

Case File Number: CMD11-191

December 19, 2012

<b>Location:</b>	<b>5329-5345 Foothill Blvd. (See map on reverse)</b>
<b>Assessors Parcel Numbers:</b>	<b>(APN: 035-2389-017-03)</b>
<b>Proposal:</b>	To replace three (3) existing telecommunication antennas, with three (3) new antennas at a site with 40 existing telecommunication antennas.
<b>Applicant:</b>	MetroPCS, Maryann Miller Novak
<b>Contact Person/</b>	Maryann Miller Novak/
<b>Phone Number:</b>	(510)919-3224
<b>Owner:</b>	Fairfax Lighthouse Deliverance Center
<b>Case File Number:</b>	<b>CMD11-191</b>
<b>Planning Permits Required:</b>	Regular Design Review to install three (3) telecommunication antennas, within an enclosed faux chimney on the roof of an existing building. Major Conditional Use Permit for the installation of a Macro telecommunication facility within 100 feet of a residential zone.
<b>General Plan:</b>	Neighborhood Center Mixed Use
<b>Zoning:</b>	CN-3 Neighborhood Center -3
<b>Environmental</b>	Exempt, Section 15301 of the State CEQA Guidelines; minor
<b>Determination:</b>	additions and alterations to an existing facility Section 15183 of the State CEQA Guidelines; projects consistent with a community plan, General Plan or zoning.
<b>Historic Status:</b>	Potential Designated Historic Property; Survey Rating: B+2+
<b>Service Delivery District:</b>	5
<b>City Council District:</b>	4
<b>Date Filed:</b>	9/29/11
<b>Finality of Decision:</b>	<i>Appealable to City Council within 10 days</i>
<b>For Further Information:</b>	Contact case planner <b>Michael Bradley</b> at (510) 238-6935 or mbradley@oaklandnet.com

## SUMMARY

The following staff report addresses the proposal for a modification to an existing unmanned wireless telecommunication facility located on the rooftop of an existing church building with the associated equipment cabinets located in a gated area on the ground next to the building. The project is to replace three (3) existing telecommunication antennas, with three (3) new antennas at a site with 40 existing telecommunication antennas. Given the number of antennas and the type of installation, this would be considered a "Macro" Telecommunications Facility. The proposed antennas would be located within an enclosed faux chimney near the center of the upper roof of the existing church building. The site is located in the CN-3 Neighborhood Center Zone. The General Plan designation for the site is Neighborhood Center Mixed Use.

# CITY OF OAKLAND PLANNING COMMISSION



0 125 250 500 750 1,000 Feet



Case File: CMD11-191  
Applicant: Metro PCS, Maryann Miller Novak  
Address: 5329-2345 Foothill Boulevard  
Zone: CN-3

**PROJECT DESCRIPTION**

The applicant (Metro PCS) is to replace three (3) existing telecommunication antennas, with three (3) new antennas at a site with 40 existing telecommunication antennas. The proposal for the equipment shelters to be located in a gated area on the ground next to the building. All proposed antennas and associated equipment will not be accessible to the public.  
(See Attachment A)

**PROPERTY DESCRIPTION**

The subject property is a through lot of approximately 44,160 square feet, with frontage on Foothill Boulevard and Bancroft Avenue. The subject property has a fully functioning church on the site. The property was first developed in 1922 (based on Alameda County Assessors Data). Currently there is a macro telecommunication facility with three separate telecommunication providers on the property including 40 antennas and five equipment shelters on the ground near to the building.

**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.

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".

### **GENERAL PLAN ANALYSIS**

The subject property is located within the Neighborhood Center Mixed Use General Plan designations. The Neighborhood Center Mixed Use land use classification is intended to identify, create, maintain and enhance mixed use neighborhood commercial centers. The proposed unmanned wireless telecommunication facility will not adversely affect and detract from the commercial or residential characteristics of the neighborhood. The antennas will be mounted on the existing church and visual impacts will be mitigated since the antennas will be enclosed and painted and textured to match the existing building. General Plan Policy N9.9 states that the City encourages rehabilitation efforts which respect the architectural integrity of a building's original style. The proposed project will have very minimal effect on the existing building.

### **ZONING ANALYSIS**

The subject property is located within the CN-3 Neighborhood Center Mixed Use Zone-3. The intent of the CN-3 zone is to create, improve, and enhance areas neighborhood commercial centers that have a compact, vibrant pedestrian environment. Consistent with the intent of the CN-3 Zone 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. The proposed project will have very minimal effect on the existing building.

### **ENVIRONMENTAL DETERMINATION**

The California Environmental Quality Act (CEQA) Guidelines lists the projects that qualify as categorical exemptions from environmental review. The proposed project is categorically exempt from the environmental review requirements pursuant to Section 15301, additions and alterations to existing facilities, and 15183, projects consistent with a community plan, general plan or zoning.

**KEY ISSUES AND IMPACTS****1. Conditional Use Permit**

Section 17.33.040 of the City of Oakland Planning Code requires a conditional use permit to install a Macro Telecommunication facility in the CN-3 zone. Furthermore, Section 17.134.020 defines a major and minor conditional use permit. Subsections (A)(3)(i) lists a Major Conditional Use Permit: "Any telecommunication facility in or within one hundred (100) feet of the boundary of any residential zone. The required findings for a major conditional use permit are listed and included in staff's evaluation as part of this report.

**2. Project Site**

Section 17.128.110 of the City of Oakland Telecommunication Regulations indicate that new 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 Co-location on an existing structure or facility with existing wireless antennas, the proposed project meets (A).

**3. 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 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 higher preference design alternative can not 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).

City of Oakland Planning staff have reviewed and determined that the site selected is conforming to all other telecommunication regulation requirements. The project has met design criteria (A) since the antennas shall be mounted completely concealed within a faux chimney on the roof of an existing church approximately 62 feet above the public right of way and will be setback from the edge of the building. The associated equipment shelters will have no visual impact since the equipment will be placed behind a gated area next to the building.

#### **4. 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.

The applicant states that the proposed project meets the radio frequency (RF) emissions standards as required by the regulatory agency. Submitted with the initial application was a RF emissions report, prepared by EBI Consulting, (**attachment B**). The report states that the proposed project will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not cause a significant impact on the environment. Additionally, staff recommends that prior to the final building permit sign off, the applicant submits certified RF emissions report stating that the facility is operating within acceptable thresholds established by the regulatory federal agency.

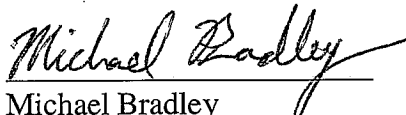
#### **CONCLUSION**

City of Oakland planning staff believes that the proposed project and subject property can be developed to meet the established zoning and telecommunication regulations that were created and adopted to set certain criteria minimums and maximums for similar types of developments. Staff believes that the findings for approval can be made to support the Conditional Use Permit, and Design Review.

**RECOMMENDATIONS:**

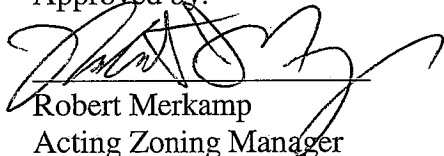
1. Affirm staff's environmental determination
2. Approve the Conditional Use Permit, and Design Review application CMD11-191 subject to the attached findings and conditions of approval.

Prepared by:



Michael Bradley  
Planner I

Approved by:

  
Robert Merkamp  
Acting Zoning Manager

Approved for forwarding to the  
City Planning Commission



Scott Miller, Interim Director  
Department of Planning, Building and Neighborhood Preservation

**ATTACHMENTS:**

- A. Project Plans & Photo simulations
- B. Telnet, RF Emissions Report

**FINDINGS FOR APPROVAL****FINDINGS FOR APPROVAL:**

This proposal meets all the required findings under Section 17.134.050, of the General Use Permit criteria; all the required findings under Section 17.136.050.(B), of the Non- Residential Design Review criteria; all the required findings under Section 17.128.070(B), of the telecommunication facilities (Macro) Design Review criteria; and all the required findings under Section 17.128.070.(C), of the telecommunication facilities (Macro) Conditional Use Permit criteria; and as set forth below and which are required to approve your application. Required findings are shown in **bold type**; reasons your proposal satisfies them are shown in normal type.

**SECTION 17.134.050 – GENERAL USE PERMIT FINDINGS:**

**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 location, size, design and operational characteristics of the proposal will not adversely affect the livability or appropriate development of abutting properties and the surrounding neighborhood. Consideration was given to the harmony in scale, bulk, and coverage; 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 proposed telecommunications antennas will be located within a faux chimney located on the roof of the existing building and will not adversely affect the operating characteristic or livability of the existing area. The facility will be unmanned and will not create additional vehicular traffic 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.**

The location, design and site planning of the proposed development will not detract from the existing civic environment and will preserve the existing character of the site by screening the new telecom facilities out of view from the general public

**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 proposed development will enhance the successful operation of the surrounding area in its basic community function and will provide an essential service to the community or region. This will be achieved by improving the functional use of the site by providing a regional

telecommunication facility for the community and will be available to police, fire, public safety organizations and the general public.

**D. That the proposal conforms to all applicable design review criteria set forth in the DESIGN REVIEW PROCEDURE of Chapter 17.136 of the Oakland Planning Code.**

The proposal conforms with all significant aspects of the design review criteria set forth in Chapter 17.136 of the Oakland Planning Code, as outlined below.

**E. That the proposal conforms in all significant respects with the Oakland General 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 General Plan designations. The Neighborhood Center Mixed Use land use classification is intended to identify, create, maintain and enhance mixed use neighborhood commercial centers. The proposed unmanned wireless telecommunication facility will not adversely affect and detract from the commercial or residential characteristics of the neighborhood. The antennas will be mounted on the existing church and visual impacts will be mitigated since the antennas will be enclosed and painted and textured to match the existing building. General Plan Policy N9.9 states that the City encourages rehabilitation efforts which respect the architectural integrity of a building's original style. The proposed project will have very minimal effect on the existing building.

