

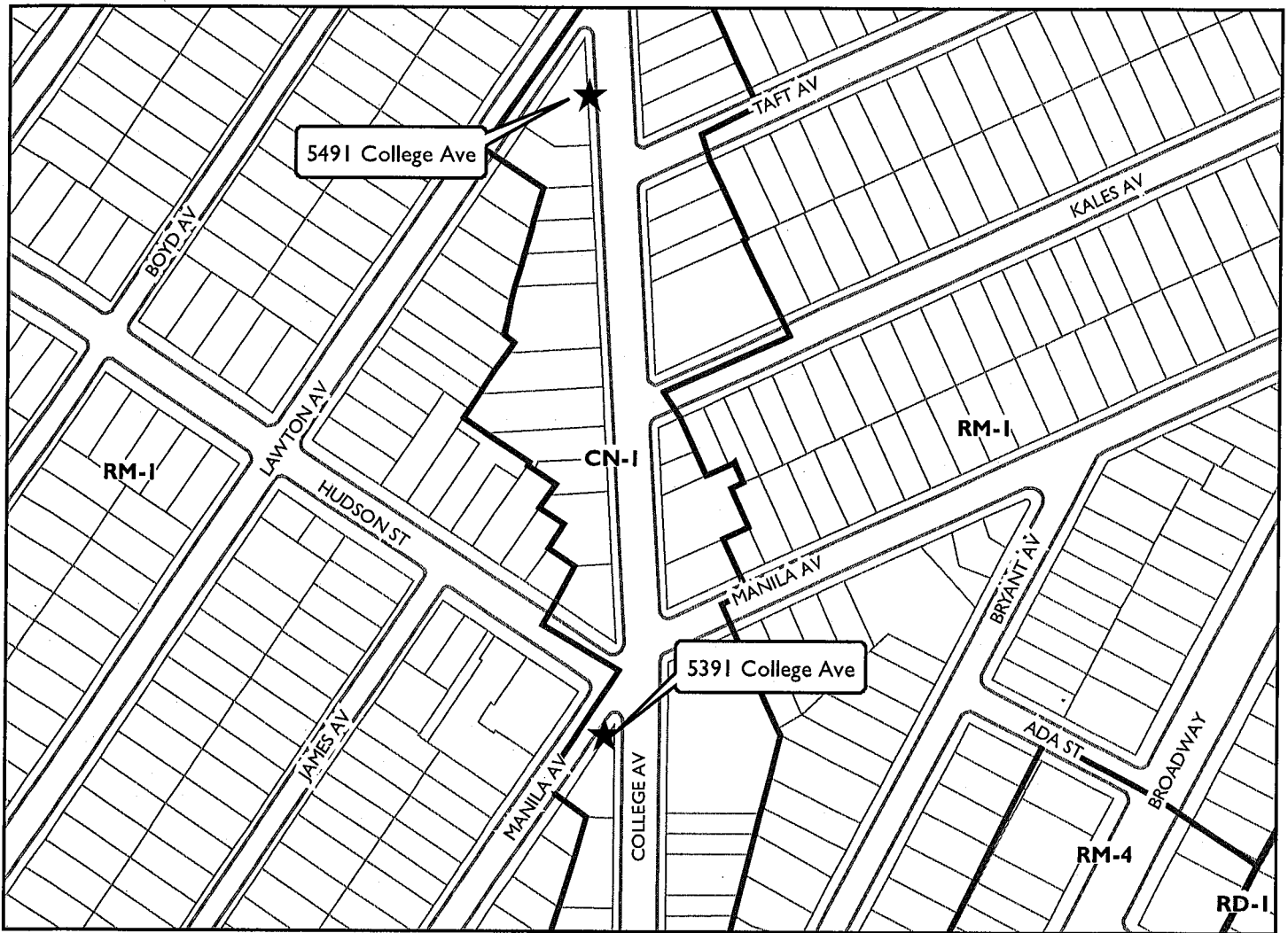
Location:	Utility City Light Pole in Public Right-of-Way: a. Near 5391 College Avenue; PLN18-463, APN: 014-1249-001-00. b. Near 5491 College Avenue; PLN18-464, APN: 014-1263-001-00.
Proposal:	To establish two (2) wireless "small cell site" telecommunication facilities on existing 25' tall City street light poles located in the public right-of-way. The project involves installation of one antenna measuring 23.5" long and 7.9" in diameter within an antenna shroud at a height of 28'-6", two radio units (7.8" tall, 7.8" wide and 3.93" deep) and a meter box located within shroud mounted at a height of 11'-4" and 17'-6" (PLN18-463), and 10' and 19'-0" (PLN18-464) above ground.
Applicant / Phone Number:	Vinculums Services/ Justin Giarritta (for: AT&T Wireless) (925) 482-8519
Owner:	City of Oakland
Case File Number:	PLN18-463 & PLN18-464
Planning Permits Required:	Major Conditional Use Permit and Regular Design Review to install a wireless Monopole Telecommunications Facility on existing City light poles located in the public right-of-way within 100' of the RM-1 Mixed Housing Type Residential - 1 Zone.
General Plan:	Neighborhood Center Mixed Use
Zoning:	CN-1 Neighborhood Commercial - 1 Zone.
Environmental Determination:	Exempt per Section 15301 of the State CEQA Guidelines, minor additions and alterations to existing city light poles; Section 15303, new construction or conversion of small structures; and Section 15183, projects consistent with a community plan, general plan or zoning.
Historic Status:	Non-historic property
City Council District:	1
Date Filed:	November 11, 2018
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 Jason Madani, Planner III at (510) 238-4790 or jmadani@oaklandca.gov

SUMMARY

The project applicant (Vinculums Services) is proposing to establish two (2) small cell wireless telecommunication facility sites for AT&T Wireless on existing City street light poles located in the public right-of-way near residential neighborhoods. The projects involve installation of one antenna measuring 23.5" long and 7.9" in diameter located within an antenna shroud at a height of 28'-6", two radio units (7.8" tall, 7.8" wide and 3.93" deep) and a meter box located within shroud mounted on the pole at a height of 11'-4" and 17'-6" (PLN18-463), and 10' and 19'-0" (PLN18-464) above ground.. The purpose of the installations is to enhance existing wireless services within this vicinity.

A Major Conditional Use Permit and Regular Design Review permit is required for the installation of a new Monopole Telecommunications Facility within or near a residential zone. The antenna shrouds and associated equipment will be painted green to match the City light poles. As result, the proposed telecommunication facilities are in an appropriate location and would not significantly increase negative

CITY OF OAKLAND PLANNING COMMISSION



0 125 250 500 750 1,000 Feet



Case File: PLN18463 & PLN18464
Applicant: Vinculums Services/Justin Giarritta (for AT&T Wireless)
Address: City street light poles in public right-of-way adjacent to:
a) 5391 College Ave
b) 5491 College Ave
Zone: CN-1

visual impacts to adjacent neighboring properties. The project meets all the required findings for approval of the project.

BACKGROUND

For several years in the City of Oakland, telecommunications carriers have proposed facility installations within the public right-of-way, instead of private property. These facilities typically consist of antennas and associated equipment attached to utility poles or street light poles. Poles are often replaced with replicas for technical purposes. The main purpose of the installation 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, with conditions of approval typically attached 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 flat land neighborhoods and urban/commercial corridor 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.

TELECOMMUNICATIONS BACKGROUND

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

Section 704 of the Telecommunications Act of 1996 (TCA) provides federal standards for the siting of "Personal Wireless Services Facilities." "Personal Wireless Services" include all commercial mobile services (including personal communications services (PCS), cellular radio mobile services, and paging); unlicensed wireless services; and common carrier wireless exchange access services. Under Section 704, local zoning authority over personal wireless services is preserved such that the FCC is prevented from preempting local land use decisions; however, local government zoning decisions are still restricted by several provisions of federal law. Specifically:

- Under Section 253 of the TCA, no state or local regulation or other legal requirement can prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service.
- Further, Section 704 of the TCA imposes limitations on what local and state governments can do. Section 704 prohibits any state and local government action which unreasonably discriminates

among personal wireless providers. Local governments must ensure that its wireless ordinance does not contain requirements in the form of regulatory terms or fees which may have the "effect" of prohibiting the placement, construction, or modification of personal wireless services.

- Section 704 also preempts any local zoning regulation purporting to regulate the placement, construction and modification of personal wireless service facilities on the basis, either directly or indirectly, on the environmental effects of radio frequency emissions (RF) of such facilities, which otherwise comply with Federal Communications Commission (FCC) standards in this regard. (See 47 U.S.C. Section 332(c)(7)(B)(iv) (1996)). This means that local authorities may not regulate the siting or construction of personal wireless facilities based on RF standards that are more stringent than those promulgated by the FCC.
- Section 704 mandates that local governments act upon personal wireless service facility siting applications to place, construct, or modify a facility within a reasonable time (See 47 U.S.C.332(c)(7)(B)(ii) and FCC Shot Clock ruling setting forth "reasonable time" standards for applications deemed complete).
- Section 704 also mandates that the FCC provide technical support to local governments in order to encourage them to make property, rights-of-way, and easements under their jurisdiction available for the placement of new spectrum-based telecommunications services. This proceeding is currently at the comment stage.

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

Competition & Infrastructure Policy Division (CIPD) of the Wireless Telecommunications Bureau, main division number: (202) 418-1310. <https://www.fcc.gov/general/competition-infrastructure-policy-division-wireless-telecommunications-bureau>

SITE DESCRIPTION

PLN18-463 near to 5391 College Avenue.

- The project site consists of an existing non-decorative City street light pole located in the sidewalk located at corner of College Avenue, Manila Avenue and Hudson Street, adjacent to a one-story commercial building (furniture store), the Oakland Public Library and other commercial buildings across street. The existing metal City light pole measures twenty-five (25') feet in height.

PLN18-464 near 5491 College Avenue.

- The project site consists of an existing non-decorative City street light pole located in the side walk at the corner of College Avenue and Lawton Avenue, adjacent to the parking lot of Eddie's Liquor Store, two-story mixed use buildings and other residential buildings across street. The existing metal City street-light pole measures twenty-five (25') feet in height.

PROJECT DESCRIPTION

As shown in Attachment C for PLN18-463, the project applicant proposes to:

Establish a Monopole Telecommunications Facility ("small cell site") on an existing street light pole located in the public right-of-way (Attachment C). The project involves installation of:

- One (1) antenna measuring 23.5" long and 7.9" in diameter located within shroud at a height of 28'-6",
- Two (2) radio units (7.8" tall, 7.8" wide and 3.93" deep) mounted at a height of 11'-4" and 17'-6" above ground, and

- A fiber splice box measuring 6 3/4" tall, 4 3/4" wide and 2 1/8" deep mounted on the pole at 11'-4" and in height.

As shown in Attachment C for PLN18-464, the project applicant proposes to:

Establish a Monopole Telecommunications Facility ("small cell site") on an existing, street light pole located in the public right-of-way (Attachment C). The project involves installation of:

- One (1) antenna measuring 23.5" long and 7.9" in diameter located within shroud at a height of 28'-6",
- Two (2) radio units (7.8" tall, 7.8" wide and 3.93" deep) mounted at a height of 19'-0" above ground, and
- A meter box measuring 6 3/4" tall, 4 3/4" wide and 2 1/8" deep mounted on the pole at 10' in height.

GENERAL PLAN ANALYSIS

The subject property is located within the Neighborhood Center Mixed Use land use classification per the Oakland General Plan's Land Use and Transportation Element (LUTE). The Neighborhood Center Mixed Use classification is intended to identify, create, maintain and enhance mixed use neighborhood commercial centers. These centers are typically characterized by smaller scale pedestrian-oriented, continuous street frontage with a mix of retail, housing, office, active open space, eating and drinking places, personal and business services, and smaller scale educational, or entertainment uses. The proposed antennas will be within an antenna shroud, mounted on top of the City light pole. The proposed antenna and related equipment is compatible with the typical utilities located on City light poles. As a result, the proposal is an appropriate location and would not significantly increase negative visual impacts to adjacent neighboring commercial or residential properties.

Given increasing reliance upon cellular service for phone and internet, the proposal for a Monopole Telecommunications Facility will not adversely affect and detract from the characteristics of the neighborhood. Staff therefore finds the proposal, as conditioned, to conform to the General Plan.

ZONING ANALYSIS

The subject properties are in CN-1 Zone. The intent of the CN-1 Zone is to maintain, and enhance vibrant commercial districts with a wide range of retail establishments serving both short and long term needs in attractive settings oriented to pedestrian comparison shopping.

Section 17.33.40 of the City of Oakland Planning Code requires a Conditional Use Permit to install a Monopole Telecommunication facility. Furthermore, pursuant to Section 17.134.020 (A) (3)(g), a Major Conditional Use Permit is required for any telecommunication facility in or within 100' of the boundary of any residential zone.

Monopole Telecommunications Facilities on City light poles require a Major Conditional Use Permit and a Regular Design Review permit with additional findings; these permits are decided by the Planning Commission for sites located within a residential zone or within 300' of residential zone. 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 analyzed 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 customers increasing reliance upon cellular service for phone and Wi-Fi and that the Monopole Telecommunications Facility is adjacent to the residential and commercial buildings, the proposal conforms to this intent of the zoning.

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' and, Section 15303 exempts projects involving 'Construction of Small Structures.' The proposal fits all of these descriptions. The project is also consistent with 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 use of an existing City street light pole that would remain available for future collocation purposes as practicable.

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 (meter switch box) would be closely mounted onto 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 light poles is located within a wide sidewalk adjacent to commercial, civic and residential buildings. and are located approximately 118' away from residential buildings.

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).

This requirement does not apply. The subject property is not located in any of the described zoning districts. Nonetheless, the facility would not exceed a height of 28'-6".

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 28'-6".

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 district. Nonetheless, the facility would not exceed the height of 28'-6".

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 project less 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 two (2) sites in each preference order exist, the two 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

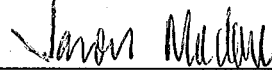
The proposed site design would not be situated on an historic or decorative pole or structure, would not create a view obstruction. Staff, therefore, finds the proposal to provide an essential service with a least-intrusive possible design. Draft conditions of approval stipulate that the components be painted and textured to match the metal pole in appearance for camouflaging.

CONCLUSION

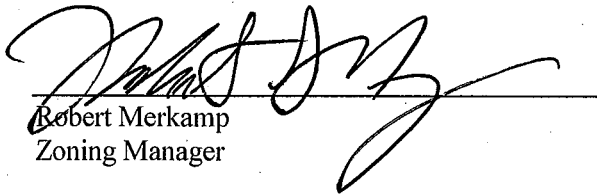
The proposed project meets all the required findings for approval. The proposal will provide an essential telecommunication service to the community and the City of Oakland at large. It will also be available to emergency services such as police, fire department and emergency response teams. Staff believes that the proposal is designed to meet the established zoning and telecommunication regulations and recommends supporting the Major Conditional Use Permit and Design Review application.

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

Prepared by:

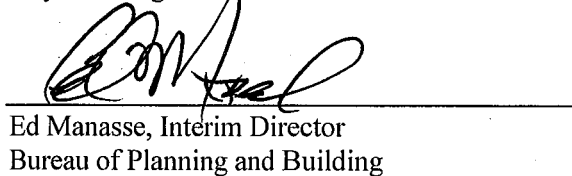


Jason Madani
Planner III



Robert Merkamp
Zoning Manager

Approved for forwarding to the
City Planning Commission:



Ed Manasse, Interim Director
Bureau of Planning and Building

ATTACHMENTS:

- A. Findings
- B. Conditions of Approval
- C. Plans
- D. Photo-simulations
- E. Site Design Alternatives Analysis
- F. RF Emissions Report
- G. CPUC Compliance Letter
- H. Proof of public notification posting
- I. Public comments received by date of packet preparation

ATTACHMENT A: FINDINGS

This proposal meets the required findings under General Use Permit Criteria (OMC Sec. 17.134.050), Conditional Use Permit Criteria for Monopole Facilities (OMC Sec. 17.136.040 (A)), Regular Design Review Criteria for Nonresidential Facilities (OMC Sec. 17.136.050(B)), Design Review Criteria for Monopole Telecommunications Facilities (OMC Sec. 17.128.070(B)), 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 SEC. 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 is to establish a Monopole Telecommunications Facility in CN-1 Neighborhood Mixed Use Zones by attaching an antenna and related equipment to an existing City light pole. Attachment to an existing structure with the smallest possible components, painted and texturized to match the light pole, will be the least intrusive design. The project will enhance existing service for merchants, shoppers, residents, and visitors in the area.

B. 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.

Attachment of a telecommunication facility to an existing City light pole structure with the smallest possible components, painted and texturized, to match the pole will be the least intrusive design.

C. 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 project will enhance existing service for merchants, shoppers, residents, and visitors in the area.

D. 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 below.

E. 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 subject property is located within the Neighborhood Center Mixed Use land use classification per the Oakland General Plan's Land Use and Transportation Element (LUTE). The Neighborhood Center Mixed Use classification is intended to identify, create, maintain and enhance mixed use neighborhood commercial centers. These centers are typically characterized by smaller scale pedestrian-oriented, continuous street frontage with a mix of retail, housing, office, active open space, eating and drinking places, personal and business services, and smaller scale educational, or entertainment uses. The proposed antennas will be within a shroud, mounted on top of the City light utility pole. The proposed antenna and related equipment is compatible with the typical utilities located on City light poles. As a result, the proposal is an appropriate location and would not significantly increase negative visual impacts to adjacent neighboring commercial or residential properties.

Given increasing reliance upon cellular service for phone and internet, the proposal for a Monopole Telecommunications Facility will not adversely affect and detract from the characteristics of the neighborhood. Staff therefore finds the proposal, as conditioned, to conform to the General Plan.

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.

CONDITIONAL USE PERMIT CRITERIA FOR MONOPOLE FACILITIES (OMC SEC. 17.128.070(C))

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

The proposal conforms to the Design Review findings below.

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.

Use of this existing pole precludes the placement of a new pole with the facility viewable from the residential and commercial buildings, and is therefore, "visually preferable."

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

Attachment to an existing structure with the smallest possible components, painted and texturized, to match the pole will be the least intrusive design. The project will enhance existing service for merchants, shoppers, residents, and visitors in the area.

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.

a. If there is any objection to the appointment of an independent expert engineer, the applicant must notify the Planning Director within ten (10) days of the Commission request. The Commission will hear arguments regarding the need for the independent expert and the applicant's objection to having one appointed. The Commission will rule as to whether an independent expert should be appointed.

b. Should the Commission appoint an independent expert, the Commission will direct the Planning Director to pick an expert from a panel of licensed engineers, a list of which will be compiled, updated and maintained by the Planning Department.

c. No expert on the panel will be allowed to review any materials or investigate any application without first signing an agreement under penalty of perjury that the expert will keep confidential any and all information learned during the investigation of the application. No personnel currently employed by a telecommunication company are eligible for inclusion on the list.

d. An applicant may elect to keep confidential any proprietary information during the expert's investigation. However, if an applicant does so elect to keep confidential various items of proprietary information, that applicant may not introduce the confidential proprietary information for the first time before the Commission in support of the application.

e. The Commission shall require that the independent expert prepare the report in a timely fashion so that it will be available to the public prior to any public hearing on the application.

f. Should the Commission appoint an independent expert, the expert's fees will be paid by the applicant through the application fee, imposed by the City.

A Major Conditional Use Permit is required and the Planning Director or Planning Commission may, therefore, require independent expert review in addition to that which is attached to this report.

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:

Attachment to an existing structure with the smallest possible components, painted and texturized, to match the pole will be the least intrusive design. The proposed telecommunication facility, located on the City street light, provides enough separation from the residential and commercial buildings; therefore, the proposal will not have a significant view impact to the adjacent neighboring properties in this area.

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

The proposed telecommunication, located on the City street light, provides enough separation from both commercial and the residential buildings will not be located on an historic or decorative structure; therefore, the proposal will not significant view impact to the adjacent neighboring properties in this area.

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.

See above E findings.

DESIGN REVIEW CRITERIA FOR MONOPOLE TELECOMMUNICATIONS FACILITIES (OMC SEC. 17.128.070(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 on existing infrastructure where it will not create clutter or negatively affect specific views. The view of the City street light from the adjacent retail parking lot, commercial and residential buildings

will be minimal.

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

The Monopole Facility will be camouflaged and texturized to match the appearance of the existing light pole that will host it.

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 on an existing non-decorative City light pole. This enables the preservation of character in the area. The facility will not pose a negative visual impact as the proposal will be camouflaged to match the pole. There is no adjacent vegetation or topography.

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 measure approximately 10' in height.

Attachment B: Conditions of Approval

1. 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 **October 2nd, 2017** and submitted **November 11, 2018**, 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 and equipment shall be painted, texturized, and maintained the same color and finish of the City light pole.

When Required: Prior to a final inspection

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

16. Operational Noise

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. 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:

a. 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

Applicant Statement

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

Name of Project Applicant

Signature of Project Applicant

Date

PROJECT TEAM

APPLICANT:

AT&T
5001 Executive Parkway
San Ramon, Ca 94583

ARCHITECT/ENGINEER:

Rodney Barnes
Meridian Management LLC
785 Oak Grove Road E2
Suite 251
Concord, CA 94518
T 707.592.5924
rodney@meridian.management

LEASING CONTACT:

Matt Yergovich
Vinculums Services
575 Lennon Lane
Suite 125
Walnut Creek, CA 94598
T 415.596.3474
myergo@gmail.com

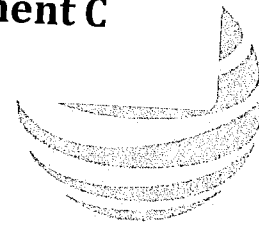
CONSTRUCTION MANAGER:

Vinculums Services
575 Lennon Lane
Suite 125
Walnut Creek, CA 94598

ZONING CONTACT

Matt Yergovich
Vinculums Services
575 Lennon Lane
Suite 125
Walnut Creek, CA 94598
T 415.596.3474
myergo@gmail.com

Attachment C



AT&T

5001 EXECUTIVE PARKWAY, SAN RAMON, CA 94583

CRAN-RSFR-SFOK7-015

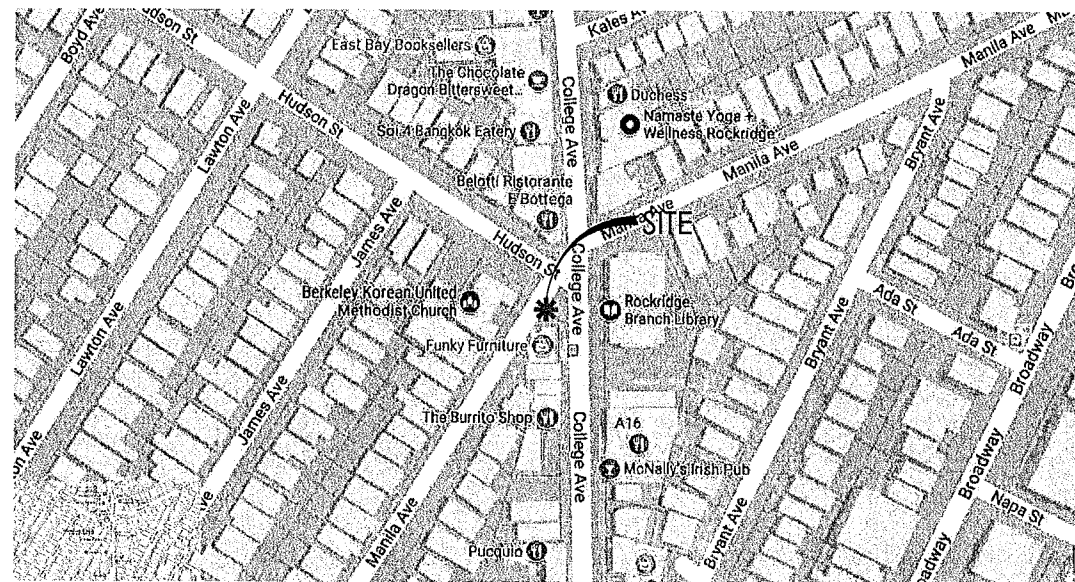
PACE ID:

ROW AT 5391 COLLEGE AVE, OAKLAND, CA 94618

COUNTY: ALAMEDA

SITE TYPE: METAL STREET LIGHT POLE

FA:14394424 HUB:20 USID:192914



GENERAL NOTES

- THIS IS AN UNMANNED TELECOMMUNICATIONS FACILITY FOR THE AT&T WIRELESS NETWORK CONSISTING OF THE INSTALLATION AND OPERATION OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON AN EXISTING METAL LIGHT POLE IN THE PUBLIC RIGHT-OF-WAY. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.
- A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT DRAINAGE, NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.
- CHANGES FROM THE APPROVED PLANS DURING THE COURSE OF CONSTRUCTION SHALL CAUSE CONSTRUCTION TO BE SUSPENDED UNTIL SUCH TIME AS THE PLANS CAN BE AMENDED BY THE DESIGNER AND SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL

CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUCTED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

- CALIFORNIA CODES
- 2016 CALIFORNIA BUILDING CODE
- 2016 CALIFORNIA MECHANICAL CODE
- 2016 CALIFORNIA PLUMBING CODE
- 2016 CALIFORNIA ELECTRIC CODE
- 2016 GREEN BUILDING CODE
- 2016 EDITION OF TITLE 24 ENERGY STANDARDS
- ANY LOCAL BUILDING CODE AMENDMENTS TO THE ABOVE
- CITY / COUNTY ORDINANCES
- CITY OF OAKLAND PUBLIC WORKS DEPARTMENT
- GENERAL ORDER 95 (JUNE 2009 EDITION)

SITE IMAGE



DRIVING DIRECTIONS

FROM AT&T WIRELESS OFFICE AT 5001 EXECUTIVE PARKWAY, SAN RAMON, CA

- Head north-east on Bishop Dr towards Sunset Dr
- Turn right onto Sunset Dr
- Use the right 2 lanes to turn right onto Bollinger Canyon Rd
- Use the right 2 lanes to merge onto I-680 N via the slip road to Sacramento
- Merge onto I-680 N
- Use the right 2 lanes to take exit 46A for State Route 24 towards Oakland/Lafayette
- Continue onto CA-24 W
- Keep left at the fork to stay on CA-24 W
- Take exit 4B to merge onto Broadway
- Merge onto Broadway
- Turn right onto Manila Ave

INDEX

T.1	TITLE SHEET
T.2	GENERAL NOTES, LEGEND, ABBREVIATIONS
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A.3	ELEVATIONS
A.4	ELEVATIONS
A.5	EQUIPMENT DETAILS
A.6	EQUIPMENT DETAILS

DRAWING SIGN-OFF



SITE ACQUISITION: _____ Signature _____ Date _____

PLANNING: _____ Signature _____ Date _____

CONSTRUCTION: _____ Signature _____ Date _____

MANAGEMENT: _____ Signature _____ Date _____



CONSTRUCTION: _____ Signature _____ Date _____

REAL ESTATE: _____ Signature _____ Date _____

RF ENGINEER: _____ Signature _____ Date _____

EQUIPMENT ENGINEER: _____ Signature _____ Date _____

MW ENG/TRANSPORT: _____ Signature _____ Date _____

OWNER: _____ Signature _____ Date _____

PROJECT DESCRIPTION

THIS IS AN UNMANNED TELECOMMUNICATIONS FACILITY FOR THE AT&T WIRELESS NETWORK CONSISTING OF THE INSTALLATION AND OPERATION OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON AN EXISTING METAL LIGHT POLE IN THE PUBLIC RIGHT-OF-WAY.

