

Location:	Utility pole in public right-of-way adjacent to: 5650 + 5658 Grisborne Avenue (see reverse for map)
Assessor's Parcel Numbers:	Adjacent to: 048E-7329-035-00 & 036-00
Proposal:	To install an 11' tall extension with two 2'-2" tall antennas (approx.) on top of a 29'-4" utility pole (proposed top height = 41'-5") and equipment pole mounted between 8' and 18'-11" in height.
 Pursuant to Federal and State law, City review for this application is essentially limited to design considerations only	
Applicant /	Matt Yergovich on behalf of Extenet (for: AT&T)
Phone Number:	(415) 596-3747
Owners:	City of Oakland (Public right-of-way); PG&E (utility pole)
Planning Permits Required:	Regular Design Review to attach a Telecommunications Facility to a Joint Pole Authority utility pole located within a Residential Zone
General Plan:	Hillside Residential
Zoning:	RH-4 Hillside Residential Zone
Environmental	Exempt, Section 15301 of the State CEQA Guidelines:
Determination:	Existing Facilities; Section 15183 of the State CEQA Guidelines: Project consistent with a Community Plan, General Plan or Zoning
Historic Status:	None
Service Delivery District:	2
City Council District:	4
Date Filed:	January 28, 2013
Staff Recommendation:	Approve with conditions
Finality of Decision:	<i>Appealable to City Council within 10 days</i>
For Further Information:	Contact case planner Aubrey Rose, AICP, Planner II at (510) 238-2071 or arose@oaklandnet.com

SUMMARY

The applicant requests Planning Commission approval to install an extension with two antennas on top of a utility pole, with equipment attached to the side of the pole, for wireless telecommunications purposes. The project is subject to Regular Design Review as an attachment to a utility pole located in a residential zone. The Zoning Manager has referred the application to the Planning Commission for review.

Staff recommends approval of the requested permit subject to the attached Findings and Conditions of Approval.

CITY OF OAKLAND PLANNING COMMISSION



0 125 250 500 750 1,000 Feet



Case File: DR13023
Applicant: Matt Yergovich on behalf of Extenet (for AT&T)
Address: Utility pole in public right-of-way adjacent to
5658 Grisborne Avenue (right side of frontage)
Zone: RH-4

BACKGROUND

State case law (*Sprint v. Palos Verdes Estates*) has enabled the City to require Design Review for telecommunications facilities attached to existing utility poles located within the right-of-way. The Planning & Zoning Division has determined that such Design Reviews be decided at the equivalent level as telecommunications projects located on private property located in the same zone.

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.

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 FCC standards in this regard. See, 47 U.S.C. 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. 47 U.S.C.332(c)(7)(B)(ii). See 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, contact Steve Markendorff, Chief of the Broadband Branch, Commercial Wireless Division, Wireless Telecommunications Bureau, at (202) 418-0640 or e-mail "smarkend@fcc.gov".

The effect of the preceding section on this application are discussed in the Key Issues And Impacts section of this report.

SITE DESCRIPTION

The site is a section of public right-of-way containing a wooden utility pole measuring 37'-2" in height. The pole is located towards the street from the property line between 5650 and 5658 Grisborne Avenue. The lots are level and the street does not contain a sidewalk. The property at 5650 Grisborne Avenue is situated at the corner of Thornhill Drive and contains an open parking lot serving a nearby civic building. The property at 5658 Grisborne Drive contains a single family home that is two-stories at the rear.

PROJECT DESCRIPTION

The proposal is to install (1) a 7'-9" extension ("antennas mast") with two 2'-2" tall antennas (approx.) on top of the utility pole for a top height of 47'-1", and (2) pole mounted equipment between 8' and 18'-10". The antennas would be wider than the extension. The extension on top of the pole is required for antenna clearance above overhead utility lines. The purpose of the project would be to enhance wireless telecommunications (cellular telephones service).

GENERAL PLAN ANALYSIS

The site is located in a Hillside Residential area under the General Plan. The intent of the Hillside Residential area is: *"to create, maintain, and enhance residential areas characterized by detached, single unit structures."* The General Plan is silent on telecommunications activities (which are classified as Essential Service Civic Activity under the Planning Code). The purpose of the proposal would be to enhance service to residents from a highly effective location with a non-obstructive design. Staff finds the proposal to be in conformance with the General Plan.

ZONING ANALYSIS

The site is located within the RH-4 Hillside Residential Zone - 4. The intent of the RH-4 zone is: *"to create, maintain, and enhance areas for single-family dwellings on lots of 6,500 to 8,000 square feet and is typically appropriate in already developed areas of the Oakland Hills."*

As described in the Background section of this report, telecommunications facilities located on Joint Pole Authority (JPA) utility poles are subject to Design Review. Additional findings for Macro facilities apply to all JPA cases. Findings required to approve the project ensure the location and design are not obstructive and are concealed to the extent practicable. The subject proposal requires Planning Commission review (OMC Sec. 17.136.040(D)(1)). The Planning Commission has approved cases that were located in front of trees and not residences, and has denied cases fronting residences with significant views where the proposal would create an obstruction.

Given advancing technologies, enhanced service at this location would assist users in the residential zone. The antennas would generally maintain the shape of the JPA pole. The proposal meets the Telecommunications Regulations for Site Location Preferences for locating on City property on a quasi-public facility and, therefore, a site alternatives analysis is not required. A site design preference analysis and a satisfactory emissions (RF) report have been submitted that indicate this site is satisfactory for the proposal given surroundings and that emission levels will be below Federally-stipulated limits. Staff finds the proposal to be consistent with the Planning Code.

ENVIRONMENTAL DETERMINATION

The California Environmental Quality Act (CEQA) Guidelines categorically exempts specific types of projects from environmental review. Section 15301 of the State CEQA Guidelines exempts projects involving "...the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use..." The proposal to attach wireless telecommunications antennas and related equipment to an existing wooden utility pole meets this description. The project is therefore exempt from further Environmental Review.

KEY ISSUES AND IMPACTS

In addition to ensuring this type of request meets required legal findings, proposed wireless telecommunications facilities must meet specific development standards, and site location and design preferences, and possess a satisfactory radio frequency emissions report.

Project Site

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

- A. Co-located on an existing structure or facility with existing wireless antennas.
- B. City owned properties or other public or quasi-public facilities.
- C. Existing commercial or industrial structures in non-residential zones.
- D. Existing commercial or industrial structures in residential zones.
- E. Other non-residential uses in residential zones.
- F. Residential uses in non-residential zones.
- G. Residential uses in residential zones.

*Facilities locating on an A, B or C ranked preference do not require a site alternatives analysis.

Since the proposed project involves the attachment antennas on an existing structure, the proposed development meets the (B) located on an existing structure or facility, therefore a site alternatives analysis is not required.

