SIGNATURE _____ DATE _____

REAL ESTATE SIGNATURE _____ DATE _____

BLACK & VEATCH

BLACK & VEATCH CORPORATION
2992 OAK ROAD
WALNUT CREEK, CA 94597

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PROJECT NO. DRAWN BY CHECKED BY

192417.0000	JAT	LW
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B	11/21/16	ISSUED FOR REVIEW
A	11/16/16	ISSUED FOR REVIEW

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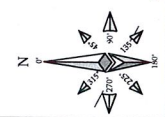
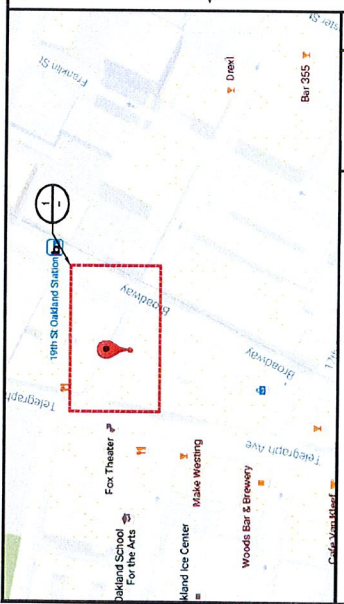
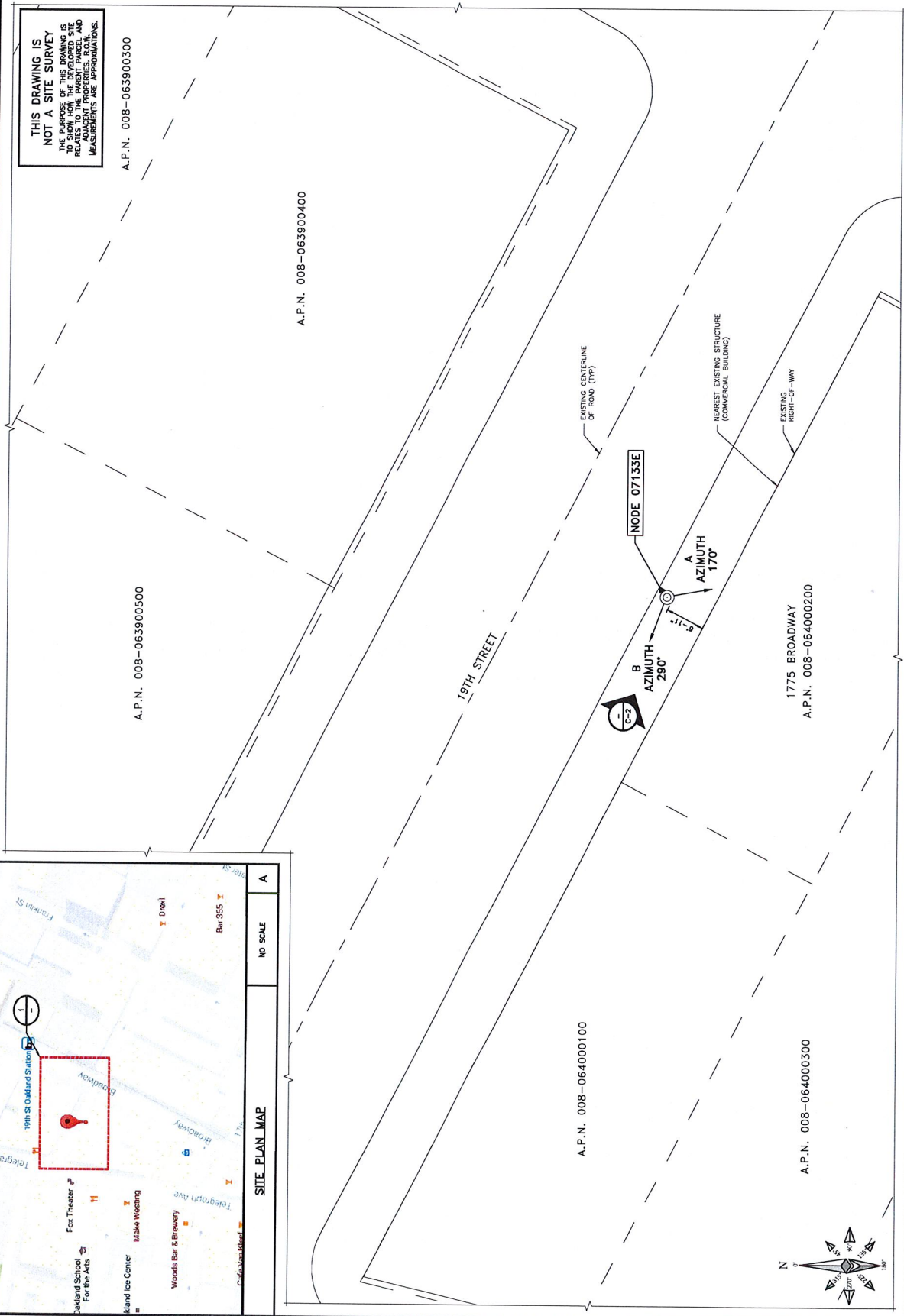
EXTENET SYSTEMS (CA) LLC
2000 CROW CANYON PLACE
SUITE 210
SAN RAMON, CA 94583

