

# Oakland City Planning Commission

Case File Number CMD10303

## STAFF REPORT

May 4, 2011

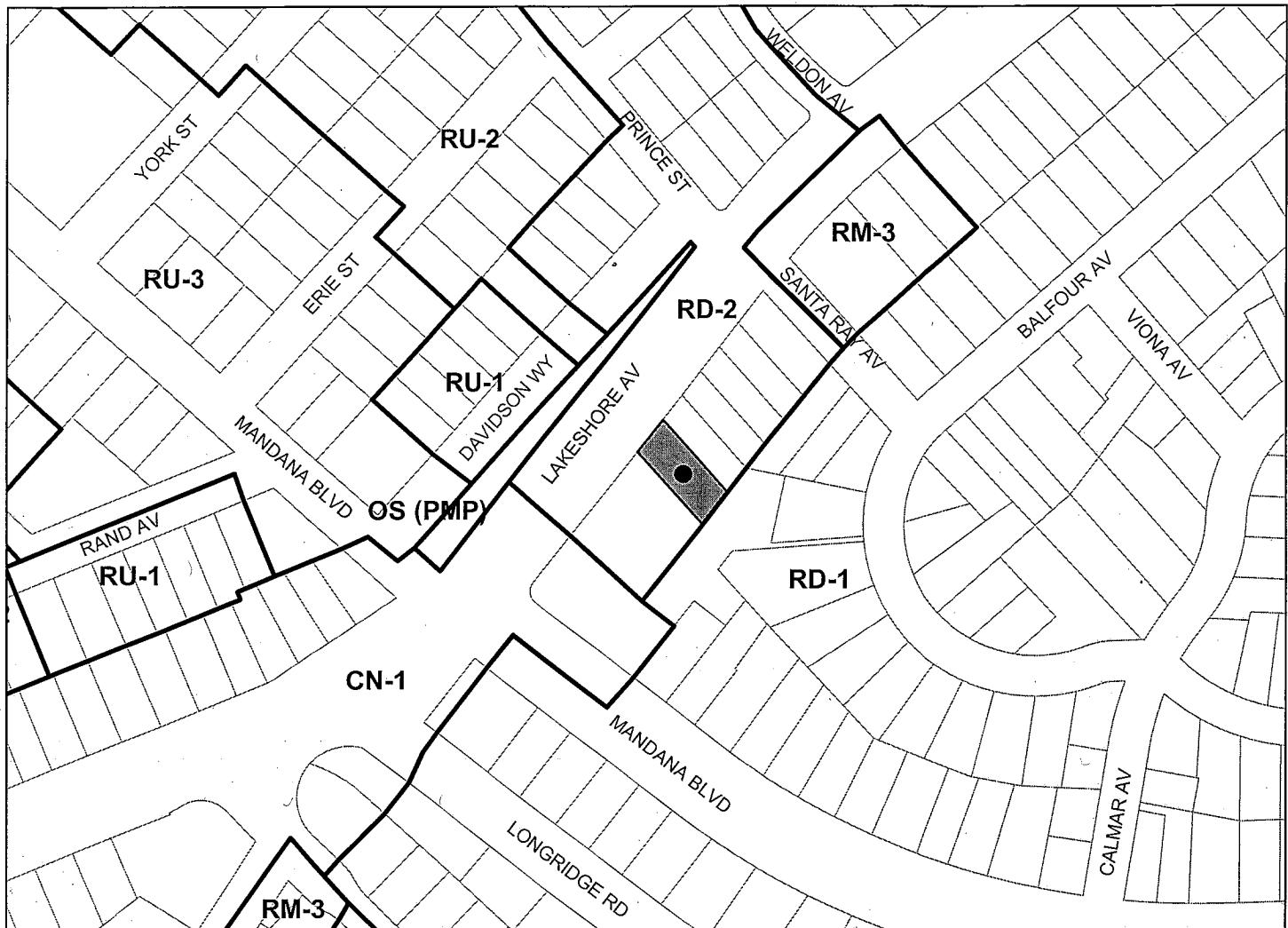
<b>Location:</b>	3518 Lake Shore Avenue
<b>Assessor's Parcel Number:</b>	011-0874-019-06
<b>Proposal:</b>	Request for a Major Conditional Use Permit and Design Review to co-locate a total of one (1) additional panel antenna, replace two existing panel antennas (total of three new antennas), enlarge existing equipment shelter to accommodate two additional cabinets to an existing unmanned macro telecommunications facility located on the 10 <sup>th</sup> Ave. Baptist Church.
<b>Contact Person/</b> <b>Phone Number:</b>	Jonathan Fong / Lyle Co. (925) 997-1312
<b>Owner:</b>	Tenth Avenue Baptist Church
<b>Planning Permits Required:</b>	Major Conditional Use Permit to co-locate to an existing unmanned wireless telecommunication macro facility within a residential zone and Regular Design Review to add a total of 3 new antennas and enlarge an existing equipment shelter. All new and existing antennas will be fully screened with appropriate RF screens matching the building.
<b>General Plan:</b>	Neighborhood Center Commercial
<b>Zoning:</b>	RD-2 Detached Unit Residential 2 Zone (Project submitted and deemed complete when property was under the R-50 Medium Density Residential Zone)
<b>Environmental Determination:</b>	Exempt, Section 15303 of the State CEQA Guidelines: Small Structures, Section 15301 existing facilities, Section 15183 of the State CEQA Guidelines: Projects consistent with a community plan, general plan or zoning
<b>Historic Status:</b>	Potentially Designated Historic Property (PDHP): Survey rating C2+
<b>Service Delivery District:</b>	3
<b>City Council District:</b>	II
<b>Date Filed:</b>	11/22/10
<b>Staff Recommendation:</b>	Approve with the attached conditions
<b>Finality of Decision:</b>	<i>Appealable to City Council within 10 days</i>
<b>For Further Information:</b>	Contact case planner Jose M. Herrera-Preza, Planner I at (510) 238-3808 or jherrera@oaklandnet.com