**17.136.050(B) – NON-RESIDENTIAL DESIGN REVIEW CRITERIA:**

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

The proposal is a modification of a macro telecommunications facility which includes the replacement of three (3) existing telecommunication antennas, with three (3) new antennas at a site with 40 existing telecommunication antennas. The proposed antennas will be placed within an existing faux chimney at the center of the upper roof and therefore will be consistent and well related to the surrounding area in scale, bulk, height, materials, and textures.

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

The design will be appropriate and compatible with current zoning and general plan land use designations. The proposal protects and preserves the surrounding neighborhood context by adding wireless telecommunication antennas to a residential area. The antennas will be concealed from public view and will not have any visual impact on the neighborhood.

**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 proposal conforms with the City of Oakland Comprehensive General Plan meeting specific General Plan policies and the Supplemental Report and Recommendations on Revisions to the Citywide Telecommunications Regulations. The proposal will conform to performance standards for noise set forth in Section 17.120.050 for decibels levels in residential areas for both day and nighttime use. The Project conforms to all macro-facility definitions set forth in Section 17.128.070 and meets all design review criteria to minimize all impacts throughout the neighborhood

**17.128.070(B) DESIGN REVIEW CRITERIA FOR MACRO FACILITIES**

**B. Design Review Criteria for Micro Facilities.** In addition to the design review criteria listed in Chapter 17.136, the following specific additional criteria must be met when design review is required before an application can be granted:

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

The antennas will be mounted within a faux chimney on the roof top of an existing church building located approximately 62 feet above the sidewalk and will not be very visible from the street directly below.

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

The antennas will be mounted within a faux chimney on the roof top of an existing church building located approximately 62 feet above the sidewalk and will not be very visible from the street directly below.

**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 within a faux chimney on the roof top of an existing church building located approximately 62 feet above the sidewalk and will not be very visible from the street directly below.

**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.**

The equipment cabinets will be located inside a locked and screened gated area next to the existing building and will not be visible from public view.

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

The equipment cabinets will be located inside a locked and screened gated area next to the existing building and will not be visible from public view.

**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.**

The proposed replacement antennas will be mounted within a faux chimney on the roof and setback 11' from the edge of the building.

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

The antennas will be mounted to the roof and will not be accessible to the public due to its location. The equipment cabinets will be located inside a locked gated area next to the existing building.

**17.128.070(B) CONDITIONAL USE PERMIT CRITERIA FOR MACRO FACILITIES**

**C. Conditional Use Permit Criteria for Macro Facilities. In addition to the conditional use criteria listed in Chapter 17.134, the following specific additional criteria must be met before a conditional use permit can be granted:**

**1. The project must be demonstrated to have no visual impact.**

The antennas will be mounted within a faux chimney on the roof top of an existing church building located approximately 62 feet above the sidewalk and will not be very visible from the street directly below.

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

The proposed project meets the special design review criteria listed above in section 17.128.070B.

## CONDITIONS OF APPROVAL

### STANDARD CONDITIONS:

#### 1. Approved Use

##### *Ongoing*

a) The project shall be constructed and operated in accordance with the authorized use as described in the application materials, **CMD11-191**, and the plans dated **August 28, 2012** and submitted on **November 16, 2012** 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 required prior written approval from the Director of City Planning or designee.

b) This action by the City Planning Commission ("this Approval") includes the approvals set forth below. This Approval includes: **A Conditional Use Permit and Design Review that would replace three (3) existing telecommunication antennas, with three (3) new antennas at a site with 40 existing telecommunication antennas at 5329-5345 Foothill Boulevard (APN: 035-2389-017-03), under Oakland Municipal Code 17.128, 17.136, and 17.134.**

#### 2. Effective Date, Expiration, Extensions and Extinguishment

##### *Ongoing*

Unless a different termination date is prescribed, this Approval shall expire **two calendar 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 **Oakland 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 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.
- 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, and vegetation management for preventing fires and soil erosion.

## **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) The City of Oakland reserves the right at any time during construction to require certification by a licensed professional that the as-built project conforms to all applicable zoning requirements, including but not limited to approved maximum heights and minimum setbacks. Failure to construct the project in accordance with approved plans may result in remedial reconstruction, permit revocation, permit modification, stop work, permit suspension or other corrective action.
- c) Violation of any term, conditions or project description relating to the Approvals 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 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.

## **6. Signed Copy of the Conditions**

### ***With submittal of a demolition, grading, and building permit***

A copy of the approval letter and conditions 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, and if any 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 Management**

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

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

**12. Days/Hours of Construction Operation**

***Ongoing throughout demolition, grading, and/or construction***

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

- a) Construction activities are limited to between 7:00 AM and 7:00 PM Monday through Friday, except that pile driving and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m. Monday through Friday.
- b) Any construction activity proposed to occur outside of the standard hours of 7:00 am to 7:00 pm Monday through Friday for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case by case basis, with criteria including the proximity of residential uses and a consideration of resident's preferences for whether the activity is acceptable if the overall duration of construction is shortened and such construction activities shall only be allowed with the prior written authorization of the Building Services Division.

- c) Construction activity shall not occur on Saturdays, with the following possible exceptions:
  - i. Prior to the building being enclosed, requests for Saturday construction for special activities (such as concrete pouring which may require more continuous amounts of time), shall be evaluated on a case by case basis, with criteria including the proximity of residential uses and a consideration of resident's preferences for whether the activity is acceptable if the overall duration of construction is shortened. Such construction activities shall only be allowed on Saturdays with the prior written authorization of the Building Services Division.
  - ii. After the building is enclosed, requests for Saturday construction activities shall only be allowed on Saturdays with the prior written authorization of the Building Services Division, and only then within the interior of the building with the doors and windows closed.
- d) No extreme noise generating activities (greater than 90 dBA) shall be allowed on Saturdays, with no exceptions.
- e) No construction activity shall take place on Sundays or Federal holidays.
- f) Construction activities include but are not limited to: truck idling, moving equipment (including trucks, elevators, etc) or materials, deliveries, and construction meetings held on-site in a non-enclosed area.

**13. Landscape Maintenance**

***Ongoing***

All new landscaping shall be permanently maintained in good growing condition and, whenever necessary, replaced with new plant materials to ensure continued compliance with applicable landscaping requirements.

**14. 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.

**PROJECT SPECIFIC CONDITIONS:**

**15. Radio Frequency Emissions**

***Prior to the final building permit sign off***

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

# metroPCS

Wireless for All.

SF12010A

FAIRFAX LIGHTHOUSE

5329 FOOTHILL BLVD

OAKLAND, CA 94601

ALAMEDA COUNTY

GREG SMITH, ARCHITECT

2124 LINCOLN AVENUE, STE. A  
ALAMEDA, CA 94501  
415.585.3732 PHONE

**metroPCS**  
Wireless for All.  
1080 MARINA VILLAGE PARKWAY  
4TH FLOOR  
ALAMEDA, CA 94501

SF12010A  
FAIRFAX LIGHTHOUSE  
5329 FOOTHILL BOULEVARD  
OAKLAND, CA 94601

ATTACHMENT A

MARK	DATE	DESCRIPTION
1	02/11/01	ISSUED FOR PERMIT
2	02/11/01	REVISION
3	02/11/01	REVISION
4	02/11/01	REVISION
5	02/11/01	REVISION
6	02/11/01	REVISION
7	02/11/01	REVISION
8	02/11/01	REVISION
9	02/11/01	REVISION
10	02/11/01	REVISION

TITLE  
SHEET

T-1

SHEET DESCRIPTION	REV.
T-1 TITLE SHEET	4
T-2 APPLICABLE CODES, SYMBOLS, ABBREVIATIONS	4
T-3 GENERAL NOTES	4
T-4 ANTENNA SPECIFICATIONS/ ANTENNA CONFIGURATION SCHEDULE	4
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S-1 STRUCTURAL NOTES, PARTIAL ROOF PLAN	4
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## SHEET INDEX

TITLE	SIGNATURE	DATE
PROJECT MANAGER		
LEASING		
ZONING		
CONSTRUCTION		
UTILITIES		
NET OPS		
LANDLORD		
RF ENGINEER		
SIGNATURE BLOCK		

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT. ANY WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES:

- 2010 CALIFORNIA BUILDING CODE, TITLE 24, PART 2
- 2010 CALIFORNIA ADMINISTRATIVE CODE, TITLE 24, PART 1
- 2010 CALIFORNIA PLUMBING CODE, TITLE 24, PART 4
- 2010 CALIFORNIA MECHANICAL CODE, TITLE 24, PART 5
- 2010 CALIFORNIA ENERGY CODE, TITLE 24, PART 6
- 2010 CALIFORNIA FIRE CODE, TITLE 24, PART 9
- ASHRAE 90.1-2001
- 2009 NFPA 101, LIFE SAFETY CODE
- 2010 NFPA 72, NATIONAL FIRE ALARM CODE
- 2010 NFPA 70, NATIONAL ELECTRICAL CODE
- CITY/ COUNTY ORDINANCES

## CODE COMPLIANCE

**ARCHITECT**  
GREG SMITH  
2124 LINCOLN AVENUE, #A  
ALAMEDA, CA 94501  
CONTACT: GREG SMITH  
CONTACT NUMBER: (415) 585-3732

**STRUCTURAL ENGINEER**  
JEFFREY VAN DYKE  
1470 FELTA ROAD  
HEALDSBURG, CA 94448  
CONTACT NUMBER: (707) 886-3721

**UTILITIES**  
ELECTRICAL:  
PEACE  
TELEPHONE:  
AT&T

THE PROJECT INVOLVES THE INSTALLATION OF:

- REPLACE (3) THREE EXISTING SINGLE SECTOR PANEL ANTENNAS WITH (3) NEW QUAD SECTOR PANEL ANTENNAS TO BE INSTALLED IN THE EXISTING STRUCTURE TO BE CONSTRUCTED IN NEW FRP CHIMNEY STRUCTURE AT EXISTING BUILDING UPPER ROOF.
- REPLACE COAX CABLE AT ROOF.
- ALL OTHER METROPCS EQUIPMENT TO REMAIN.