SITE ADDRESS
ADJACENT TO (IN PROW)
1775 BROADWAY
OAKLAND, CA 94612

SHEET TITLE
OVERALL SITE PLAN

SHEET NUMBER
C-1

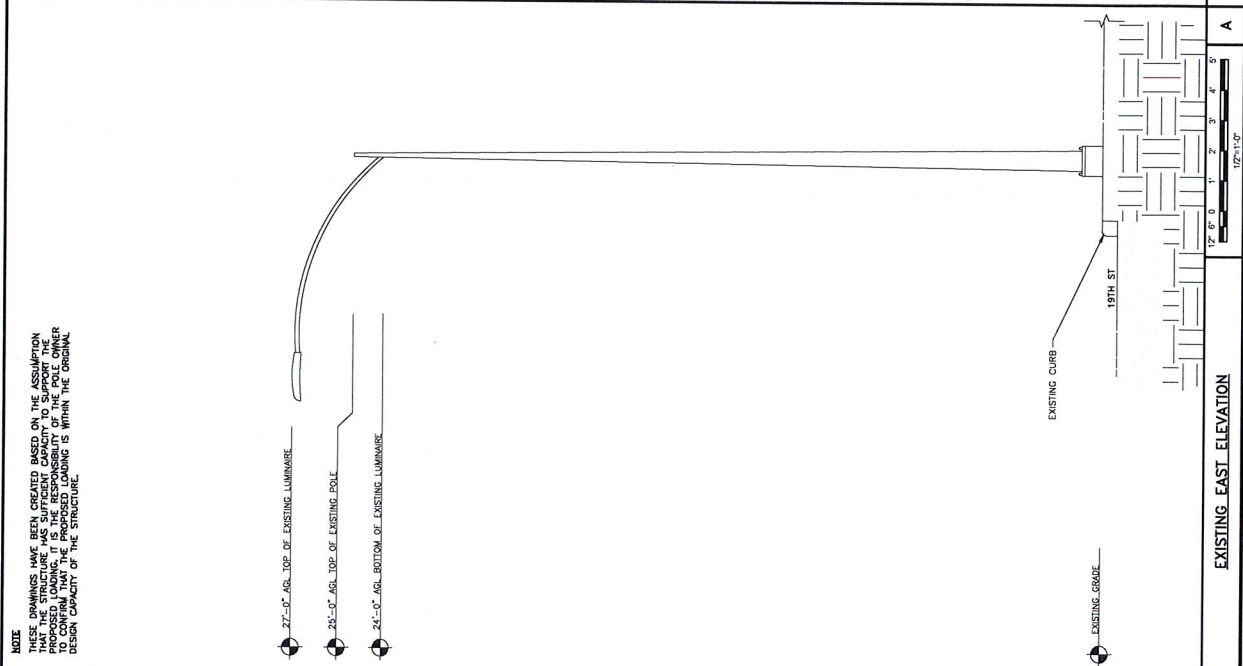
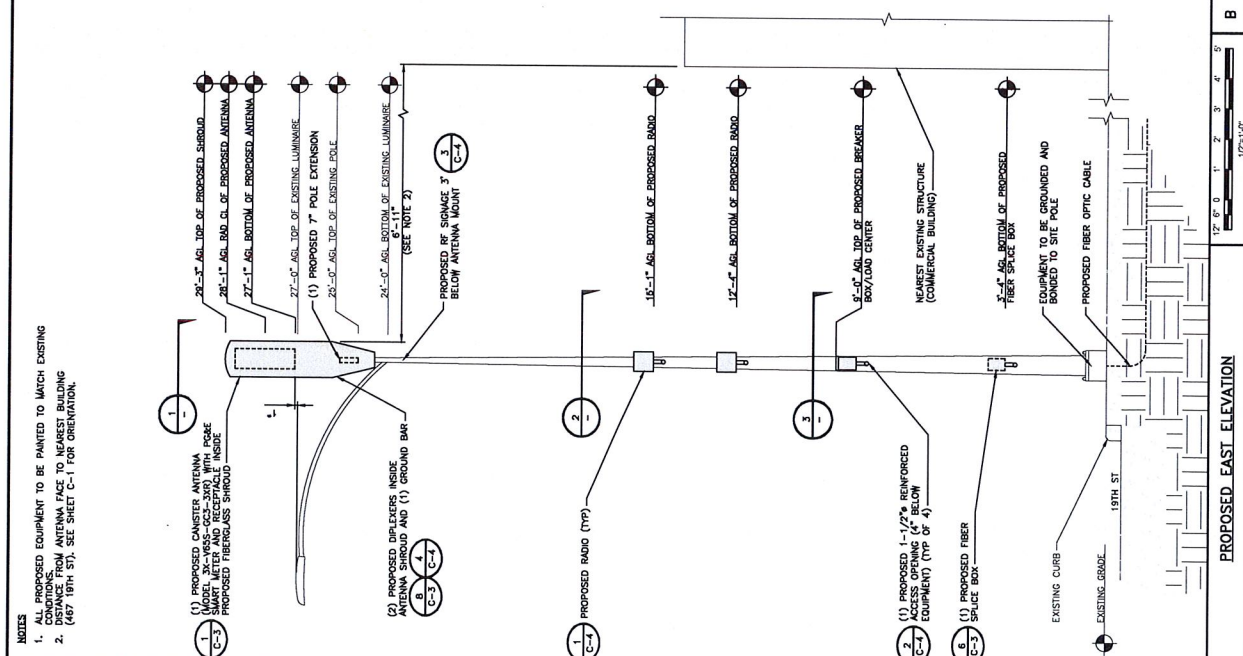
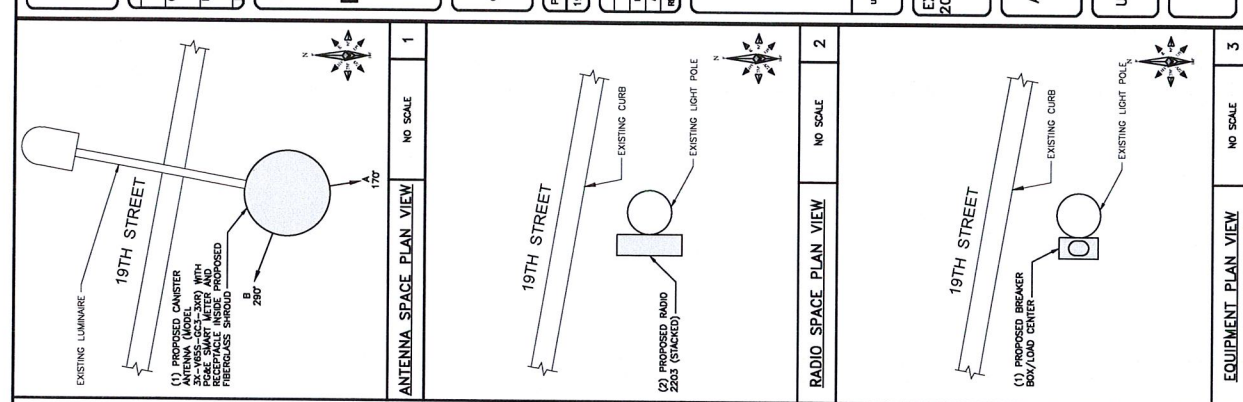
THIS DRAWING IS NOT A SITE SURVEY. THE PURPOSE OF THIS DRAWING IS TO SHOW HOW THE DEVELOPED SITE RELATES TO THE ADJACENT PROPERTIES. ALL MEASUREMENTS ARE APPROXIMATIONS.



OVERALL SITE PLAN

1

NOTE DRAWINGS WERE CREATED BASED ON THE ASSUMPTION THAT THE STRUCTURE WOULD BE USED FOR THE PROPOSED LOADING. IT IS THE RESPONSIBILITY OF THE POLE OWNER TO VERIFY THE STRUCTURE'S DESIGN CAPACITY WITHIN THE ORIGINAL DESIGN CAPACITY OF THE STRUCTURE.