## SUMMARY

This project would provide for the modification of an existing macro telecommunications facility consisting of co-locating one (1) additional panel antenna, replacing two (2) existing antennas and adding two equipment cabinets inside a dedicated ground floor equipment shelter. The site currently hosts a total of 8 antennas and the project will result in a total of 9 antennas. All existing and proposed antennas will be fully concealed from public view via new RF screen enclosure, which will be painted to match the building and will be vertically oriented to match the architectural style of the 10<sup>th</sup> Ave Baptist Church.

A Major Conditional Use Permit and Design Review is required for modifications to a Telecommunications Facility located within a residential zone. As detailed below, the project meets all of the required findings for approval. Therefore, staff recommends approval of the project subject to the attached conditions of approval.

# CITY OF OAKLAND PLANNING COMMISSION



0 125 250 500 750 1,000 Feet



Case File: CMD10-303  
Applicant: Jonathan Fong/ Lyle Co.  
Address: 3534 Lake Shore Avenue  
Zone: RD-2 (formerly R-50)

**PROPERTY DESCRIPTION**

The subject property is a 34,450 sq/ft lot located along Lake Shore Avenue. The site contains a 55' tall community assembly civic building serving the 10<sup>th</sup> Avenue Baptist Church. The subject property is surrounded by similarly zoned lots with the pre-dominate pattern of development being low density residential buildings with one commercial building at the corner of Mandana and Lake Shore Avenue. The site is located within a residential zone.

**PROJECT DESCRIPTION**

The proposal would involve co-locating an additional (1) panel antenna, replace two (2) existing antennas with two (2) new panel antennas in the same location and adding two equipment cabinets inside a ground floor equipment area. The proposed antennas will be mounted along the exterior sides of the building at three different locations. The new and existing antennas will be fully concealed inside new RF screens that will be incorporated into the building design by orienting the screens in a vertical manner consistent with the building architecture and will be painted and textured to match the exterior of the building. The new equipment cabinets will be located on the interior side of the building inside a dedicated and screened equipment area (See Attachment A).

**GENERAL PLAN ANALYSIS**

The subject property is located within the Neighborhood Center Mixed Use General Plan designation. 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 or detract from the neighborhood center mixed use and residential characteristics of the neighborhood. All existing and proposed antennas will be mounted inside RF friendly screens that will be textured and painted to match the existing building thus minimizing visual impacts. General Plan Policy N9.9 states that the City encourages that new development respects the architectural integrity of a building's original style.

**ZONING ANALYSIS**

The subject property, when the project was submitted and deemed complete, was located in the R-50 Medium Density Residential Zone; the current zoning for the property is RD-2 Detached Unit Residential 2 Zone. The R-50 zone is intended to create, preserve, and enhance areas for apartment living at medium densities in desirable settings, and is typically appropriate to areas of existing medium density residential development. The proposal would provide for the co-location of wireless antennas on a previously approved unmanned wireless telecommunication facility. The antennas would be mounted along three existing sectors along the building walls inside new RF friendly screens that will be painted and textured to match the civic building. A major conditional use permit is required since the project is located in a residential zone. Staff finds that the proposed application meets the City of Oakland Telecommunication regulations (see Findings for Approval).