SCOPE OF WORK & SITE COMPLETION CHECKLIST:

- ANTENNA & ASSOCIATED EQUIPMENT BOXES: INSTALL A NEW TELECOMMUNICATION ANTENNA AND 2 EQUIPMENT BOXES ON AN EXISTING METAL LIGHT POLE
- DURABLE PAINT: ANTENNAS, MOUNTING BRACKETS, CABLING, AND RADIO RELAY UNITS TO BE PAINTED TO MATCH THE EXISTING POLE USING A DURABLE PAINT (E.G. SHERWIN WILLIAMS, FRAZEE, KELLY MOORE, OR EQUIVALENT)
- CABLING: CABLING TO BE INSTALLED IN A TIDY MANNER WITHOUT EXCESS CABLE LOOPS
- LOGO REMOVAL: ALL EQUIPMENT LOGOS, OTHER THAN THOSE REQUIRED BY REGULATION (E.G. NODE IDENTIFICATION), SHALL BE PAINTED OVER OR REMOVED, RAISED/DEPRESSED TEXT ON RRUS OR OTHER EQUIPMENT, IF PRESENT, TO BE SANDED OFF OR SIMILARLY REMOVED AND/OR FILLED
- SIGNAGE: FCC MANDATED RF WARNING SIGNAGE SHALL FACE CLIMBING SPACE. OPTIONAL SIGNAGE SHALL FACE OUT TO STREET WHEN PLACED IN FRONT OF OR NEAR A WINDOW. SIGNAGE SHALL FACE TOWARD BUILDING IF THERE IS NO WINDOW.
- UTILITY LINES: PROPOSED UTILITY LINES BETWEEN EXISTING POINT OF CONNECTION TO BE IN CONDUIT INSIDE POLE

SITE INFORMATION

OWNER: CITY OF OAKLAND
 APPLICANT: AT&T
 5001 EXECUTIVE PARKWAY
 SAN RAMON, CA 94583
 LATITUDE: 37.8399020 (NAD 83)
 LONGITUDE: -122.2515080 (NAD 83)
 GROUND ELEVATION: 143' AMSL
 ADJACENT APN#: (IFO) 14-1249-1
 ZONING JURISDICTION: CITY OF OAKLAND
 CURRENT ZONING: PUBLIC ROW
 PROPOSED USE: UNMANNED TELECOMMUNICATIONS FACILITY

DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS & FIELD 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



AT&T Wireless
5001 Executive Parkway
San Ramon, CA 94583

Client: _____



Project Architect: _____



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

Site Agent: _____

90% Zoning Drawings

Drawing Phase: _____

CRAN-RSFR-SFOK7-015

PACE ID:
ROW AT 5391 COLLEGE AVE,
OAKLAND, CA 94618
COUNTY: ALAMEDA

Site Name: _____

Professional Seal: _____

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

Rev.	Date	Description
01	09/22/17	Zoning Dwg 90%
02	10/02/17	Zoning Dwg 95%

Project No.: _____

Date: 09/22/17 Job No.: _____

Scale: AS SHOWN CAD File: _____

Designed By: JG Checked: RB

TITLE SHEET

Sheet Title: _____

T.1

Sheet No.: _____

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GENERAL CONSTRUCTION NOTES

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

GENERAL NOTES FOR EXISTING CELL SITES

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

APPLICABLE CODES, REGULATIONS AND STANDARDS:

- SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION.
- THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
- SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:
- AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION
- TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-F, STRUCTURAL STANDARD FOR STRUCTURAL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES
- INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRICAL EQUIPMENT
- IEEE C62.41, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND "HIGH SYSTEM EXPOSURE")
- TIA 607 COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS TELCORDIA GR-43 NETWORK EQUIPMENT-BUILDING SYSTEM (NEBS); PHYSICAL PROTECTION TELCORDIA GR-347 CENTRAL OFFICE POWER WIRING TELCORDIA GR-1275 GENERAL INSTALLATION REQUIREMENTS TELCORDIA GR-1503 COAXIAL CABLE CONNECTIONS
- ANY AND ALL OTHER LOCAL & STATE LAWS AND REGULATIONS
- FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

GENERAL TRENCHING NOTES

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

GENERAL GROUNDING NOTES

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

GENERAL CONDUIT NOTES

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

TYPICAL R.O.W. POLE CONSTRUCTION NOTES

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

GENERAL NOTES

	PROPOSED ANTENNA		GROUT OR PLASTER
	EXISTING ANTENNA		(E) BRICK
	GROUND ROD		(E) MASONRY
	GROUND BUS BAR		CONCRETE
	MECHANICAL GRND. CONN.		EARTH
	GROUND ACCESS WELL		GRAVEL
	ELECTRIC BOX		PLYWOOD
	TELEPHONE BOX		SAND
	LIGHT POLE		WOOD CONT.
	SPOT ELEVATION		WOOD BLOCKING
	SET POINT		STEEL
	REVISION		CENTERLINE
	GRID REFERENCE		PROPERTY/LEASE LINE
	DETAIL REFERENCE		MATCH LINE
	ELEVATION REFERENCE		WORK POINT
	SECTION REFERENCE		GROUND CONDUCTOR
			COAXIAL CABLE
			OVERHEAD SERVICE CONDUCTORS
			CHAIN LINK FENCING
			OVERHEAD ELEPHONE/OVERHEAD POWER
			OVERHEAD TELEPHONE LINE
			OVERHEAD POWER LINE
			POWER RUN

	TELCO RUN		5/8" x 10"-0" .CU. GND ROD IN TEST WELL 30" MIN. BELOW GRADE.
	POWER/TELCO RUN		CHEMICAL GROUND ROD (M) GROUND ROD
	GROUNDING CONDUCTOR		CADWELD CONNECTION
	GROUNDING CONDUCTOR		MECHANICAL CONNECTION
	CONDUIT UNDERGROUND		HALO GROUND CONNECTION
	FUSE, SIZE AND TYPE AS INDICATED.		CIRCUIT BREAKER
	SAFETY SWITCH, 2P-240V-60A W/60A FUSES, NEMA 3R ENCLOSURE, SQ D CATALOG NO. H222NR8		UTILITY METER BASE
	MANUAL TRANSFER SWITCH, 2P-240V-200A, NO FUSE, NEMA 3R ENCLOSURE		TRANSFORMER
	LIGHTING FIXTURE, FLUORESCENT, 10.94" x 4"-0", 2/0W, SURFACE MOUNTING TYPE, HUBBELL LIGHTING CATALOG #WSW232T		STEPDOWN TRANSFORMER
	LIGHTING FIXTURE, FLUORESCENT, 10.94" x 8"-0", 2/0W, SURFACE MOUNTING TYPE, HUBBELL LIGHTING CATALOG #TWSM232T		RECEPTACLE, 2P-3W-125V-15A, DUPLEX, GROUND TYPE, HUBBELL CATALOG #5362
	LIGHTING FIXTURE, HIGH PRESSURE SODIUM, 1/70W, WALL MOUNTING TYPE, HUBBELL LIGHTING CATALOG #NRG-307 OR 1/50W, HUBBELL LIGHTING CATALOG #NRG-121		TOGGLE SWITCH, 1P-125V-15A, HUBBELL CATALOG #HBL 1201CN
	EXIT SIGN, THERMOPLASTIC LED, SINGLE FACE, UNIVERSAL MOUNTING, W/BATTERY PACK, HUBBELL LIGHTING CATALOG #PRB		TOGGLE SWITCH, 1P-120V-15A, \"WP\"
	COMBINATION, EXIT SIGN & EMERGENCY LIGHTING, HUBBELL LIGHTING CATALOG #PRC		IONIZATION SMOKE DETECTOR W/ALARM HORN & AUXILIARY CONTACT, 120 VAC, GENIEX PART NO. 7100F
	EMERGENCY LIGHTING, 2/50W, HUBBELL LIGHTING CATALOG #HE6-50-2-R91		POLE
	LIGHTING FIXTURE, INCANDESCENT, 1/100W, WALL MOUNTING TYPE, HUBBELL LIGHTING CATALOG #BRH-100-06-1		PROPOSED POLE MOUNTED XFMR
	LIGHTING FIXTURE, HALOGEN, QUARTZ, 1/300W, HUBBELL LIGHTING CATALOG #QL-505		(E) POLE MOUNTED XFMR
	LIGHTING FIXTURE, 1/175W, METAL HALIDE, HUBBELL CAT #MIC-0175H-336		PROPOSED PAD MOUNTED XFMR
	5/8" x 10"-0" .CU. GND ROD 30" MIN. BELOW GRADE.		(E) PAD MOUNTED XFMR

A	AMPERE	HT.	HEIGHT
A.B.	ANCHOR BOLT	ICGB.	ISOLATED COPPER GROUND BUS
ABV.	ABOVE	IN (F)	INCHES
ACCA	ANTENNA CABLE COVER ASSEMBLY	INT.	INTERIOR
ADDL.	ADDITIONAL	LB (#)	POUNDS
A.F.F.	ABOVE FINISHED FLOOR	LB (F)	LINEAR FEET (FOOT)
A.F.G.	ABOVE FINISHED GRADE	L.F.	LENGTH
AIC	AMPERE INTERRUPTING CAPACITY	L.	LENGTH (DIMENSIONAL)
ALUM.	ALUMINUM	L.P.S.	LOW PRESSURE SODIUM
ALT.	ALTERNATE	M.A.S.	MASONRY
ANIT.	ANTENNA	MAX.	MAXIMUM
APPROX.	APPROXIMATELY	M.B.	MACHINE BOLT
ARCH.	ARCHITECTURAL	MECH.	MECHANICAL
AMPERS	AMPERE	MFG.	MANUFACTURER
AWG.	AMERICAN WIRE GAUGE	MIN.	MINIMUM
BATT.	BATTERY	MISC.	MISCELLANEOUS
BD.	BUILDING	MLO	MAIN LUGS ONLY
BLDG.	BLOCK	MTD.	MOUNTED
BLOC.	BLOCKING	MTC.	MOUNTING
BM.	BEAM	MTL.	METAL
B.N.	BOUNDARY NAILING	MTS.	MANUAL TRANSFER SWITCH
BR.	BRANCH	N	NEUTRAL
BRKR.	BREAKER	N	PROPOSED
BARE	BARE THINNED COPPER WIRE	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
BT.	BASE TRANSMISSION SYSTEM	NO. (#)	NUMBER
B.O.F.	BOTTOM OF FOOTING	N.T.S.	NOT TO SCALE
B/U	BACK UP CABINET	OH	OVERHEAD
C	CONDUIT	O.C.	ON CENTER
CAB.	CABINET	OPNG.	OPENING
CANT.	CANTILEVER(ED)	P/C	POLE
CB.	CIRCUIT BREAKER	PCS	PERSONAL COMMUNICATION SERVICES
C.I.P.	CAST IN PLACE	PH	PHASE
CI	CIRCUIT	PLY	PLYWOOD
CLG.	CEILING	PNBD	PANELBOARD
CLR.	CLEAR	PPC	POWER PROTECTION CABINET
COL.	COLUMN	PRC	PRIMARY RADIO CABINET
CONC.	CONCRETE	PRM	PRIMARY
CONN.	CONNECTION(OR)	P.S.F.	POUNDS PER SQUARE FOOT
CONS.	CONSTRUCTION	P.S.I.	POUNDS PER SQUARE INCH
CONT.	CONTINUOUS	P.T.	PRESSURE TREATED
d	DEPTH	PHR.	POWER (CABINET)
DBL.	DOUBLE	QTY.	QUANTITY
DEM.	DEMAND	RAD (R)	RADIUS
DEPT.	DEPTH	RCPT.	RECEPTACLE
D.F.	DOUGLAS FIR	REF.	REFERENCE
DIA.	DIAMETER	REIN.	REINFORCEMENT(ING)
DIAG.	DIAGONAL	REQD.	REQUIRED
DIM.	DIMENSION	RGS.	RIGID GALVANIZED STEEL
DWG.	DRAWING(S)	SAF	SAFETY
DWL.	DOWEL(S)	SCH.	SCHEDULE
EA.	EACH	SDBC	SOFT DRAWN BARE COPPER
EGR.	EMERGENCY GENERATOR RECEPTACLE	SEC	SECONDARY
ELEV.	ELEVATION	SHL.	SHEET
ELEC.	ELECTRICAL	SIM.	SIMILAR
ELEV.	ELEVATOR	SAL	SOLID NEUTRAL
EMT.	ELECTRICAL METALLIC TUBING	SPEC.	SPECIFICATION(S)
EN.	EDGE NAIL	SQ.	SQUARE
ENCL.	ENCLOSURE	S.S.	STAINLESS STEEL
ENGR.	ENGINEER	STD.	STANDARD
EQ.	EQUAL	STL.	STEEL
EXIST (E)	EXISTING	STRUC.	STRUCTURAL
EXP.	EXPANSION	SURF	SURFACE
EXT.	EXTERIOR	SW	SWITCH
FAB.	FABRICATION(OR)	TEL.	TELEPHONE
FAC.	FACTOR	TEMP.	TEMPORARY
FIRE	FIRE ALARM	THK.	THICK(NESS)
F.F.	FINISH FLOOR	T.N.	TOE NAIL
F.G.	FINISH GRADE	T.O.A.	TOP OF ANTENNA
FIN.	FINISHED	T.O.C.	TOP OF CURB
FLOR.	FLOOR	T.O.F.	TOP OF FOUNDATION
FLUOR.	FLUORESCENT	T.O.P.	TOP OF PLATE (PARAPET)
FDN.	FOUNDATION	T.O.S.	TOP OF STEEL
F.O.C.	FACE OF CONCRETE	T.O.W.	TOP OF WALL
F.O.M.	FACE OF MASONRY	TYP.	TYPICAL
F.O.S.	FACE OF STUD	U.G.	UNDER GROUND
F.O.W.	FACE OF WALL	UNL.	UNDERWRITERS LABORATORY INC. UNLESS NOTED OTHERWISE
F.S.	FINISH SURFACE	U.N.O.	UNLESS NOTED OTHERWISE
FT (F)	FOOTING	V	VOLT
FU	FUSE	VAC	VOLT ALTERNATING CURRENT
G	GROUND	V.F.	VERIFY IN FIELD
GR	GROWTH (CABINET)	W/O	WATT OR WIRE
GA.	GAUGE	WD	WIDEN(TH)
GEN.	GENERATOR	W/O	WITHOUT
CI	GALVANIZED	W/P.	WOOD
G.F.C.I.	GROUND FAULT CIRCUIT INTERRUPTER	WT.	WEATHERPROOF
GIB.	GLUE LAMINATED BEAM	XFER	TRANSFER
GRND.	GROUND	XFMR	TRANSFORMER
GPS.	GLOBAL POSITIONING SYSTEM	X/PE	CROSS-LINK POLYETHYLENE
GRND.	GROUND	Y	TYPE
HDBC	HARD DRAWN COPPER WIRE	Z	CENTERLINE
HDR.	HEADER		PLATE, PROPERTY LINE
HGR.	HANGER		
HPS	HIGH PRESSURE SODIUM		

LEGEND

ABBREVIATIONS



AT&T Wireless
5001 Executive Parkway
San Ramon, CA 94583

Client:



Project Architect:



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

Site Agent:

90% Zoning Drawings

Drawing Phase:

CRAN-RSFR-SFOK7-015
PAGE ID:
ROW AT 5391 COLLEGE AVE,
OAKLAND, CA 94618
COUNTY: ALAMEDA

Site Name:

Professional Seal:

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Rev.	Date	Description
01	09/22/17	Zoning Dwg 90%
02	10/02/17	Zoning Dwg 95%

Project No.:

Date: 09/22/17 Job No.:

Scale: AS SHOWN CAD File:

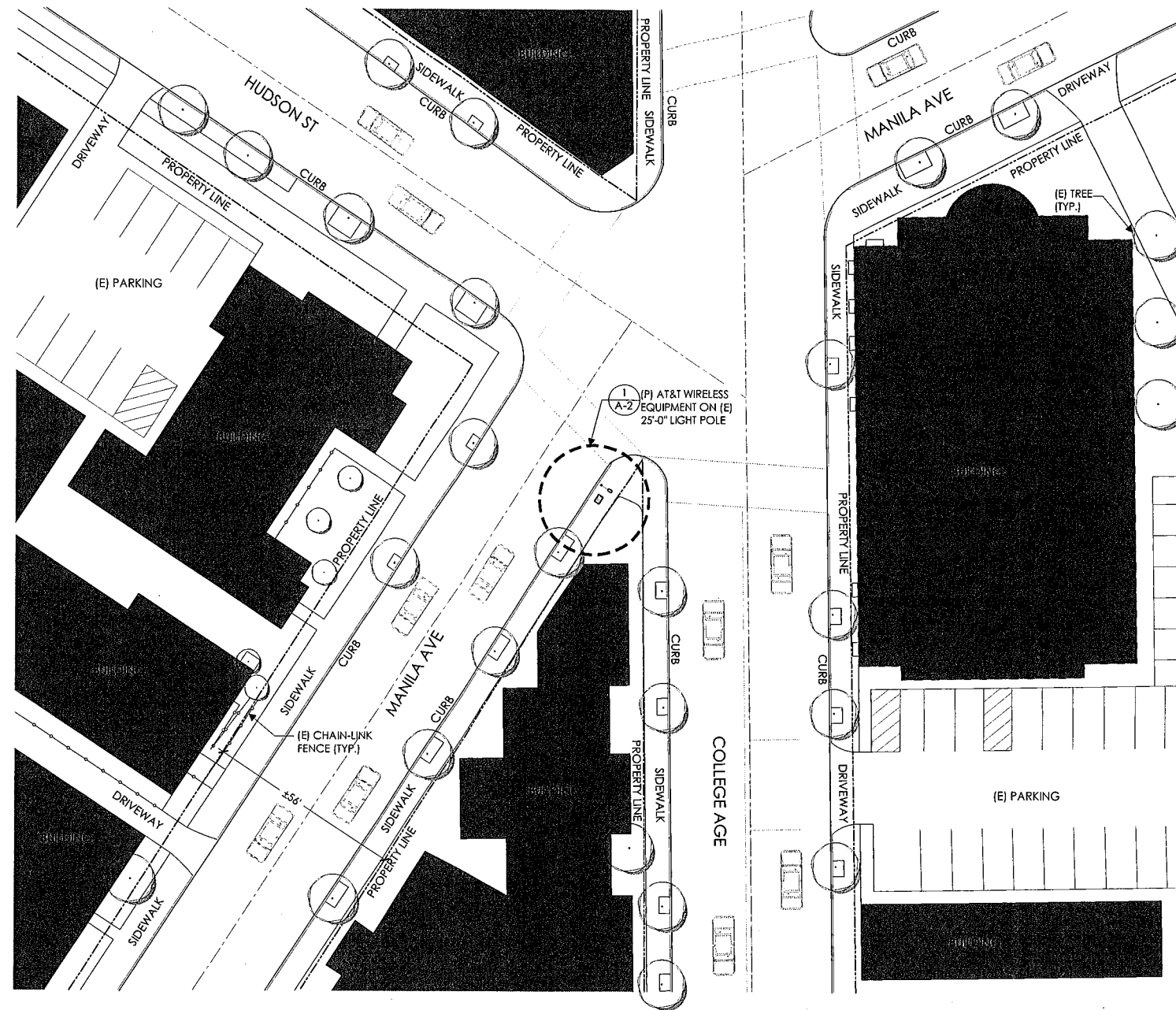
Designed By: JG Checked: RB

**GENERAL NOTES
LEGEND
ABBREVIATIONS**

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T.2

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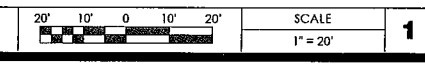


NOTE:
THIS SITE PLAN WAS GENERATED WITHOUT THE USE OF A SURVEY. PROPERTY LINES, RIGHT-OF-WAYS, POWER & TELCO UTILITY POINT CONNECTIONS/ROUTES AND EASEMENTS SHOWN ON THESE PLANS ARE ESTIMATED. ALL ITEMS AND DIMENSIONS SHOULD BE VERIFIED IN THE FIELD.

UNDERGROUND UTILITIES NOTE:
THE LOCATIONS AND EXISTENCE OF ANY UNDERGROUND PIPES, STRUCTURES, OR CONDUITS SHOWN ON THIS PLAN WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. THERE MAY BE EXISTING UTILITIES OTHER THAN THOSE SHOWN ON THIS PLAN. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT SHOWN ON THIS PLAN.



OVERALL SITE PLAN



1



AT&T Wireless
5001 Executive Parkway
San Ramon, CA 94583

Client: _____



Project Architect: _____



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OVERALL SITE PLAN

Sheet Title: _____

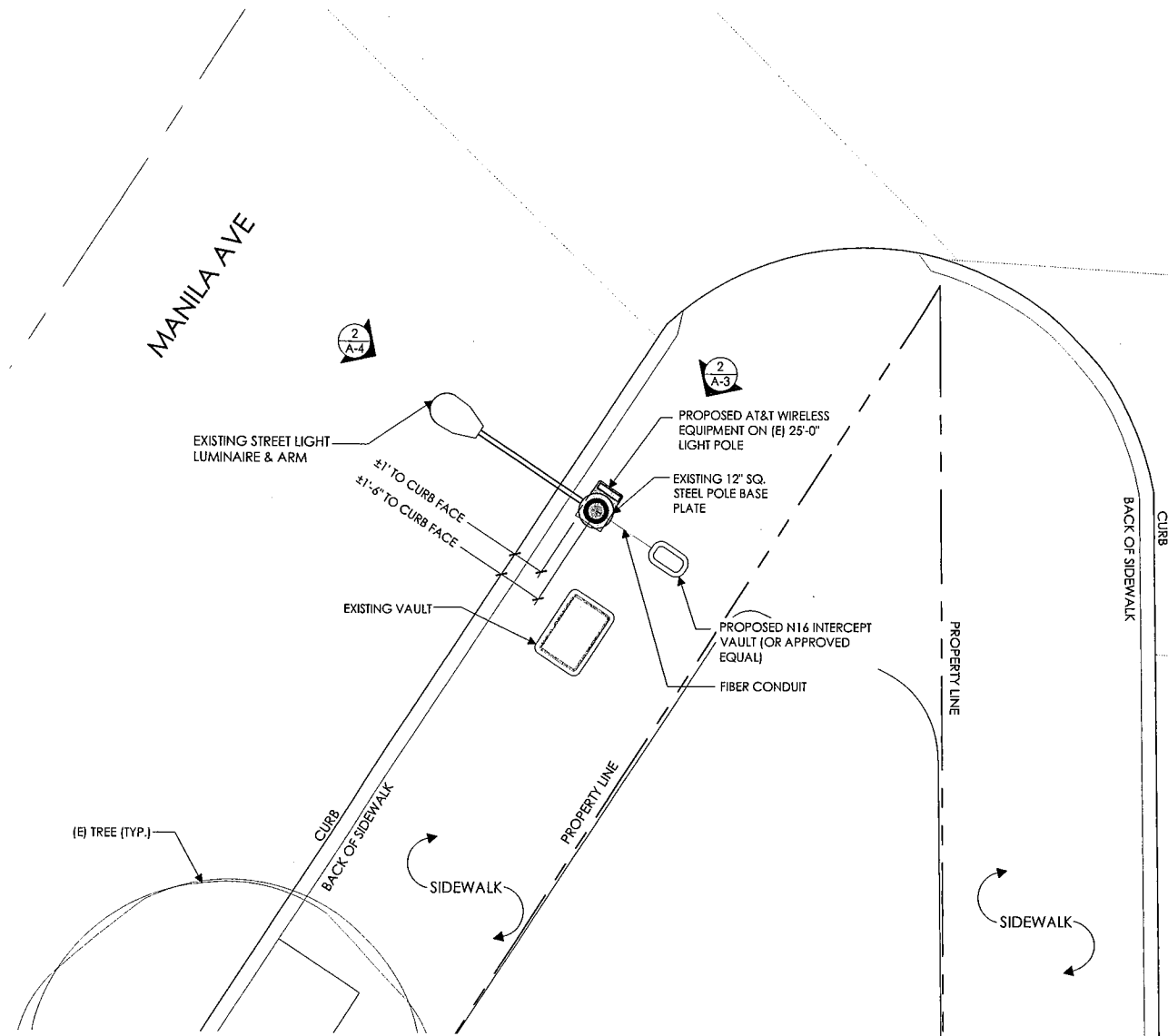
A.1

Sheet No.: _____

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NOTES:

1. DURABLE PAINT: ANTENNAS, MOUNTING BRACKETS, CABLING, AND RADIO RELAY UNITS TO BE PAINTED TO MATCH THE EXISTING POLE USING A DURABLE PAINT (E.G. SHERWIN WILLIAMS, FRAZEE, KELLY MOORE, OR EQUIVALENT)
2. CABLING: CABLING TO BE INSTALLED IN A TIDY MANNER WITHOUT EXCESS CABLE LOOPS. ALL CABLING TO GROUND-MOUNTED BOXES AND ANTENNAS TO BE INSTALLED INSIDE POLE
3. LOGO REMOVAL: ALL EQUIPMENT LOGOS, OTHER THAN THOSE REQUIRED BY REGULATION (E.G. NODE IDENTIFICATION), SHALL BE PAINTED OVER OR REMOVED, RAISED/DEPRESSED TEXT ON RRUS OR OTHER EQUIPMENT, IF PRESENT, TO BE SANDED OFF OR SIMILARLY REMOVED AND/OR FILLED
4. SIGNAGE: FCC MANDATED RF WARNING SIGNAGE SHALL FACE CLIMBING SPACE. OPTIONAL SIGNAGE SHALL FACE OUT TO STREET WHEN PLACED IN FRONT OF OR NEAR A WINDOW. SIGNAGE SHALL FACE TOWARD BUILDING IF THERE IS NO WINDOW.