Project Design

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

- A. Building or structure mounted antennas completely concealed from view.
- B. Building or structure mounted antennas set back from roof edge, not visible from 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 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 project meets preference (D) since the antennas would be visible from the public right-of-way and a site design alternatives is therefore required. A satisfactory report has been submitted and is attached to this report.

Project Radio Frequency Emissions Standards

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

- 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 RF emissions report has been submitted and is attached to this report.

In consideration of the proposal, site surroundings, and discussions regarding cases under this type of review, staff recommends Planning Commission approval of this application for the following reasons:

The site does not directly front:

- a residence;
- a significant view from a home (for example, view of the Bay); or
- a scenic vista.

The proposal features:

- an existing structure (JPA pole) in an area lacking other non-residential structures;
- a facility not appreciably taller than adjacent trees;
- no ground mounted equipment cabinets; and
- satisfactory reports.

Staff recommends the following conditions:

- pole mounted equipment cabinets to be encased in a single, continuous shroud painted matte brown to match the color and finish of the wooden utility pole; and
- the antennas and connecting apparatus and all equipment be painted matte brown to match the color and finish of the wooden pole.

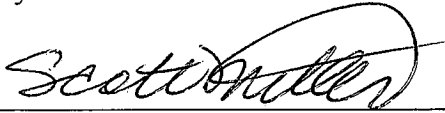
- RECOMMENDATIONS:**
1. Affirm staff's environmental determination.
 2. Approve the Regular Design Review subject to the attached Findings, Additional Findings, and Conditions.

Prepared by:



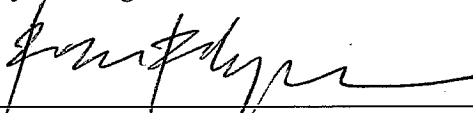
AUBREY ROSE, AICP
Planner II

Approved by:



SCOTT MILLER
Zoning Manager

Approved for forwarding to the
City Planning Commission:



RACHEL FLYNN, Director
Department of Planning and Building

ATTACHMENTS:

- A. Findings for Approval
- B. Conditions of Approval
- C. Plans
- D. Applicant's Photo-Simulations
- E. Site Design Preference Analysis
- F. RF Emissions Report by Hammett & Edison, Inc. dated December 13, 2012

Attachment A: Findings for Approval

This proposal meets the required findings under Regular Design Review Criteria (OMC Sec. 17.136.040(B)) and Design Review Criteria for Macro 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.

REGULAR DESIGN REVIEW CRITERIA FOR NONRESIDENTIAL FACILITIES(OMC SEC. 17.136.040(B))

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

The facility will not be visually intrusive given no view impact, singular shroud around equipment, and paint to match color. Given advancing technologies, enhanced service at this location will assist users in the residential zone. The antennas will generally maintain the shape of the JPA pole and pole mounted equipment cabinets, as conditioned, will be contained in a singular sheath painted matte brown to match the color and finish of the wooden pole.

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

This finding is met for the following reasons:

The site does not directly front:

- a residence;
- a significant view from a home (for example, view of the Bay); or
- a scenic vista.

The proposal features:

- an existing structure (JPA pole) in an area lacking other non-residential structures;
- a facility not appreciably taller than adjacent trees; and
- no ground mounted equipment cabinets

Conditions of approval require:

- pole mounted equipment cabinets to be encased in a single, continuous shroud painted matte brown to match the color and finish of the wooden utility pole; and
- the antennas and connecting apparatus and all equipment to be painted matte brown to match the color and finish of the wooden pole.

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

The site is located in a Hillside Residential area under the General Plan. The intent of the Hillside Residential area is: *"to create, maintain, and enhance residential areas characterized by detached, single unit structures."* The General Plan is silent on telecommunications activities (which are classified as Essential Service Civic Activity under the Planning Code). The proposal is meant to enhance service to residents from a highly effective location with a relatively unobtrusive design.

DESIGN REVIEW CRITERIA FOR MACRO FACILITIES (OMC SEC. 17.128.070(B)):

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

The antennas will be painted matte brown to match the color and finish of the wooden pole, as conditioned.

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

The antennas will be attached to an existing wooden utility pole.

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

The antennas will be mounted directly on top of the existing wooden utility pole.

4. Equipment shelters or cabinets shall be screened from the public view by using landscaping, or materials and colors consistent with surrounding backdrop or placed underground or inside existing facilities or behind screening fences.

As conditioned, equipment cabinets will be mounted to the pole in a singular shroud that is significantly smaller than typical ground mounted cabinets and shelters and the exterior will be painted matte brown to match the color and finish of the wooden pole.

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

As conditioned, equipment cabinets will be housed in a singular shroud attached to a wooden utility pole and painted to match its color.

6. For antennas attached to the roof, maintain a 1:1 ratio (example: ten feet high antenna requires ten feet setback from facade) for equipment setback; screen the antennas to match existing air conditioning units, stairs, or elevator towers; avoid placing roof mounted antennas in direct line with significant view corridors.

This finding is inapplicable; the proposal does not involve a roofed structure.

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

Equipment will be pole mounted a minimum of eight feet above grade and, as conditioned, will be encased in a shroud; the antenna will be located at 37'-2" above grade.

Attachment B: Conditions of Approval

1. Approved Use

Ongoing

- a) The project shall be constructed and operated in accordance with the authorized use as described in the application materials and the **plans dated December 19, 2012 and submitted to the City on January 28, 2013**, and as amended by the following conditions. Any additional uses or facilities other than those approved with this permit, as described in the project description and the approved plans, will require a separate application and approval. Any deviation from the approved drawings, Conditions of Approval or use shall require prior written approval from the Director of City Planning or designee.
- b) This action by the **Planning Commission** ("this Approval") includes the approvals set forth below. This Approval includes **establishment of a wireless telecommunications facility on a utility pole including two antennas attached to the top of the pole and a singular shroud containing pole mounted equipment, all painted matte brown**

2. Effective Date, Expiration, Extensions and Extinguishment

Ongoing

Unless a different termination date is prescribed, this Approval shall expire **two (2) years** from the approval date, 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 permit, 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 for this project may invalidate this Approval if the said extension period has also expired.

3. Scope of This Approval; Major and Minor Changes

Ongoing

The project is approved pursuant to the **Planning Code** only. Minor changes to approved plans may be approved administratively by the Director of City Planning or designee. Major changes to the approved plans shall be reviewed by the Director of City Planning or designee to determine whether such changes require submittal and approval of a revision to the approved project by the approving body or a new, completely independent permit.

4. Conformance with other Requirements

Prior to issuance of a demolition, grading, P-job, or other construction related permit

- a) The project applicant shall comply with all other applicable federal, state, regional and/or local laws/codes, requirements, regulations, and guidelines, including but not limited to those imposed by the City's Building Services Division, the City's Fire Marshal, and the City's Public Works Agency. 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 of Approval #3.
- b) The applicant shall submit approved building plans for project-specific needs related to fire protection to the Fire Services Division for review and approval, including, but not limited to automatic extinguishing systems, water supply improvements and hydrants, fire department access, elevated walking pathways, safety railings, emergency access and lighting.