INTERNAL REVIEW		CONSTRUCTION SIGNATURE _____ DATE _____	
RF SIGNATURE _____ DATE _____		LOCAL ESTIMATE SIGNATURE _____ DATE _____	

BLACK & VEATCH
 BLACK & VEATCH CORPORATION
 2995 OAK ROAD
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PROJECT NO.	DATE	JAT	LWF
192417.XXXXX			

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A	11/27/14	BASED ON REVISED

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 SUITE 210
 SAN RAMON, CA 94583

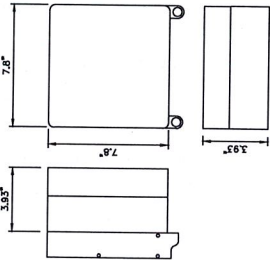
ADJACENT TO (IN PROW)
 1775 BROADWAY
 OAKLAND, CA 94612

SHEET TITLE
UTILITY POLE ELEVATIONS AND RISER DETAILS

SHEET NUMBER
C-2

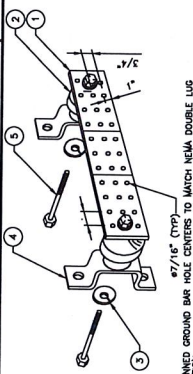
ERICSSON RADIO 2203

LENGTH: 7.8" (200MM)
 WIDTH: 7.8" (200MM)
 DEPTH: 3.93" (100MM)
 TOTAL WEIGHT (WITHOUT BRACKETS): <4.5 Kg



RADIO SPECIFICATION DETAIL

NO SCALE



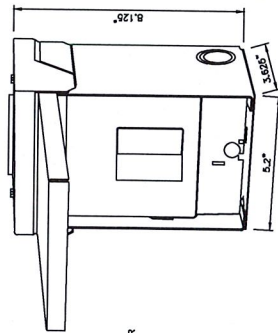
LEGEND
 1. GROUND BAR HOLE CENTERS TO MATCH NEMA DOUBLE LUG
 2. INSULATORS
 3. 5/8" LOCKWASHERS
 4. WALL MOUNTING BRACKETS
 5. 5/8"-11 X 1" H.A.C.S. BOLTS

GROUND BAR

NO SCALE

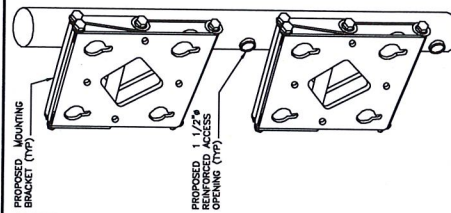
MURRAY_LW002GRU SPECIFICATION

DIMENSIONS
 DEPTH: 3.93"
 LOAD CENTER WIDTH: 8.125"
 LOAD CENTER HEIGHT: 1.52"
 MAX. WEIGHT: 1.52 LB
 MAX. CENTER TYPE: 80
 MAX. APPEARANCE: 1 PLUG IN
 NUMBER OF PHASES: 2
 NUMBER OF SPACES: 2 / 240
 INDOOR/OUTDOOR: OUTDOOR
 ELECTRICAL PRODUCT TYPE: LOAD CENTER



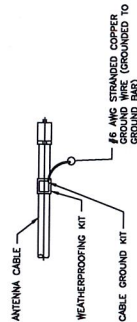
BREAKER BOX SPECIFICATION

NO SCALE



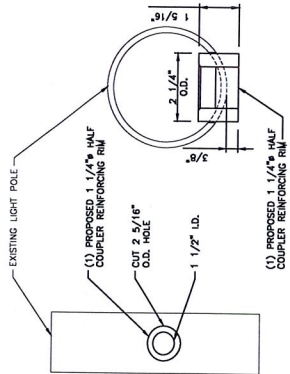
ANTENNA CABLE GROUND KIT

NO SCALE



VERTICAL ACCESS PORT DETAIL

NO SCALE



NOTICE

Beyond This Point you are entering a controlled area where RF emissions may exceed the FCC General Population Exposure Limits. Follow all posted signs and site guidelines for working in a RF environment.

CAUTION

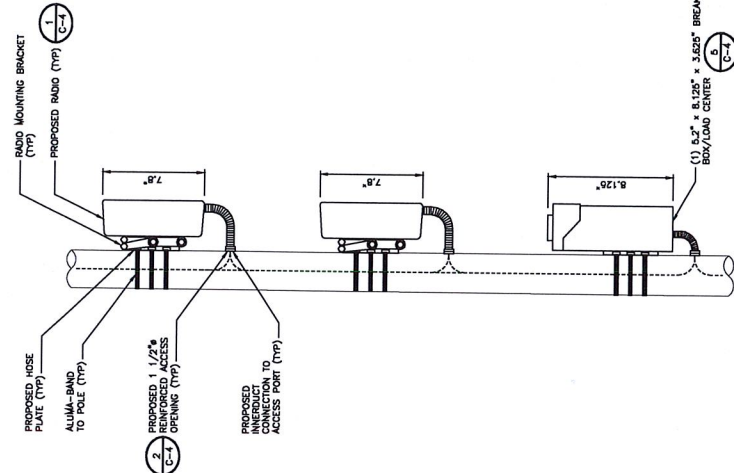
Beyond This Point you are entering a controlled area where RF emissions may exceed the FCC Occupational Exposure Limits. Obey all posted signs and site guidelines for working in a RF environment.

NOTE: SPECIFIC EME PLACARD WILL BE PLACED AFTER EME REPORT

RF SIGNAGE DETAIL

NO SCALE

3



EQUIPMENT PLACEMENT DETAIL

NO SCALE

B

INTERNAL REVIEW

CONSTRUCTION SIGNATURE _____ DATE _____

RF SIGNATURE _____ DATE _____

CLEAR ESTIMATE SIGNATURE _____ DATE _____

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PROJECT NO. DRAWN BY CHECKED BY

1924173200A	JAT	LW
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A	11/16/16	ISSUED FOR PERMIT
REV	DATE	DESCRIPTION

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 2000 CROW CANYON PLACE
 SUITE 210
 SAN RAMON, CA 94583

SITE ADDRESS
 ADJACENT TO (IN PROW)
 1775 BROADWAY
 OAKLAND, CA 94612

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
C-4

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192417-2000				
B	11/27/16	READY FOR REVIEW		
A	11/16/16	READY FOR REVIEW		
REV	DATE	DESCRIPTION		