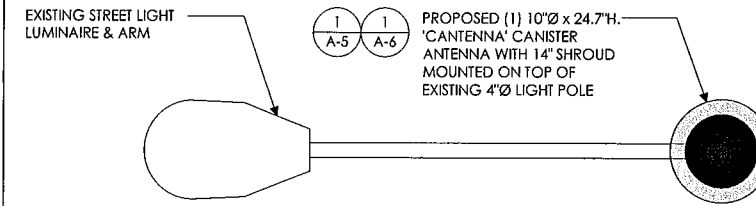


POLE PLAN ENLARGEMENT

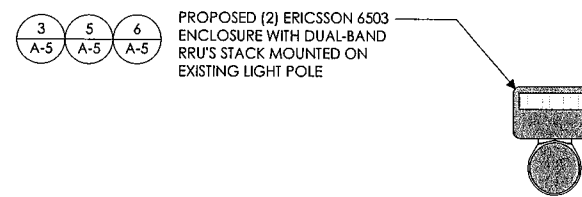
16' 8' 0' 8' 16' SCALE 3/8" = 1'-0" **1**

ANTENNA ENLARGEMENT PLAN

1' 6" 0' 6" 1' SCALE 1" = 1'-0" **2**



A. SECTION (CANISTER ANTENNA)



B. SECTION (RRUS)

EQUIPMENT ENLARGEMENT PLAN

1' 6" 0' 6" 1' SCALE 1" = 1'-0" **3**



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WALNUT CREEK, CA 94598
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Site Agent:

90% Zoning Drawings

(E) LIGHT POLE
Drawing Phase:

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POLE PLAN EQUIPMENT ENLARGEMENTS

Sheet Title:

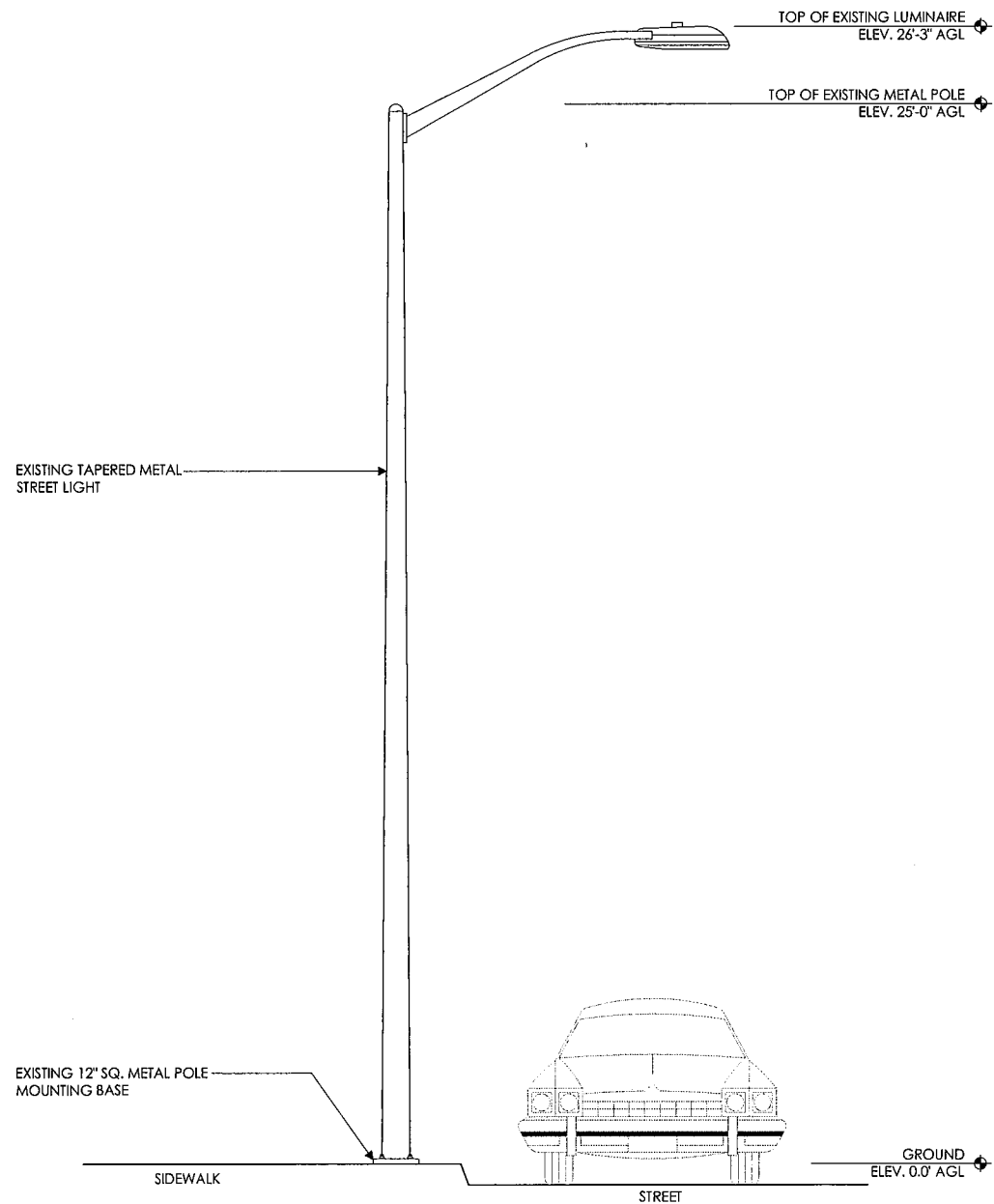
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Sheet No.:

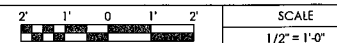
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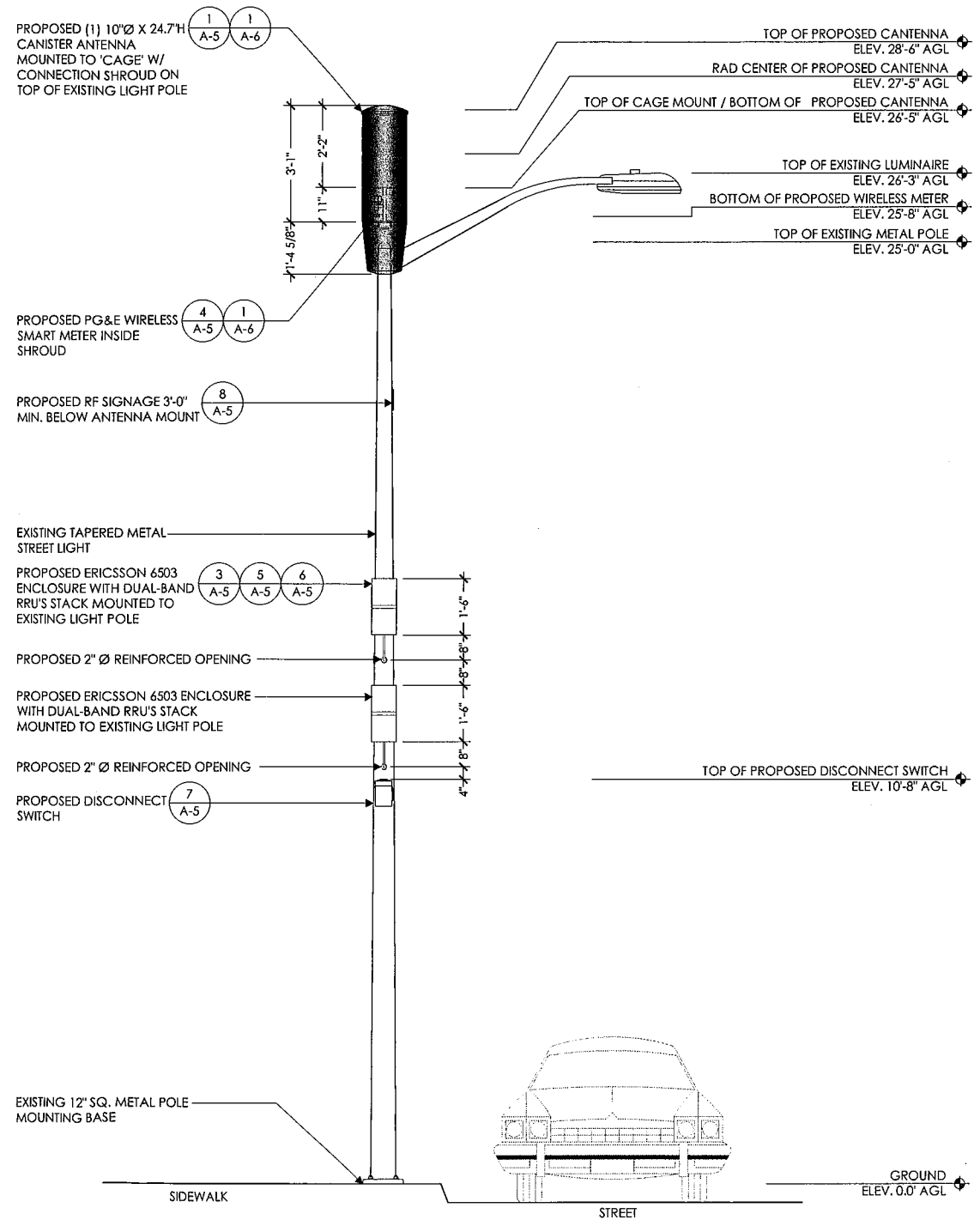
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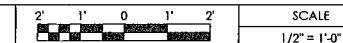
NORTHEAST ELEVATION - EXISTING



1



NORTHEAST ELEVATION - PROPOSED



2



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Project No.:

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ELEVATIONS

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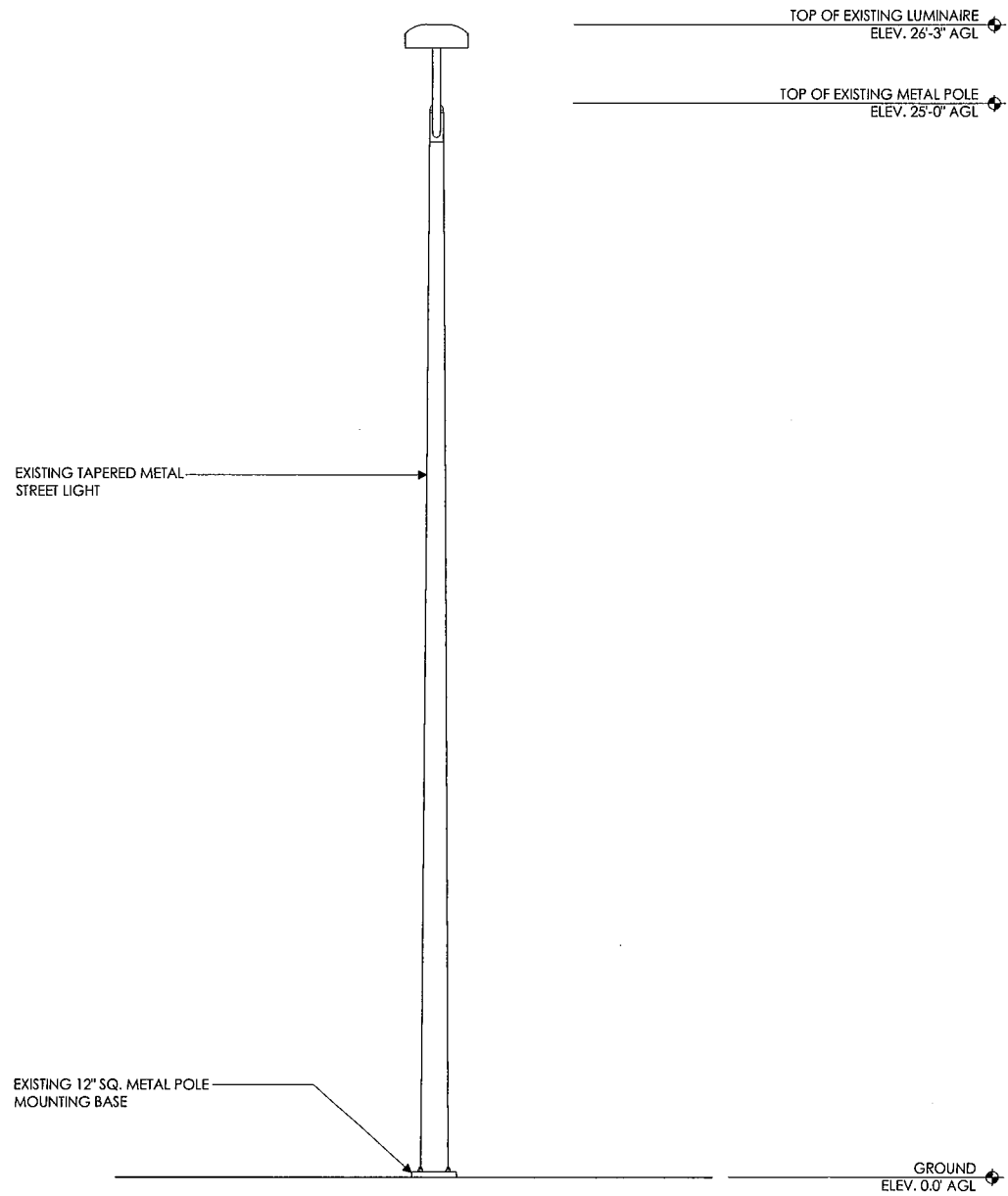
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Sheet No.:

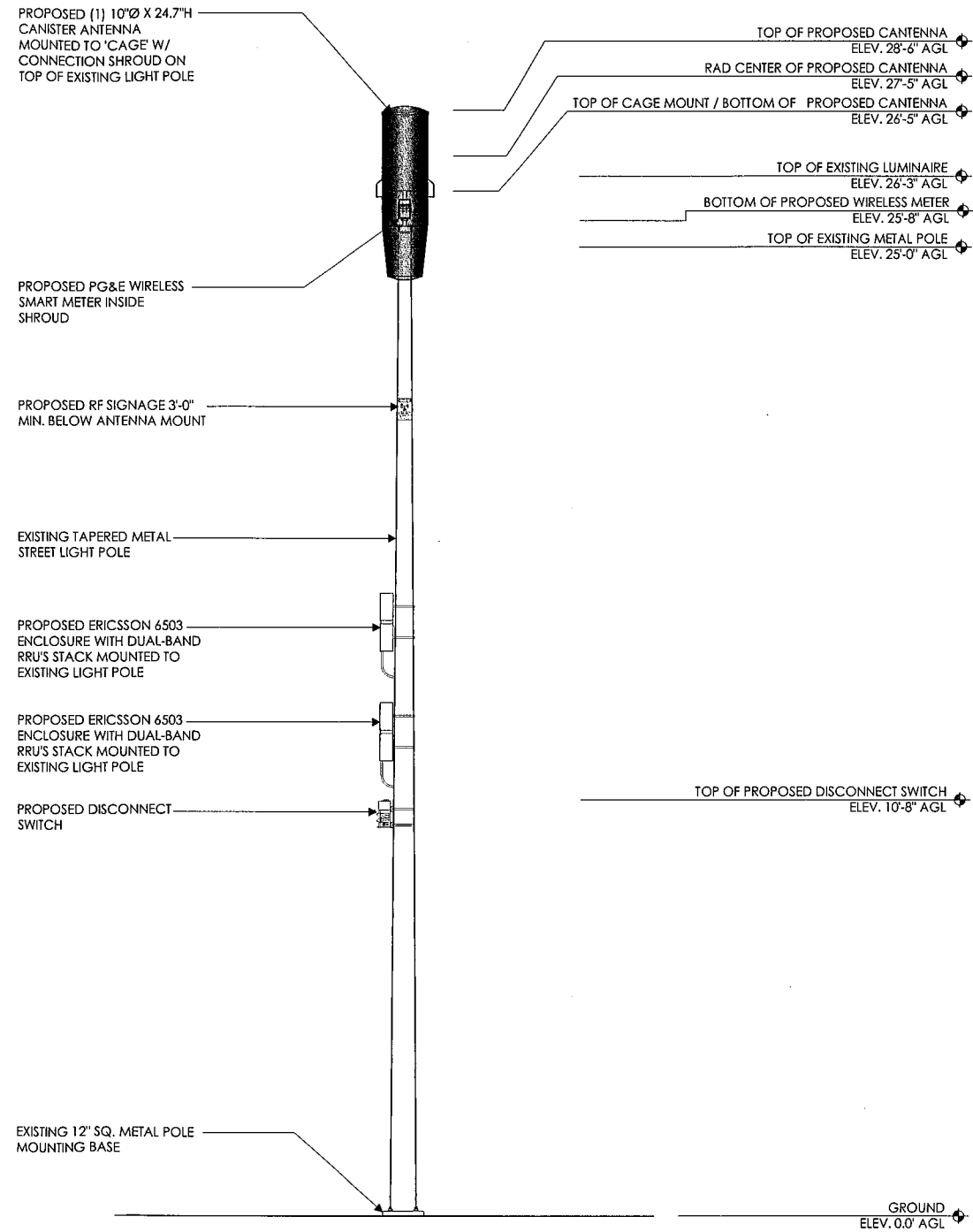
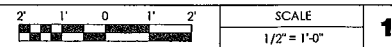
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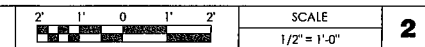
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NORTHWEST ELEVATION - EXISTING



NORTHWEST ELEVATION - PROPOSED



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San Ramon, CA 94583

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ELEVATIONS

Sheet Title: _____

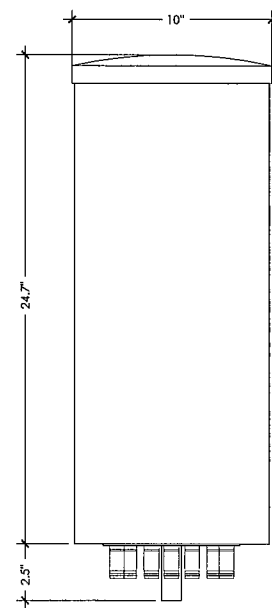
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Sheet No.: _____

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AT&T CANISTER ANTENNA 'CAN-TENNA'

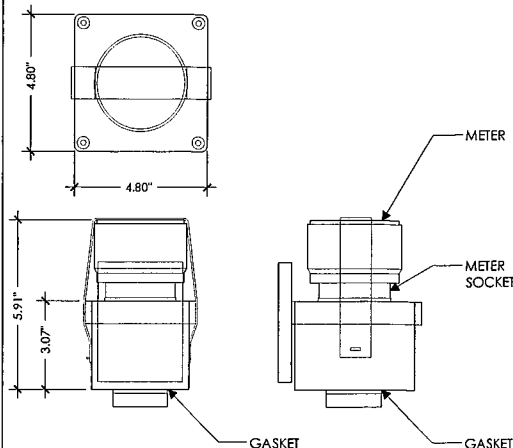
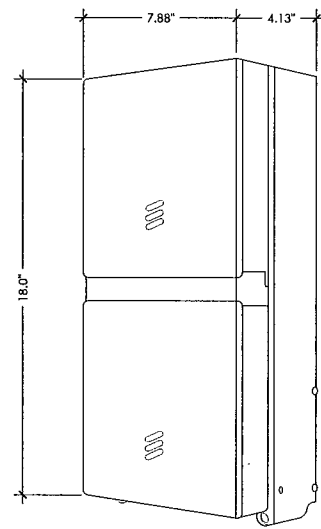
ANTENNA COLOR: LIGHT GRAY
 DIMENSIONS: 10.0"Ø x 24.7" TALL
 NET WEIGHT: 19.0 LBS



ERICSSON 6503

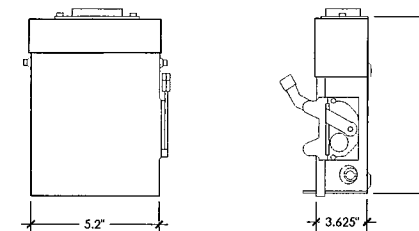
SINGLE BAND 2203: 2 TX / 2 RX (AWS OR PCS)
 DUAL BAND RRU (2 - 2203'S): 4 TX / 4 RX (AWS OR PCS)
 MAXIMUM POWER CONSUMPTION: <100W PER 2203 RADIO
 ±95W PER SINGLE-BAND 2203 RADIO
 ±190W PER DUAL-BAND 2203 RRU

MAX FUSE RATING: 32A
 WIRE SIZE: #10 CU OR #8 ALU



MURRAY LW002GRU SPECIFICATIONS

LOAD CENTER DEPTH: 3.625"
 LOAD CENTER WIDTH: 5.2"
 LOAD CENTER HEIGHT: 8.125"
 WEIGHT: 4.55 LB
 LOAD CENTER TYPE: MAIN LUG
 MAX AMPERAGE: 60
 MOUNTING TYPE: PLUG IN
 NUMBER OF PHASES: 1
 NUMBER OF SPACES: 2
 VOLTAGE (VOLTS): 120/240
 INDOOR/OUTDOOR: OUTDOOR
 ELECTRICAL PRODUCT TYPE: LOAD CENTER



NOTICE

Radio frequency fields beyond this point may exceed the FCC general public exposure limit.

Obey all posted signs and site guidelines for working in radio frequency environments.