5. Conformance to Approved Plans; Modification of Conditions or Revocation

Ongoing

- a) Site shall be kept in a blight/nuisance-free condition. Any existing blight or nuisance shall be abated within 60-90 days of approval, unless an earlier date is specified elsewhere.
- b) Violation of any term, **Conditions of Approval** or **project description** relating to the **Conditions of 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 Approvals or alter these **Conditions of Approval** if it is found that there is violation of any of the **Conditions of Approval** 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 Conditions of Approval.

6. Signed Copy of the Conditions of Approval

A copy of the approval letter and **Conditions of Approval** shall be signed by the property owner, notarized, and submitted with each set of permit plans to the appropriate City agency for this project.

7. Indemnification

Ongoing

- a. To the maximum extent permitted by law, the applicant shall defend (with counsel acceptable to the City), indemnify, and hold harmless the City of Oakland, the Oakland City Council, the City of Oakland Redevelopment Agency, the Oakland City Planning Commission and its respective agents, officers, and employees (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, (1) an approval by the City relating to a development-related application or subdivision or (2) implementation of an approved development-related project. The City may elect, in its sole discretion, to participate in the defense of said Action and the 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 applicant shall execute a Letter of Agreement with the City, acceptable to the Office of the City Attorney, which memorializes the above obligations. These obligations and the Letter of Agreement shall survive termination, extinguishment or invalidation of the approval. Failure to timely execute the Letter of Agreement does not relieve the applicant of any of the obligations contained in this condition or other requirements or Conditions of Approval that may be imposed by the City.

8. Compliance with Conditions of Approval

Ongoing

The project applicant shall be responsible for compliance with the recommendations in any submitted and approved technical report and all the Conditions of Approval set forth below at its sole cost and expense, and subject to review and approval of the City of Oakland.

9. Severability

Ongoing

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

10. Construction-Related Air Pollution Controls (Dust and Equipment Emissions)

Ongoing throughout demolition, grading, and/or construction

During construction, the project applicant shall require the construction contractor to implement all of the following applicable measures recommended by the Bay Area Air Quality Management District (BAAQMD):

- a) Water all exposed surfaces of active construction areas at least twice daily (using reclaimed water if possible). Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible.
- b) Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
- c) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- d) Pave all roadways, driveways, sidewalks, etc. as soon as feasible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- e) Enclose, cover, water twice daily or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.).
- f) Limit vehicle speeds on unpaved roads to 15 miles per hour.
- g) Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations. Clear signage to this effect shall be provided for construction workers at all access points.
- h) All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- i) Post a publicly visible sign that includes the contractor's name and telephone number to contact regarding dust complaints. When contacted, the contractor shall respond and take corrective action within 48 hours. The telephone numbers of contacts at the City and the BAAQMD shall also be visible. This information may be posted on other required on-site signage.

11. Noise Control

Ongoing throughout demolition, grading, and/or construction

To reduce noise impacts due to construction, the project applicant shall require construction contractors to implement a site-specific noise reduction program, subject to the Planning and Zoning Division and the Building Services Division review and approval, which includes the following measures:

- a) Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, wherever feasible).
- b) Except as provided herein, Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid

noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.

- c) Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction.
- d) The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.

12. Noise Complaint Procedures

Ongoing throughout demolition, grading, and/or construction

Prior to the issuance of each building permit, along with the submission of construction documents, the project applicant shall submit to the Building Services Division a list of measures to respond to and track complaints pertaining to construction noise. These measures shall include:

- a) A procedure and phone numbers for notifying the Building Services Division staff and Oakland Police Department; (during regular construction hours and off-hours);
- b) A sign posted on-site pertaining with permitted construction days and hours and complaint procedures and who to notify in the event of a problem. The sign shall also include a listing of both the City and construction contractor's telephone numbers (during regular construction hours and off-hours);
- c) The designation of an on-site construction complaint and enforcement manager for the project;
- d) Notification of neighbors and occupants within 300 feet of the project construction area at least 30 days in advance of extreme noise generating activities about the estimated duration of the activity; and
- e) A preconstruction meeting shall be held with the job inspectors and the general contractor/on-site project manager to confirm that noise measures and practices (including construction hours, neighborhood notification, posted signs, etc.) are completed.

13. Operational Noise-General

Ongoing.

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

14. Hazards Best Management Practices

Prior to commencement of demolition, grading, or construction

The project applicant and construction contractor shall ensure that construction of Best Management Practices (BMPs) are implemented as part of construction to minimize the potential negative effects to groundwater and soils. These shall include the following:

- a) Follow manufacture's recommendations on use, storage, and disposal of chemical products used in construction;
- b) Avoid overtopping construction equipment fuel gas tanks;
- c) During routine maintenance of construction equipment, properly contain and remove grease and oils;
- d) Properly dispose of discarded containers of fuels and other chemicals.
- e) Ensure that construction would not have a significant impact on the environment or pose a substantial health risk to construction workers and the occupants of the proposed development. Soil sampling and chemical analyses of samples shall be performed to determine the extent of potential contamination beneath all UST's, elevator shafts, clarifiers, and subsurface hydraulic lifts when on-site demolition, or construction activities would potentially affect a particular development or building.
- f) If soil, groundwater or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notification of regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.

15. Tree Protection During Construction

Prior to issuance of a demolition, grading, or building permit

Adequate protection shall be provided during the construction period for any trees which are to remain standing, including the following, plus any recommendations of an arborist:

- a) Before the start of any clearing, excavation, construction or other work on the site, every protected tree deemed to be potentially endangered by said site work shall be securely fenced off at a distance from the base of the tree to be determined by the City Tree Reviewer. Such fences shall remain in place for duration of all such work. All trees to be removed shall be clearly marked. A scheme shall be established for the removal and disposal of logs, brush, earth and other debris which will avoid injury to any protected tree.
- b) Where proposed development or other site work is to encroach upon the protected perimeter of any protected tree, special measures shall be incorporated to allow the roots to breathe and obtain water and nutrients. Any excavation, cutting, filing, or compaction of the existing ground surface within the protected perimeter shall be minimized. No change in existing ground level shall occur within a distance to be determined by the City Tree Reviewer from the base of any protected tree at any time. No burning or use of equipment with an open flame shall occur near or within the protected perimeter of any protected tree.
- c) No storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees shall occur within the distance to be determined by the Tree Reviewer from the base of any protected trees, or any other location on the site from which such substances might enter the protected perimeter. No heavy construction equipment or construction materials shall be operated or stored within a distance from the base of any protected trees to be determined by the tree reviewer. Wires, ropes, or other devices shall not be attached to any protected tree, except as needed for support of the tree. No sign, other than a tag showing the botanical classification, shall be attached to any protected tree.