PRELIMINARY

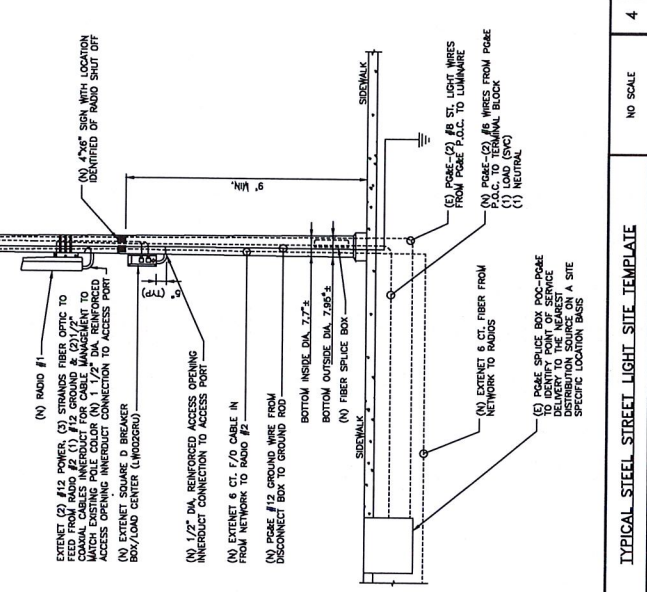
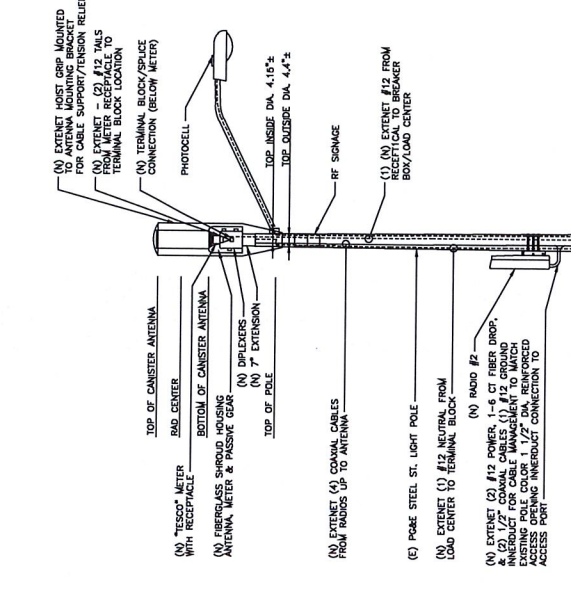
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2000 CROW CANYON PLACE
SUITE 210
SAN RAMON, CA 94583

SITE ADDRESS
ADJACENT TO (N, PROW)
1775 BROADWAY
OAKLAND, CA 94612

SHEET TITLE
CONCEPTUAL
WIRING DIAGRAMS

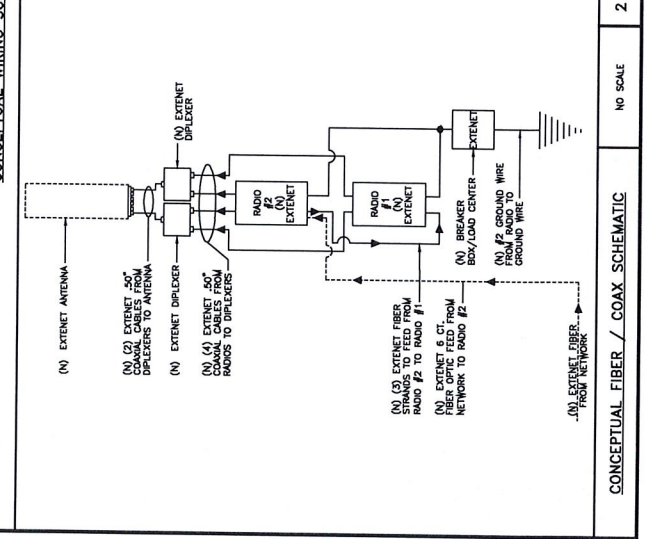
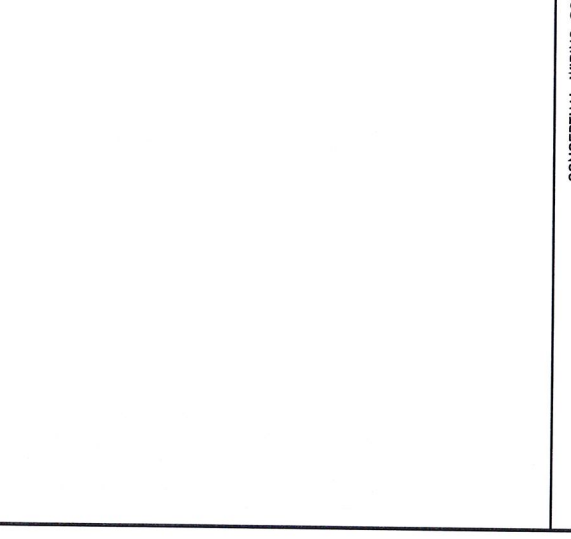
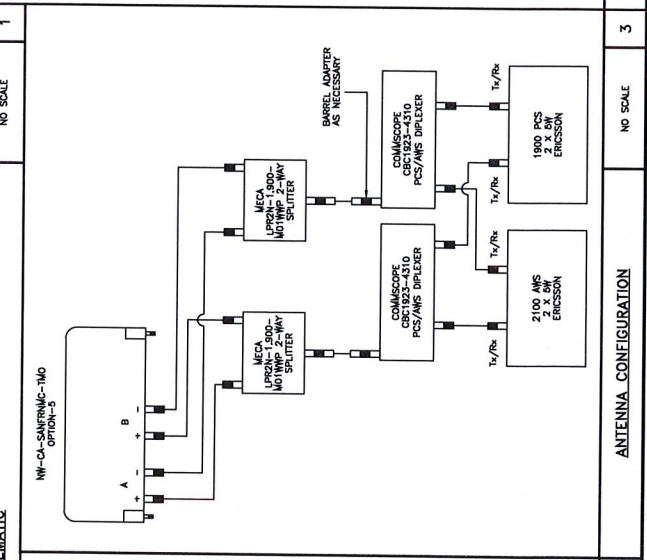
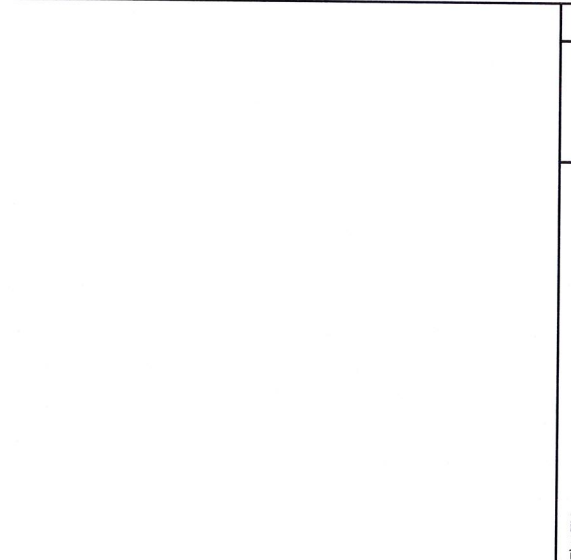
SHEET NUMBER
C-5