In accordance with Federal Communications Commission rules on radio frequency emissions 47 CFR 1.1307(b)

ANTENNA DETAIL

1

6503 RRU ENCLOSURE

3

PG&E WIRELESS SMART METER

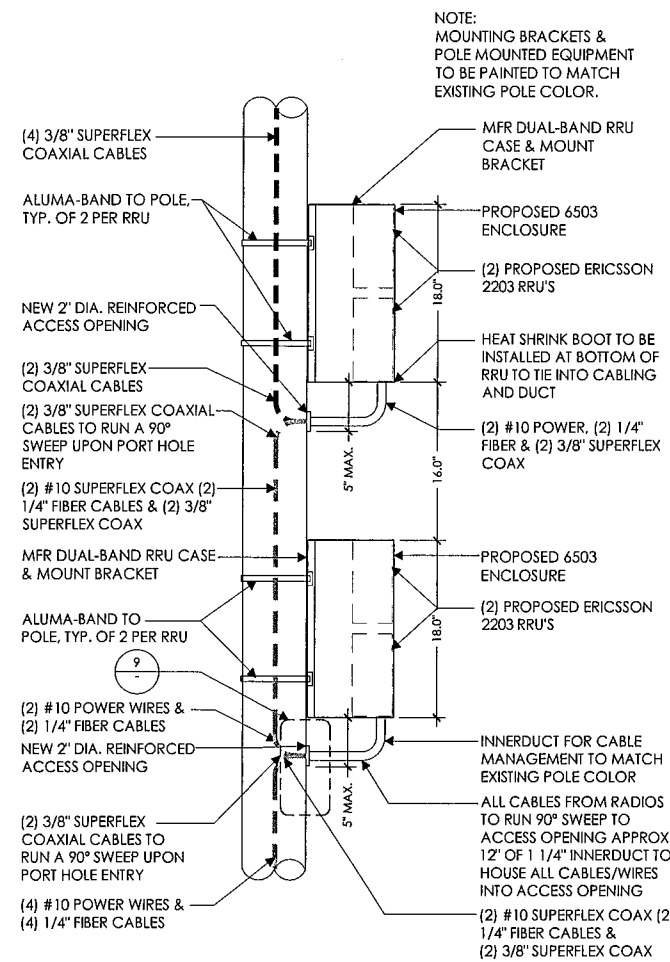
4

DISCONNECT SWITCH

7

NOTICE SIGNAGE

8



Technical Specifications Radio 2203

FREQUENCY BANDS
 Bands: 3GPP Bands B1 (W1), B3 (E), B3C (W1), B9 (W1), B6A (W1), B5 (W1), B2025 (W1), B12 (E), B13 (E) and B7 (E)

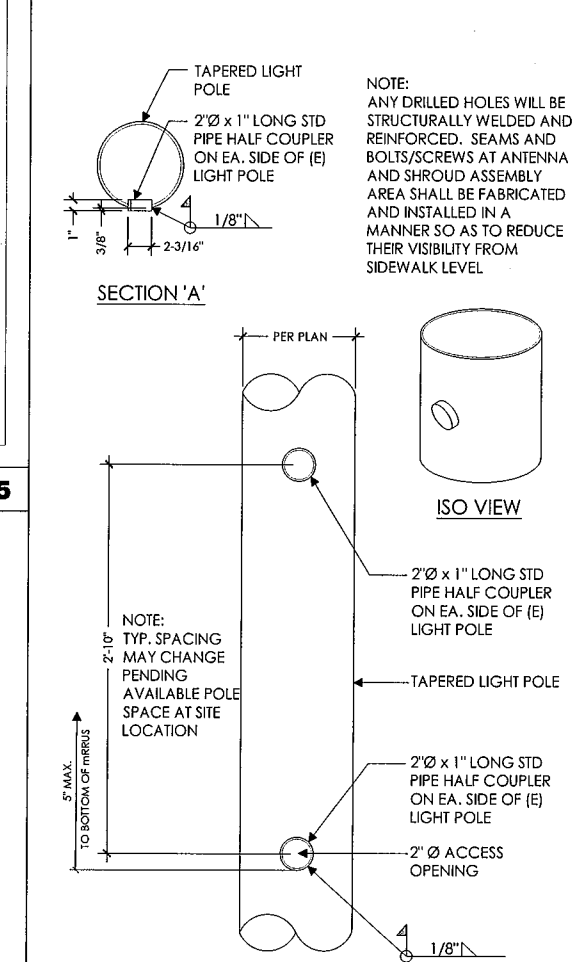
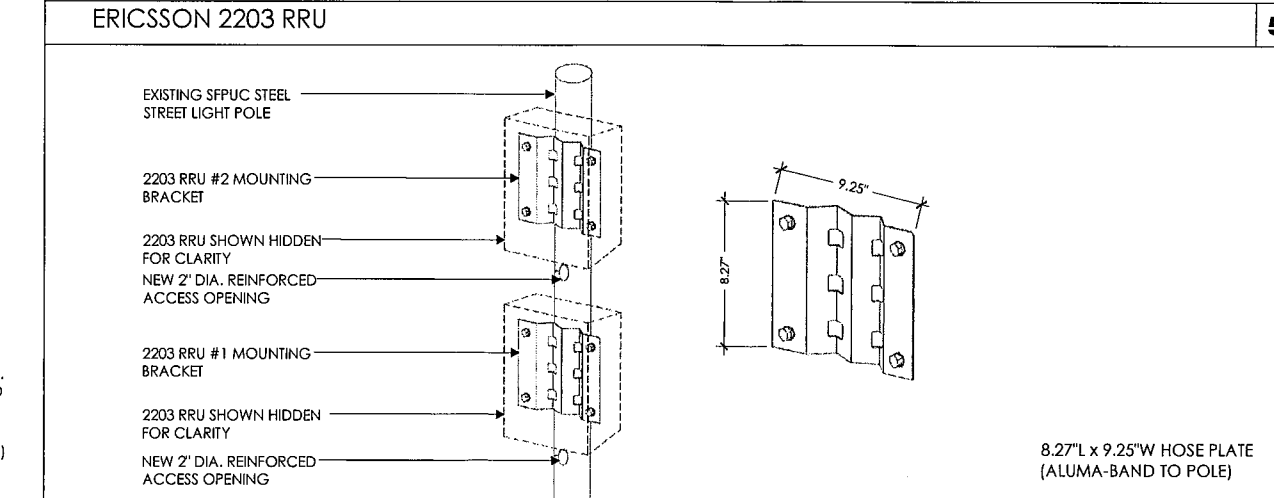
RF CAPACITY
 Carrier capacity WCDMA: Up to 4 carriers
 Carrier capacity LTE: Up to 40 MHz
 RFW: B1, B3 and B6A 45 MHz, B2/B25 and B7 40 MHz, B3C, B6, B5, B12 and B13 Full band
 MIMO: Yes, 2T2R
 Output power: Up to 2 x 5 W

INTERFACE SPECIFICATIONS
 Antenna Ports: 2 x 4.3-10 (F)
 CPRI: 2 x 2.5/5/10 Gbps (exchangeable SFP modules)
 Optical indicators: 6
 External alarms: 2
 Field ground: 1

MECHANICAL SPECIFICATIONS
 W x H x D: 200 mm x 200 mm x 100 mm, including mounting bracket and antenna front cover
 Weight: < 4.5 kg
 Volume: 4 L
 Mounting: Wall and pole mount

ELECTRICAL SPECIFICATIONS
 Power Supply: 48 VDC or 100 - 250 VAC

ENVIRONMENTAL SPECIFICATIONS
 Nominal operating temp.: 40 °C to 155 °C (cold start at -40 °C)
 Relative Humidity: 5 - 100%
 Environment: Outdoor class with IP65



DUAL BAND RRU MOUNT

2

6503 RRU-POLE MOUNTING DETAILS

6

VERTICAL ACCESS PORT

9



AT&T Wireless
 5001 Executive Parkway
 San Ramon, CA 94583

Client:



Project Architect:



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

Site Agent:

90% Zoning Drawings

Drawing Phase:

CRAN-RSFR-SFOK7-015

FACE ID:
 ROW AT 5391 COLLEGE AVE,
 OAKLAND, CA 94618
 COUNTY: ALAMEDA

Site Name:

Professional Seal:

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

Rev.	Date	Description
01	09/22/17	Zoning Dwgs 90%
02	10/02/17	Zoning Dwgs 95%

Project No.:

Date: 09/22/17 Job No.:

Scale: AS SHOWN CAD File:

Designed By: JG Checked: RB

EQUIPMENT DETAILS

Sheet Title:

A.5

Sheet No.:

©Meridian Management LLC, 2017

Client: _____



Project Architect: _____



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

Site Agent: _____

90% Zoning Drawings

Drawing Phase: _____

CRAN-RSFR-SF0K7-015
PACE ID:
ROW AT 5391 COLLEGE AVE,
OAKLAND, CA 94618
COUNTY: ALAMEDA

Site Name: _____

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

Rev.	Date	Description
01	09/22/17	Zoning Dwgs 90%
02	10/02/17	Zoning Dwgs 95%

Project No.: _____
Date: 09/22/17 Job No.: _____
Scale: AS SHOWN CAD File:
Designed By: JG Checked: RB

EQUIPMENT DETAILS

Sheet Title: _____

A.6

FIELD TRIM SKIRT AS REQ'D TO FIT AROUND (E) OR (N) LIGHT ARMS

FIELD TRIM AS REQ'D TO FIT AROUND POLE

SHROUD ASSEMBLY AS ASSEMBLED

CONSTRUCTION SEQUENCE:

- REMOVE (E) POLE TOP CAP.
- VERIFY (E) POLE TOP DIAMETER.
- ENSURE (E) POLE IS PLUMB & LEVEL. (FIELD TRIM REQ'D)
- DRILL 1/2" DIA. HOLE 3/4" DOWN FROM TOP OF POLE.
- COAT EXPOSED STEEL OF POLE WITH COLD GALV. COMPOUND CONTAINING A MINIMUM ZINC CONTENT OF 95%.
- APPLY A FINAL COAT OF PAINT TO MATCH (E) SURFACES IF NECESSARY.
- INSTALL ITEMS #1-4 W/HARDWARE.
- FIELD TRIM IF REQ'D & INSTALL ITEMS #17, 18 & 19.
- COAT EXPOSED STEEL OF SKIRT WITH COLD GALV. COMPOUND CONTAINING A MINIMUM ZINC CONTENT OF 95%.
- APPLY A FINAL COAT OF PAINT TO MATCH (E) SURFACES IF NECESSARY.

ITEM #	PART #	DESCRIPTION	QTY.	UNIT WT. (lbs)
CLAMP-ON BRACKET PARTS / HARDWARE				
1	WA-943	3/8" x 13 7/8" O.D. A36, TOP CAP W/DWNT	1	14
2	WA-1413	3/8" x 1-1/2" O.D. A36, TOP MOUNT W/CLMNT	1	12.8
3	PL-1655	1/4" x 1.50" x 2.18" A36, PLATE	3	0.2
4	PL-1879	1/4" x 3.875" x 2.18" A36, ANTENNA ADAPTER	1	0.6
5	70429	3/8" x 1 1/2" COUNTERSUNK SKRT HD SCREW, S.S.	3	0.01
6	43010	3/8" LOCK WASHER, S.S.	3	0.01
7	55000	3/8" HEAVY HEX MUT. S.S.	3	0.03
8	40027	1/2" x 1.032" O.D. x .121" S.S. FLAT WASHER	4	0.02
9	43020	1/2" S.S. LOCK WASHER	7	0.01
10	44005	1/2" FLAT WASHER, NYLON	3	0.01
11	53026	1/2" S.S. JAM NUT	5	0.04
12	71012F	1/2" x 1 3/4" S.S. FULLY TH'D BOLT	3	0.1
13	71032F	1/2" x 3" S.S. FULLY TH'D BOLT	2	0.2
14	71051F	1/2" x 3 1/2" S.S. FULLY TH'D BOLT	2	0.2
15	71033F	1/2" x 4" S.S. FULLY TH'D BOLT	2	0.3
16	80333	1/2" x 6" S.S. T-READED ROD	1	0.3
SHROUD ASSEMBLY & COVER PLATE PARTS / HARDWARE				
17	WA-920	14 1/4" O.D. x 1.85" x 2 1/4" FIBERGLASS SHROUD ASSEMBLY	1	20.7
18	WA-1174	14GA. x 14 1/4" TD x 4 1/4" ED x 15 9/16" A568, SKIRT	1	7.9
19	WA-1175	14GA. x 14 1/4" TD x 4 1/4" ED x 15 9/16" A568, SKIRT	1	7.9
20	229-4	11GA. x 1 1/2" x 2 1/2" A36, FORMED PLATE	4	0.1
21	55510	3/8-16 SPEED NUT	3	0.04
22	70399	1/4" x 3/4" SS, CNTR. SUNK SOCKET HD SCREW	8	0.01
23	55500	1/4-20 U-STYLE SPEED NUT	8	0.02
24	70428	3/8" x 1 1/4" S.S. COUNTERSUNK SKRT HD SCREW	6	0.01
			TOTAL GALV. WT.	70

SECTION B-B
(SHOWN ON A 4" O.D. POLE)

SECTION A-A

CLAMP-ON BRACKET
(ANTENNA NOT SHOWN FOR CLARITY)

CLAMP-ON BRACKET
(ANTENNA NOT SHOWN FOR CLARITY)

POLE DIA RANGE

POLE DIA RANGE	ITEM #	DESCRIPTION
4'-6"	15	1/2" x 4" BOLT
5'-6"	14	1/2" x 3 1/2" BOLT
6'-7"	13	1/2" x 3" BOLT

ELEVATION VIEW

SHROUD ASSEMBLY

"NOTE"
IF (E) OR (N) POLE HAS A LIGHT ARM, SHROUD HALVES MUST BE FIELD CUT.

WESTERN
UTILITY / TELECOM, INC.

3600 SALEM DALLAS HWY
SALEM, OR 97304
PH: 503-687-2101 | FX: 503-378-1884
Western.Utility@western.com

"FAT BOY" TOP MOUNT W/ SKIRT
FOR 4' TO 7" GO POLES
FOR EXTENT P6480 ANTENNAS

STANDARD NUMBER: STD S-1 TAGGING NUMBER: ID-740

Existing

view from Hudson Street looking southeast at site



AT&T Wireless

CRAN-RSFR-SFOK7-015
ROW at 5391 College Avenue, Oakland, CA
Photosims Produced on 9-25-2017

Proposed

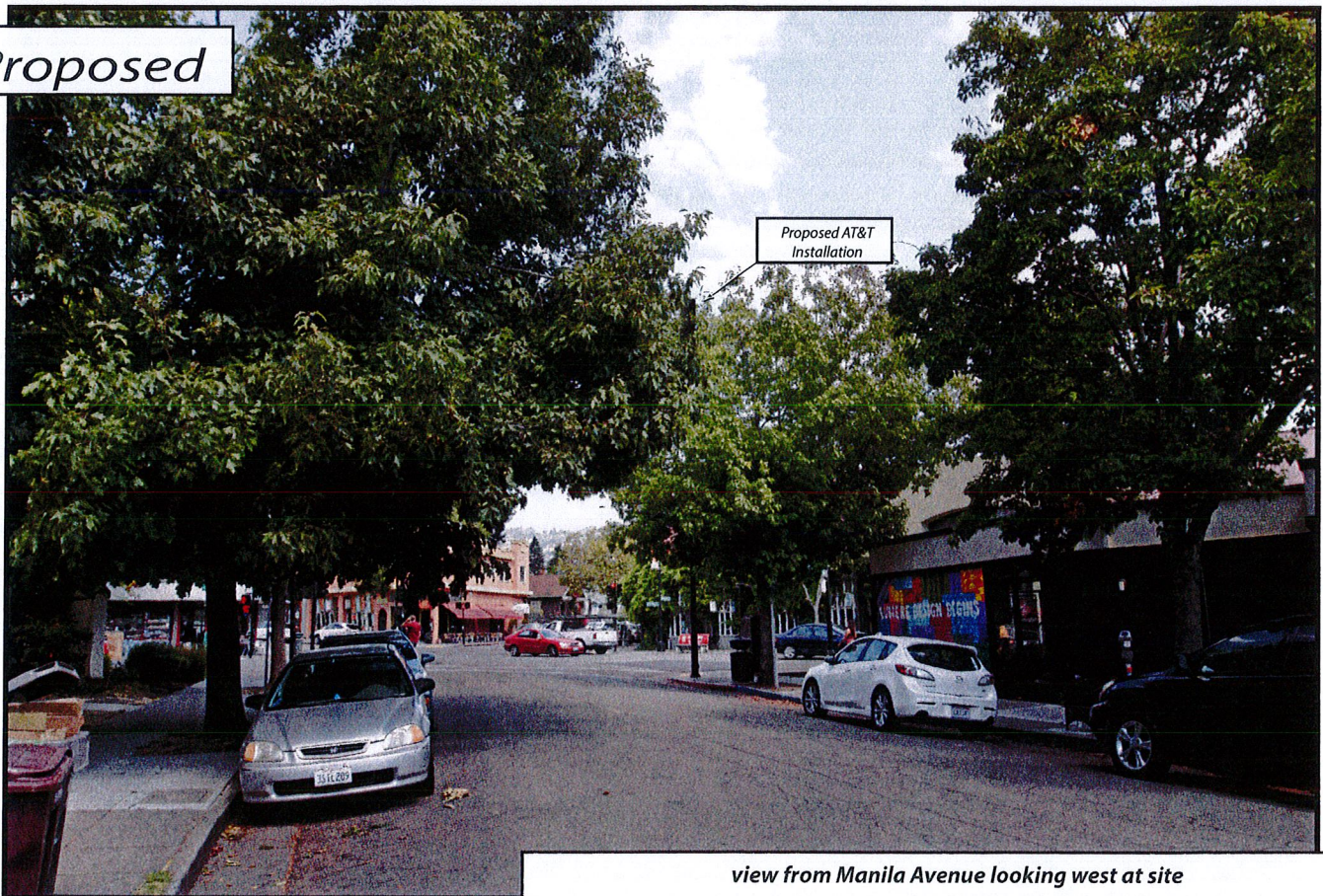
Attachment D



Existing



Proposed



view from Manila Avenue looking west at site



ALTERNATIVE DESIGN ANALYSIS

SFOK7_014

APN:

14-1263-1

LAT/LONG:

37.8421000, -122.2516400

The project is located in an area with existing commercial structures. AT&T considered alternative monopole designs (see below) in this area but none of these designs are as desirable from a planning perspective or from an aesthetics perspective to minimize visual impacts. The proposed project is in an underserved area.

Alternative light pole designs considered



Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of AT&T Mobility, a personal wireless telecommunications carrier, to evaluate its small cell (No. CRAN-RSFR-SF0K7-015) proposed to be sited in Oakland, California, for compliance with appropriate guidelines limiting human exposure to radio frequency (“RF”) electromagnetic fields.

Executive Summary

AT&T proposes to install an omnidirectional cylindrical antenna on a light pole sited in the public right-of-way at 5391 College Avenue in Oakland. The proposed operation will comply with the FCC guidelines limiting public exposure to RF energy.

Prevailing Exposure Standards

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

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

General Facility Requirements

Small cells typically consist of two distinct parts: the electronic transceivers (also called “radios”) that are connected to the traditional wired telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units. The transceivers are typically mounted on the support pole or placed in a cabinet at ground level, and they 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 to concentrate their energy toward the horizon, with very little energy wasted toward the sky or the ground. This means

**AT&T Mobility • Proposed Small Cell (No. CRAN-RSFR-SF0K7-015)
5391 College Avenue • Oakland, California**

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 AT&T, including drawings by Meridian Management LLC, dated September 22, 2017, it is proposed to install one Galtronics Model P6480, 2-foot tall, omnidirectional cylindrical antenna, on top of an existing light pole sited in the public right-of-way at the south corner of the intersection between College Avenue, Manila Avenue, and Hudson Street, near the building at 5391 College Avenue. The antenna would employ no downtilt and would be mounted at an effective height of about 27½ feet above ground. The maximum effective radiated power in any direction would be 80 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 AT&T operation is calculated to be 0.0011 mW/cm², which is 0.11% of the applicable public exposure limit. The maximum calculated level at any nearby building is 0.79% 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.

No Recommended Mitigation Measures

Due to its mounting location and height, the AT&T antenna would not be accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. The occupational limit is calculated to extend 4 inches from the antenna and, due to this short distance, the proposed operation is considered intrinsically compliant with that limit.



Conclusion

Based on the information and analysis above, it is the undersigned's professional opinion that operation of the small cell proposed by AT&T Mobility, at 5391 College Avenue in Oakland, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating small cells.

Authorship

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration Nos. E-13026 and M-20676, which expire on June 30, 2019. This work has been carried out under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.



William F. Hammett

William F. Hammett, P.E.
707/996-5200

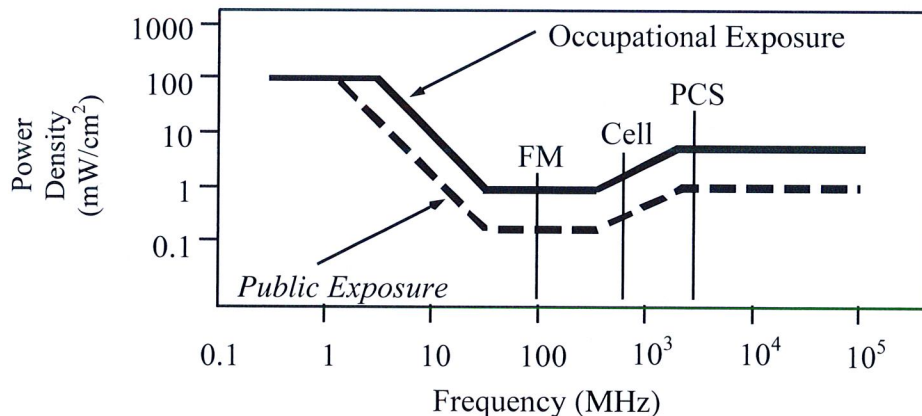
November 3, 2017

FCC Radio Frequency Protection Guide

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

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

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



Attachment G



Utility Contact System Search

The Utility Contact System (UCS) is the Communications Division's database for the primary regulatory contact for each telephone corporation operating in California. The Communications Division sends important regulatory notices to the regulatory contact for each telephone corporation via e-mail, so it is important for primary regulatory contacts to update their UCS record if their e-mail address changes.

Telephone corporations may update UCS contact information using the form on the following page: [Carrier Reporting Requirements](#)

A description of the different utility types (granted authorities) are listed on the following page: [Utility Type Descriptions](#)

Search Utility Name Search Utility Number 3060

Utility Name ▲	Alias (DBA Name)	Utility Number	Street Address	City	State	Zip	Phone Number	Email	Utility Type	CPCN Appro
New Cingular Wireless Pcs, LLC	CINGULAR WIRELESS	3060	430 BUSH STREET	SAN FRANCISCO	CA	94108	(415) 778-1299	att-regulatory-ca@att.com	CEC	12-21-1995
New Cingular Wireless Pcs, LLC	CINGULAR WIRELESS	3060	7405 GREENHAVEN DRIVE	SACRAMENTO	CA	95831	(800) 498-1912	west.region.oopsac@awsmail.att.com	CEC	12-21-1995
New Cingular Wireless Pcs, LLC	CINGULAR WIRELESS	3060	11760 US HIGHWAY ONE, WEST TOWER	NORTH PALM BEACH	FL	33048	770-240-8849		CEC	12-21-1995

[Save Search Results as CSV Spreadsheet](#)

[Comments & Feedback](#)



Attachment E

November 20, 2017

City Planner
Oakland Planning Dept.
250 Frank Ogawa Plaza
Oakland, CA 94612

Re: Proposed AT&T Small Cell Node Installation
Applicant: New Cingular Wireless PCS, LLC (dba AT&T Mobility)
Nearest Site Address: Public Right of Way near 5391 College Ave, Oakland, CA 94618
Site ID: CRAN RSFR SFOK7-015 (“Node 015”)

Dear City Planner,

On behalf of New Cingular Wireless PCS, LLC (doing business as AT&T Mobility), this letter and attached materials are to apply for the appropriate Planning permit to install a small cell node in the public right-of-way at the above-referenced location (“Node 015” or the “Node”).¹ The following is an explanation of the existing site, a project description of the designed facility, the project purpose and justifications in support of this proposal.

A. Project Description.

The proposed location for our facility currently consists of an approximate 25 feet tall City-owned light pole in the public right-of-way.

AT&T proposes to affix one canister antenna within an antenna shroud on top of the pole, extending up to a height of about 28.6 feet. On the pole between about 10 feet and 19 feet above ground, AT&T proposes to install two remote radio units and (if necessary) a miniature power disconnect switch. This facility or “Node” will be connected to underground fiber optic telecommunications lines and power. All equipment will be painted to match the pole. Our proposal is depicted in the attached design drawings and photographic simulations.

B. Project Purpose.

The purpose of this project is to provide AT&T third and fourth generation (3G and 4G) wireless voice and data coverage and capacity to the surrounding area. These wireless services include mobile telephone, wireless broadband, emergency 911, data transfers, electronic mail, Internet, web browsing, wireless applications, wireless mapping and video streaming. The proposed node is part of a larger small cell deployment providing wireless coverage and capacity to areas of Oakland that are otherwise very difficult or impossible to cover using traditional macro wireless telecommunications facilities.

¹ AT&T expressly reserves all rights concerning the city’s jurisdiction to assert zoning regulation over the placement of wireless facilities in the public rights-of-way.



A small cell network consists of a series of radio access nodes connected to small telecommunications antennas, typically mounted on existing poles within the public rights-of-way, to distribute wireless telecommunications signals. Small cell networks provide telecommunications transmission infrastructure for use by wireless services providers. These facilities allow service providers such as AT&T to establish or expand their network coverage and capacity. The nodes are linked by fiber optic cable that carry the signal stemming from a central equipment hub to a node antenna.

C. Project Justification, Alternative Site and Design Analysis.

The proposed Node is an integral part of AT&T's overall small cell deployment to cover transient traffic along the roadways and provide in-building service to the surrounding area. Using an existing pole is the least intrusive means to meet AT&T's wireless coverage and capacity needs in the area. This Node best uses existing infrastructure, adding small equipment without disturbing the character of the neighborhoods served. Deploying a small cell node at an existing pole location minimizes any visual impact by utilizing an inconspicuous spot.

The small cell node RF emissions are also much lower than the typical macro site, they are appropriate for the area, and they are fully compliant with the FCC's requirements for limiting human exposure to radio frequency energy. The attached radio frequency engineering analysis provided by Hammett & Edison, Inc., Consulting Engineers, confirms that the proposed equipment will operate well within (and actually far below) all applicable FCC public exposure limits. The facility will also comply with California Public Utility Commission (CPUC) General Orders 95 (concerning overhead line design, construction and maintenance) and 170 (CEQA review) that govern utility use in the public right-of-way.