**ENVIRONMENTAL DETERMINATION**

The California Environmental Quality Act (CEQA) Guidelines categorically exempts specific types of projects from environmental review. Section 15303 of the State CEQA Guidelines exempts project involving construction or location of new, small facilities or structures. The proposal to co-locate a new

unmanned telecommunications facility containing 8 existing and 1 proposed antennas and add two equipment cabinets inside an existing equipment area at ground-level adjacent to the existing building and meets this description: the project would constitute a minor addition only. The project is therefore exempt from 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 possesses a satisfactory radio frequency emissions report.

### 1. Conditional Use Permit

Section 17.16.070 of the City of Oakland Planning Code requires a conditional use permit to modify a Macro Telecommunication facility in the R-50 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 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 co-location of a new unmanned wireless facility on an previously approved wireless facility, the proposed development meets the (A) co-located on an existing structure or facility with existing wireless antennas, therefore a site alternatives analysis is not required.

### 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 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:

The project meets design criteria (A) since all existing and proposed panel antennas will be mounted within RF friendly screens that will be painted and textured to match the building thus improving the existing facility and minimizing their impacts from the public view. Furthermore, to mitigate visual impacts the antennas will be mounted 40' above the pedestrian pathway on Lake Shore Avenue. The associated equipment cabinets would have no visual impact since the equipment cabinets would be fully screened and located inside a existing equipment area located along the interior side of the building and would be adequately concealed from the public right of way or immediate neighbors.

#### **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.

RF-EME emissions report, prepared by Herbert J. Stockinger, PE of EBI Consulting for AT&T indicates that the proposed project meets the radio frequency (RF) emissions standards as required by the regulatory agency. 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 as a condition of approval that prior to the issuance of a final building permit, that the applicant submits certified RF emissions report stating that the facility is operating within acceptable thresholds established by the regulatory federal agency.

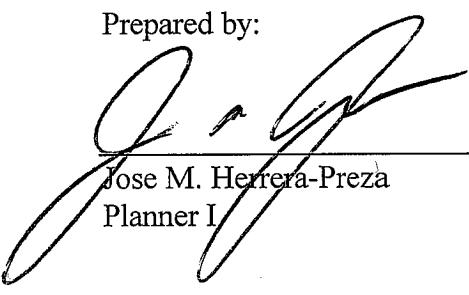
## CONCLUSION

The proposed project has been designed to significantly reduce the visual impacts of co-locating a new panel antenna, replacing 2 existing antennas and fully concealing all antennas within RF friendly screens and screening all other associated ground level equipment. Therefore, staff recommends approval of the requested Major Conditional Use Permit and Regular Design Review to allow for the co-location of panel antennas on the 10<sup>th</sup> Ave. Baptist Church.

## RECOMMENDATIONS:

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

Prepared by:



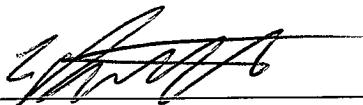
Jose M. Herrera-Preza  
Planner I

Approved by:



SCOTT MILLER  
Zoning Manager

Approved for forwarding to the  
City Planning Commission:



ERIC ANGSTADT  
Deputy Director  
Community and Economic Development Agency

## ATTACHMENTS:

- A. Project Plans & Photo Simulations

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

The equipment cabinets will be co-located inside a dedicated equipment area that is fenced and screened, so will be consistent with the existing facility and general character of the facility.

**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 existing and proposed antennas are wall mounted below the roof line and away from steeples and other roof mounted elements of the existing 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 40' above any right of way or pedestrian path, access to antennas will be limited to approved personnel. The equipment cabinets are fenced, screened and incorporate anti-tampering measures to reduce access to equipment from the public.

**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 meet the special design review criteria listed in subsection B of this section.**

Please see applicable design review criteria above.

**2. The proposed project must not disrupt the overall community character. (Ord. 11904 § 5.01 (part), 1996: prior planning code § 8507)**

The project will not disrupt the overall community character since the subject property will improve aesthetically through the screening of all antennas and co-locating on an existing non-residential facility in a residential zone.

## **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, **CMD10303**, and the plans dated **November 11<sup>th</sup>, 2010** and submitted on **November 11<sup>th</sup>, 2010** 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: **To co-locate a total of one (1) additional panel antenna , replace two existing panel antennas (total of three new antennas), enlarge existing equipment area to accommodate two additional cabinets to an existing unmanned macro telecommunications facility located on the 10<sup>th</sup> Ave. Baptist Church., under Oakland Planning Code 17.128**

#### **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

***CONDITIONS OF APPROVAL***

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. 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:**

**12. 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.

**13. Sinking Fund for Facility Removal or Abandonment.**

***Prior to issuance of a building permit***

The applicant shall provide proof of the establishment of a sinking fund to cover the cost of removing the facility if it is abandoned within a prescribed period. The word "abandoned" shall mean a facility that has not been operational for a six (6) month period, except where non-operation is the result of maintenance or renovation activity pursuant to valid City permits. The sinking fund shall be established to cover a two year period, at a financial institution approved by the City's Office of Budget and Finance. The sinking fund payment shall be adequate to determined by the office of Budget and Finance and shall be adequate to defray expenses associated with the removal of the telecommunication facility.