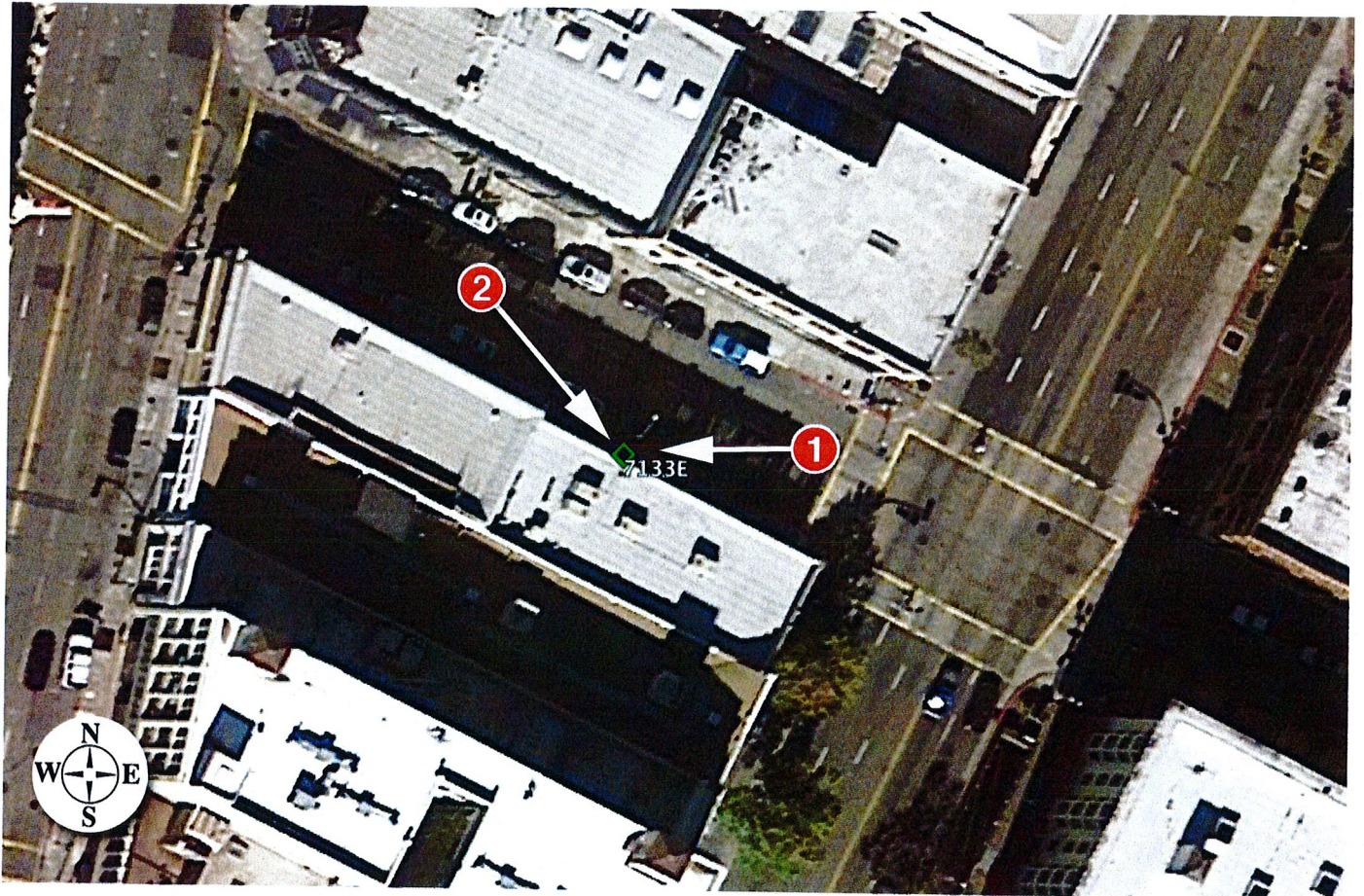
TYPICAL STEEL STREET LIGHT SITE TEMPLATE