- d) Periodically during construction, the leaves of protected trees shall be thoroughly sprayed with water to prevent buildup of dust and other pollution that would inhibit leaf transpiration.
- e) If any damage to a protected tree should occur during or as a result of work on the site, the project applicant shall immediately notify the Public Works Agency of such damage. If, in the professional opinion of the Tree Reviewer, such tree cannot be preserved in a healthy state, the Tree Reviewer shall require replacement of any tree removed with another tree or trees on the same site deemed adequate by the Tree Reviewer to compensate for the loss of the tree that is removed.
- f) All debris created as a result of any tree removal work shall be removed by the project applicant from the property within two weeks of debris creation, and such debris shall be properly disposed of by the project applicant in accordance with all applicable laws, ordinances, and regulations.

SPECIFIC CONDITIONS FOR TELECOMMUNICATIONS FACILITIES

16. Emissions Report

Prior to a final inspection

The applicant shall provide an RF emissions report to the City of Oakland Zoning Division indicating that the site is actually operating within the acceptable thresholds as established by the Federal government or any such agency that may be subsequently authorized to establish such standards.

17. Equipment Concealment

Prior to submitting for a Building Permit

Plans shall be revised to depict all pole mounted equipment contained within a singular casing that is as small in size as possible.

18. Camouflaging

Prior to building permit approval

Plans shall be revised to show all apparatus (including but not limited to antenna and equipment) painted matte or non-reflective brown to match the color and finish of the existing wooden utility pole.



19. Underground Districts

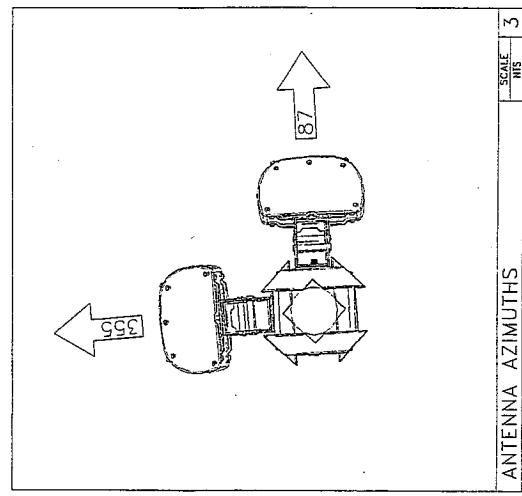
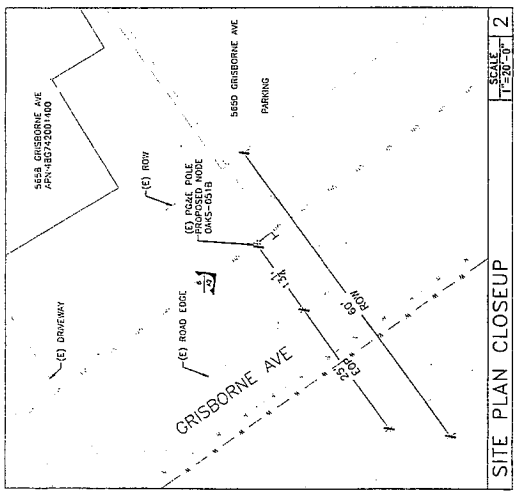
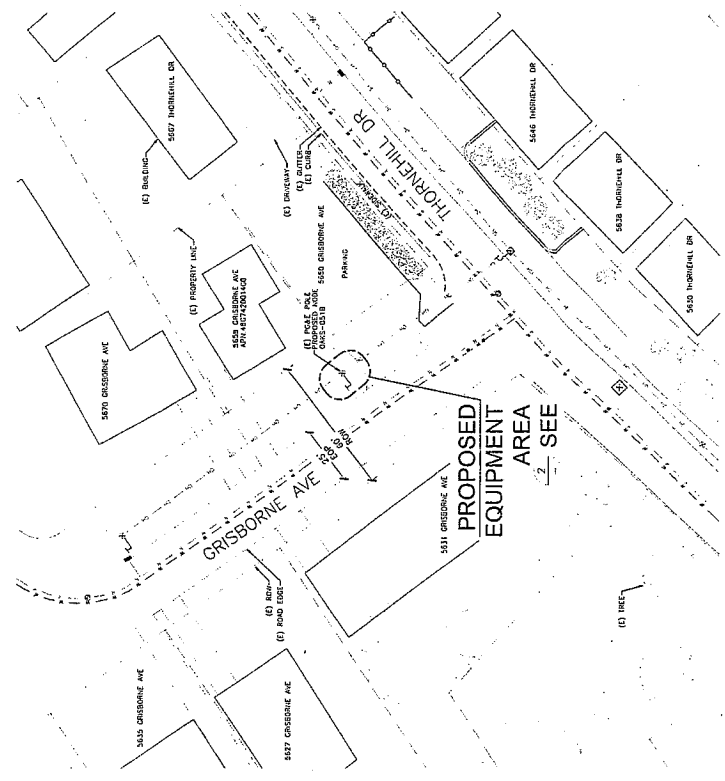
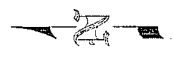
Ongoing

Should the utility pole be voluntarily removed for purposes of district undergrounding or otherwise, the telecommunications facility can only be re-established by applying for and receiving approval of a new application to the Oakland Planning and Zoning Division as required by the zoning regulations.

APPROVED BY:

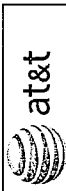
City Planning Commission: _____ (date) _____ (vote)

 <p>NEW CIRCULAR WIRELESS PCS, LLC 4430 ROSEWOOD DR. BLDG. 3 PLEASANTON, CA 94588-3656</p>		<p>OAKHILLS AT&T SOUTH NETWORK NODE 051B 5658 GRISBORNE AVE OAKLAND, CA 94611</p>		<p>12/19/12</p>		<p>ISSUED FOR: ZONING</p>		<p>BY: DATE: DESCRIPTION: REV:</p> <table border="1"> <tr> <td>ACI</td> <td>12/19/12</td> <td>POL INFO CORRECTED</td> <td>1</td> </tr> <tr> <td>ACI</td> <td>12/07/12</td> <td>ZON</td> <td>0</td> </tr> <tr> <td>BY</td> <td>DATE</td> <td>DESCRIPTION</td> <td>REV</td> </tr> </table>		ACI	12/19/12	POL INFO CORRECTED	1	ACI	12/07/12	ZON	0	BY	DATE	DESCRIPTION	REV	 <p>ACI 7000 WOODBURN AVE SUITE 200 CANTON, MI 48188</p>		<p>CONSTRUCTED BY: net YOUR NETWORK. EVERYWHERE. 3030 WILLOWVILLE RD. SUITE 340 Lisle, IL 60532 www.netel.com</p>		<p>SHEET NUMBER: A1 REVISION: 1</p>	
ACI	12/19/12	POL INFO CORRECTED	1																								
ACI	12/07/12	ZON	0																								
BY	DATE	DESCRIPTION	REV																								