As this application seeks authority to install a wireless telecommunication facility, the FCC's Shot Clock Order² requires the city to issue its final decision on AT&T's application within 150 days. We respectfully request expedited review and approval of this application. Feel free to contact me if you have any questions. Thank you.

Thank you.

Best Regards,
VINCULUMS SERVICES, LLC

A handwritten signature in black ink, appearing to read "Matthew S. Yergovich".

Matthew S. Yergovich
FOR AT&T MOBILITY

² See Petition for Declaratory Ruling to Clarify Provisions of Section 332(c)(7)(B), WT Docket No. 08-165, Declaratory Ruling, 24 F.C.C.R. 13994 (2009).

November 9, 2017
SFOK7_015

RE: Authorization to Submit Permit Applications
For facility type: AT&T Small Cell Wireless Facility (“Proposed Facility”)
At the site: City Owned Light Pole (“Site”)
GPS Location: 37.8399020,-122.2515080
Nearest Address: 5391 College Ave
Nearest APN: 14-1249-1
Jurisdiction: City of Oakland
Applicant: New Cingular Wireless PCS, LLC (dba AT&T) (“Company”)

To Whom It May Concern:

This letter authorizes Vinculums Services LLC, as the representative of Company, to apply for development review and other applicable planning or building permits in connection with Company’s Proposed Facility at the Site. The Site is a small cell wireless facility on a city-owned light pole.

This document is provided solely to satisfy the requirement of the City of Oakland Planning and Building Department that the Site owner consent to the submission of the referenced applications.

This document does not authorize Company’s use of the Site or installation of the Proposed Facility which authorization, if any, would be the subject of a separate agreement between the Company and the City of Oakland.

Company acknowledges that any applications submitted pursuant to this document are submitted at its sole cost and expense and with the full understanding that further authorization to use the Site or install the Proposed Facility may not be provided. Company further acknowledges that the Site may be very close or similar to other sites owned by the City of Oakland or others, and that Company bears sole responsibility to ensure that any applications submitted pursuant to this document distinguish between the Site and such other sites with sufficient specificity that they cannot be mistaken for one another.

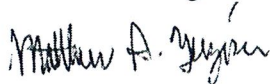
Thank you.

Sincerely,

James Golde
Real Estate Manager
for the City of Oakland

Applicant Certification:

I certify that I am the duly authorized representative of the Company and, on behalf of the Company, understand and agree to the risks and limitations described above.



signature

Matthew S. Yergovich, Vinculums Services LLC
printed name

ALTERNATIVE SITING ANALYSIS

SFOK7_015

APN:

14-1249-1

LAT/LONG:

37.8399020, -122.2515080

The project is located in an area with existing commercial structures. AT&T considered alternative sites on other utility poles in this area but none of these sites are as desirable from a service coverage perspective or from an aesthetics perspective to minimize visual impacts. The proposed project is in an underserved area. The proposed location is approximately equidistant from other small cell nodes proposed in the surrounding area so that service coverage can be evenly distributed.

Alternative light poles considered

37.839898, -122.251455

37.840094, -122.251275

Attachment H

NOTICE OF PUBLIC HEARING CITY OF OAKLAND



CITY OF OAKLAND
BUREAU OF PLANNING
 250 Frank H. Ogawa Plaza, Suite 2114, Oakland, CA 94612-2031
 Phone: 510-238-3911 Fax: 510-238-4730
PLANNING COMMISSION PUBLIC NOTICE

Locations:	City street light poles in public right-of-way adjacent to: <ul style="list-style-type: none"> • a) 5391 College Ave (PLN18463; APN: 014-1249-001-00) • b) 5491 College Ave (PLN18464; APN: 014-1263-001-00)
Proposal:	To establish two (2) wireless "small cell site" telecommunication facilities on existing 25' tall City street light poles located in the public right-of-way. The project involves installation of one antenna measuring 23.5" long and 7.9" in diameter within shroud at a height of 28'-6", two radio units (7.8" tall, 7.8" wide and 3.93" deep) and a meter box located within shroud mounted at a height of 11'-4" and 17'-6" (PLN18463), and 10' and 19'-0" (PLN18464) above the ground.
Applicant / Phone Number:	Vinculum Services/Justin Giarritta (for AT&T Wireless) (925) 482-8519
Owner:	City of Oakland
Case File Number:	PLN18463 & PLN18464
Planning Permits Required:	Major Conditional Use Permit and Design Review to install a wireless Monopole Telecommunications Facility on an existing City light poles located in the public right-of-way within 100' of the RM-1 Residential Zone.
General Plan:	Neighborhood Center Mixed Use
Zoning:	CN-1 Neighborhood Center Mixed Use
Environmental Determination:	Exempt per Section 15301 of the State CEQA Guidelines, minor additions and alterations to existing city light poles; Section 15303, new construction or conversion of small structures; and Section 15183, projects consistent with a community plan, general plan or zoning.
Historic Status:	Non-historic property
City Council District:	1
Date Filed:	November 11, 2018
Action to be Taken:	Decision based on staff report
Finality of Decision:	Appealable to City Council within 10 days
For Further Information:	Contact Case Planner Jason Madani, Planner III at (510) 238-4790 or by email at jmadani@oaklandca.gov .

Your comments and questions, if any, should be directed to the Bureau of Planning, 250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, California 94612-2031 at or prior to the public hearing to be held on **March 6, 2019**, at Oakland City Hall, Council Chambers, 1 Frank H. Ogawa Plaza, Oakland, California 94612. The public hearing will start at 6:00 p.m.

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

Please note that the description of the application found above is preliminary in nature and that the project and/or such description may change prior to a decision being made. Except where noted, once a decision is reached by the Planning Commission on these cases, they are appealable to the City Council. **Such appeals must be filed within ten (10) calendar days of the date of decision by the Planning Commission and by 4:00 p.m.** An appeal shall be on a form provided by the Bureau of Planning, and submitted to the same at 250 Frank H. Ogawa Plaza, Suite 2114, to the attention of the Case Planner. The appeal shall state specifically wherein it is claimed there was error or abuse of discretion by the City of Oakland or wherein the decision is not supported by substantial evidence and must include payment in accordance with the City of Oakland Master Fee Schedule. Failure to file a timely appeal will preclude you from challenging the City's decision in court. The appeal itself must raise every issue that is contested along with all the arguments and evidence previously entered into the record prior to or at the public hearing mentioned above. Failure to do so will preclude you from raising such issues during the appeal hearing and/or in court.

POSTING DATE: **February 15, 2019**

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

PLEASE CALL ZONING AT (510) 238-3911. FOR BLIGHT NOTICES, PLEASE CALL (510) 238-6402



PROJECT TEAM

APPLICANT:

AT&T
5001 Executive Parkway
San Ramon, Ca 94583

ARCHITECT/ENGINEER:

Rodney Barnes
Meridian Management LLC
785 Oak Grove Road E2
Suite 251
Concord, CA 94518
T 707.592.5924
rodney@meridian.management

ZONING CONTACT

Matt Yergovich
Vinculums Services
575 Lennon Lane
Suite 125
Walnut Creek, CA 94598
T 415.596.3474
myergo@gmail.com

LEASING CONTACT:

Matt Yergovich
Vinculums Services
575 Lennon Lane
Suite 125
Walnut Creek, CA 94598
T 415.596.3474
myergo@gmail.com

CONSTRUCTION MANAGER:

Vinculums Services
575 Lennon Lane
Suite 125
Walnut Creek, CA 94598

GENERAL NOTES

- THIS IS AN UNMANNED TELECOMMUNICATIONS FACILITY FOR THE AT&T WIRELESS NETWORK CONSISTING OF THE INSTALLATION AND OPERATION OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON AN EXISTING METAL LIGHT POLE IN THE PUBLIC RIGHT-OF-WAY. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.
- A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT DRAINAGE, NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.
- CHANGES FROM THE APPROVED PLANS DURING THE COURSE OF CONSTRUCTION SHALL CAUSE CONSTRUCTION TO BE SUSPENDED UNTIL SUCH TIME AS THE PLANS CAN BE AMENDED BY THE DESIGNER AND SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL

CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUCTED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

- CALIFORNIA CODES
- 2016 CALIFORNIA BUILDING CODE
- 2016 CALIFORNIA MECHANICAL CODE
- 2016 CALIFORNIA PLUMBING CODE
- 2016 CALIFORNIA ELECTRIC CODE
- 2016 GREEN BUILDING CODE
- 2016 EDITION OF TITLE 24 ENERGY STANDARDS
- ANY LOCAL BUILDING CODE AMENDMENTS TO THE ABOVE
- CITY / COUNTY ORDINANCES
- CITY OF OAKLAND PUBLIC WORKS DEPARTMENT
- GENERAL ORDER 95 (JUNE 2009 EDITION)

SITE IMAGE



Attachment C

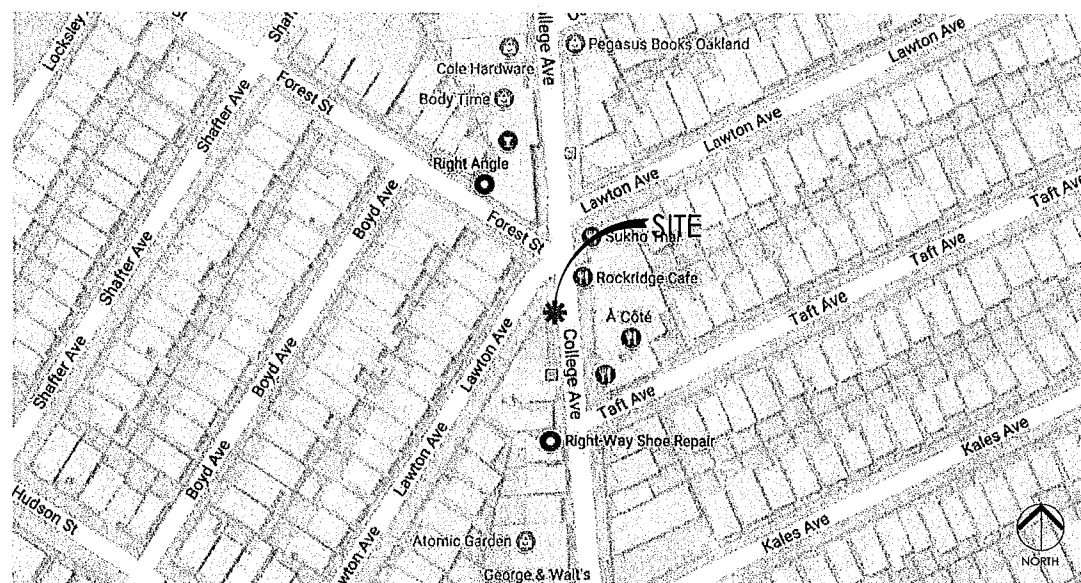


AT&T

5001 EXECUTIVE PARKWAY, SAN RAMON, CA 94583

CRAN-RSFR-SF0K7-014

PAGE ID:
ROW AT 5491 COLLEGE AVE, OAKLAND, CA 94618
COUNTY: ALAMEDA
SITE TYPE: METAL STREET LIGHT POLE
FA:14394424 HUB:20 USID:192913



DRIVING DIRECTIONS

FROM AT&T WIRELESS OFFICE AT 5001 EXECUTIVE PARKWAY, SAN RAMON, CA

- Head north-east on Bishop Dr towards Sunset Dr
- Turn right onto Sunset Dr
- Use the right 2 lanes to turn right onto Ballinger Canyon Rd
- Use the right 2 lanes to merge onto I-680 N via the slip road to Sacramento
- Merge onto I-680 N
- Use the right 2 lanes to take exit 46A for State Route 24 towards Oakland/Lafayette
- Continue onto CA-24 W
- Keep left at the fork to stay on CA-24 W
- Take exit 4A towards College Ave
- Merge onto Miles Ave
- Turn left onto College Ave

INDEX

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A.3	ELEVATIONS
A.4	ELEVATIONS
A.5	EQUIPMENT DETAILS
A.6	EQUIPMENT DETAILS

DRAWING SIGN-OFF



Signature _____ Date _____
 SITE ACQUISITION: _____
 PLANNING: _____
 CONSTRUCTION: _____
 MANAGEMENT: _____



Signature _____ Date _____
 CONSTRUCTION: _____
 REAL ESTATE: _____
 RF ENGINEER: _____
 EQUIPMENT ENGINEER: _____
 MW ENG/TRANSPORT: _____
 OWNER: _____

PROJECT DESCRIPTION

THIS IS AN UNMANNED TELECOMMUNICATIONS FACILITY FOR THE AT&T WIRELESS NETWORK CONSISTING OF THE INSTALLATION AND OPERATION OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON A REPLACEMENT EXISTING SEMI-DECORATIVE METAL LIGHT POLE IN THE PUBLIC RIGHT-OF-WAY.

SCOPE OF WORK & SITE COMPLETION CHECKLIST:

- ANTENNA & ASSOCIATED EQUIPMENT BOXES: INSTALL A NEW TELECOMMUNICATION ANTENNA AND 2 EQUIPMENT BOXES ON AN EXISTING METAL LIGHT POLE
- DURABLE PAINT: ANTENNAS, MOUNTING BRACKETS, CABLING, AND RADIO RELAY UNITS TO BE PAINTED TO MATCH THE EXISTING POLE USING A DURABLE PAINT (E.G. SHERWIN WILLIAMS, FRAZEE, KELLY MOORE, OR EQUIVALENT)
- CABLING: CABLING TO BE INSTALLED IN A TIDY MANNER WITHOUT EXCESS CABLE LOOPS
- LOGO REMOVAL: ALL EQUIPMENT LOGOS, OTHER THAN THOSE REQUIRED BY REGULATION (E.G. NODE IDENTIFICATION), SHALL BE PAINTED OVER OR REMOVED, RAISED/DEPRESSED TEXT ON RRUS OR OTHER EQUIPMENT, IF PRESENT, TO BE SANDED OFF OR SIMILARLY REMOVED AND/OR FILLED
- SIGNAGE: FCC MANDATED RF WARNING SIGNAGE SHALL FACE CLIMBING SPACE, OPTIONAL SIGNAGE SHALL FACE OUT TO STREET WHEN PLACED IN FRONT OF OR NEAR A WINDOW. SIGNAGE SHALL FACE TOWARD BUILDING IF THERE IS NO WINDOW.
- UTILITY LINES: PROPOSED UTILITY LINES BETWEEN EXISTING POINT OF CONNECTION TO BE IN CONDUIT INSIDE POLE

SITE INFORMATION

OWNER: CITY OF OAKLAND
 APPLICANT: AT&T
 5001 EXECUTIVE PARKWAY
 SAN RAMON, CA 94583
 LATITUDE: 37.8421000 (NAD 83)
 LONGITUDE: -122.2516400 (NAD 83)
 GROUND ELEVATION: 166' AMSL
 ADJACENT APN#: (IFO) 14-1263-1
 ZONING JURISDICTION: CITY OF OAKLAND
 CURRENT ZONING: PUBLIC ROW
 PROPOSED USE: UNMANNED TELECOMMUNICATIONS FACILITY

DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS & FIELD 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



AT&T Wireless
5001 Executive Parkway
San Ramon, CA 94583

Client: _____



Project Architect: _____



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

Site Agent: _____

90% Zoning Drawings

Drawing Phase: _____

CRAN-RSFR-SF0K7-014

PAGE ID:
ROW AT 5491 COLLEGE AVE,
OAKLAND, CA 94618
COUNTY: ALAMEDA

Site Name: _____

Professional Seal: _____

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

Rev.	Date	Description
01	09/22/17	Zoning Dwgs 90%
02	10/02/17	Zoning Dwgs 95%

Project No.: _____

Date: 09/22/17 Job No.: _____

Scale: AS SHOWN CAD File: _____

Designed By: JG Checked: RB

TITLE SHEET

Sheet Title: _____

T.1

Sheet No.: _____

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GENERAL CONSTRUCTION NOTES

- PLANS ARE INTENDED TO BE DIAGRAMMATIC OUTLINE ONLY, UNLESS NOTED OTHERWISE. THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE CONTRACTOR SHALL OBTAIN, IN WRITING, AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL CONTACT USA (UNDERGROUND SERVICE ALERT) AT (800) 227-2400, FOR UTILITY LOCATIONS, 48 HOURS BEFORE PROCEEDING WITH ANY EXCAVATION, SITE WORK OR CONSTRUCTION.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE, OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CBC / UBC'S REQUIREMENTS REGARDING EARTHQUAKE RESISTANCE, FOR, BUT NOT LIMITED TO, PIPING, LIGHT FIXTURES, CEILING GRID, INTERIOR PARTITIONS, AND MECHANICAL EQUIPMENT. ALL WORK MUST COMPLY WITH LOCAL EARTHQUAKE CODES AND REGULATIONS.
- REPRESENTATIONS OF TRUE NORTH, OTHER THAN THOSE FOUND ON THE PLOT OF SURVEY DRAWINGS, SHALL NOT BE USED TO IDENTIFY OR ESTABLISH BEARING OF TRUE NORTH AT THE SITE. THE CONTRACTOR SHALL RELY SOLELY ON THE PLOT OF SURVEY DRAWING AND ANY SURVEYOR'S MARKINGS AT THE SITE FOR THE ESTABLISHMENT OF TRUE NORTH, AND SHALL NOTIFY THE ARCHITECT / ENGINEER PRIOR TO PROCEEDING WITH THE WORK IF ANY DISCREPANCY IS FOUND BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND THE TRUE NORTH ORIENTATION AS DEPICTED ON THE CIVIL SURVEY. THE CONTRACTOR SHALL ASSUME SOLE LIABILITY FOR ANY FAILURE TO NOTIFY THE ARCHITECT / ENGINEER.
- THE BUILDING DEPARTMENT ISSUING THE PERMITS SHALL BE NOTIFIED AT LEAST TWO WORKING DAYS PRIOR TO THE COMMENCEMENT OF WORK, OR AS OTHERWISE STIPULATED BY THE CODE ENFORCEMENT OFFICIAL HAVING JURISDICTION.
- DO NOT EXCAVATE OR DISTURB BEYOND THE PROPERTY LINES OR LEASE LINES, UNLESS OTHERWISE NOTED.
- ALL EXISTING UTILITIES, FACILITIES, CONDITIONS, AND THEIR DIMENSIONS SHOWN ON THE PLAN HAVE BEEN PLOTTED FROM AVAILABLE RECORDS. THE ARCHITECT / ENGINEER AND THE OWNER ASSUME NO RESPONSIBILITY WHATSOEVER AS TO THE SUFFICIENCY OR THE ACCURACY OF THE INFORMATION SHOWN ON THE PLANS, OR THE MANNER OF THEIR REMOVAL OR ADJUSTMENT. CONTRACTORS SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL EXISTING UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTORS SHALL ALSO OBTAIN FROM EACH UTILITY COMPANY DETAILED INFORMATION RELATIVE TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTING EXISTING UTILITIES.
- CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES, BOTH HORIZONTAL AND VERTICALLY, PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES OR DOUBTS AS TO THE INTERPRETATION OF PLANS SHOULD BE IMMEDIATELY REPORTED TO THE ARCHITECT / ENGINEER FOR RESOLUTION AND INSTRUCTION. NO FURTHER WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS CHECKED AND CORRECTED BY THE ARCHITECT / ENGINEER. FAILURE TO SECURE SUCH INSTRUCTION MEANS CONTRACTOR WILL HAVE WORKED AT HIS/HER OWN RISK AND EXPENSE.
- ALL PROPOSED AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS TO BE DISTURBED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISH ELEVATIONS PRIOR TO FINAL INSPECTION OF WORK.
- ANY DRAIN AND/OR FIELD TILE ENCOUNTERED / DISTURBED DURING CONSTRUCTION SHALL BE RETURNED TO ITS ORIGINAL CONDITION PRIOR TO COMPLETION OF WORK. SIZE, LOCATION AND TYPE OF ANY UNDERGROUND UTILITIES OR IMPROVEMENTS SHALL BE ACCURATELY NOTED AND PLACED ON "AS-BUILT" DRAWINGS BY GENERAL CONTRACTOR, AND ISSUED TO THE ARCHITECT / ENGINEER AT COMPLETION OF PROJECT.
- ALL TEMPORARY EXCAVATIONS FOR THE INSTALLATION OF FOUNDATIONS, UTILITIES, ETC., SHALL BE PROPERLY LAID BACK OR BRACED IN ACCORDANCE WITH CORRECT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.
- INCLUDE MISC. ITEMS PER AT&T WIRELESS SPECIFICATIONS

GENERAL NOTES FOR EXISTING CELL SITES

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

APPLICABLE CODES, REGULATIONS AND STANDARDS:

- SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION.
- THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
- SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:
 - AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
 - AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION
 - TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-F, STRUCTURAL STANDARD FOR STRUCTURAL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES
 - INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM (IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRICAL EQUIPMENT.
 - IEEE C62.41, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND "HIGH SYSTEM EXPOSURE")
- TIA 607 COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS TELCORDIA GR-63 NETWORK EQUIPMENT-BUILDING SYSTEM (NEB); PHYSICAL PROTECTION TELCORDIA GR-347 CENTRAL OFFICE POWER WIRING TELCORDIA GR-1275 GENERAL INSTALLATION REQUIREMENTS TELCORDIA GR-1503 COAXIAL CABLE CONNECTIONS
- ANY AND ALL OTHER LOCAL & STATE LAWS AND REGULATIONS
- FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE SHALL GOVERN, WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

GENERAL TRENCHING NOTES

- MAINTAIN 40" MINIMUM COVER FOR ALL ELECTRICAL CONDUITS.
- MAINTAIN 30" MINIMUM COVER FOR ALL TELECOMMUNICATIONS CONDUITS.
- MINIMUM 1" SAND SHADING BELOW CONDUITS, AND 4" COVERING ON TOP OF CONDUITS REQUIRED.
- ALL ELECTRICAL CONDUITS FROM POWER COMPANY FROM ANY POLE, TRANSFORMER OR OTHER LOCATIONS WILL BE SLURRY BACKFILLED.
- IN STREET SLURRY TO GRADE AND MILL DOWN 1-1/2" FOR AC CAP.
- IN DIRT SLURRY 18" FROM GRADE AND FILL 95% COMPACTION NATIVE SOIL FOR BALANCE
- WARNING TAPE TO BE PLACED IN TRENCH 12" ABOVE ALL CONDUITS AND #18 WARNING TAPE ABOVE RING.

GENERAL GROUNDING NOTES

- 5/8" x 8" ROD, CAD WELD BELOW GRADE
- GROUND TESTED AT 5 OHMS OR LESS.
- #5 GROUND AND BOND WIRE.
- GROUNDS 3' FROM POLE.
- PLACE 3 #10 GA WIRES FROM TESCO BREAKER TO P8MD OR STRONG BOX.
- WOOD MOLDING, STAPLED EVERY 3" AND AT EACH END.