NO SCALE

4



Attachment D





Existing



proposed antenna

Proposed



Existing



proposed antenna

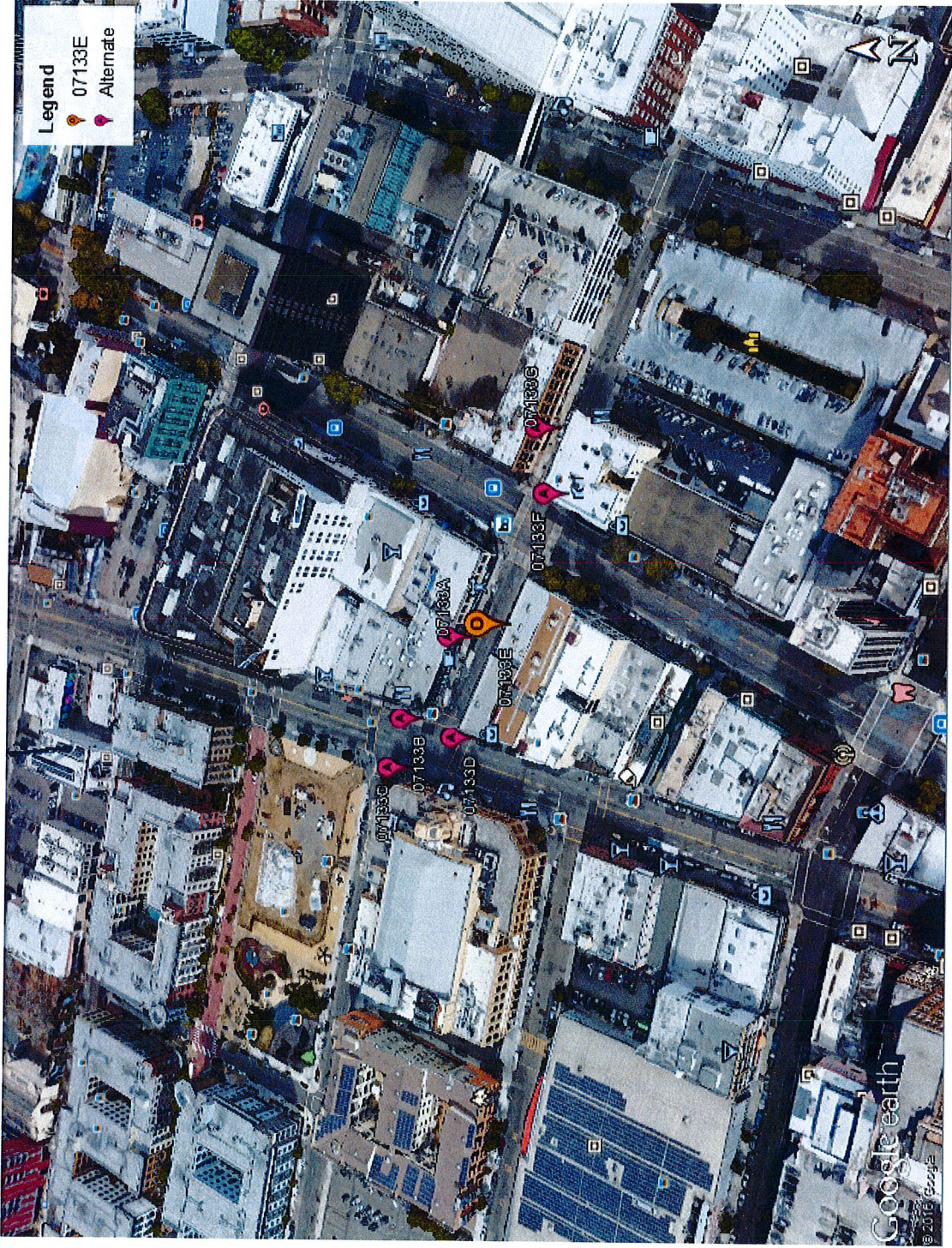
Proposed



EXTENET OAKLAND NODE 07133E ALTERNATIVE SITE ANALYSIS

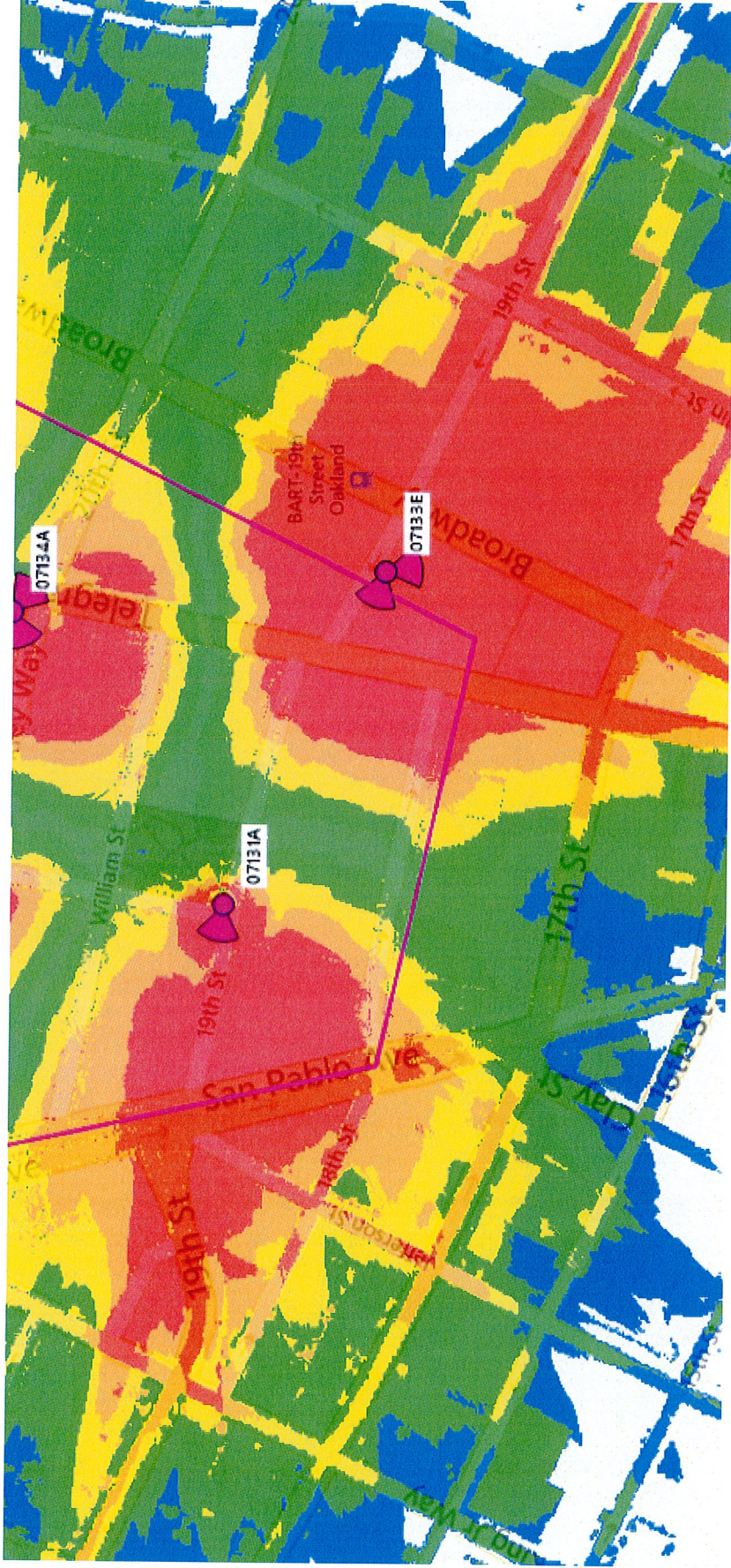
Attachment E

MAP OF ALTERNATIVE POLES EVALUATED FOR NODE 07133E



- The above maps depict ExteNet's proposed Node 07133E 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 6 alternative locations.

PROPAGATION MAP OF NODES 07133E



This propagation map depicts the ExteNet proposed Node 07133E in relation to surrounding proposed ExteNet small cell nodes.

07133E - PROPOSED LOCATION



- The location for ExteNet's proposed Node 07133E is a metal light pole located adjacent to PROW 1775 Broadway (37.807875,- 122.269424).
- 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 07133A

- Node 07133A is a metal light pole located in front of 468 19th Street (37.808028, - 122.269478).
- This pole is not a viable alternative candidate because this pole is located too close to primary Node 07131A.
- This pole is not a viable alternative candidate because this pole is in front of a historic building.



ALTERNATIVE NODE 07133B

- Node 07133B is a metal light pole located in front of 1916 Telegraph Avenue (37.808217, - 122.269823).
- This is pole is not a viable alternative because it has an existing traffic signal light.
- This pole is not a viable alternative candidate because this pole is located too close to primary Node 07131A.
- This pole is not a viable alternative candidate because this pole is in front of a historic building.