EQUIP. SPACE PLAN VIEW	1
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NEW CINGULAR WIRELESS PCS, LLC
4435 ROSEWOOD DR., BLDG. 3
FREMONT, CA 94538-3030

PROJECT INFORMATION:
**OAKHILLS AT&T
SOUTH NETWORK
NODE 051B**
5656 CHURCHSIDE AVE
OAKLAND, CA 94611

CURRENT ISSUE DATE:
12/19/12

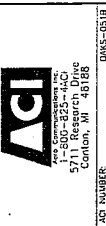
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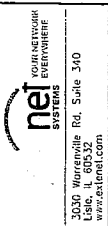
BY: DATE: DESCRIPTION: REV:

NO.	DATE	DESCRIPTION	REV
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ACI	12/07/12	ZDS	0

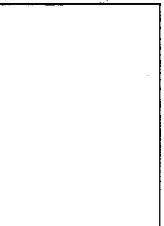
PLANS PREPARED BY:



CONSTRUCTED BY:



SEAL OF APPROVAL:

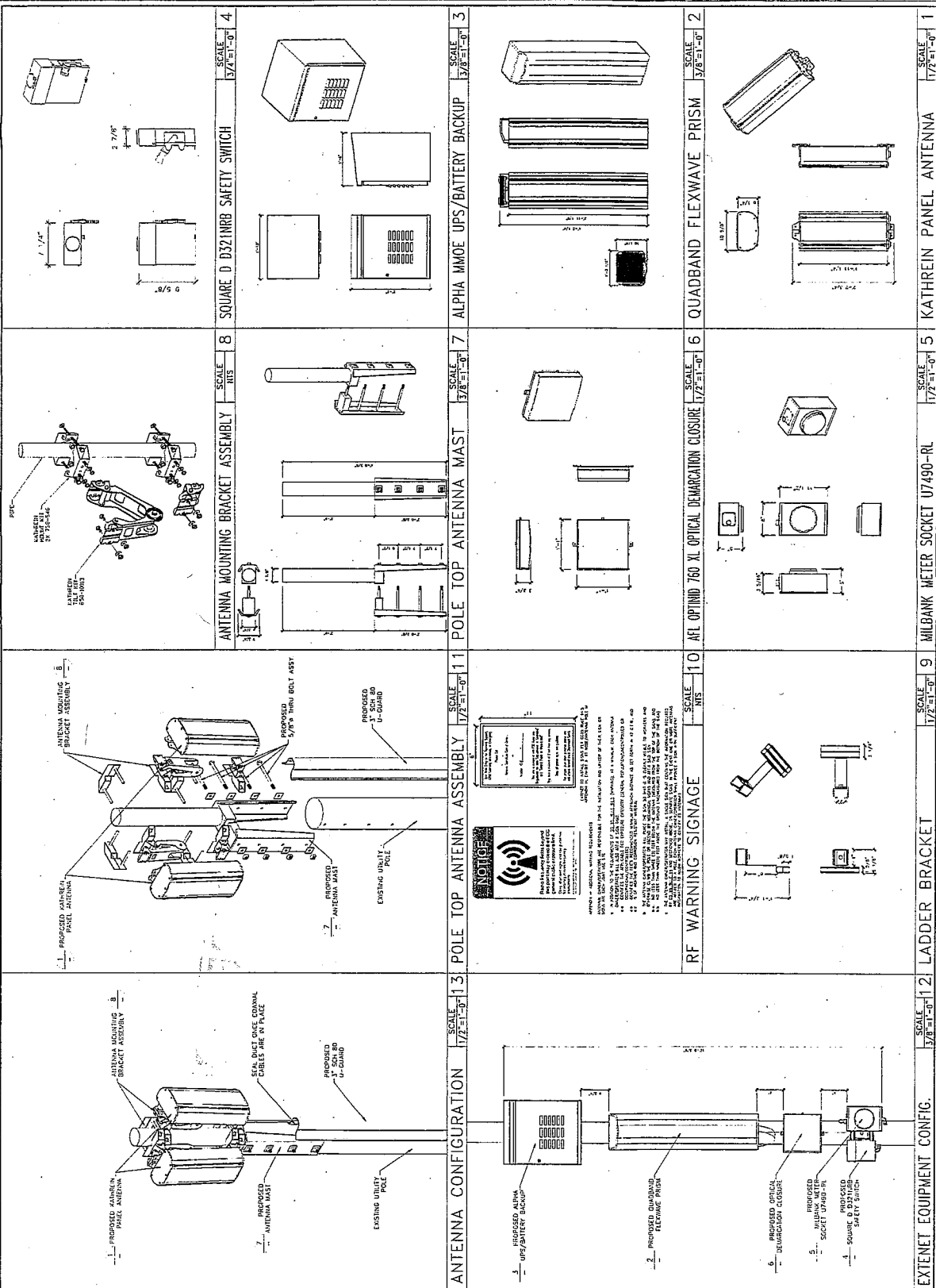


SHEET TITLE:
EQUIPMENT DETAILS

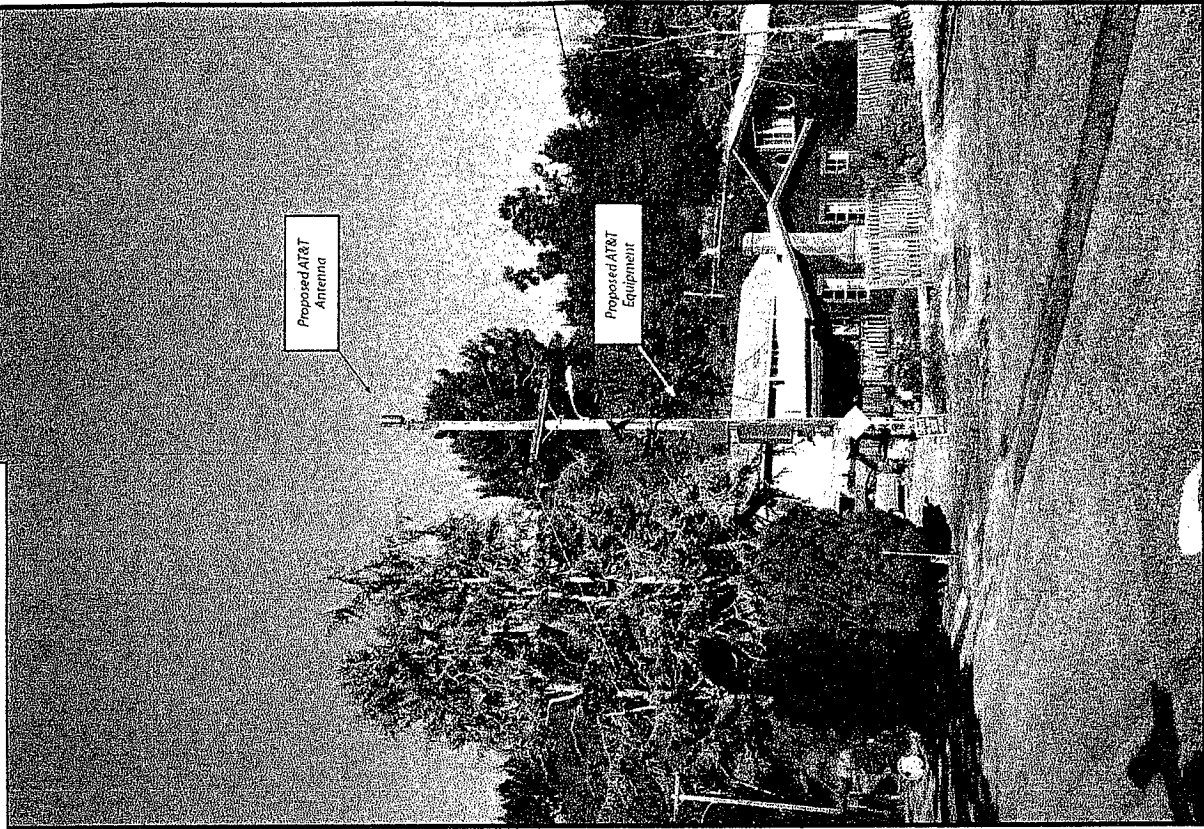
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REVISION:
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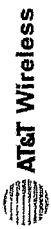
12/19/12



Proposed

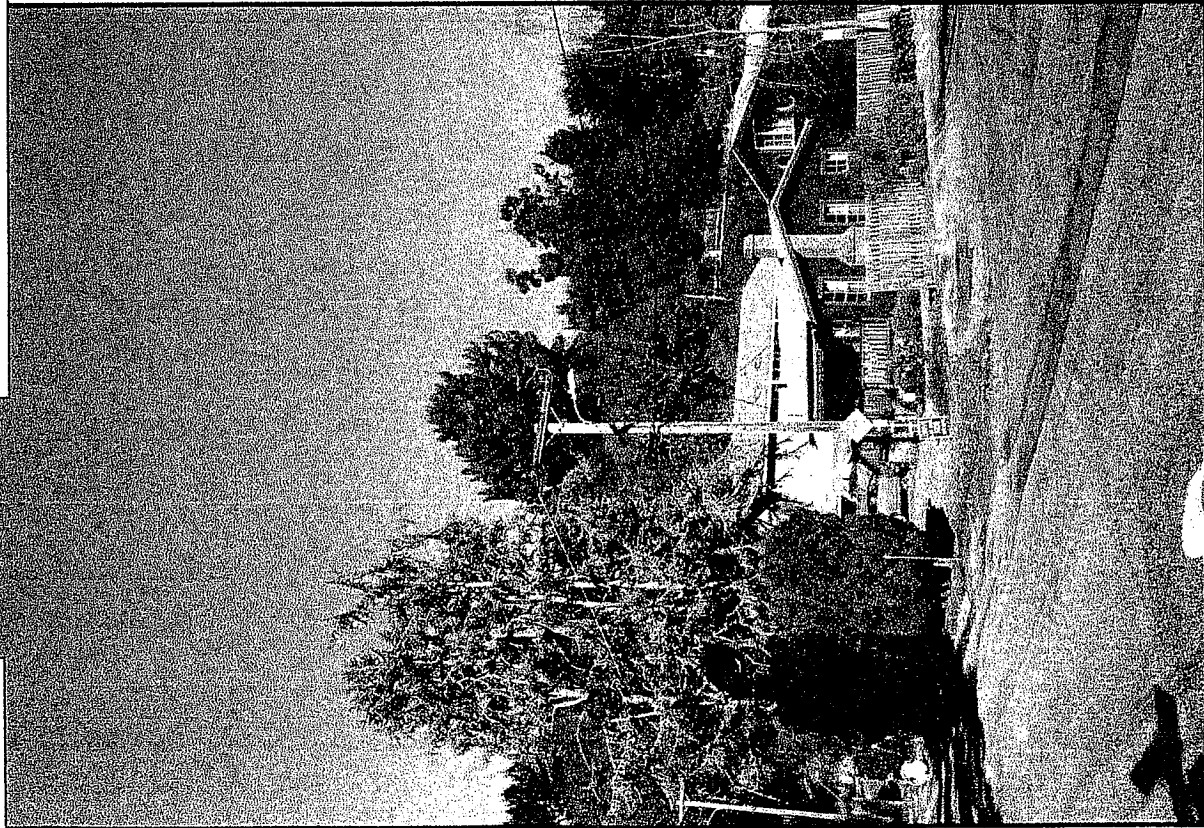


view from Grisborne Avenue looking north at site



5658 Grisborne Avenue, Oakland, CA
Oak Hills AT&T South Network Node 051B

Existing



Advancesim
Photo Simulation Solutions
Contact (925) 202-8507



March 29, 2013

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

Re: Alternative Site Analysis for Proposed AT&T Mobility DAS Node Installation
Applicant: New Cingular Wireless PCS, LLC (d/b/a AT&T Mobility)
Site Address: Public Right of Way across from 5658 Grisborne Ave.
Site ID: OAKS-051B
Latitude/Longitude: 37.833616, -122.213914
Joint Utility Pole #: 11038339

Dear Planning Department,

This letter is to explain why a distributed antenna system ("DAS") node is being proposed at the above-referenced utility pole and to explain the alternative sites that were evaluated in making this determination. The site is located in a difficult coverage area because of its winding roads, hilly terrain and plentiful trees. The coverage area consists of a stretch of road along Thornhill Drive just east of Mountain Boulevard and the surrounding areas.

This DAS node is the least intrusive means to provide coverage because it uses existing utility infrastructure, the smallest equipment and the lowest emissions possible. The DAS node emissions are also much lower than the typical macro-site and thus appropriate for the area. Deploying a DAS node onto this pole utilizes an inconspicuous location amidst the trees and out of the way from any residences or views. By co-locating antennas and equipment onto this existing pole, AT&T does not need to propose any new infrastructure in the area. Furthermore, this two-antenna installation onto existing infrastructure is miniature in size compared to the typical 12-antenna macro site and therefore more appropriate for the surrounding rural residential area. The site should be barely noticeable as a co-located utility amidst the backdrop of trees and terrain.