## PROJECT DESCRIPTION

**APPLICANT/LESSEE**  
METRO PCS, INC.  
1080 MARINA VILLAGE PARKWAY, 4TH FLOOR  
ALAMEDA, CA 94501  
CONTACT: SCOTT REWARD  
PHONE: (510) 747-4693

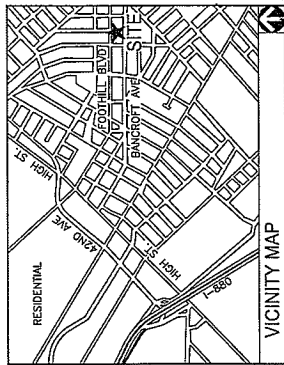
**ZONING MANAGER**  
MARYANN MILLER  
(510) 919-3224

**CONSTRUCTION MANAGER**  
JAMES WELAND  
1080 MARINA VILLAGE PARKWAY, 4TH FLOOR  
ALAMEDA, CA 94501  
(510) 258-6898

**PROPERTY INFORMATION**  
LANDLORD: FAIRFAX LIGHTHOUSE DELIVERANCE CTR.  
ADDRESS: 5341 FOOTHILL BLVD  
OAKLAND, CA 94601  
CONTACT: EVELYN LEWIS  
PHONE: 510-5341-2459  
AREA OF CONSTRUCTION: 8135 SQ. FT.  
(E) OCCUPANCY TYPE: UNWANTED TELECOM

**CONSTRUCTION TYPE:** N/A  
**CURRENT ZONING:** C30  
**LOT:** 37' 46" x 20.37' N (NAD 83)  
**LONG:** 122' 12" 00.09" W  
**A.P.N.:** 035-2398-017-02  
**ACCESSIBILITY:** METRO PCS FACILITY IS UN-MANNED AND ACCESS NOT REQUIRED.

## PROJECT DATA



## VICINITY MAP

**DIRECTIONS FROM METRO PCS OFFICE AT 1080 MARINA VILLAGE PARKWAY, ALAMEDA, CA:**

- TAKE CA-260 N/CA-61 N/WEBSTER ST
- TURN RIGHT AT 7TH ST 0.1 MI
- TURN LEFT ON HILL ST 0.1 MI
- MERGE ONTO L-880S TO SAN JOSE 0.3 MI
- TAKE EXIT 36 FOR HIGH ST. 0.3 MI
- MERGE ONTO 42ND AVE. 0.6 MI
- TURN RIGHT ONTO HILL BLVD. 0.8 MI
- DESTINATION IS ON THE RIGHT

## DRIVING DIRECTIONS

**DO NOT SCALE DRAWINGS**  
THESE DRAWINGS ARE FORWARDED TO BE FULL-SIZE AT THE TIME OF PERMITTING. THE EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE DESIGNER/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR CONSTRUCTION. THE CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICES TO PREVENT STORM WATER POLLUTION DURING CONSTRUCTION.

## GENERAL CONTRACTOR NOTES



SUBMITTAL DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ENGINEER OR ENGINEER OF RECORD, WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND THAT THEY HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE BUILDING OFFICIAL'S REQUIREMENTS. THE BUILDING OFFICIALS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

- ☐ SOILS COMPLIANCE PRIOR TO FOUNDATION INSPECTION
- ☐ HIGH STRENGTH BOLTING
- ☐ CONCRETE OVER 2500 PSI AT 28 DAYS
- ☐ EXPANSION ANCHOR INSTALLATION
- ☐ CONCRETE PLACEMENT AT SLAB ON GRADE
- ☐ SPRAYED -ON- FIREPROOFING
- ☐ WRITTEN CERTIFICATION FOR PROPER PLACEMENT OF REINFORCEMENTS AT SLAB ON GRADE
- ☐ STRUCTURAL MASONRY
- ☐ PRESTRESSED CONCRETE
- ☐ FOUNDATION EXCAVATION AND FILL INCLUDING UTILITY TRENCHES
- ☐ ALL FIELD WELDING
- ☐ CERTIFICATION OF BUILDING PAD, FOUNDATION AND RECORD THE GEOTECHNICAL ENGINEER OF THE RECORD
- ☐ REINFORCING PLACEMENT
- ☐ VERIFICATIONS OF MILL REPORT
- ☐ IDENTIFICATION OF STEEL AND AT JOB SITE
- ☐ ADHESIVE BOLTS IN CONCRETE OR MASONRY
- ☐ ANCHOR BOLTS INSTALLATION AND PLACEMENT IN CONCRETE

### SPECIAL INSPECTION REQUIREMENTS

3

24. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL HAVE 2500 PSI STRENGTH AT 28 DAYS, UNLESS NOTED OTHERWISE. ALL CONCRETING WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.

25. ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS. CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY DESIGNER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.

26. THE EXISTING SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY CONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH THE OWNER. ALSO, WORK SHOULD BE COMPLETED PRIOR TO THE START OF THE CONSTRUCTION PERIODS AFTER MIDNIGHT.

27. IF THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING IN THE VICINITY OF THE CELL SITE. CONTRACTOR SHALL BE RESPONSIBLE FOR THE 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.

28. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-4/10-BC WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF THE WORK AREA DURING CONSTRUCTION.

29. CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICES TO PREVENT STORM WATER POLLUTION DURING CONSTRUCTION.

30. CONTRACTOR SHALL BE SUBMITTED FOR ALL EQUIPMENT AND MATERIALS WHICH MUST INTERFERE AND COORDINATE WITH OTHERS, WHETHER DETAILED OR NOT.

31. SHOP DRAWINGS SHALL BE SUBMITTED FOR ANY VERTICAL EXCAVATION OVER 5'-0" DEEP INTO WHICH PERSONS MUST DESCEND.

32. ALL DISSIMILAR METALLIC MATERIALS SHALL BE EFFECTIVELY ISOLATED FROM EACH OTHER TO PREVENT GALVANIC ACTION.

33. ALL WOOD IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESERVED TREATED WITH AN APPROVED PRESERVATIVE.

34. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.

35. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING NEAR EXISTING UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING & EXCAVATION.

36. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.

37. IF NECESSARY, RUBBER, STUMPS, DEBRIS, STOPS, EDGES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.

38. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH ARE NOT REQUIRED FOR THE PROJECT, SHALL BE PROTECTED AND WHERE REQUIRED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, OWNER AND/OR LOCAL UTILITIES.

39. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION.

40. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE.

41. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BITS EQUIPMENT AND TOWER AREAS.

42. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND, FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

43. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.

44. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER EQUIPMENT OR OTHERWISE SHALL BE GRASSED TO MATCH EXISTING SLOPE AND SHALLOWS TO PREVENT EROSION AS SPECIFIED IN THE PROJECT SPECIFICATIONS.

45. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES AND CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.

### SITE WORK GENERAL NOTES

2

1. CONTRACTOR SHALL VERIFY AND COORDINATE ALL NEW AND EXISTING CONDITIONS AND DIMENSIONS AT JOB SITE FOR COMPARISON WITH DRAWINGS AND SPECIFICATIONS PRIOR TO BEGINNING AND START OF DURING CONSTRUCTION. IF ANY DISCREPANCIES, CONTRACTOR SHALL NOTIFY DESIGNER IN WRITING FOR CLARIFICATION PRIOR TO PROCEEDING WITH WORK.

2. DO NOT SCALE DRAWINGS. CONTRACTOR SHALL RELY ON WRITTEN DIMENSIONS AS GIVEN. THE CONTRACTOR SHALL NOTIFY THE DESIGNER/ENGINEER FOR CLARIFICATIONS. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR AND COORDINATED WITH ALL OF THE WORK OF ALL TRADES. IF DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE DESIGNER/ENGINEER IN WRITING FOR CLARIFICATION BEFORE COMMENCEMENT OR RESUMPTION OF WORK.

3. ABBREVIATIONS THROUGHOUT THE PLANS ARE THOSE IN COMMON USE. NOTIFY THE DESIGNER/ENGINEER OF ANY ABBREVIATIONS IN QUESTION.

4. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, RULES, REGULATIONS, AND LAWFUL NOTICES OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.

5. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE CODE AND REGULATIONS.

6. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE DESIGNER/ENGINEER.

9. LEGAL EXITS SHALL NOT BE BLOCKED AT ANYTIME.

10. TEMPORARY PEDESTRIAN PROTECTION SHALL BE PROVIDED AS REQUIRED BY LOCAL CODES.

11. ALL CONDUIT/DUCT PENETRATIONS THROUGH PARTITIONS AND CEILING SHALL BE PROVIDED WITH NECESSARY FIRE PENETRATION SEALANT AS REQUIRED BY CODE FOR FIRE-RATED PENETRATIONS.

12. THE DESIGNER/ENGINEER SHALL BE CONSULTED IN ANY CASES WHERE CUTTING INTO AN EXISTING STRUCTURAL PORTION OF ANY BUILDING IS NECESSARY. PRIOR TO PROCEEDING WITH WORK, REINFORCEMENT AND/OR SUPPORT SATISFACTORY TO THE DESIGNER/ENGINEER SHALL BE PROVIDED BY THE CONTRACTOR PRIOR TO CUTTING INTO ANY STRUCTURAL PORTIONS OF ANY BUILDING.

13. CONTRACTOR SHALL VERIFY ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. CONTRACTOR SHALL VERIFY EXISTING CABLES AND WIRING TRAYS AS SHOWN ON THE DRAWINGS. CONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONSTRUCTION MANAGER.

14. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.

15. CLEAN UP AND DISPOSAL-REMOVE DEBRIS, RUBBISH AND WASTE MATERIAL FROM THE WORK AREA. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL DEBRIS AND DUMPING COSTS. CONFORM TO PERTAINING FEDERAL, STATE AND LOCAL LAWS, REGULATIONS AND ORDERS UPON COMPLETION OF WORK ALL CONSTRUCTION AREAS SHALL BE LEFT CLEAN AND FREE FROM DEBRIS. CLEAN ALL STAINS, PAINT SPOTS, DROPPINGS, AND OTHER BLEMISHES.