ALTERNATIVE NODE 07133C



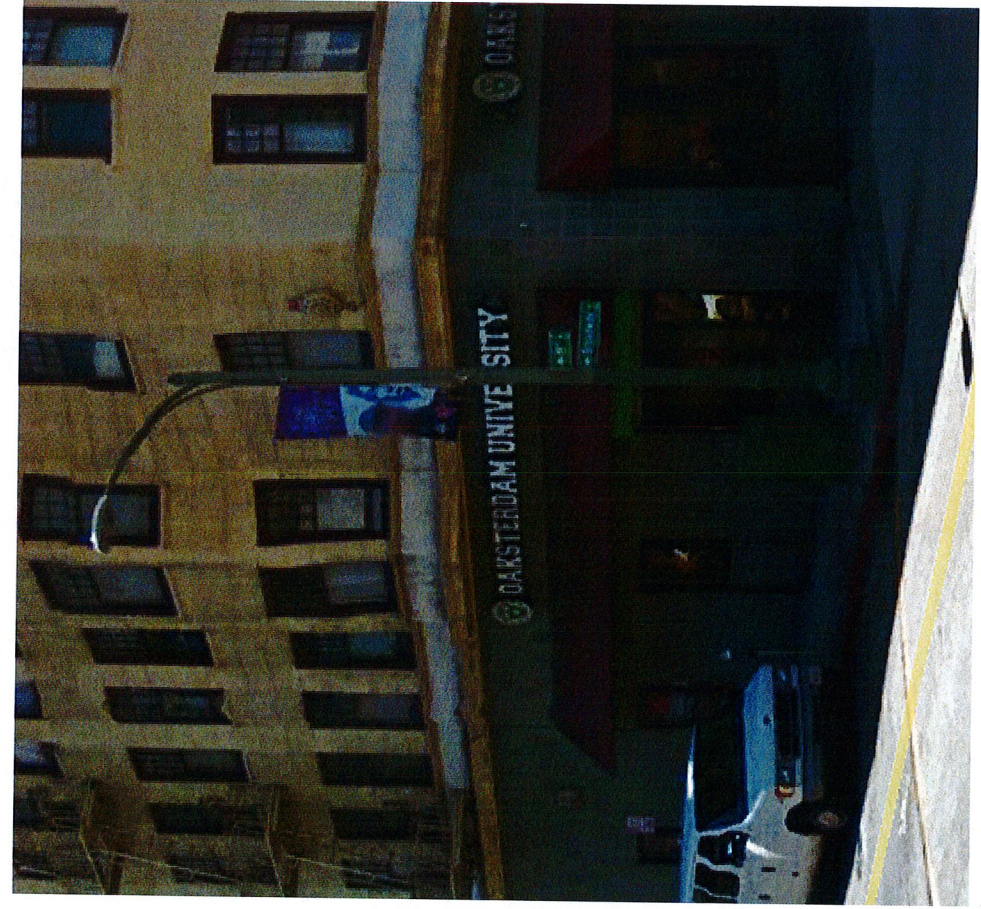
- Node 07133C is a metal light pole located at 531 19th Street (37.808268, -122.270031)
- This is pole is not a viable alternative because it has an existing traffic signal light.
- This pole is not a viable alternative candidate because this pole is located too close to primary Node 07131A.

ALTERNATIVE NODE 07133D



- Node 07133D is a metal light pole located near 1816 Telegraph Avenue (37.808007, - 122.269885).
- This is not a viable alternative because it has an existing traffic signal light.
- This is not a viable alternative candidate because this pole is located too close to primary Node 07131A.

ALTERNATIVE NODE 07133F



- Node 07133F is a metal light pole located at 1776 Broadway (37.807673, - 122.268920).
- This pole is not a viable alternative candidate because this pole is located too far from the primary Node 07131A.
- This pole is not a viable alternative because it is in front of windows.

ALTERNATIVE NODE 07133G



- Node 07133G is a metal light pole located at 440 19th Street (37.807703, - 122.268663).
- This pole is not a viable alternative candidate because this pole is located too far from the primary Node 07131A.
- This pole is not a viable alternative because it is in front of windows.

ALTERNATIVE SITE ANALYSIS CONCLUSION

Based on ExteNet's analysis of alternative sites, the currently proposed Node 07133E is the least intrusive location from which to fill the surrounding significant wireless coverage gaps.



SM
extenet
SYSTEMS

Thank You!

**ExteNet Systems CA, LLC • Proposed DAS Node (Site No. 07133E)
1775 Broadway • 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. 07133E 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 light pole sited in the public right-of-way at 1775 Broadway in Oakland. The proposed operation will comply with the FCC guidelines limiting public exposure to RF energy.

Prevailing Exposure Standards

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

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

General Facility Requirements

Wireless nodes typically consist of two distinct parts: the electronic transceivers (also called “radios” or “channels”) that are connected to a central “hub” (which in turn are connected to the traditional wired telephone lines), and the passive antenna(s) that send the wireless signals created by the radios out to be received by individual subscriber units. The radios are often located on the same pole as the antennas and are connected to the antennas by coaxial cables. 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



ExteNet Systems CA, LLC • Proposed DAS Node (Site No. 07133E)
1775 Broadway • Oakland, California

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 November 21, 2016, it is proposed to install one CommScope Model 3X-V65S-GC3-3XR, 2-foot tall, tri-directional cylindrical antenna, with two directions activated, on a light pole sited in the public right-of-way on 19th Street, adjacent to the building located at 1775 Broadway in Oakland. The antenna would employ no downtilt, would be mounted at an effective height of about 28 feet above ground, and its principal directions would be oriented toward 170°T and 290°T. T-Mobile proposes to operate from this facility with a maximum effective radiated power in any direction of 122 watts, representing simultaneous operation at 61 watts for AWS and 61 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 0.0012 mW/cm², which is 0.12% of the applicable public exposure limit. The maximum calculated level at the second-floor elevation of any nearby building is 0.48% 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.

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

**ExteNet Systems CA, LLC • Proposed DAS Node (Site No. 07133E)
1775 Broadway • Oakland, California**

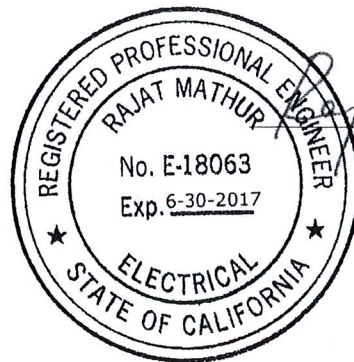
antenna, including employees and contractors of the utility companies. No access within 1 foot directly in front of the antenna itself, such as might occur during certain activities, should be allowed while the base station is in operation, unless other measures can be demonstrated to ensure that occupational 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 1775 Broadway in Oakland, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations. Training personnel and posting signs is recommended to establish compliance with occupational exposure limitations.