Alternative sites were considered at other utility poles in the area including ones northeast up Thornhill and southwest down Thornhill. The proposed location was chosen instead of any on Thornhill because Thornhill is a well-travelled road where a node might be more exposed to public view whereas the proposed location is just off of Thornhill on Grisborne out of view amidst nearby trees. This location is just close enough to Thornhill to provide coverage along the busy thoroughfare but far enough away to be out of immediate view. Therefore our proposal is the best out of all the alternatives.

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

Best Regards,

Matthew S. Yergovich
ExteNet Real Estate Contractor
For AT&T Mobility

AT&T Mobility
C/O Yergovich and Associates, LLC
ExteNet Systems Real Estate Contractor
1826 Webster Street • San Francisco, CA 94115
(415) 596-3474 • myergo@gmail.com



January 28, 2013

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

Re: Proposed AT&T Mobility DAS Node Installation
Applicant: New Cingular Wireless PCS, LLC (d/b/a AT&T Mobility)
Site Address: Public Right of Way across from 5658 Grisborne Ave.
Site ID: OAKS-051B
Latitude/Longitude: 37.833616, -122.213914
Joint Utility Pole #: 11038339

Dear Planning Department,

This letter and attached materials are to apply for the appropriate planning permits to accomplish the above-referenced and below-described AT&T distributed antenna system ("DAS") node installation. The following is an explanation of the existing site, a project description of the installation, the project purpose and justifications in support of this proposal.

A. Project Description.

The existing site consists of an approximate 29-foot four-inch tall wooden utility pole in the public right of way on the east side of Grisborne Avenue just north of Thornhill Drive of Valley View Road at about 5658 Grisborne Avenue. There are several tall trees in the area, and a hill behind the site to the north.

AT&T proposes to swap the utility pole for a new one approximately 10-feet taller and add two panel antennas that are approximately two-feet long, ten-inches wide and six-inches deep. At a mounting location about 17-feet high on the pole we propose to mount a battery-backup equipment box approximately two-feet long by two-feet wide and a foot and a half feet deep. At about 12-feet high on the pole we propose to mount an equipment cabinet approximately four-feet long, a foot wide and a foot deep. Below that, at about 10-feet high on the pole, we propose to mount an approximate one-foot long by one-foot wide by four-inch deep optical demarcation unit. Below that at about eight feet we propose a small safety shut-off switch and electricity meter approximately one-foot long, three-inches deep and eight-inches wide. The equipment will be connected to power and telecommunications lines already on the pole, extended through one-inch and three-inch conduit. All equipment will be painted brown to match the utility pole. Our proposal is depicted in the attached design drawings and photographic simulations.

This is an unmanned facility that will operate at all times (24-hours per day, 7 days per week) and will be serviced about once per month by an AT&T technician. Our proposal will greatly benefit the area by improving wireless telecommunications service as detailed below.

AT&T Mobility
C/O Yergovich and Associates, LLC
ExteNet Systems Real Estate Contractor
1826 Webster Street • San Francisco, CA 94115
(415) 596-3474 • myergo@gmail.com

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 to the surrounding area where there is currently a significant gap in coverage. 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 DAS providing coverage to areas of the Oakland and Berkeley Hills that are otherwise impossible to reach. The attached radio frequency propagation maps depict AT&T's larger DAS project along with the existing and proposed coverage.

C. Project Justification, Design and Placement.

The site is located in a difficult coverage area because of its winding roads, hilly terrain and plentiful trees. The coverage area consists of an Oakland Hills neighborhood off of Thornhill Drive and surrounding areas. The proposed site will cover these areas as depicted in the attached-propagation maps.

This DAS node is the least intrusive means to provide coverage because it uses existing utility infrastructure, the smallest equipment and the lowest emissions possible. Deploying a DAS node onto this pole utilizes an inconspicuous location out of the way from any residences or views. By co-locating antennas and equipment onto this existing pole, AT&T does not need to propose any new infrastructure in the area. Furthermore, this two-antenna installation onto existing infrastructure is miniature in size compared to the typical 12-antenna macro site and therefore more appropriate for the surrounding rural residential area. The site should be barely noticeable as a co-located utility amidst the backdrop of trees, bushes and hillside.

The DAS node emissions are also much lower than the typical macro-site and thus appropriate for the area. Attached is a radio-frequency analysis supporting this conclusion. The facility will comply with all FCC rules and California Public Utility Commission (CPUC) General Orders 95 and 170.

Alternative sites were considered at other utility poles along Thornhill Drive but none of these sites are as desirable from a coverage perspective or from an aesthetics perspective. The proposed location is equally distanced from nodes to be placed in surrounding hard-to-reach areas so that coverage can be evenly distributed. There are a number of trees near the proposed site that will allow the installation to blend-in with the backdrop of foliage and the hillside, thus minimizing any visual impact. The other utility poles in the area are more conspicuous than the proposed pole. Thornhill drive is a major thoroughfare and installations in other poles along that roadway would impose more visual impact than our proposal. Any other locations not installed on utility poles would require new infrastructure imposing unnecessary visual impact and would not be able to provide coverage to the intended coverage area. For these reasons, our proposal is the best out of all the alternatives.

Included with this zoning submittal are the following materials:

- (1) Completed Planning Applications;
- (2) The appropriate filing fee;
- (3) Full-sized (24" x 36") and reduced drawing sets;
- (4) One copy of two-perspective photographic simulations depicting the proposed modification;
- (5) Propagation maps; and
- (6) A radio-frequency report explaining the impact of the proposed site.

We respectfully request approval of this project. Feel free to contact me if you have any questions. Thank you.

Best Regards,



Matthew S. Yergovich
ExteNet Real Estate Contractor
For AT&T Mobility

AT&T Mobility
C/O Yergovich and Associates, LLC
ExteNet Systems Real Estate Contractor
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**New Cingular Wireless, LLC • 32 Proposed Distributed Antenna System Nodes
Oakland Hills • Oakland, California**

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of New Cingular Wireless, LLC, a wireless telecommunications service provider, to evaluate 32 distributed antenna system (DAS) nodes proposed to be located in the Oakland Hills area of Oakland, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

Executive Summary

New Cingular Wireless proposes to install two directional panel antennas on 32 existing or proposed utility poles sited in the Oakland Hills area of Oakland. The proposed operation will comply with the FCC guidelines limiting public exposure to RF energy.

Prevailing Exposure Standards

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

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

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

General Facility Requirements

Base stations typically consist of two distinct parts: the electronic transceivers (also called "radios" or "channels") that are connected to the traditional wired telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units.

HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
SAN FRANCISCO

S5XH
Configuration 2B
Page 1 of 5

ATTACHMENT F

**New Cingular Wireless, LLC • 32 Proposed Distributed Antenna System Nodes
Oakland Hills • Oakland, California**

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

Computer Modeling Method

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

Site and Facility Description

Based upon information provided by New Cingular Wireless, that carrier proposes to install 32 new nodes, listed in Table 1 below, in the Oakland Hills area of Oakland. Each node would consist of two Kathrein Model 840-10525 directional panel antennas installed on a new or existing utility pole to be sited in a public right-of-way. The antennas would be mounted with no downtilt at an effective height of about 35 feet above ground and would be oriented in different directions, as shown in Table 1. The maximum effective radiated power in any direction would be 219 watts, representing simultaneous operation by New Cingular Wireless at 104 watts for PCS, 61 watts for cellular, and 54 watts for 700 MHz service. There are reported no other wireless telecommunications base stations at the site or nearby.



**New Cingular Wireless, LLC • 32 Proposed Distributed Antenna System Nodes
Oakland Hills • Oakland, California**

Node #	Approximate Address	Antenna Orientations	
Node 35	Grizzly Peak Boulevard and Golf Course Drive	116°T	321°T
Node 36	2501 Grizzly Peak Boulevard	65°T	248°T
Node 37	7541 Claremont Avenue	54°T	240°T
Node 39	8071 Claremont Avenue	36°T	215°T
Node 41	Grizzly Peak Boulevard and Skyline Boulevard	149°T	283°T
Node 42	6616 Pine Needle Drive	73°T	344°T
Node 46	1265 Mountain Boulevard	30°T	105°T
Node 47	5925 Sherwood Drive	13°T	285°T
Node 48	Skyline Boulevard and Elverton Drive	153°T	325°T
Node 49	1732 Indian Way	24°T	306°T
Node 50	5612 Merriewood Drive	46°T	110°T
Node 51	5658 Grisborne Avenue	87°T	355°T
Node 52	5826 Mendoza Drive	61°T	121°T
Node 53	6133 Snake Road	43°T	119°T
Node 54	2052 Tampa Avenue	0°T	100°T
Node 55	8211 Skyline Boulevard	98°T	158°T
Node 56	6837 Aitken Drive	65°T	316°T
Node 57	6415 Westover Drive	137°T	302°T
Node 58	6828 Saroni Drive	20°T	100°T
Node 59	2189 Andrews Street	37°T	88°T
Node 60	5879 Scarborough Drive	33°T	81°T
Node 62	2997 Holyrood Drive	21°T	88°T
Node 63	2679 Mountain Gate Way	0°T	80°T
Node 64	Mountain Boulevard and Ascot Drive	29°T	110°T
Node 70	75 Castle Park Way	0°T	70°T
Node 71	3343 Crane Way	72°T	355°T
Node 74	6925 Pinehaven Road	0°T	70°T
Node 75	6776 Thornhill Drive	66°T	127°T
Node 77	6659 Girvin Drive	100°T	180°T
Node 78	7380 Claremont Avenue	55°T	200°T
Node 79	6757 Sobrante Road	70°T	159°T
Node 81	Shepherd Canyon Road and Escher Drive	56°T	209°T

Table 1. New Cingular Wireless Nodes Evaluated

Study Results

For a person anywhere at ground, the maximum RF exposure level due to the proposed operation through is calculated to be 0.0026 mW/cm², which is 0.50% of the applicable public exposure limit. The maximum calculated level at the second-floor elevation of any nearby building* is 1.2% of the

* Including nearby residences located at least 9 feet from any pole, based on photographs from Google Maps.

**New Cingular Wireless, LLC • 32 Proposed Distributed Antenna System Nodes
Oakland Hills • Oakland, California**

public limit. It should be noted that these results include several "worst-case" assumptions and therefore are expected to overstate actual power density levels from the proposed operation.

Recommended Mitigation Measures

Due to their mounting locations on utility poles, the New Cingular Wireless antennas would not be accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. To prevent occupational exposures in excess of the FCC guidelines, no access within 3 feet directly in front of the antennas themselves, such as might occur during maintenance work on the poles, should be allowed while the pertinent node is in operation, unless other measures can be demonstrated to ensure that occupational protection requirements are met. Posting explanatory warning signs[†] at the antennas and/or on the poles below the antennas, such that the signs would be readily visible from any angle of approach to persons who might need to work within that distance, would be sufficient to meet FCC-adopted guidelines.

Conclusion

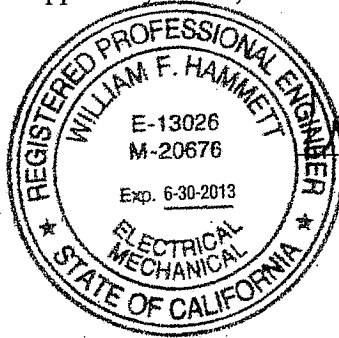
Based on the information and analysis above, it is the undersigned's professional opinion that the proposed operation of these New Cingular Wireless nodes located in Oakland, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations. Posting explanatory signs is recommended to establish compliance with occupational exposure limitations.

[†] Warning signs should comply with OET-65 color, symbol, and content recommendations. Signage may also need to comply with the requirements of California Public Utilities Commission General Order No. 95.

**New Cingular Wireless, LLC • 32 Proposed Distributed Antenna System Nodes
Oakland Hills • Oakland, California**

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, 2013. 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

December 13, 2012



HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
SAN FRANCISCO

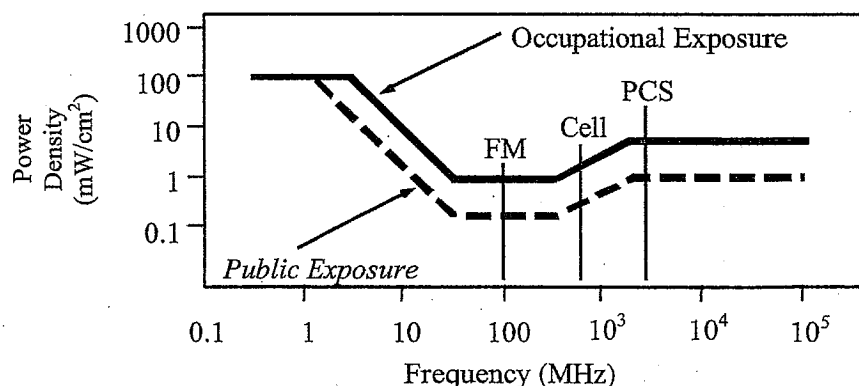
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FCC Radio Frequency Protection Guide

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.

HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
SAN FRANCISCO

FCC Guidelines
Figure 1

RFR.CALC™ Calculation Methodology

Assessment by Calculation of Compliance with FCC Exposure Guidelines

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

Near Field.

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

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

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

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

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

D = distance from antenna, in meters,

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

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

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

Far Field.

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

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

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

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

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

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



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Methodology
Figure 2

AT&T Oakland Hills DAS - Node 51 Propagation

Propagation Map Key:

- Red = Excellent Coverage (in-building)
- Yellow = Medium Coverage (partial in-building)
- Green = Some Coverage (outdoor)