GENERAL CONDUIT NOTES

- ALL CONDUITS WILL BE MANDRELED AND EQUIPPED WITH 3/8" FULL ROPE.
- SCHEDULE 40 CONDUIT FOR UNDERGROUND USE.
- SCHEDULE 80 CONDUIT FOR RISER USE.
- 2" GALVANIZED STEEL CONDUIT FOR ANY CONDUIT UNDER 3', STUB UP 10" THEN CONVERT TO SCHEDULE 80.
- CONVERT 4" CONDUIT TO 3" AT BASE OF POLE.
- CONTRACTOR TO STUB UP POLE 10" w/ 3" POWER CONDUIT. POWER COMPANY TO CONVERT FROM 3" STUB SCHEDULE 80 TO 2"
- INSTALL STEPS PER PG&E REQUIREMENTS

TYPICAL R.O.W. POLE CONSTRUCTION NOTES

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

GENERAL NOTES

	PROPOSED ANTENNA		GROUT OR PLASTER		TELCO RUN		5/8" x 10"-0" CU. GND ROD IN TEST WELL 30" MIN. BELOW GRADE.
	EXISTING ANTENNA		(E) BRICK		POWER/TELCO RUN		CHEMICAL GROUND ROD (XIT GROUND ROD)
	GROUND ROD		(E) MASONRY		GROUNDING CONDUCTOR		CADWELD CONNECTION
	GROUND BUS BAR		CONCRETE		GROUNDING CONDUCTOR		MECHANICAL CONNECTION
	MECHANICAL GRND. CONN.		EARTH		GROUNDING CONDUCTOR		HALO GROUND CONNECTION
	GROUND ACCESS WELL		GRAVEL		CONDUIT UNDERGROUND		CIRCUIT BREAKER
	ELECTRIC BOX		PLYWOOD		FUSE, SIZE AND TYPE AS INDICATED.		UTILITY METER BASE
	TELEPHONE BOX		WOOD CONT.		SAFETY SWITCH, 2P-240V-40A, W/60A FUSES, NEMA 3R ENCLOSURE, SQ D CATALOG NO. W222NR8		TRANSFORMER
	LIGHT POLE		WOOD BLOCKING		MANUAL TRANSFER SWITCH, 2P-240V-200A, NO FUSE, NEMA 3R ENCLOSURE		STEPDOWN TRANSFORMER
	FHD. MONUMENT		STEEL		LIGHTING FIXTURE, FLUORESCENT, 10.94' x 4'-0", 2/40W, SURFACE MOUNTING TYPE, HUBBELL LIGHTING CATALOG #W5W232T		RECEPTACLE, 2P-3W-125V-15A, DUPLEX, GROUND TYPE, HUBBELL CATALOG #5362
	SPOT ELEVATION		CENTERLINE		LIGHTING FIXTURE, FLUORESCENT, 10.94' x 8'-0", 2/95W, SURFACE MOUNTING TYPE, HUBBELL LIGHTING CATALOG #TWSM232T		TOGGLE SWITCH, 1P-125V-15A, HUBBELL CATALOG #HBL 1201CN
	SET POINT		PROPERTY/LEASE LINE		LIGHTING FIXTURE, HIGH PRESSURE SODIUM, 1/70W, WALL MOUNTING TYPE, HUBBELL LIGHTING CATALOG #NRG-307 OR 1/50W, HUBBELL LIGHTING CATALOG #NRG-121		TOGGLE SWITCH, 1P-120V-15A, "WP"
	REVISION		WORK POINT		EXIT SIGN, THERMOPLASTIC LED, SINGLE FACE, UNIVERSAL MOUNTING, W/BATTERY PACK, HUBBELL LIGHTING CATALOG #FRB		IONIZATION SMOKE DETECTOR W/ALARM HORN & AUXILIARY CONTACT, 120 VAC, GENEX PART NO. 7100F
	GRID REFERENCE		GROUND CONDUCTOR		LIGHTING FIXTURE, INCANDESCENT, 1/100W, WALL MOUNTING TYPE, HUBBELL LIGHTING CATALOG #BRH-100-06-1		POLE
	DETAIL REFERENCE		COAXIAL CABLE		LIGHTING FIXTURE, HALOGEN, QUARTZ, 1/300W, HUBBELL LIGHTING CATALOG #QL-505		(E) POLE MOUNTED XFMR
	ELEVATION REFERENCE		OVERHEAD SERVICE CONDUCTORS		LIGHTING FIXTURE, 1/175W, METAL HALIDE, HUBBELL CAT #MC-0175H-336		PROPOSED PAD MOUNTED XFMR
	SECTION REFERENCE		CHAIN LINK FENCING		LIGHTING FIXTURE, 1/175W, METAL HALIDE, HUBBELL CAT #MC-0175H-336		(E) PAD MOUNTED XFMR
			OVERHEAD ELEPHONE/OVERHEAD POWER				
			OVERHEAD TELEPHONE LINE				
			OVERHEAD POWER LINE				
			POWER RUN				

LEGEND

ABBREVIATIONS

A	AMPERE	HT.	HEIGHT
A.B.	ANCHOR BOLT	ICGB.	ISOLATED COPPER GROUND BUS
ABV.	ABOVE	INT.	INTERIOR
ACCA	ANTENNA CABLE COVER ASSEMBLY	LB.(#)	POUND(S)
ADOL.	ADDITIONAL	LAC	LAC BOLTS
A.F.F.	ABOVE FINISHED FLOOR	LF.	LINEAR FEET (FOOT)
A.F.O.	ABOVE FINISHED GRADE	LG.	LENGTH
AC	AMPERE INTERRUPTING CAPACITY	LONG.	LONGITUDINAL
ALUM.	ALUMINUM	LS	LOW PRESSURE SODIUM
ALT.	ALTERNATE	UPS	UNPLUGGED
ANT.	ANTENNA	MAS.	MASONRY
APPROX.	APPROXIMATELY	MAX.	MAXIMUM
ARCH.	ARCHITECT(URAL)	M.B.	MACHINE BOLT
AT.	AMPERE TRIP	MECH.	MECHANICAL
AWG.	AMERICAN WIRE GAUGE	MFR.	MANUFACTURER
BATT.	BATTERY	MIN.	MINIMUM
BD.	BOARD	MISC.	MISCELLANEOUS
BLDG.	BUILDING	MLU	MAN UGHS ONLY
BLK.	BLOCK	MTD.	MOUNTED
BK.G.	BLOCKING	MTG.	MOUNTING
BM.	BEAM	MTL.	METAL
B.N.	BOUNDARY NAILING	MTS.	MANUAL TRANSFER SWITCH
BR.	BRANCH	N	NEUTRAL
BRKR.	BREAKER	PROPOSED	PROPOSED
BTCV.	BARE TINNED COPPER WIRE	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
BTS.	BASE TRANSMISSION SYSTEM	NO.(#)	NUMBER
B.O.F.	BOTTOM OF FOOTING	N.T.S.	NOT TO SCALE
B/U	BACK-UP CABINET	OH	OVERHEAD
C	CONDUIT	O.C.	ON CENTER
CAB.	CABINET	OPNG.	OPENING
CANT.	CANTILEVER(ED)	P	POLE
CB.	CIRCUIT BREAKER	P/C	PRECAST CONCRETE
C.I.P.	CAST IN PLACE	PCS	PERSONAL COMMUNICATION SERVICES
CIT.	CIRCUIT	PH	PHASE
CLG.	CEILING	PLY.	PLYWOOD
CLR.	CLEAR	PNBD	PANELBOARD
COL.	COLUMN	PPC	POWER PROTECTION CABINET
CONC.	CONCRETE	PRC	PRIMARY RADIO CABINET
CONN.	CONNECTION(OR)	PRI	PRIMARY
CONSTR.	CONSTRUCTION	P.S.F.	POUNDS PER SQUARE FOOT
CONT.	CONTINUOUS	P.S.I.	POUNDS PER SQUARE INCH
d	PENNY (NAILS)	P.T.	PRESSURE TREATED
DBL.	DOUBLE	PWR.	POWER (CABINET)
DEM.	DEMAND	QTY.	QUANTITY
DEPT.	DEPARTMENT	RAD.(R)	RADIUS
D.F.S.	DOUBLE FIRE	RFT.	RECEPTACLE
DIA.	DIAMETER	REF.	REFERENCE
DIAG.	DIAGONAL	REF.	REFERENCE
DM.	DIMENSION	RENF.	REINFORCEMENT(ING)
DWG.	DRAWING(S)	REQD.	REQUIRED
DWL.	DOWNEL(S)	RGS.	RIGID GALVANIZED STEEL
EGR.	ELEVATION	SAF	SAFETY
ELEV.	ELEVATION	SCH.	SCHEDULE
ENG.	ENGINEER	SDBC	SOFT DRAWN BARE COPPER
EN.	EDGE NAIL	SEC	SECONDARY
ENCL.	ENCLOSURE	SHT.	SHEET
EQ.	EQUAL	SIM.	SIMILAR
EQ.	EQUAL	S.N.	SOLID NEUTRAL
EXIST.(E)	EXISTING	SPEC.	SPECIFICATION(S)
EXP.	EXPANSION	STD.	STANDARD
EXT.	EXTERIOR	STL.	STEEL
FAB.	FABRICATION(OR)	STRUC.	STRUCTURAL
FAC.	FACE	SURF.	SURFACE
F.A.	FIRE ALARM	SW	SWITCH
F.F.	FINISH FLOOR	TEL.	TELEPHONE
F.G.	FINISH GRADE	TEMP.	TEMPORARY
FN.	FINISH(ED)	THK.(NESS)	THICK(NESS)
FNR.	FLUORESCENT	T.N.	TOP OF ANTENNA
FLUR.	FLUORESCENT	T.O.A.	TOP OF ANTENNA
FDN.	FOUNDATION	T.O.C.	TOP OF CURB
F.O.C.	FACE OF CONCRETE	T.O.F.	TOP OF FOUNDATION
F.O.M.	FACE OF MASONRY	T.O.P.	TOP OF PLATE (PARAPET)
F.O.S.	FACE OF STUD	T.O.S.	TOP OF STEEL
F.O.W.	FACE OF WALL	T.O.W.	TOP OF WALL
F.S.	FINISH SURF	TYP.	TYPICAL
FT.(J)	FOOT (FEET)	UG.	UNDER GROUND
FTG.	FOOTING	UL.	UNDERWRITERS LABORATORY INC.
FUSE	FUSE	UNL.	UNLESS NOTED OTHERWISE
F.U.	FUSE	VAC	VACUUM
G	GROUND	V.I.F.	VERIFY IN FIELD
GR	GROUND (CABINET)	WATT	WATT OR WIRE
GA.	GAUGE	WD	WIDTH
GEN.	GENERATOR	W/O	WITHOUT
G.L.	GALVANIZED	WD.	WOOD
G.F.C.I.	GROUND FAULT CIRCUIT INTERRUPTER	W.P.	WEATHERPROOF
G.L.B.	GLUE LAMINATED BEAM	WT.	WEIGHT
GND	GROUND	WT.	WEIGHT
GPS	GLOBAL POSITIONING SYSTEM	XFR	TRANSFER
GRND.	GROUND	XFMR	TRANSFORMER
HDBC	HARD DRAWN COPPER WIRE	X/PE	CROSS-LINK POLYETHYLENE
HDR.	HEADER	C	CENTERLINE
HGR.	HANGER	E	PLATE, PROPERTY LINE
HPS	HIGH PRESSURE SODIUM		

LEGEND

ABBREVIATIONS



AT&T Wireless
5001 Executive Parkway
San Ramon, CA 94583

Client:



Project Architect:



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

Site Agent:

90% Zoning Drawings

Drawing Phase:

CRAN-RSFR-SF0K7-014
PACE ID:
ROW AT 5491 COLLEGE AVE,
OAKLAND, CA 94618
COUNTY: ALAMEDA

Site Name:

Professional Seal:

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Rev.	Date	Description
01	09/22/17	Zoning Dwgs 90%
02	10/02/17	Zoning Dwgs 95%

Project No.:

Date: 09/22/17 Job No.:

Scale: AS SHOWN CAD File:

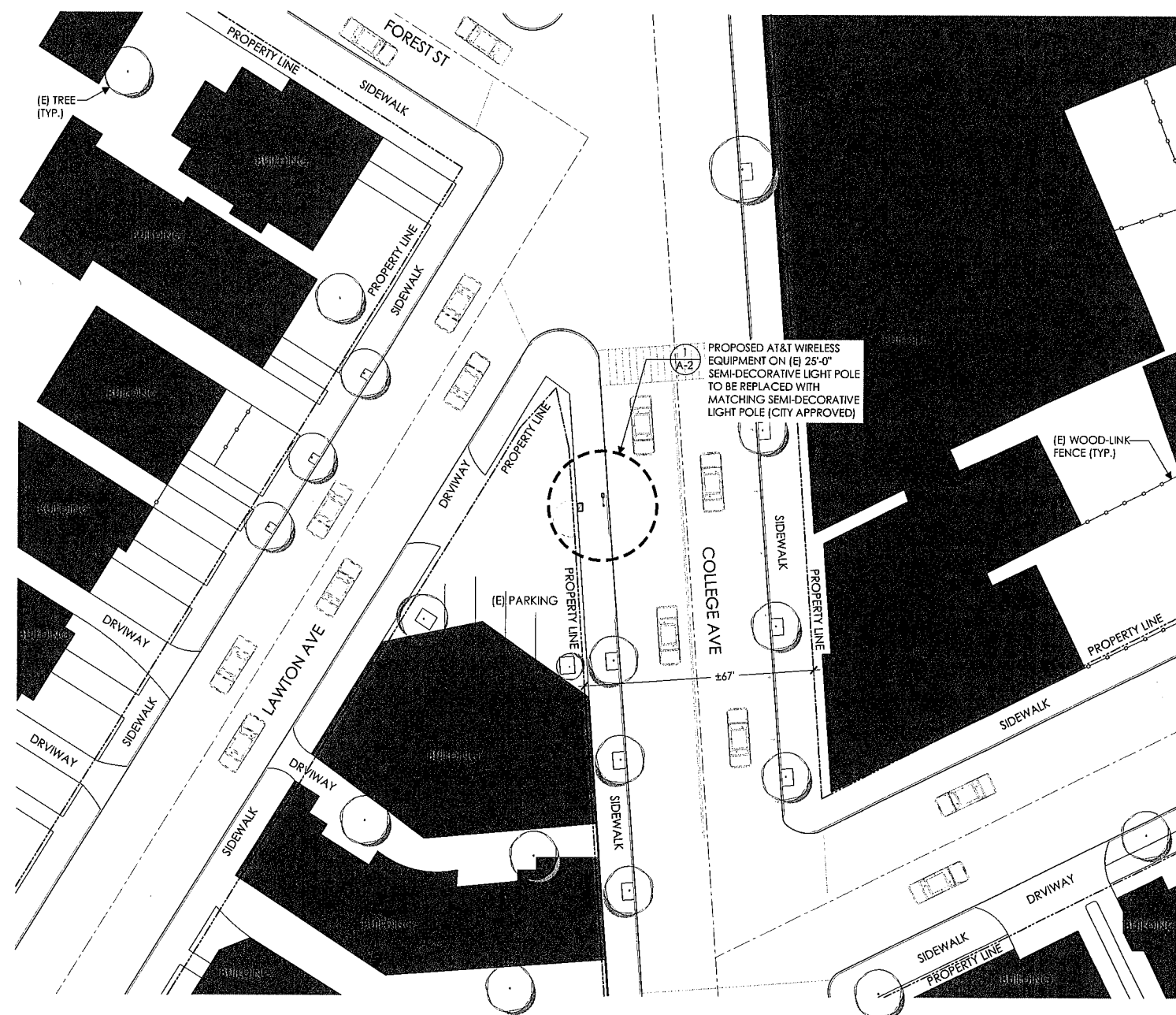
Designed By: JG Checked: RB

GENERAL NOTES
LEGEND
ABBREVIATIONS

Sheet Title:

T.2

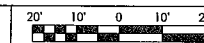
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NOTE:
THIS SITE PLAN WAS GENERATED WITHOUT THE USE OF A SURVEY. PROPERTY LINES, RIGHT-OF-WAYS, POWER & TELCO UTILITY POINT CONNECTIONS/ROUTES AND EASEMENTS SHOWN ON THESE PLANS ARE ESTIMATED. ALL ITEMS AND DIMENSIONS SHOULD BE VERIFIED IN THE FIELD.

UNDERGROUND UTILITIES NOTE:
THE LOCATIONS AND EXISTENCE OF ANY UNDERGROUND PIPES, STRUCTURES, OR CONDUITS SHOWN ON THIS PLAN WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. THERE MAY BE EXISTING UTILITIES OTHER THAN THOSE SHOWN ON THIS PLAN. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT SHOWN ON THIS PLAN.

OVERALL SITE PLAN



SCALE
1" = 20'

1



AT&T Wireless
5001 Executive Parkway
San Ramon, CA 94583

Client:



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Site Agent:

90% Zoning Drawings

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OVERALL SITE PLAN

Sheet Title:

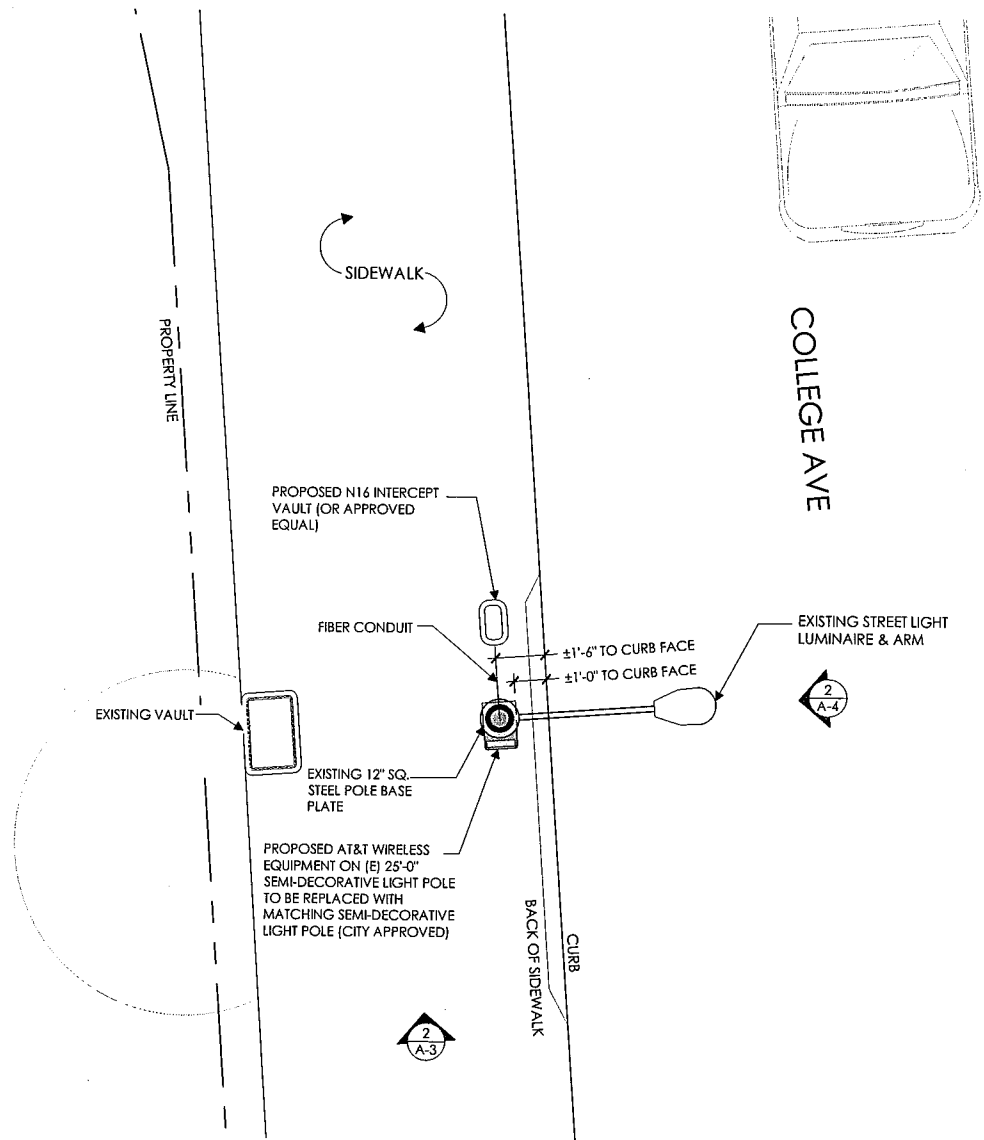
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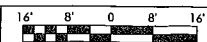
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NOTES:

1. DURABLE PAINT: ANTENNAS, MOUNTING BRACKETS, CABLING, AND RADIO RELAY UNITS TO BE PAINTED TO MATCH THE EXISTING POLE USING A DURABLE PAINT (E.G. SHERWIN WILLIAMS, FRAZEE, KELLY MOORE, OR EQUIVALENT)
2. CABLING: CABLING TO BE INSTALLED IN A TIDY MANNER WITHOUT EXCESS CABLE LOOPS. ALL CABLING TO GROUND-MOUNTED BOXES AND ANTENNAS TO BE INSTALLED INSIDE POLE
3. LOGO REMOVAL: ALL EQUIPMENT LOGOS, OTHER THAN THOSE REQUIRED BY REGULATION (E.G. NODE IDENTIFICATION), SHALL BE PAINTED OVER OR REMOVED, RAISED/DEPRESSED TEXT ON RRUS OR OTHER EQUIPMENT, IF PRESENT, TO BE SANDED OFF OR SIMILARLY REMOVED AND/OR FILLED
4. SIGNAGE: FCC MANDATED RF WARNING SIGNAGE SHALL FACE CLIMBING SPACE, OPTIONAL SIGNAGE SHALL FACE OUT TO STREET WHEN PLACED IN FRONT OF OR NEAR A WINDOW. SIGNAGE SHALL FACE TOWARD BUILDING IF THERE IS NO WINDOW.



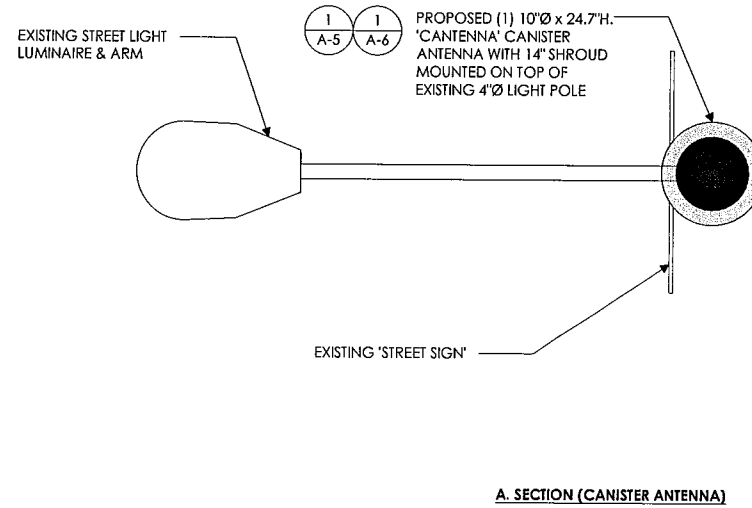
POLE PLAN ENLARGEMENT



SCALE
3/8" = 1'-0"

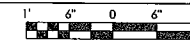
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EQUIPMENT ENLARGEMENT PLAN



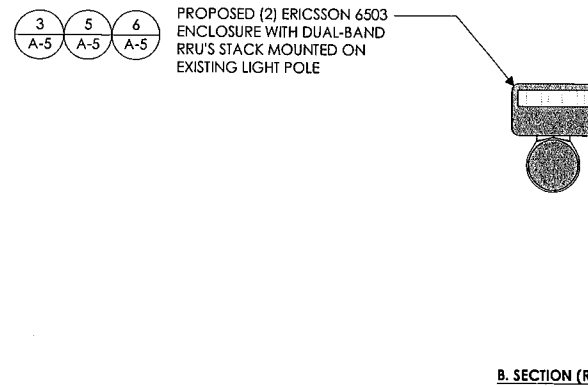
A. SECTION (CANISTER ANTENNA)

ANTENNA ENLARGEMENT PLAN



SCALE
1" = 1'-0"

2



B. SECTION (RRUS)



SCALE
1" = 1'-0"

3



AT&T Wireless
5001 Executive Parkway
San Ramon, CA 94583

Client:



Project Architect:



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

Site Agent:

90% Zoning Drawings

(E) LIGHT POLE
Drawing Phase:

CRAN-RSFR-SF0K7-014
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POLE PLAN
EQUIPMENT
ENLARGEMENTS

Sheet Title:

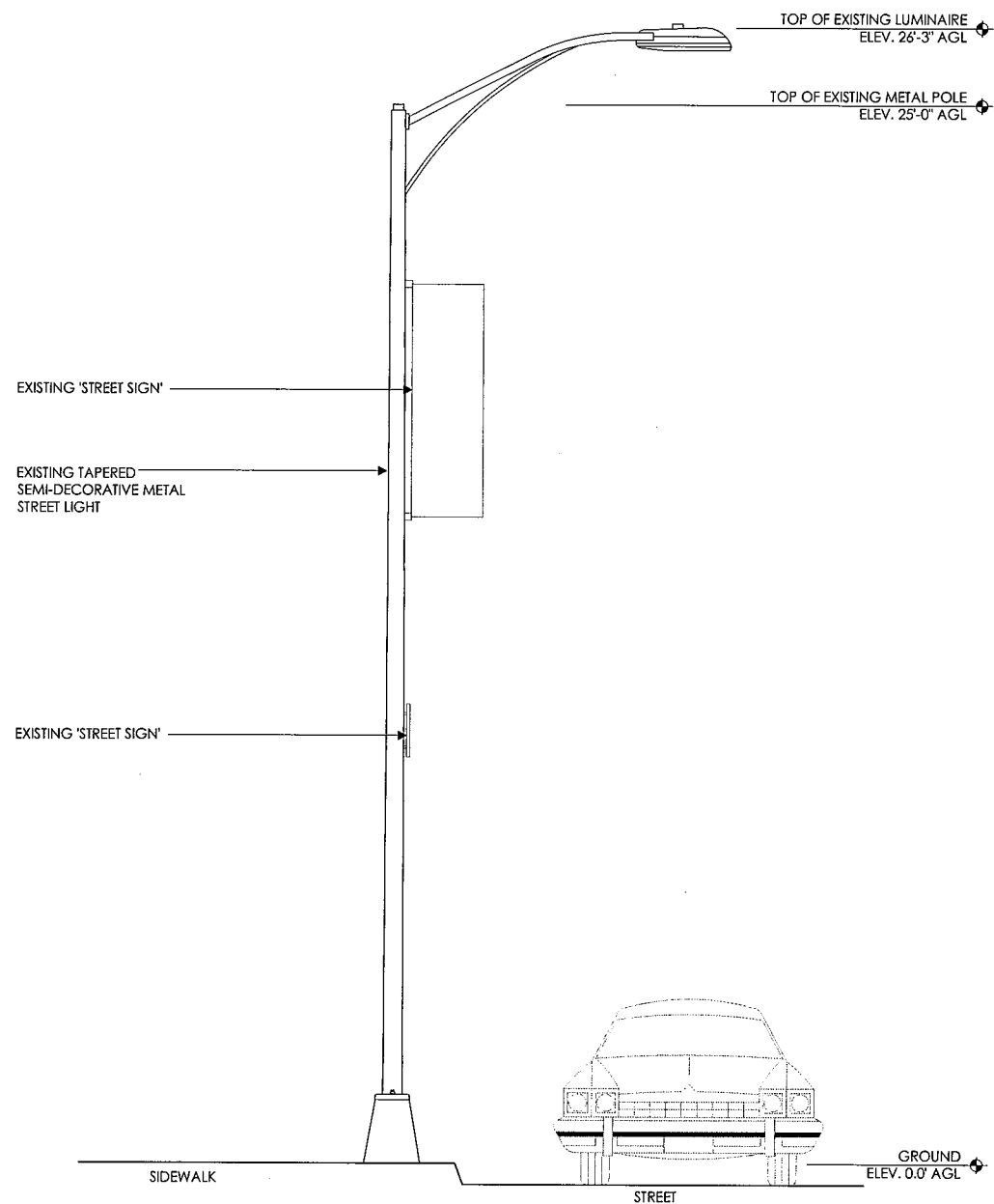
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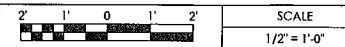
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SCALE NOTE:

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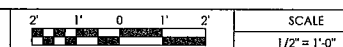
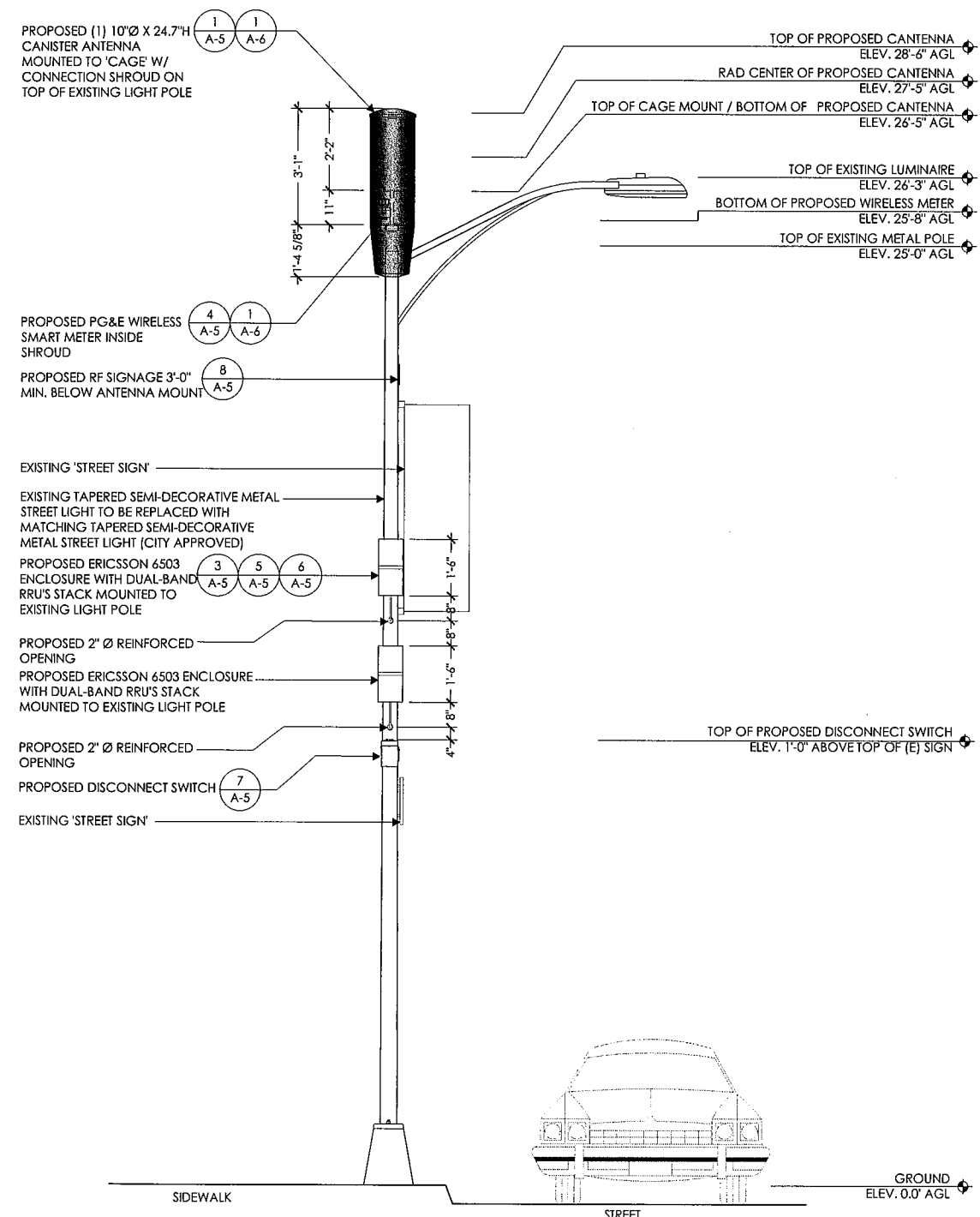


SOUTH ELEVATION - EXISTING



1

SOUTH ELEVATION - PROPOSED



2



AT&T Wireless
5001 Executive Parkway
San Ramon, CA 94583

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Site Agent:

90% Zoning Drawings

Drawing Phase:

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ELEVATIONS

Sheet Title:

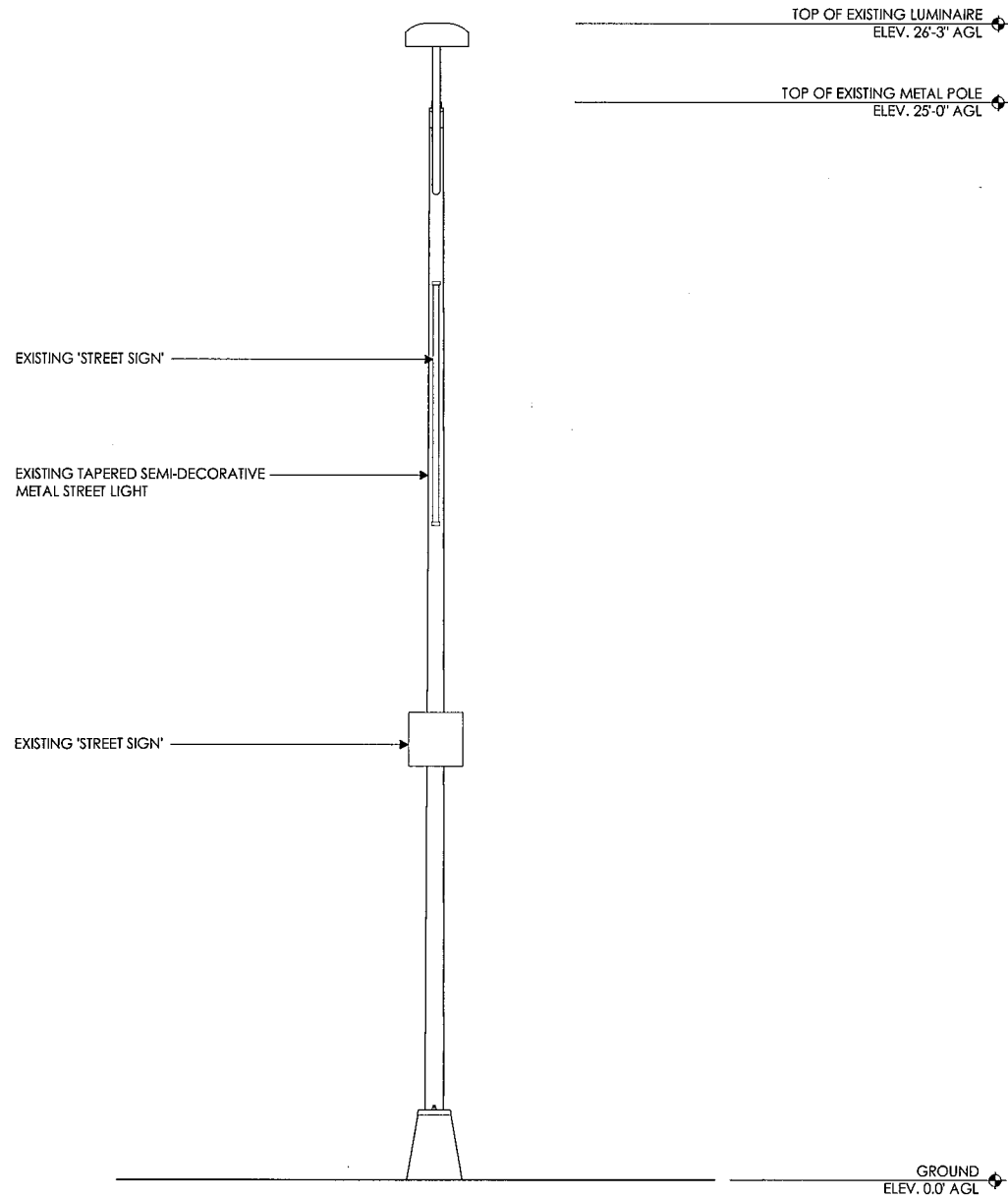
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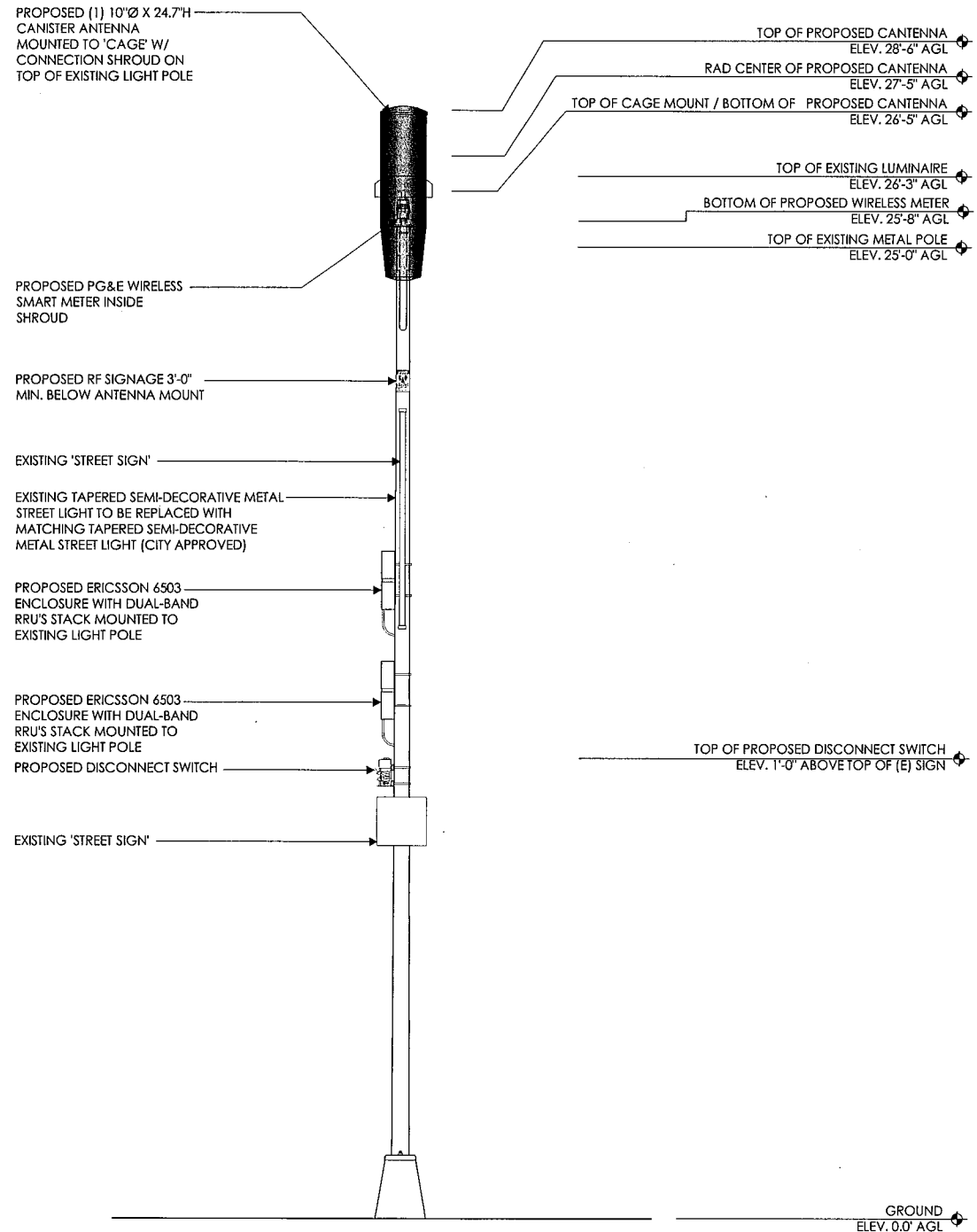
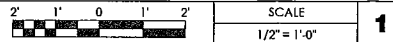
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SCALE NOTE:

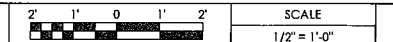
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EAST ELEVATION - EXISTING



EAST ELEVATION - PROPOSED



AT&T Wireless
5001 Executive Parkway
San Ramon, CA 94583

Client:



Project Architect:



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

Site Agent:

90% Zoning Drawings

Drawing Phase:

CRAN-RSFR-SFOK7-014

FACE ID:
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COUNTY: ALAMEDA

Site Name:

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Project No.:

Date: 09/22/17 Job No.:

Scale: AS SHOWN CAD File:

Designed By: JG Checked: RB

ELEVATIONS

Sheet Title:

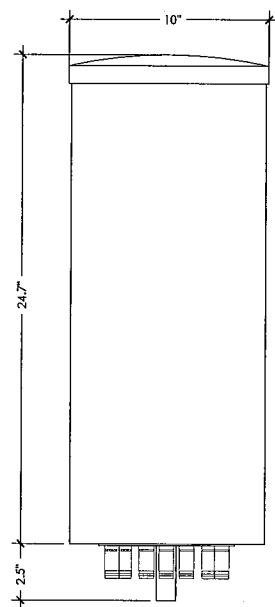
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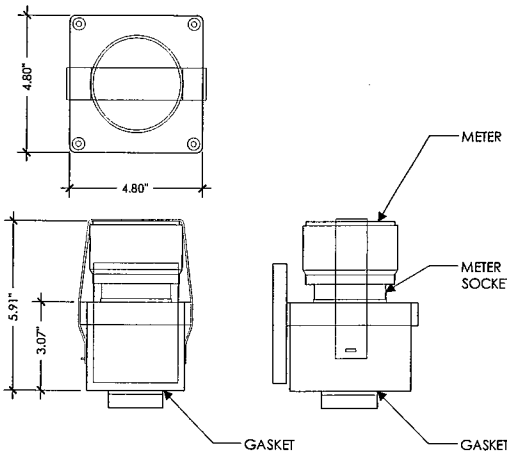
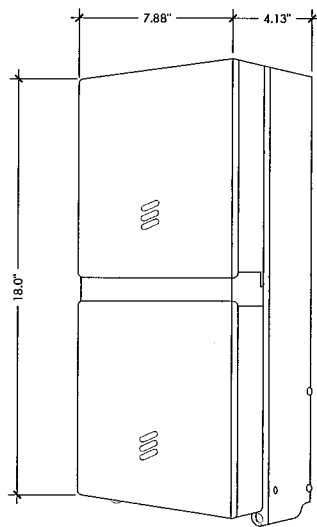
AT&T CANISTER ANTENNA 'CAN-TENNA'

ANTENNA COLOR: LIGHT GRAY
 DIMENSIONS: 10.0"Ø x 24.7" TALL
 NET WEIGHT: 19.0 LBS



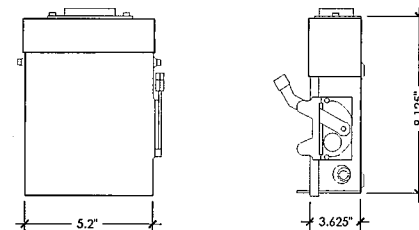
ERICSSON 6503

SINGLE BAND 2203: 2 TX / 2 RX (AWS OR PCS)
 DUAL BAND RRU (2 - 2203'S): 4 TX / 4 RX (AWS OR PCS)
 MAXIMUM POWER CONSUMPTION: <100W PER 2203 RADIO-±95W PER SINGLE-BAND 2203 RADIO ±190W PER DUAL-BAND 2203 RRU
 MAX FUSE RATING: 32A
 WIRE SIZE: #10 CU OR #8 ALU



MURRAY LW002GRU SPECIFICATIONS

LOAD CENTER DEPTH: 3.625"
 LOAD CENTER WIDTH: 5.2"
 LOAD CENTER HEIGHT: 8.125"
 WEIGHT: 4.55 LB
 LOAD CENTER TYPE: MAIN LUG
 MOUNTING TYPE: PLUG IN
 NUMBER OF PHASES: 1
 NUMBER OF SPACES: 2
 VOLTAGE (VOLTS): 120/240
 INDOOR/OUTDOOR: OUTDOOR
 ELECTRICAL PRODUCT TYPE: LOAD CENTER



NOTICE

Radio frequency fields beyond this point may exceed the FCC general public exposure limit. Obey all posted signs and site guidelines for working in radio frequency environments.

In accordance with Federal Communications Commission rules on radio frequency emissions 47 CFR 1.1307(b)

ANTENNA DETAIL

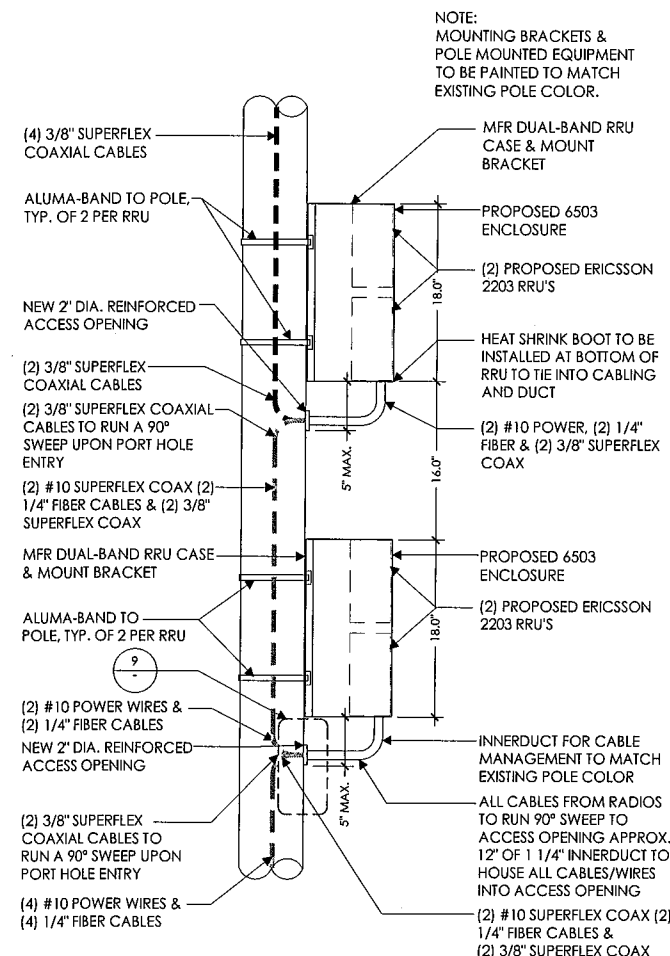
1 6503 RRU ENCLOSURE

3 PG&E WIRELESS SMART METER

4 DISCONNECT SWITCH

7 NOTICE SIGNAGE

8



Technical Specifications Radio 2203

FREQUENCY BANDS
 Bands: 3GPP Bands B1 (W/L), B3 (L), B3C (W/L), B8 (W/L), B66A (W/L, B5 (W/L), B2/B25 (W/L), B12 (L), B13 (L) and B7 (L)

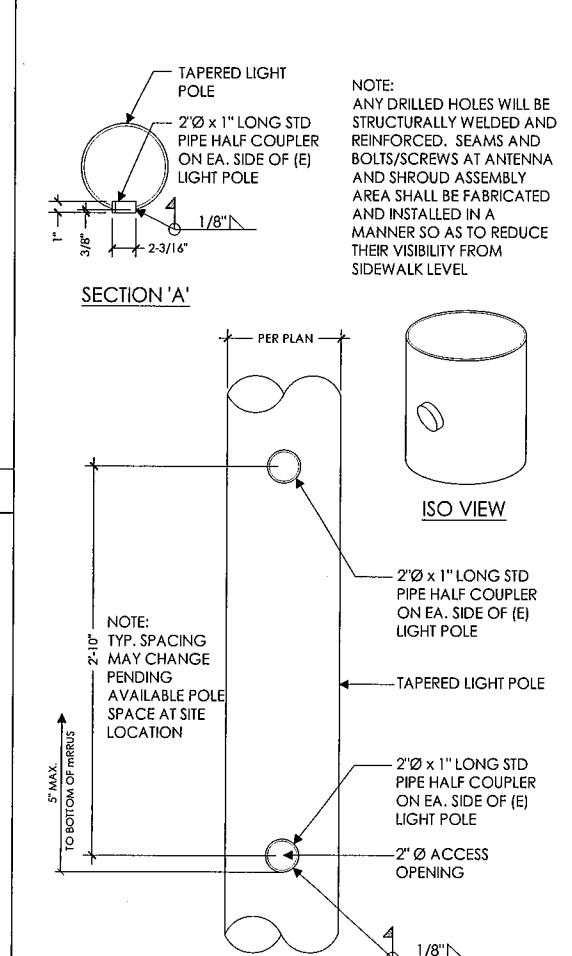
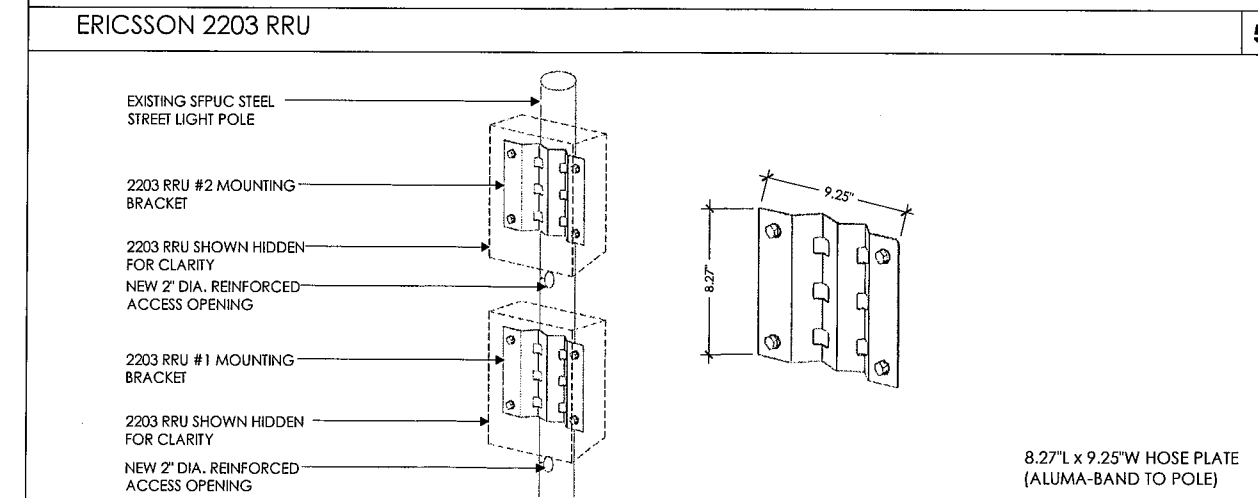
HW CAPACITY
 Carrier capacity WCDMA: Up to 4 carriers
 Carrier capacity LTE: Up to 40 MHz
 ISM: B1, B3 and B66A 45 MHz, B2/B25 and B7 40 MHz, B3C, B8, B5, B12 and B13 Full band
 MIMO: Yes, 2T/2R
 Output power: Up to 2 x 5 W

INTERFACE SPECIFICATIONS
 Antenna Ports: 2 x 4.3-10 (R)
 CPRI: 2 x 2.5/5/10 Gbps (exchangeable SFP modules)
 Optical indicators: 6
 External alarms: 2
 Field ground: 1

MECHANICAL SPECIFICATIONS
 W x H x D: 200 mm x 200 mm x 100 mm, including mounting bracket and aesthetic front cover
 Weight: < 4.5 kg
 Volume: 4 l
 Mounting: Wall and pole mount

ELECTRICAL SPECIFICATIONS
 Power Supply: -48 VDC or 100-250 VAC

ENVIRONMENTAL SPECIFICATIONS
 Normal operating temp.: -40 °C to +55 °C (cold start at -40 °C)
 Relative Humidity: 5 - 100%
 Environment: Outdoor class with IP65



DUAL BAND RRU MOUNT

2 6503 RRU-POLE MOUNTING DETAILS

6 VERTICAL ACCESS PORT

9



AT&T Wireless
 5001 Executive Parkway
 San Ramon, CA 94583

Client:

Meridian Management LLC
 785 Oak Grove Road E2
 Suite 251
 Concord, CA 94518
 1 707 592 5924
 www.meridian.management

Project Architect:

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

Site Agent:

90% Zoning Drawings

Drawing Phase:

CRAN-RSFR-SF0K7-014
 PAGE ID:
 ROW AT 5491 COLLEGE AVE,
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 COUNTY: ALAMEDA

Site Name:

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Project No.:
 Date: 09/22/17 Job No.:
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 Designed By: JG Checked: RB

EQUIPMENT DETAILS

Sheet Title:

A.5

Sheet No.:

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AT&T Wireless
5001 Executive Parkway
San Ramon, CA 94583

Client:



Project Architect:



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

Site Agent:

90% Zoning Drawings

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EQUIPMENT
DETAILS

Sheet Title:

A.6

Sheet No.:

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CONSTRUCTION SEQUENCE:

- REMOVE IEI POLE TOP CAP.
- VERIFY IEI POLE TOP DIAMETER.
- ENSURE IEI POLE IS PLUMB & LEVEL. FIELD TRIM IF REQ'D.
- DRILL 1/2" DIA. HOLE 3/4" DOWN FROM TOP OF POLE.
- COAT EXPOSED STEEL OF POLE WITH COLD GALV. COMPOUND CONTAINING AN MIN. 1% ZINC CONTENT OF 95%.
- APPLY A FINAL COAT OF PAINT TO MATCH IEI SURFACES IF NECESSARY.
- INSTALL ITEMS #1-4 W/HARDWARE.
- FIELD TRIM IF REQ'D & INSTALL ITEMS #17, 18 & 19.
- COAT EXPOSED STEEL OF SKIRT WITH COLD GALV. COMPOUND CONTAINING AN MIN. 1% ZINC CONTENT OF 95%.
- APPLY A FINAL COAT OF PAINT TO MATCH IEI SURFACES IF NECESSARY.