Authorship

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



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

December 8, 2016

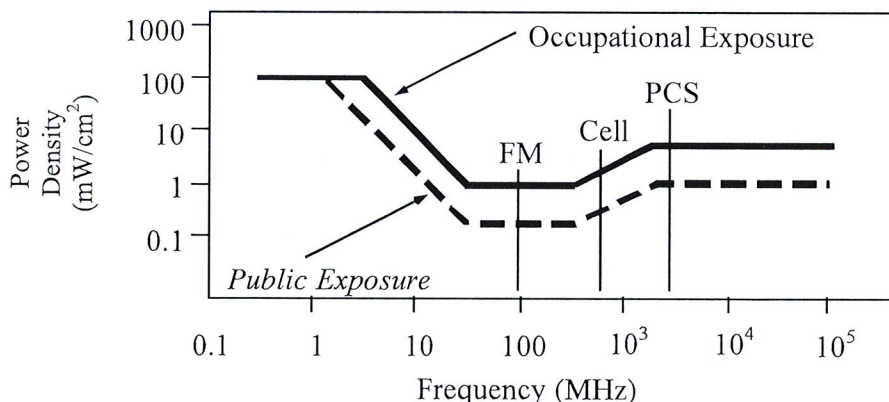
* Signs should comply with OET-65 color, symbol, and content recommendations. Contact information should be provided (e.g., a telephone number) to arrange for access to restricted areas. The selection of language(s) is not an engineering matter, and guidance from the landlord, local zoning or health authority, or appropriate professionals may be required.

FCC Radio Frequency Protection Guide

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

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

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



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



RFR.CALC™ Calculation Methodology

Assessment by Calculation of Compliance with FCC Exposure Guidelines

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

Near Field.

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

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

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

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

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

D = distance from antenna, in meters,

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

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

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

Far Field.

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

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.



NOTICE OAKLAND



CITY OF OAKLAND
BUREAU OF PLANNING
 250 Frank H. Ogawa Plaza, Suite 2114, Oakland, CA 94612-2011
 Phone: (510) 230-3911 | Fax: (510) 231-8736
PLANNING COMMISSION PUBLIC NOTICE

Location:	City Street light pole in public right-of-way (sidewalk) adjacent to 1723 Broadway
Assessor's Parcel Number(s):	Adjacent to 808-4740-812-00
Proposal:	To install a new "small cell site" telecommunications facility for T-Mobile on an existing 15' tall City street light pole located in the Public Right-of-Way (sidewalk). The project involves the installation of one (1) antenna panel measuring 23.5 inches long and 7.8 in diameter, located within a shield, at a height of 27'-1" and equipment at 5' to 15'-1" above ground level.
Applicant / Phone Number:	Ana Gomez/Black & Veitch & Estess (for T-Mobile) (913) 456-9141
Owner:	City of Oakland
Case File Number:	PLA16387
Planning Permits Required:	Major Conditional Use Permit with additional findings for Monopole Telecommunications Facility; Minor Variance for Monopole adjacent to Residential Use; Regular Design Review with additional findings for Monopole Telecommunications Facility
General Plan:	Central Business District
Zoning:	Central Business District Pedestrian Retail Commercial Zone (CBD-P)
Environmental Determination:	Exempt; Section 15101 of the State CEQA Guidelines: Existing Facilities; Exempt; Section 15102: Replacement or Reconstruction; Exempt; Section 15103: New Construction of Small Structures; Section 15183: Projects Consistent with a Community Plan, General Plan or Zoning
Historic Status:	API: Uptown Commercial; OCHS: Ex1
City Council District:	2
Date Filed:	November 17, 2016
Action to be Taken:	Decision based on staff report
Finality of Decision:	Applicable to City Council
For Further Information:	Contact Case Planner Marla Garcia at (510) 234-5117 or by email at mgarcia@oaklandnet.com

Your comments and questions, if any, should be directed to the Bureau of Planning, 250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, California 94612-2011 at or email to the public hearing to be held on **September 8, 2017**, at Oakland City Hall, Council Chambers, 1 Frank H. Ogawa Plaza, Oakland, California 94612. The public hearing will start at 6:00 p.m.

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

Please note that the description of the application found above is preliminary in nature and that the project and/or such description may change prior to a decision being made. Except where noted, once a decision is reached by the Planning Commission on these cases, they are applicable to the City Council. **See Oakland Municipal Code Ordinance 12.11.010, which states that the City Council shall have the authority to review the decision of the Planning Commission and to approve or disapprove the same.** An appeal shall be set on a date provided by the Bureau of Planning, and submitted to the Planning Commission at the address of the City of Oakland, 250 Frank H. Ogawa Plaza, Suite 2114, at the attention of the Case Planner. The appeal shall include written evidence and must include payment in accordance with the City of Oakland Charter for Schedule 1. Failure to file a timely appeal will preclude you from challenging the City's decision in court. The appeal shall also include any other written evidence and arguments and evidence previously entered into the record prior to or at the public hearing mentioned above. Failure to do so will preclude you from raising such issues during the appeal hearing and/or in court.

POSTING DATE: **ANIMAL 18, 2017**

IT IS UNLAWFUL TO ALTER OR REMOVE THIS NOTICE WHEN POSTED ON SITE

PLEASE CALL ZONING AT (510) 230-3911. FOR BLIGHT NOTICES, PLEASE CALL (510) 230-6403

ATTACHMENT G



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NOTICE
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August 24, 2017

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

Re: Public Outreach Summary

Applicant: ExteneNet Systems (California) LLC
Nearest Site Address: Public Right of Way near 1775 Broadway
Site ID: NW-CA-DTOAKLAN-TMO Node 07133E
Latitude/Longitude: 37.807875, -122.269424
Planning Application: PLN16-307

Dear City Planner,

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

- San Pablo Corridor Coalition
- West Oakland Green Initiative

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

Best Regards,

Ana Gomez/BV for ExteneNet

Ana Gomez
ExteneNet Permitting Contractor



ExteneNet is improving wireless service in Oakland!

July 4, 2017

ExteneNet 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 ExteneNet'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 ExteneNet facilities like the ones we will be proposing in Oakland.

Want to learn more?

Please visit <http://www.extenetsystems.com/> or email clindsay@extenetsystems.com.