16. THE CONTRACTOR SHALL PROTECT ALL FINISH WORK AND SURFACES FROM DAMAGE DURING THE COURSE OF CONSTRUCTION AND SHALL REPLACE AND/OR REPAIR ALL DAMAGED AREAS CAUSED BY THE CONTRACTOR OR SUBCONTRACTOR PERSONNEL TO THE SATISFACTION OF THE OWNER.

17. PRIOR TO INSPECTION OF THE EXISTING FACILITY, THE CONTRACTOR MUST RECEIVE PERMISSION FOR SITE ACCESS FROM THE OWNER OR THE DESIGNATED REPRESENTATIVE.

18. WHEN IT IS NECESSARY TO INTERRUPT ANY EXISTING UTILITY SERVICE TO MAKE CORRECTIONS AND/OR CONNECTION, A MINIMUM OF 48 HOURS ADVANCE NOTICE SHALL BE GIVEN TO THE OWNER. INTERRUPTIONS IN UTILITY SERVICES SHALL BE OF THE SHORTEST POSSIBLE DURATION AND SHALL BE APPROVED IN ADVANCE BY THE OWNER.

19. ALL CONTRACTORS PERFORMING WORK ON THE PREMISES SHALL BE RESPONSIBLE FOR OBTAINING, MAINTAINING AND SUPERVISING A NEARBY AND PRESENT SAFETY PROGRAM. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ANY DEBRIS OR TOOLS WHICH MAY ENDANGER VISITORS OR STAFF OF THE OWNER OR TENANT.

20. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES BELOW GRADE AND RELATED SERVICE CONNECTIONS WITH THE RESPECTIVE UTILITY COMPANIES.

21. THE CONTRACTOR SHALL COORDINATE THE REMOVAL, ABANDONMENT, AND/OR RELOCATION OF EXISTING UTILITIES ABOVE OR BELOW GRADE WITH THE RESPECTIVE UTILITY COMPANIES.

22. THE CONTRACTOR SHALL PERFORM ALL WORK WITHIN PUBLIC RIGHTS-OF-WAY ACCORDING TO LOCAL JURISDICTIONAL STANDARDS AND SPECIFICATIONS. CONTRACTOR SHALL OBTAIN PERMITS FROM APPROPRIATE AGENCIES.

23. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.

### GENERAL NOTES

1

GREG SMITH, ARCHITECT

2124 LINCOLN AVENUE, STE. A  
ALAMEDA, CA 94601  
415.565.3732 PHONE

metropcs  
Wireless for All.

1080 MARINIA VILLAGE PARKWAY  
4TH FLOOR  
ALAMEDA, CA 94601

SF12010A  
FAIRFAX LIGHTHOUSE  
5329 FOOTHILL BOULEVARD  
OAKLAND, CA 94601

MARK	DATE	DESCRIPTION
1	02/11/12	ISSUED FOR PERMITTING
2	02/11/12	ISSUED FOR PERMITTING
3	02/17/12	ISSUED FOR PERMITTING
4	02/28/12	ISSUED FOR PERMITTING

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SHEET TITLE:

GENERAL  
NOTES

T-3





GREG SMITH, ARCHITECT

2124 LINCOLN AVENUE, STE. A  
OAKLAND, CA 94601  
415.593.3732 PHONE

**metropcs**  
Wireless for All.

1080 MARINA VILLAGE PARKWAY  
ALAMEDA, CA 94501

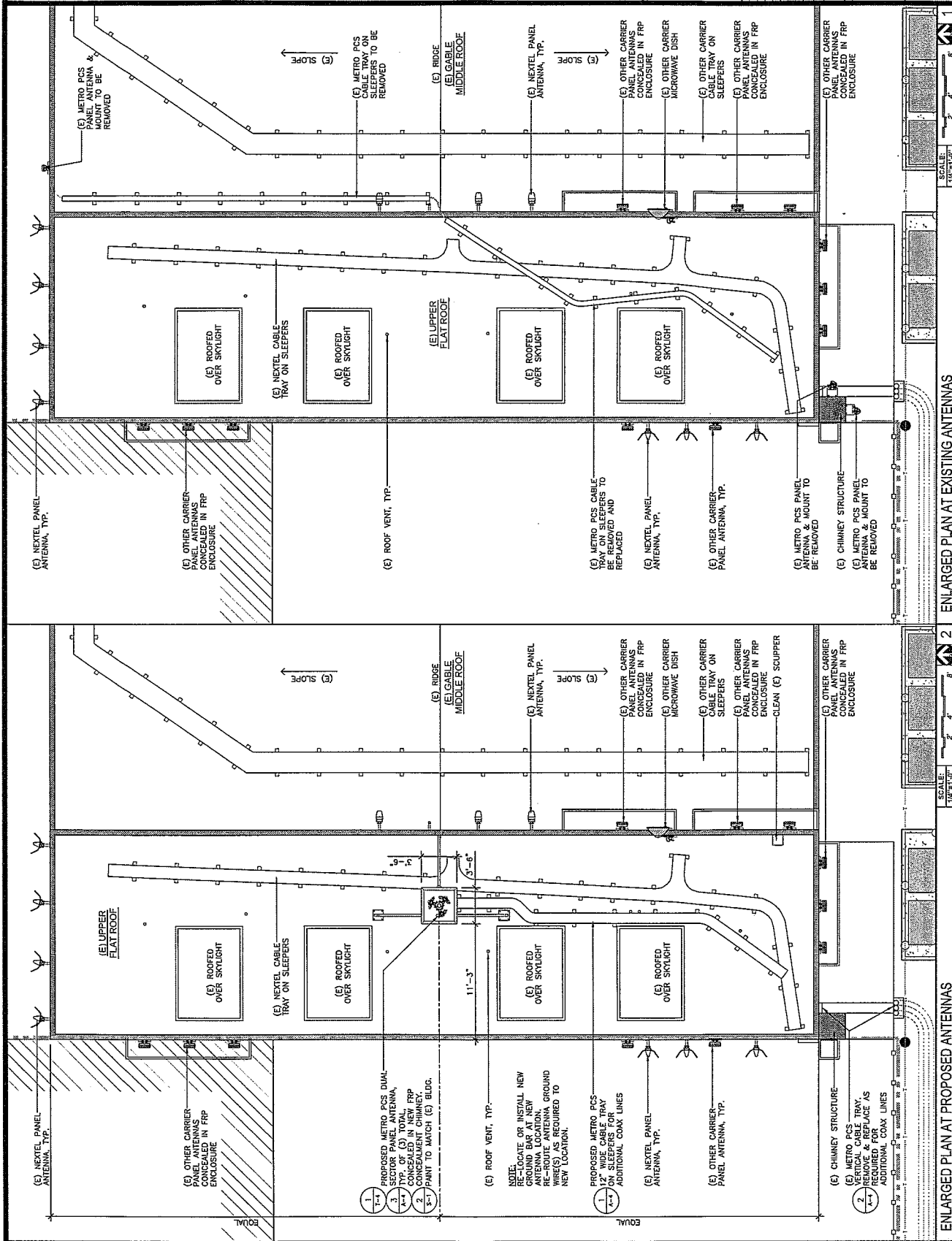
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FAIRFAX LIGHTHOUSE  
5329 FOOTHILL BOULEVARD  
OAKLAND, CA 94601

MARK	DATE	DESCRIPTION
1	10/27/17	ISSUE FOR CONSTRUCTION
2	12/17/17	ISSUE FOR CONSTRUCTION
3	03/18/18	ISSUE FOR CONSTRUCTION
4	09/28/17	100% CONSTRUCTION

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SHEET TITLE:

ENLARGED PLAN  
AT ANTENNAS

**A-2**



ENLARGED PLAN AT EXISTING ANTENNAS

ENLARGED PLAN AT PROPOSED ANTENNAS

GREG SMITH, ARCHITECT

2124 LINCOLN AVENUE, STE. A  
OAKLAND, CA 94601  
415.583.3732 PHONE

**metropcs**  
Wireless for All.

1000 MARINA VILLAGE PARKWAY  
4TH FLOOR  
ALAMEDA, CA 94601

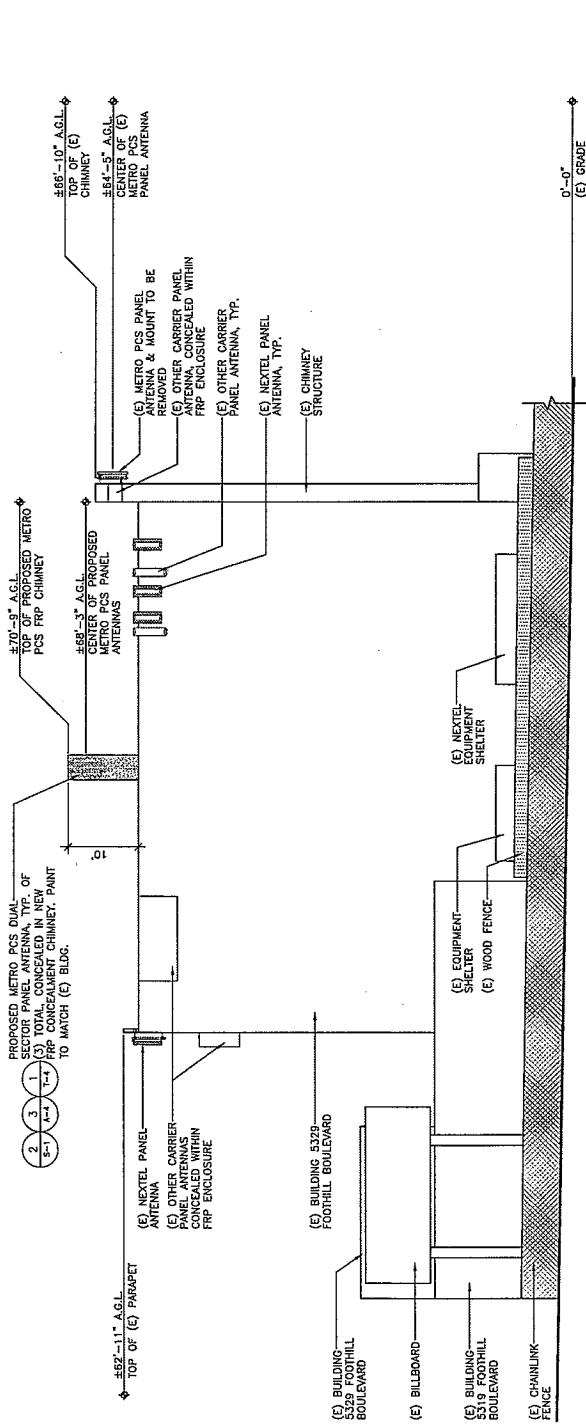
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FAIRFAX LIGHTHOUSE  
5329 FOOTHILL BOULEVARD  
OAKLAND, CA 94601