ITEM #	PART #	DESCRIPTION	QTY.	LAST (MT, lbs)
CLAMP-ON BRACKET PARTS / HARDWARE				
1	WA-943	3/8" x 13 7/8" O.D. A36, TOP CAP W/DWNT	1	14
2	WA-1413	3/8" x 1-1/2" O.D. A36, TOP MOUNT W/DWNT	1	12.8
3	PL-1655	1/4" x 1 5/8" x 2 1/8" A36, PLATE	3	0.2
4	PL-1879	1/4" x 3/8" x 5" A36, ANTENNA ADAPTER	1	0.6
5	70429	5/8" x 1 1/2" COUNTERSUNK SKT HD SCREW, S.S.	3	0.01
6	43610	3/8" LOCK WASHER, S.S.	3	0.01
7	58006	5/8" HEAVY HEX NUT, S.S.	3	0.03
8	40027	1/2" x 1 1/8" O.D. x 12" S.S. FLAT WASHER	4	0.02
9	43020	1/2" S.S. LOCK WASHER	7	0.01
10	44005	1/2" FLAT WASHER, NYLON	3	0.01
11	53005	1/2" S.S. JAM NUT	6	0.04
12	71012F	1/2" x 1 3/4" S.S. FULLY THD'D BOLT	3	0.1
13	71022F	1/2" x 3" S.S. FULLY THD'D BOLT	2	0.2
14	71051F	1/2" x 3 1/2" S.S. FULLY THD'D BOLT	2	0.2
15	71053F	1/2" x 4" S.S. FULLY THD'D BOLT	2	0.3
16	80333	1/2" x 8" S.S. THREADED ROD	1	0.3
SHROUD ASSEMBLY & COVER PLATE PARTS / HARDWARE				
17	WA-920	14" O.D. x 18" W x 2-1/2" H FIBERGLASS SHROUD ASSEMBLY	1	20.7
18	WA-1174	16GA. x 14 1/4" TD x 4 1/4" EC x 15 8/16" A369, SKIRT	1	7.9
19	WA-1175	16GA. x 14 1/4" TD x 4 1/4" EC x 15 8/16" A369, SKIRT	1	7.9
20	209-4	11GA. x 1 1/2" x 2 1/8" A36, FORMED PLATE	4	0.1
21	55510	5/8-18 SPEED NUT	3	0.04
22	70959	1/4" x 3/4" SS, CNTR. SLK SKT HD SCREW	8	0.01
23	55520	1/4-20 U-STY. E SPEED NUT	8	0.02
24	70422	5/8" x 1 1/4" S.S. COUNTERSUNK SKT HD SCREW	6	0.01
			TOTAL GALV. WT:	70

ELEVATION VIEW

POLE DIA RANGE

ITEM #	DESCRIPTION
15	1/2" x 4" BOLT
14	1/2" x 3 1/2" BOLT
13	1/2" x 3" BOLT

SECTION A-A
(SHOWN ON A 4" O.D. POLE)

DRILL 7/8" DIA HOLE

ENSURE THAT TOP OF POLE IS PLUMB

2 1/4" MIN. CLEARANCE

1/2" OR (M) LIGHT ARM

SECTION B-B
(SHOWN ON A 4" O.D. POLE)

DRILL 7/8" DIA HOLE

ENSURE THAT TOP OF POLE IS PLUMB

2 1/4" MIN. CLEARANCE

1/2" OR (M) LIGHT ARM

CLAMP-ON BRACKET
(ANTENNA NOT SHOWN FOR CLARITY)

(1) LOCATION ALL POLES

SHROUD ASSEMBLY

NOTE
IF IEI OR (M) POLE HAS A LIGHT ARM, SHROUD HALVES MUST BE FIELD CUT.

PROJ.	QTY.	CHG.	CHK.
17-0425	1	SG	AM

WESTERN
UTILITY & TELECOM, INC.

5832 SALEM DALLAS HWY
SALEM, OR 97304
PH: 503-587-2101 FAX: 503-318-1884
WesternUtility.com

"FAT BOY" TOP MOUNT W/ SKIRT
FOR 4" TO 7" O.D. POLES
FOR EXTENT P6480 ANTENNAS

Existing



AT&T Wireless

CRAN-RSFR-SF0K7-014
ROW at 5491 College Avenue, Oakland, CA
Photosims Produced on 9-25-2017

Proposed

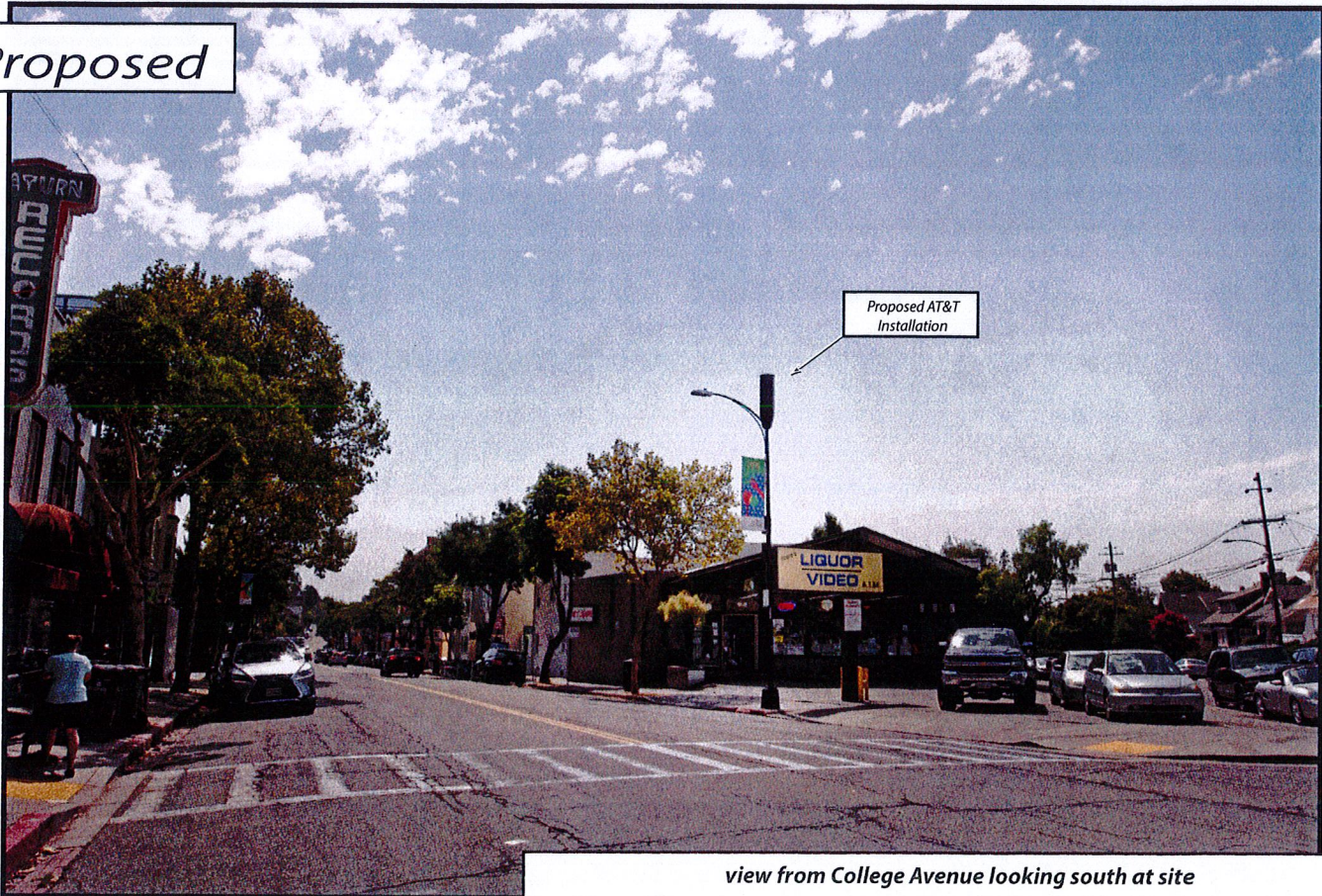
Attachment D



Existing



Proposed



view from College Avenue looking south at site

ALTERNATIVE DESIGN ANALYSIS

SFOK7_014

APN:

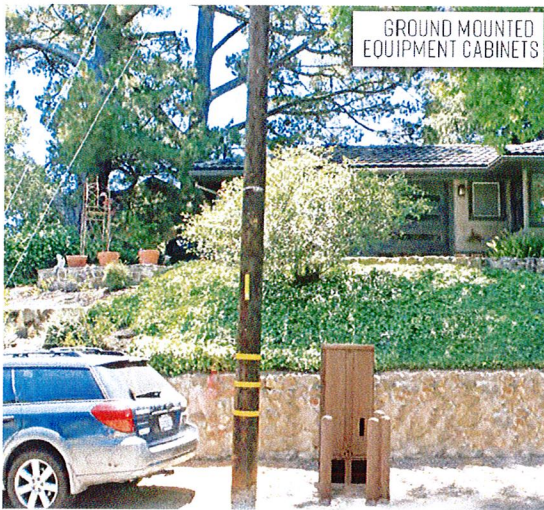
14-1263-1

LAT/LONG:

37.8421000, -122.2516400

The project is located in an area with existing commercial structures. AT&T considered alternative monopole designs (see below) in this area but none of these designs are as desirable from a planning perspective or from an aesthetics perspective to minimize visual impacts. The proposed project is in an underserved area.

Alternative light pole designs considered



**AT&T Mobility • Proposed Small Cell (No. CRAN-RSFR-SF0K7-014)
5491 College Avenue • Oakland, California**

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of AT&T Mobility, a personal wireless telecommunications carrier, to evaluate its small cell (No. CRAN-RSFR-SF0K7-014) proposed to be sited in Oakland, California, for compliance with appropriate guidelines limiting human exposure to radio frequency (“RF”) electromagnetic fields.

Executive Summary

AT&T proposes to install an omnidirectional cylindrical antenna on a light pole sited in the public right-of-way at 5491 College Avenue in Oakland. The proposed operation will comply with the FCC guidelines limiting public exposure to RF energy.

Prevailing Exposure Standards

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

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

General Facility Requirements

Small cells typically consist of two distinct parts: the electronic transceivers (also called “radios”) that are connected to the traditional wired telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units. The transceivers are typically mounted on the support pole or placed in a cabinet at ground level, and they 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 to concentrate their energy toward the horizon, with very little energy wasted toward the sky or the ground. This means



AT&T Mobility • Proposed Small Cell (No. CRAN-RSFR-SF0K7-014)
5491 College Avenue • Oakland, California

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 AT&T, including drawings by Meridian Management LLC, dated September 22, 2017, it is proposed to install one Galtronics Model P6480, 2-foot tall, omnidirectional cylindrical antenna, on top of an existing light pole sited in the public right-of-way on the west side of College Avenue, just south of the intersection with Lawton Avenue, next to the parking lot for the building at 5491 College Avenue. The antenna would employ no downtilt and would be mounted at an effective height of about 27½ feet above ground. The maximum effective radiated power in any direction would be 80 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 AT&T operation is calculated to be 0.0011 mW/cm², which is 0.11% of the applicable public exposure limit. The maximum calculated level at any nearby building is 0.18% 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.

No Recommended Mitigation Measures

Due to its mounting location and height, the AT&T antenna would not be accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. The occupational limit is calculated to extend 4 inches from the antenna and, due to this short distance, the proposed operation is considered intrinsically compliant with that limit.

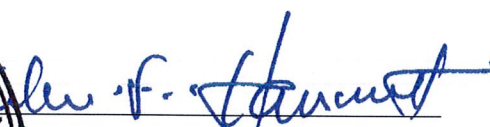
Conclusion

Based on the information and analysis above, it is the undersigned's professional opinion that operation of the small cell proposed by AT&T Mobility, at 5491 College Avenue in Oakland, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating small cells.

Authorship

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration Nos. E-13026 and M-20676, which expire on June 30, 2019. This work has been carried out under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.




William F. Hammett, P.E.
707/996-5200

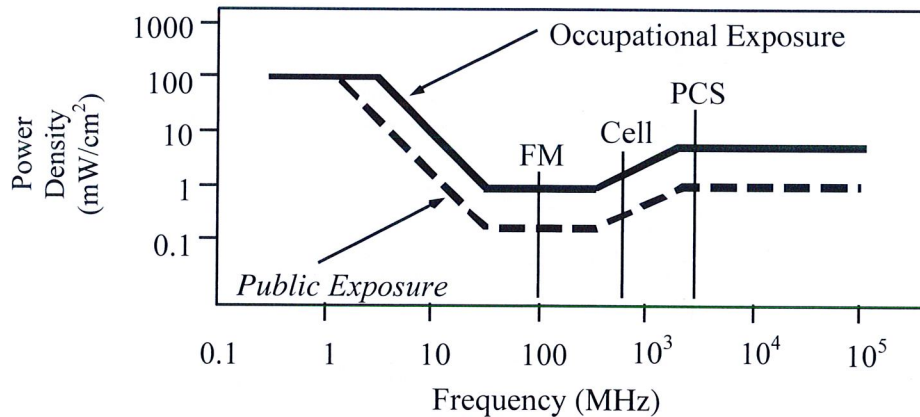
November 3, 2017

FCC Radio Frequency Protection Guide

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

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

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



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



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

Utility Contact System Search

The Utility Contact System (UCS) is the Communications Division's database for the primary regulatory contact for each telephone corporation operating in California. The Communications Division sends important regulatory notices to the regulatory contact for each telephone corporation via e-mail, so it is important for primary regulatory contacts to update their UCS record if their e-mail address changes.

Telephone corporations may update UCS contact information using the form on the following page: [Carrier Reporting Requirements](#)

A description of the different utility types (granted authorities) are listed on the following page: [Utility Type Descriptions](#)

Search Utility Name Search Utility Number Search Clear

Utility Name ▲	Alias (DBA Name)	Utility Number	Street Address	City	State	Zip	Phone Number	Email	Utility Type	CPCN Appro
New Cingular Wireless Pcs, LLC	CINGULAR WIRELESS	3060	430 BUSH STREET	SAN FRANCISCO	CA	94108	(415) 778-1299	att-regulatory-ca@att.com	CEC	12-21-1995
New Cingular Wireless Pcs, LLC	CINGULAR WIRELESS	3060	7405 GREENHAVEN DRIVE	SACRAMENTO	CA	95831	(800) 498-1912	west.region.oopsac@awsmail.att.com	CEC	12-21-1995
New Cingular Wireless Pcs, LLC	CINGULAR WIRELESS	3060	11760 US HIGHWAY ONE, WEST TOWER	NORTH PALM BEACH	FL	33048	770-240-8849		CEC	12-21-1995

[Save Search Results as CSV Spreadsheet](#)

[Comments & Feedback](#)



Attachment E

November 20, 2017

City Planner
Oakland Planning Dept.
250 Frank Ogawa Plaza
Oakland, CA 94612

Re: Proposed AT&T Small Cell Node Installation
Applicant: New Cingular Wireless PCS, LLC (dba AT&T Mobility)
Nearest Site Address: Public Right of Way near 5491 College Ave, Oakland, CA 94618
Site ID: CRAN RSFR SF0K7-014 (“Node 014”)

Dear City Planner,

On behalf of New Cingular Wireless PCS, LLC (doing business as AT&T Mobility), this letter and attached materials are to apply for the appropriate Planning permit to install a small cell node in the public right-of-way at the above-referenced location (“Node 014” or the “Node”).¹ The following is an explanation of the existing site, a project description of the designed facility, the project purpose and justifications in support of this proposal.

A. Project Description.

The proposed location for our facility currently consists of an approximate 25 feet tall City-owned light pole in the public right-of-way.

AT&T proposes to affix one canister antenna within an antenna shroud on top of the pole, extending up to a height of about 28.6 feet. On the pole between about 10 feet and 19 feet above ground, AT&T proposes to install two remote radio units and (if necessary) a miniature power disconnect switch. This facility or “Node” will be connected to underground fiber optic telecommunications lines and power. All equipment will be painted to match the pole. Our proposal is depicted in the attached design drawings and photographic simulations.

B. Project Purpose.

The purpose of this project is to provide AT&T third and fourth generation (3G and 4G) wireless voice and data coverage and capacity to the surrounding area. These wireless services include mobile telephone, wireless broadband, emergency 911, data transfers, electronic mail, Internet, web browsing, wireless applications, wireless mapping and video streaming. The proposed node is part of a larger small cell deployment providing wireless coverage and capacity to areas of Oakland that are otherwise very difficult or impossible to cover using traditional macro wireless telecommunications facilities.

¹ AT&T expressly reserves all rights concerning the city’s jurisdiction to assert zoning regulation over the placement of wireless facilities in the public rights-of-way.



A small cell network consists of a series of radio access nodes connected to small telecommunications antennas, typically mounted on existing poles within the public rights-of-way, to distribute wireless telecommunications signals. Small cell networks provide telecommunications transmission infrastructure for use by wireless services providers. These facilities allow service providers such as AT&T to establish or expand their network coverage and capacity. The nodes are linked by fiber optic cable that carry the signal stemming from a central equipment hub to a node antenna.

C. Project Justification, Alternative Site and Design Analysis.

The proposed Node is an integral part of AT&T's overall small cell deployment to cover transient traffic along the roadways and provide in-building service to the surrounding area. Using an existing pole is the least intrusive means to meet AT&T's wireless coverage and capacity needs in the area. This Node best uses existing infrastructure, adding small equipment without disturbing the character of the neighborhoods served. Deploying a small cell node at an existing pole location minimizes any visual impact by utilizing an inconspicuous spot.

The small cell node RF emissions are also much lower than the typical macro site, they are appropriate for the area, and they are fully compliant with the FCC's requirements for limiting human exposure to radio frequency energy. The attached radio frequency engineering analysis provided by Hammett & Edison, Inc., Consulting Engineers, confirms that the proposed equipment will operate well within (and actually far below) all applicable FCC public exposure limits. The facility will also comply with California Public Utility Commission (CPUC) General Orders 95 (concerning overhead line design, construction and maintenance) and 170 (CEQA review) that govern utility use in the public right-of-way.

As this application seeks authority to install a wireless telecommunication facility, the FCC's Shot Clock Order² requires the city to issue its final decision on AT&T's application within 150 days. We respectfully request expedited review and approval of this application. Feel free to contact me if you have any questions. Thank you.

Thank you.

Best Regards,
VINCULUMS SERVICES, LLC

A handwritten signature in black ink, appearing to read "Matthew S. Yergovich".

Matthew S. Yergovich
FOR AT&T MOBILITY

² See Petition for Declaratory Ruling to Clarify Provisions of Section 332(c)(7)(B), WT Docket No. 08-165, Declaratory Ruling, 24 F.C.C.R. 13994 (2009).

November 9, 2017
SFOK7_014

RE: Authorization to Submit Permit Applications
For facility type: AT&T Small Cell Wireless Facility (“Proposed Facility”)
At the site: City Owned Light Pole (“Site”)
GPS Location: 37.8421000,-122.2516400
Nearest Address: 5491 College Ave
Nearest APN: 14-1263-1
Jurisdiction: City of Oakland
Applicant: New Cingular Wireless PCS, LLC (dba AT&T) (“Company”)

To Whom It May Concern:

This letter authorizes Vinculums Services LLC, as the representative of Company, to apply for development review and other applicable planning or building permits in connection with Company’s Proposed Facility at the Site. The Site is a small cell wireless facility on a city-owned light pole.

This document is provided solely to satisfy the requirement of the City of Oakland Planning and Building Department that the Site owner consent to the submission of the referenced applications.

This document does not authorize Company’s use of the Site or installation of the Proposed Facility which authorization, if any, would be the subject of a separate agreement between the Company and the City of Oakland.

Company acknowledges that any applications submitted pursuant to this document are submitted at its sole cost and expense and with the full understanding that further authorization to use the Site or install the Proposed Facility may not be provided. Company further acknowledges that the Site may be very close or similar to other sites owned by the City of Oakland or others, and that Company bears sole responsibility to ensure that any applications submitted pursuant to this document distinguish between the Site and such other sites with sufficient specificity that they cannot be mistaken for one another.

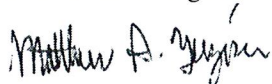
Thank you.

Sincerely,

James Golde
Real Estate Manager
for the City of Oakland

Applicant Certification:

I certify that I am the duly authorized representative of the Company and, on behalf of the Company, understand and agree to the risks and limitations described above.



signature

Matthew S. Yergovich, Vinculums Services LLC
printed name

ALTERNATIVE SITING ANALYSIS

SFOK7_014

APN:

14-1263-1

LAT/LONG:

37.8421000, -122.2516400

The project is located in an area with existing commercial structures. AT&T considered alternative sites on other utility poles in this area but none of these sites are as desirable from a service coverage perspective or from an aesthetics perspective to minimize visual impacts. The proposed project is in an underserved area. The proposed location is approximately equidistant from other small cell nodes proposed in the surrounding area so that service coverage can be evenly distributed.

Alternative light poles considered

37.8421000 -122.2516400

37.842279, -122.251484





**CITY OF OAKLAND
BUREAU OF PLANNING**

250 Frank H. Ogawa Plaza, Suite 2114, Oakland, CA 94612-2031
Phone: 510-238-3911 Fax: 510-238-4730

PLANNING COMMISSION PUBLIC NOTICE

Locations:	City street light poles in public right-of-way adjacent to: <ul style="list-style-type: none"> • a) 5391 College Ave (PLN18463; APN: 014-1249-001-00) • b) 5491 College Ave (PLN18464; APN: 014-1263-001-00)
Proposal:	To establish two (2) wireless "small cell site" telecommunication facilities on existing 25' tall City street light poles located in the public right-of-way. The project involves installation of one antenna measuring 23.5" long and 7.9" in diameter within shroud at a height of 28'-6", two radio units (7.8" tall, 7.8" wide and 3.93" deep) and a meter box located within shroud mounted at a height of 11'-4" and 17'-6" (PLN18463), and 10' and 19'-0" (PLN18464) above the ground.
Applicant / Phone Number:	Vinculum Services/Justin Giarritta (for AT&T Wireless) (925) 482-8519
Owner:	City of Oakland
Case File Number:	PLN18463 & PLN18464
Planning Permits Required:	Major Conditional Use Permit and Design Review to install a wireless Monopole Telecommunications Facility on an existing City light poles located in the public right-of-way within 100' of the RM-1 Residential Zone.
General Plan:	Neighborhood Center Mixed Use
Zoning:	CN-1 Neighborhood Center Mixed Use
Environmental Determination:	Exempt per Section 15301 of the State CEQA Guidelines, minor additions and alterations to existing city light poles; Section 15303, new construction or conversion of small structures; and Section 15183, projects consistent with a community plan, general plan or zoning.
Historic Status:	Non-historic property
City Council District:	1
Date Filed:	November 11, 2018
Action to be Taken:	Decision based on staff report
Finality of Decision:	Appealable to City Council within 10 days
For Further Information:	Contact Case Planner Jason Madani, Planner III at (510) 238-4790 or by email at jmadani@oaklandca.gov.

Your comments and questions, if any, should be directed to the Bureau of Planning, 250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, California 94612-2031 or prior to the public hearing to be held on March 6, 2019, at Oakland City Hall, Council Chambers, 1 Frank H. Ogawa Plaza, Oakland, California 94612. The public hearing will start at 6:00 p.m.

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

Please note that the description of the application found above is preliminary in nature and that the project and/or such description may change prior to a decision being made. Except where noted, once a decision is reached by the Planning Commission on these cases, they are appealable to the City Council. **Such appeals must be filed within ten (10) calendar days of the date of decision by the Planning Commission and by 4:00 p.m.** An appeal shall be on a form provided by the Bureau of Planning, and submitted to the same at 250 Frank H. Ogawa Plaza, Suite 2114, to the attention of the Case Planner. The appeal shall state specifically wherein it is claimed there was error or abuse of discretion by the City of Oakland or wherein the decision is not supported by substantial evidence, and must include payment in accordance with the City of Oakland Master Fee Schedule. Failure to file a timely appeal will preclude you from challenging the City's decision in court. The appeal itself must raise every issue that is contested along with all the arguments and evidence previously entered into the record prior to or at the public hearing mentioned above. Failure to do so will preclude you from raising such issues during the appeal hearing and/or in court.

POSTING DATE: February 15, 2019

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

PLEASE CALL ZONING AT (510) 238-3911. FOR BLIGHT NOTICES, PLEASE CALL (510) 238-4730.