MARK	DATE	DESCRIPTION
1	02/27/13	SUB. CONSTRUCTION
2	08/18/13	REVISION
3	08/18/13	REVISION
4	08/28/13	CONSTRUCTION

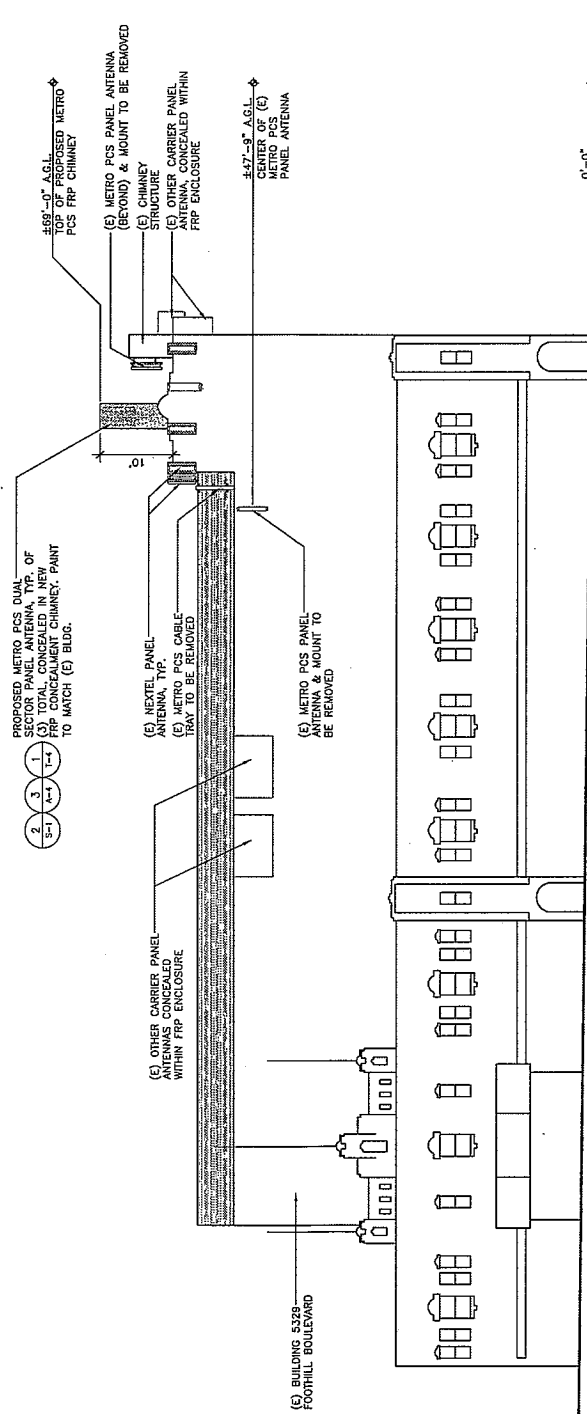
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SHEET TITLE

ELEVATIONS

A-3



WEST ELEVATION



NORTH ELEVATION

GREG SMITH, ARCHITECT

2124 LINCOLN AVENUE, STE. A  
OAKLAND, CA 94612  
415.595.3732 PHONE

metropcs  
Wireless for All.

1080 MARINA VILLAGE PARKWAY  
SUITE 200  
OAKLAND, CA 94601

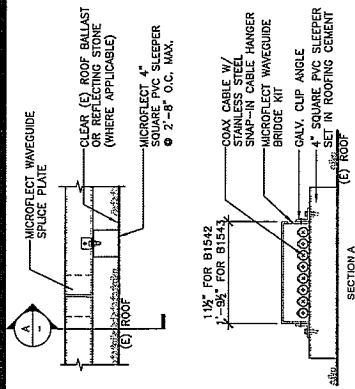
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FAIRFAX LIGHTHOUSE  
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OAKLAND, CA 94601

MARK	DATE	DESCRIPTION
1	02/11/10	ISSUE FOR CONSTRUCTION
2	02/11/10	ISSUE FOR CONSTRUCTION
3	02/11/10	ISSUE FOR CONSTRUCTION
4	08/28/12	100% CONSTRUCTION

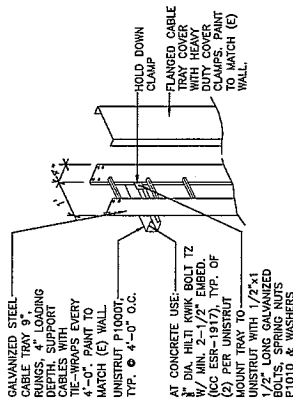
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SHEET TITLE

DETAILS

A-4

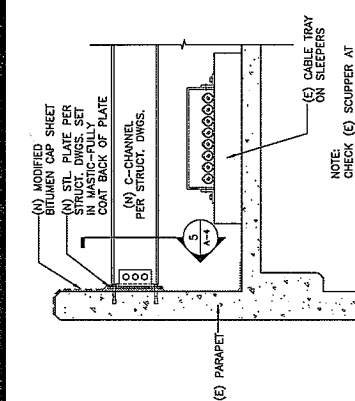


CABLE TRAY ON SLEEPERS SCALE: N.T.S. 1

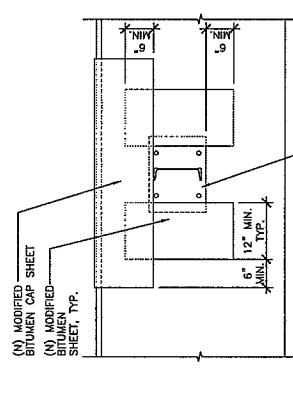


NOTE: CABLE TRAYS SHALL BE FREE OF SHARP OBJECTS AND CORNERS. ALL CORNERS SHALL BE FASTENED USING HOLD DOWN CLIPS. SHEET METAL SCREWS ARE NOT ACCEPTABLE.

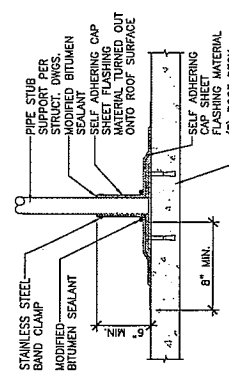
VERTICAL CABLE TRAY SCALE: N.T.S. 2



STL. BM. AT PARAPET FLASHING SCALE: N.T.S. 4

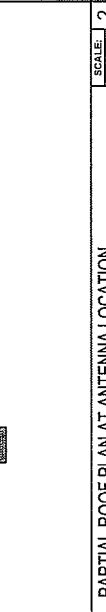
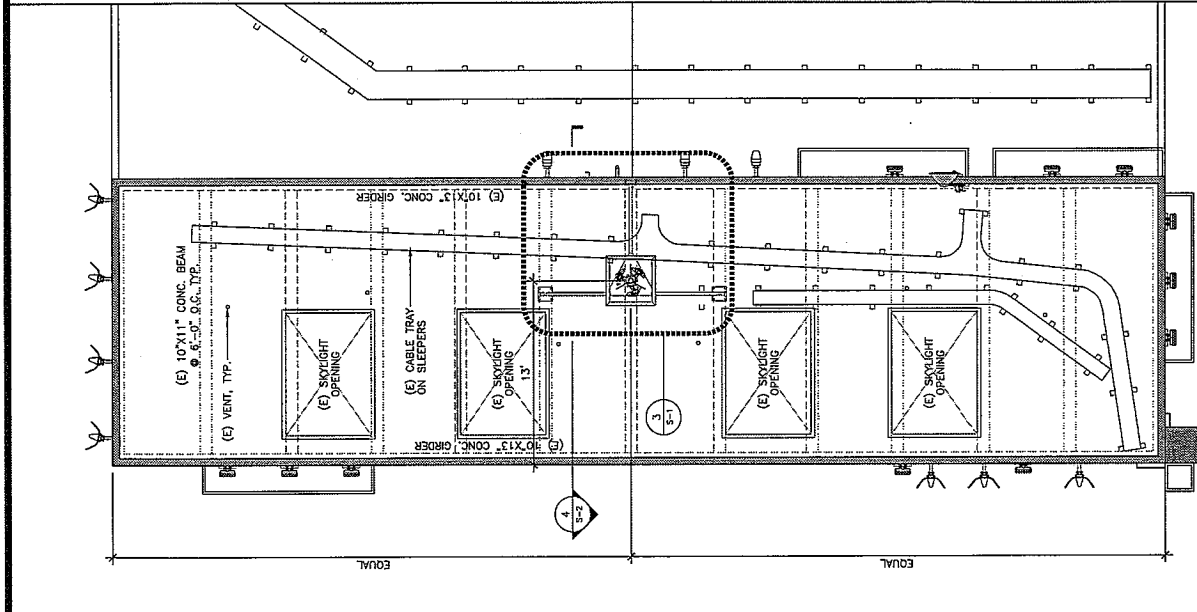
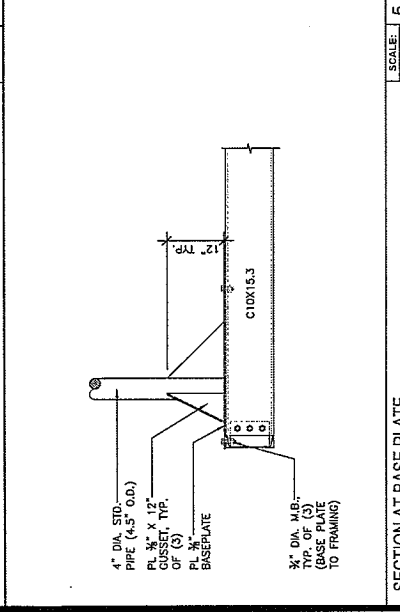
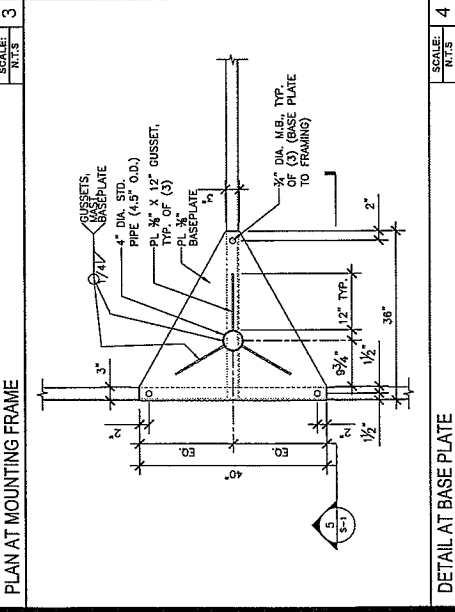
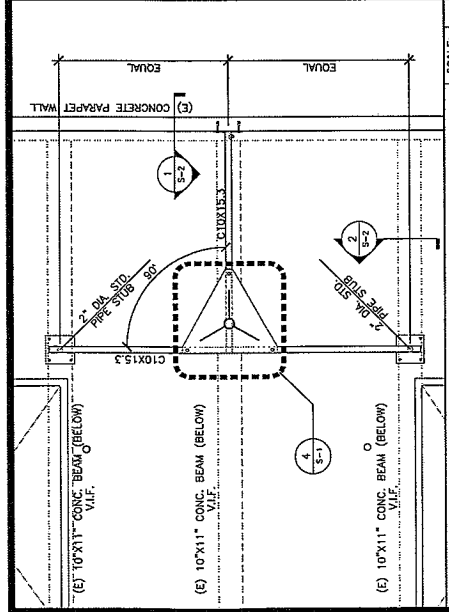


SECTION AT FLASHING SCALE: N.T.S. 5



NOTES: CONTRACTOR SHALL VERIFY IF ROOF WARRANTY EXISTS. IF WARRANTY EXISTS, ALL ROOF PENETRATIONS SHALL BE BY METHOD APPROVED BY ROOFING COMPANY TO MAINTAIN ANY EXISTING WARRANTIES.

PIPE STUB FLASHING SCALE: N.T.S. 3



- GENERAL NOTES**
- ALL CONSTRUCTION AND WORKMANSHIP SHALL CONFORM TO THE DRAWINGS AND 2010 CBC SPECIFICATIONS.
  - THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE, AND SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND CONDITIONS OF ALL WORK AND MATERIALS INCLUDING THOSE FURNISHED BY OTHERS. ANY DISCREPANCIES MUST BE IMMEDIATELY REPORTED TO THE ATTENTION OF THE STRUCTURAL ENGINEER IMMEDIATELY AND BE RESOLVED PRIOR TO PROCEEDING WITH THE WORK.
  - STRUCTURAL DRAWINGS SHALL WORK IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS.
  - DESIGN MATERIALS, EQUIPMENT AND PRODUCTS OTHER THAN THOSE SPECIFIED SHALL BE APPROVED BY THE ENGINEER. APPROVAL SHALL BE OBTAINED PRIOR TO INSTALLATION. APPROVAL IS OBTAINED FROM THE STRUCTURAL ENGINEER.
  - ALL CONDITIONS SHOWN OR NOTED AS EXISTING ARE BASED ON BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE DRAWINGS. NO WARRANTY IS IMPLIED TO THEIR ACCURACY. CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS. SHOULD ANY DISCREPANCIES BE FOUND, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE STRUCTURAL ENGINEER. STRUCTURAL ENGINEER WILL THEN PREPARE ADDITIONAL DRAWINGS AS MAY BE NEEDED TO ACCOMMODATE THE CONDITIONS AS BROUGHT TO THEIR ATTENTION.
  - MECHANICAL EQUIPMENT MUST BE FIRMLY ATTACHED TO THE STRUCTURE. ALL EQUIPMENT SHALL BE SECURED TO THE STRUCTURE PROVIDING STABILITY FOR MECHANICAL EQUIPMENT. EQUIPMENT SHALL BE CAPABLE OF TRANSMITTING CODE REQUIRED LOADS, BUT IN NO EVENT LESS THAN A SHEAR LOAD EQUIVALENT TO 0.45 TIMES THE OPERATING WEIGHT OF EQUIPMENT.
  - DESIGN DATA:  
 DESIGN CODE: 2010 CBC  
 SEISMIC IMPORTANCE FACTOR  $I_p = 1.0$   
 OCCUPANCY CATEGORY = II  
 MAPPED SPECTRAL RESPONSE:  
 ACCELERATIONS  
 $S_s = 1.318$   $S_1 = 0.882$   
 SITE CLASS = D  
 SITE COEFFICIENT  $F_a = 1.0$   
 SITE COEFFICIENT  $F_v = 1.5$   
 WIND SPEED = 85 M.P.H.  
 WIND EXPOSURE = B
- STRUCTURAL STEEL**
- ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A-36 AND SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC SPECIFICATION FOR FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, LATEST EDITION.
  - BOLTS SHALL CONFORM TO ASTM A307, UNLESS OTHERWISE NOTED.
  - PIPE STEEL SHALL CONFORM TO ASTM A-53, GRADE B.
  - TUBE STEEL SHALL CONFORM TO ASTM A-500, GRADE B.
  - ALL STEEL PERMANENTLY EXPOSED TO WEATHER, (INCLUDING NUTS, BOLTS WASHERS) SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
  - ENGINEER SHALL REVIEW STEEL SHOP DRAWINGS PRIOR TO FABRICATION.
- WELDING**
- THE QUALITY OF MATERIALS AND THE FABRICATION OF ALL WELDED CONNECTIONS SHALL BE IN CONFORMANCE WITH THE AMERICAN WELDING SOCIETY'S STRUCTURAL WELDING CODE, AWS D1.1, LATEST EDITION.
  - SPECIAL INSPECTION OF WELDING PER SECTION 1704A.3.1 IS REQUIRED. A QUALIFIED AND CERTIFIED INSPECTOR SHALL BE PRESENT DURING SHOP AND FIELD WELDING OPERATIONS UNLESS OTHERWISE NOTED AND SHALL INSPECT ALL THE WORK AS REQUIRED BY AWS D1.1.
  - SPECIAL INSPECTION NEED NOT BE CONTINUOUS FOR THE FOLLOWING ITEMS, PROVIDED THE MATERIAL, QUALIFICATIONS OF WELDING PROCEDURES AND WELDERS ARE VERIFIED PRIOR TO THE START OF WELDING. INSPECTION SHALL BE CONDUCTED AT THE START OF WELDING AND A VISUAL INSPECTION OF ALL WELDS IS STILL REQUIRED.  
 \*\* SINGLE-PASS FILLET WELDS NOT EXCEEDING 5/16 INCH.
  - ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS USING PRE-QUALIFIED WELDING PROCEDURES.
  - THE INSPECTOR SHALL CONFIRM THE QUALIFICATION OF WELDERS, THE USE OF AWS QUALIFIED PROCEDURES, THE MANUFACTURER'S RECOMMENDED USE OF AUTOMATIC EQUIPMENT AND THE PROPER USE OF PREHEAT, IF REQUIRED.

**metropcs**  
Wireless for All.

1080 MARINA VILLAGE PARKWAY  
SUITE 200  
ALAMEDA, CA 94601

FAIRFAX LIGHTHOUSE  
SF 12010A  
3329 FOOTHILL BOULEVARD  
OAKLAND, CA 94601

GREG SMITH, ARCHITECT

2124 LINCOLN AVENUE, STE. A  
ALAMEDA, CA 94601  
415.595.3735 PHONE

MARK DATE DESCRIPTION

1	12/17/12	PRELIMINARY
2	01/11/13	REVISED
3	02/11/13	REVISED
4	03/11/13	REVISED
5	04/11/13	REVISED

CHECKED BY: GS  
 DATE: 05  
 COPYRIGHT: 2012 GREG SMITH, ARCHITECT

SHEET TITLE

STRUCT. NOTES,  
PARTIAL ROOF PLAN

**S-1**

1

GREG SMITH, ARCHITECT

2124 LINCOLN AVENUE, STE. A  
OAKLAND, CA 94612  
415.556.3732 PHONE

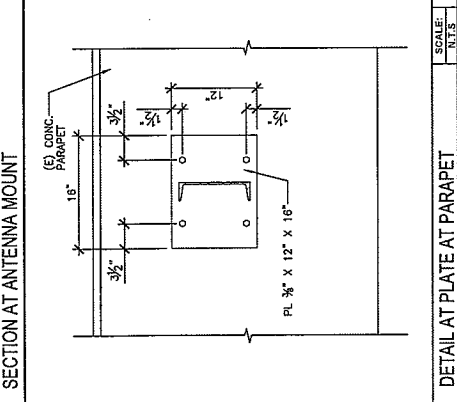
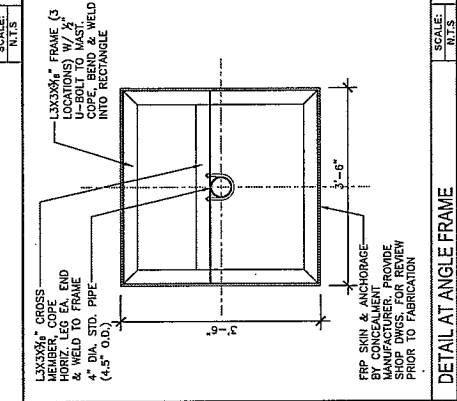
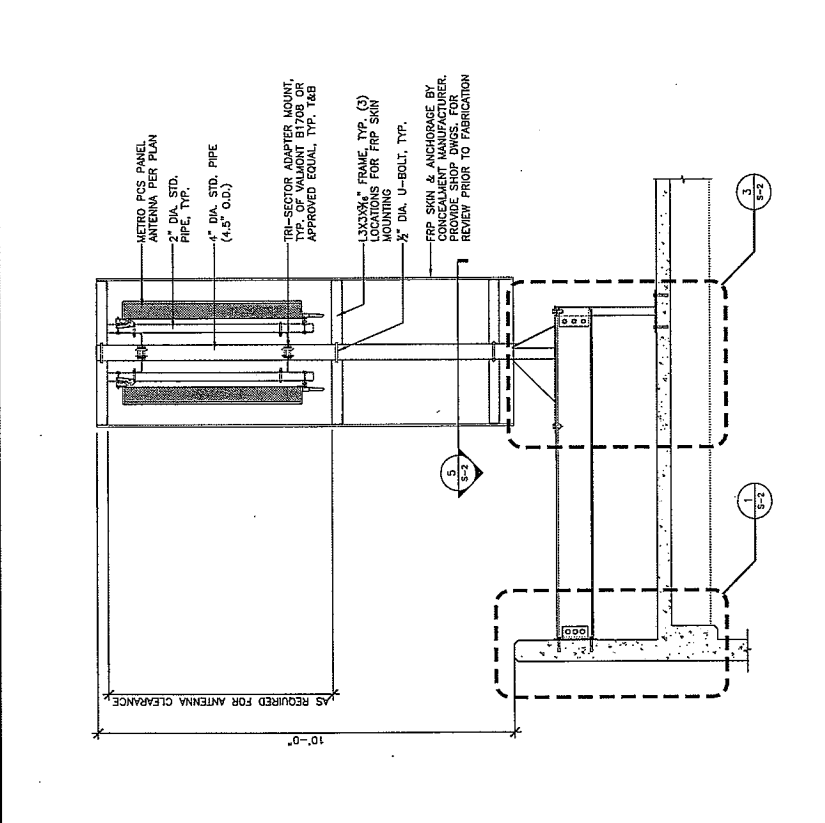
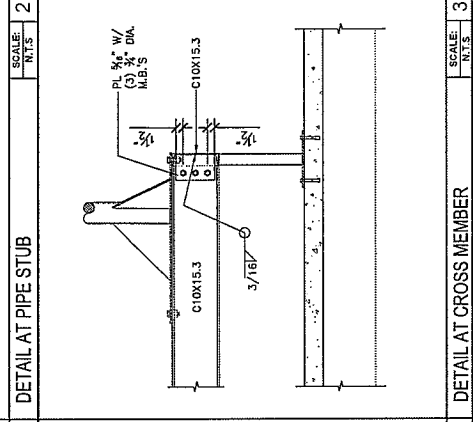
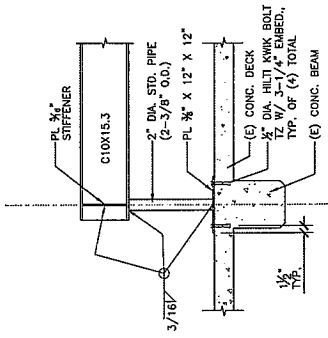
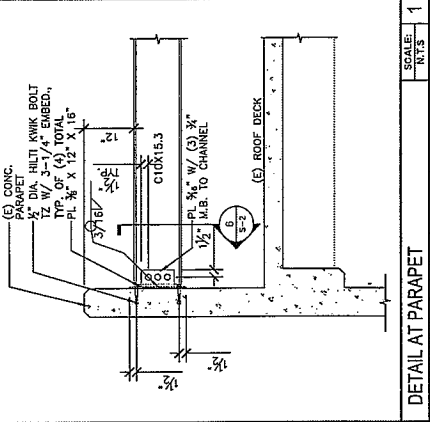
**metropcs**  
Wireless for All.  
1050 MARINA VILLAGE PARKWAY  
4TH FLOOR  
OAKLAND, CA 94612

SF12010A  
FAIRFAX LIGHTHOUSE  
6329 FOOTHILL BOULEVARD  
OAKLAND, CA 94601

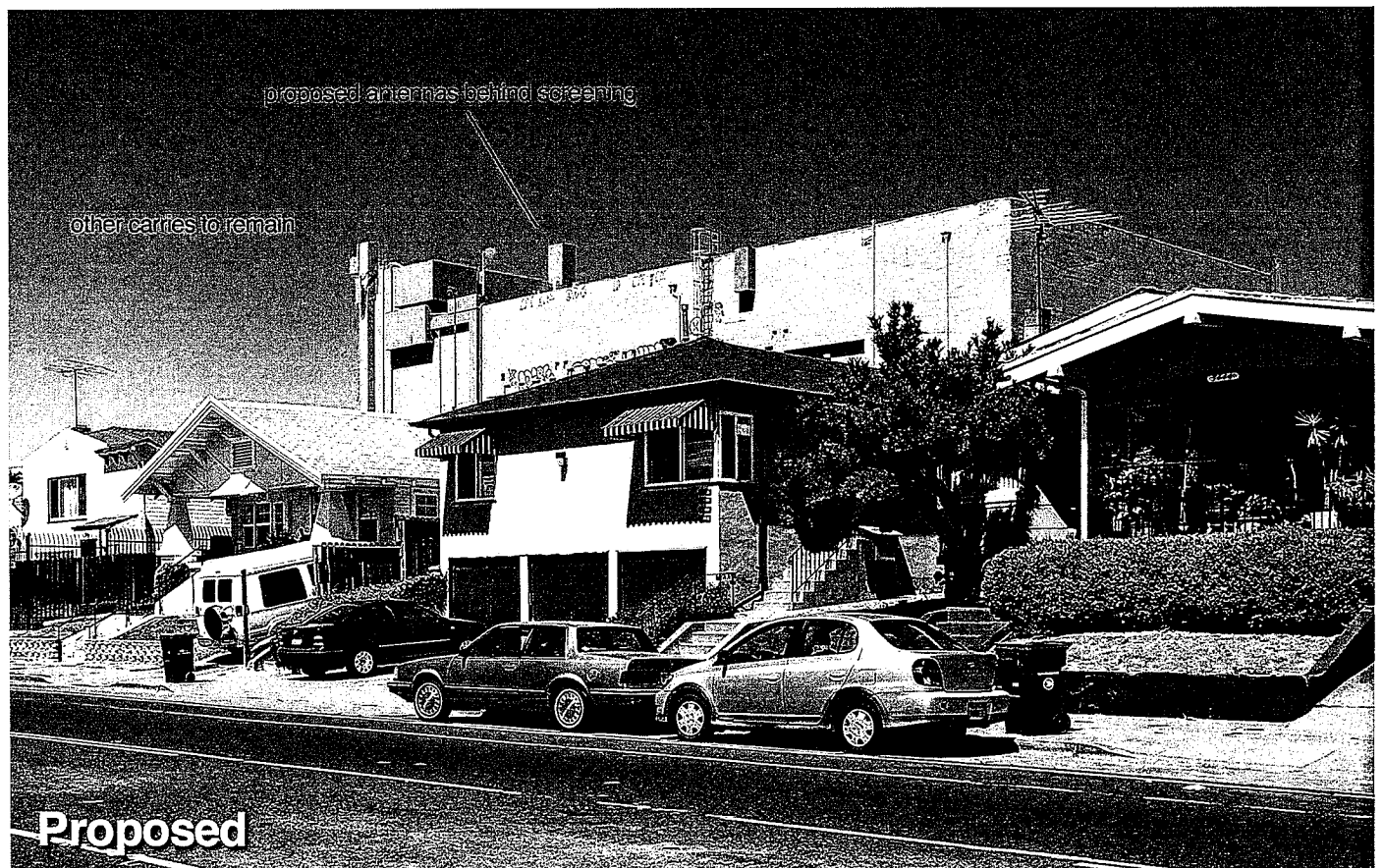
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DETAILS, SECTION

S-2







Electromagnetic Energy ("EME")  
Site Compliance Report

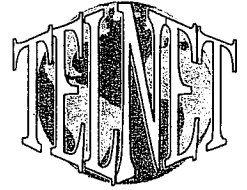


*Prepared for*

**metroPCS**

Site Information

US ID:	SF12010A
Site Name:	Fairfax Lighthouse
Address:	5329 Foothill Blvd. Oakland, CA 94601



*Metro PCS*

Site ID: SF12010A - Site Name: Fairfax Lighthouse

## Electromagnetic Energy ("EME") Measurement and Site Compliance Report



5329 Foothill Blvd., Oakland, CA 94601



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## 1 Introduction

METRO PCS has installed RF transmitting antennas at the following location (the "wireless telecommunications facility"):

**Street Address:** 5329 Foothill Blvd., Oakland, CA 94519

**US ID:** SF12010A

**Latitude / Longitude:** 37.772362 / -122.199912

Telnet, Inc performed an RF emission survey of the RF environment surrounding the facilities installed by METRO PCS at this location. The facility is located on a two story building.

METRO PCS is licensed by the Federal Communications Commission ("FCC") to provide wireless communications services. As required by the FCC, wireless system operators perform an assessment of the potential human exposure to radio frequency emissions emanating from transmitting antennas at the site.

## 2 Standards of Exposure

The FCC adopted the human exposure limits for field strength and power density recommended in Report No. 86, "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," published by the 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 study by Institute of Electrical and Electronics Engineers ("IEEE") Standard, "Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," includes almost identical exposure limits. 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 limit for exposures of unlimited duration to radio frequency energy for several personal wireless services are as follows:

Personal Wireless Service	Frequency (MHz)	Occupational Limit (mW/cm <sup>2</sup> )	Public Limit (mW/cm <sup>2</sup> )
Personal Communication (PCS)	1950	5	1
Cellular	870	2.9	0.58
Specialized Mobile Radio (SMR)	855	2.85	0.57
Restrictive Range	30 - 300	1	0.2



### 3 Facility Requirements

Base stations typically consist of two distinct parts: the electronic transceivers 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 subscribers. The transceivers are often located at ground level and are connected to the antennas by coaxial cables. Due to 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, it is generally not possible for exposure conditions to approach the maximum permissible exposure limits without being physically very near the antennas.

Telnet, Inc performed an RF emission survey of the RF environment surrounding the facilities installed by METRO PCS at this location. The facility is located on a one story building.

METRO PCS is licensed by the Federal Communications Commission ("FCC") to provide wireless communications services. As required by the FCC, wireless system operators perform an assessment of the potential human exposure to radio frequency emissions emanating from transmitting antennas at the site.

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 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.



## **4 Modeling Summary and Assumptions**

The FCC provides direction for determining compliance in its OET 65, "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radio Frequency Radiation." Section 8 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 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.

### **4.1.1 General Model Assumptions**

In this report, it is assumed that all antennas are operating at full power at all times. Software modeling was performed for all transmitting antennas located on the site. Telnet, Inc has further assumed a 100% duty cycle and maximum radiated power.

The site has been modeled with these assumptions to show the maximum RF energy density. Telnet Inc believes this to be a worst case analysis, based on best available data.

If at any time power density measurements were to be made, Telnet Inc believes the real time measurements would indicate levels below those shown in this report. By modeling in this way, we have conservatively shown exclusion areas (areas not to be entered without a personal RF monitor, carriers reducing power or performing real time measurements to show real time exposure levels).

### **4.1.2 Use of Generic Antennas**

For the purposes of this report, the use of 'Generic' as an antenna model, or 'Unknown' for a wireless carrier, means that the information about the carrier, their FCC license and/ or antenna information was not provided and could not be obtained while on site. In the event of unknown information, Telnet will use our industry specific knowledge of equipment, antenna models and transmit power to model the site. If more specific information can be obtained for the unknown measurement criteria, remodeling of the site is recommended. If no information is available regarding the transmitting service associated with an unidentified antenna, using the antenna manufacturer's published data regarding the antenna's physical characteristics makes more conservative assumptions.



## 5 Site Details

Based upon information provided by MetroPCS, including construction drawings it is proposed to mount three Kathrein Model 800 10606 dual sector panel antennas on the existing 44-foot building at the Fairfax Lighthouse, located at 5329 Foothill Blvd. in Oakland. The antennas would be mounted at an effective height of about 44 feet for sector alpha and 60 feet for sectors beta and gamma above ground and would be oriented with up to 6° downtilt at 120° spacing between alpha and beta and 160° spacing between beta and gamma, to provide service in all directions. The maximum effective radiated power in any direction would be 3181 watts, representing five channels operating simultaneously at 636.2 watts each. There are other reported wireless communications base stations installed nearby.

## 6 Results

For a person anywhere at ground, the maximum ambient RF exposure level due to the proposed Metro PCS operation is calculated to be 0.135 mW/cm<sup>2</sup>, which is 13.5% and the maximum ambient RF exposure level due to all carriers is 13.5% (unchanged) of the applicable public exposure limit. The maximum calculated level at the lower level rooftop elevation of any nearby residence\* is 101.8% and is unchanged for all carriers 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.

## 7 Mitigation Measures

Due to their mounting location, the Metro antennas are not accessible to the general public, but in order to comply with FCC guidelines a RF Notice Sign should be installed at the antenna locations. To prevent occupational exposures in excess of the FCC guidelines, no access within 3 feet in front of the antennas themselves, such as might occur during maintenance activities on the building, should be allowed while the site is in operation, unless other measures can be demonstrated to ensure that occupational protection requirements are met. Posting explanatory warning signs at 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.



## 8 Analysis and Computation

Based on emission patterns of the antennas at this location most of the energy emitted is spread towards the horizon. This assumes the antennas have a zero downtilt. If a mechanical downtilt other than zero is applied to the antennas then the maximum energy emitted will need to be calculated using the information below.

The following formulas can be used for calculating the power density.

Power density is calculated by dividing the surface area of the sphere or the unit area normal to the direction of the propagation. This information is usually shown in units of microwatts per square centimeter ( $\mu\text{W}/\text{cm}^2$ ), milliwatt per square centimeters ( $\text{mW}/\text{cm}^2$ ), or watts per square meter ( $\text{W}/\text{m}^2$ ).

### 8.1 Analysis

$$S = \frac{(P \times K \text{Fact})}{(2\pi R h)}$$

where

S = power density ( $\text{mW}/\text{cm}^2$ )

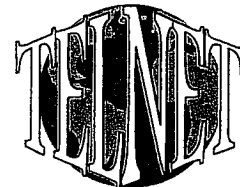
P = total power input to the antenna (mW)

K = antenna correction factor / numeric factor for antenna discrimination

R = straight line distance of the antenna from a 6 ft. human (cm)

h = distance between the roof level and the bottom of the antenna (cm) or the vertical distance from the tip of the antenna to the roof level where a 6 ft. human being is assumed standing directly from the antenna (also equal to R at 0)

MPE% = Calculated exposure level, as a percentage of the FCC MPE limit for continuous exposure of the general population



## 9 FCC Limits for MPE

The FCC guidelines for human exposure to RF electromagnetic fields were derived from the recommendations of two expert organizations, the National Council on Radiation Protection and Measurements ("NCRP") and the Institute of Electrical and Electronics Engineers ("IEEE"). The exposure guidelines are based on thresholds for known adverse effects and they incorporate appropriate margin of safety. The federal health and safety agencies such as: the Environmental Protection Agency ("EPA"), the Food and Drug Administration ("FDA"), the National Institute on Occupational Safety and Health ("NIOSH") and the Occupational Safety and Health Administration ("OSHA") have also been actively involved in monitoring and investigating issues related to RF exposure.

The FCC's MPE limits are based on exposure limits over a wide range of frequencies recommended by the NCRP and the exposure limits developed by the IEEE and adopted by the American National Standards Institute ("ANSI") to replace the 1982 ANSI guidelines. The limits for localized absorption are based on the recommendations of both the ANSI/IEEE and the NCRP. The potential hazard associated with the RF electromagnetic fields is discussed in OET Bulletin No. 56 "Questions and Answers about the Biological Effects and Potential Hazards of RF Electromagnetic Fields". This document can be obtained on the FCC website at <http://www.fcc.gov>.

Sections 9.1, 9.2 and 9.3 represent the FCC limits for both occupational and general population exposures to different radio frequencies:

### 9.1 (A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f <sup>2</sup> )*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6



## 9.2 (B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f <sup>2</sup> )*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz

\*Plane-wave equivalent power density

NOTE 1: **Occupational/controlled** limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2: **General population/uncontrolled** exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

## 9.3 Controlled and Uncontrolled Exposure Limits

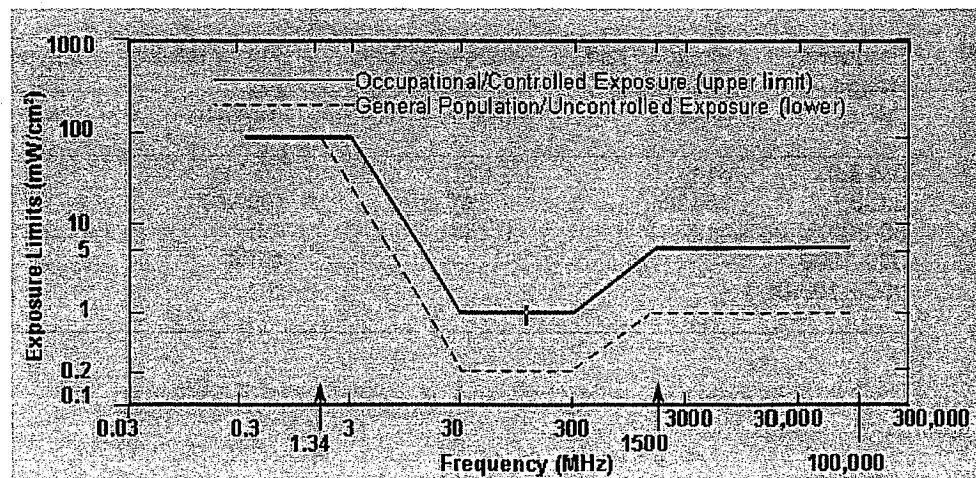


Figure 4



## 10 FCC Standard Certification

This report certifies that the site Fairfax Lighthouse – SF12010A is in compliance with the FCC rules and regulations under FCC OET Bulletin 65. Signage is recommended at the site as presented in Section 7.

Prepared by:  
Ammro Hussein  
RF Engineer  
Telnet Inc.

Date: 09/27/11

Reviewed by:  
Boris Lublinsky  
Project Manager, EMF Specialist  
Telnet Inc.

Date: 09/28/11



A handwritten signature in cursive script, appearing to read "Boris Lublinsky", written over the professional seal.



## 11 Glossary of Terms

1. *Electromagnetic Field (energy density)* – the electromagnetic energy contained in an infinitesimal volume divided by that volume.
2. *Exposure* – Exposure occurs whenever and wherever a person is subjected to electric, magnetic or electromagnetic fields other than those originating from physiological processes in the body and other natural phenomena.
3. *General Population / Uncontrolled Exposure* – applies to human exposure to RF fields when the general public is exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public always fall under this category when exposure is not employment-related.
4. *Maximum Permissible Exposure (MPE)* – the rms and peak electric and magnetic field strength, their squares, or the plane-wave equivalent power densities associated with these fields to which a person may be exposed without harmful effect and with an acceptable safety factor.
5. *Occupational / Controlled Exposure* – applies to human exposure to RF fields when persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/controlled limits.
6. *Power Density (S)* – Power per unit area normal to the direction of propagation, usually expressed in units of watts per square meter ( $\text{W/m}^2$ ) or, for convenience, units such as milliwatts per square centimeter ( $\text{mW/cm}^2$ ) or microwatts per square centimeter ( $\mu\text{W/cm}^2$ ).
7. *Ionization* – a process by which electrons are stripped from atoms and molecules. This process can produce molecular changes that can lead to damage in biological tissue, includes effect on DNA, the genetic material. This process requires interaction with high levels of electromagnetic energy.
8. *Non-ionizing radiation* – a type of emission that is not great enough to cause ionization of atom and molecules. "RF and Microwave Emissions" are low-level energy which are not capable of ionization.