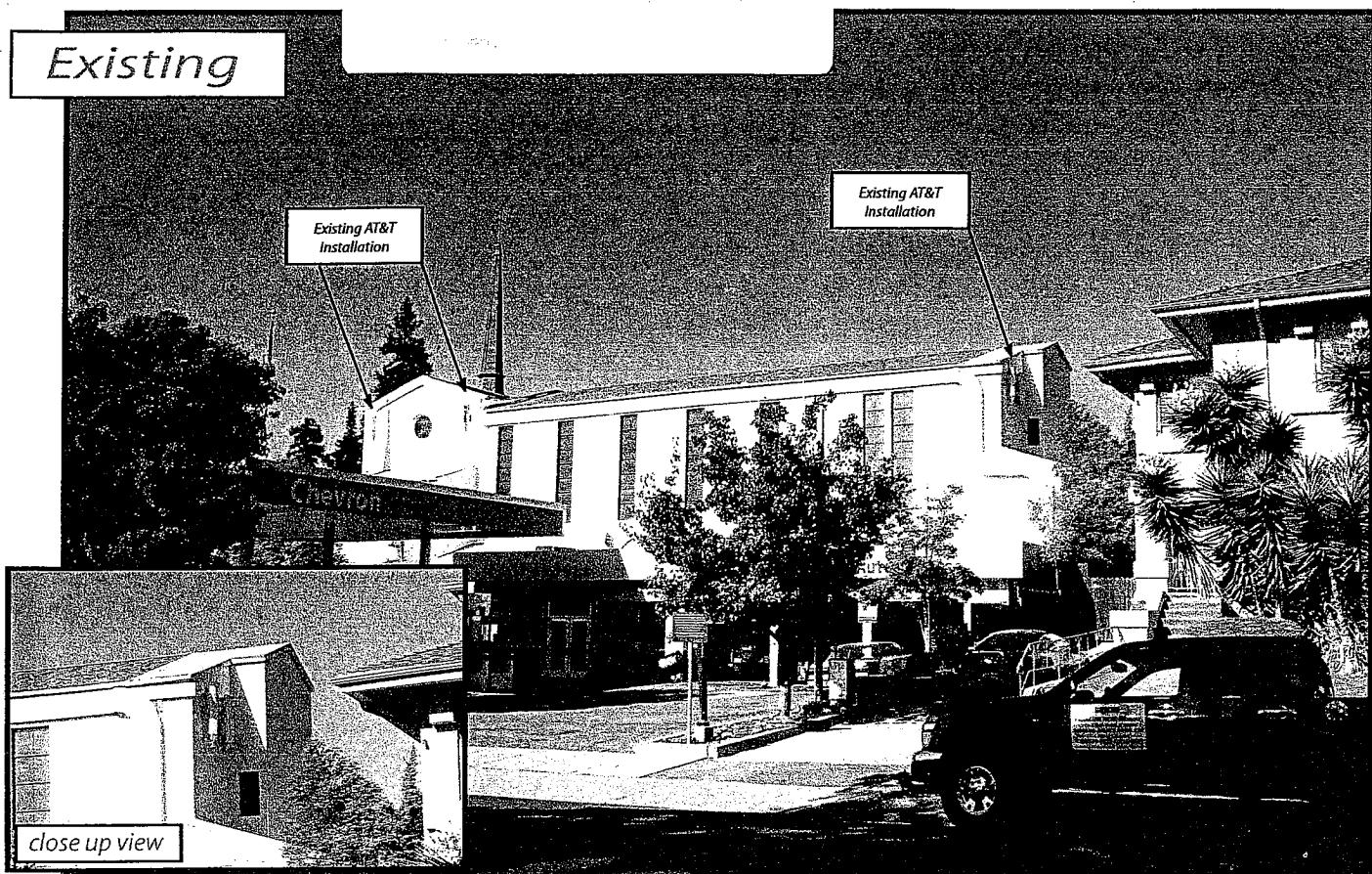
**APPROVED BY:**

City Planning Commission: \_\_\_\_\_ (May 4, 2011) \_\_\_\_\_ (vote)

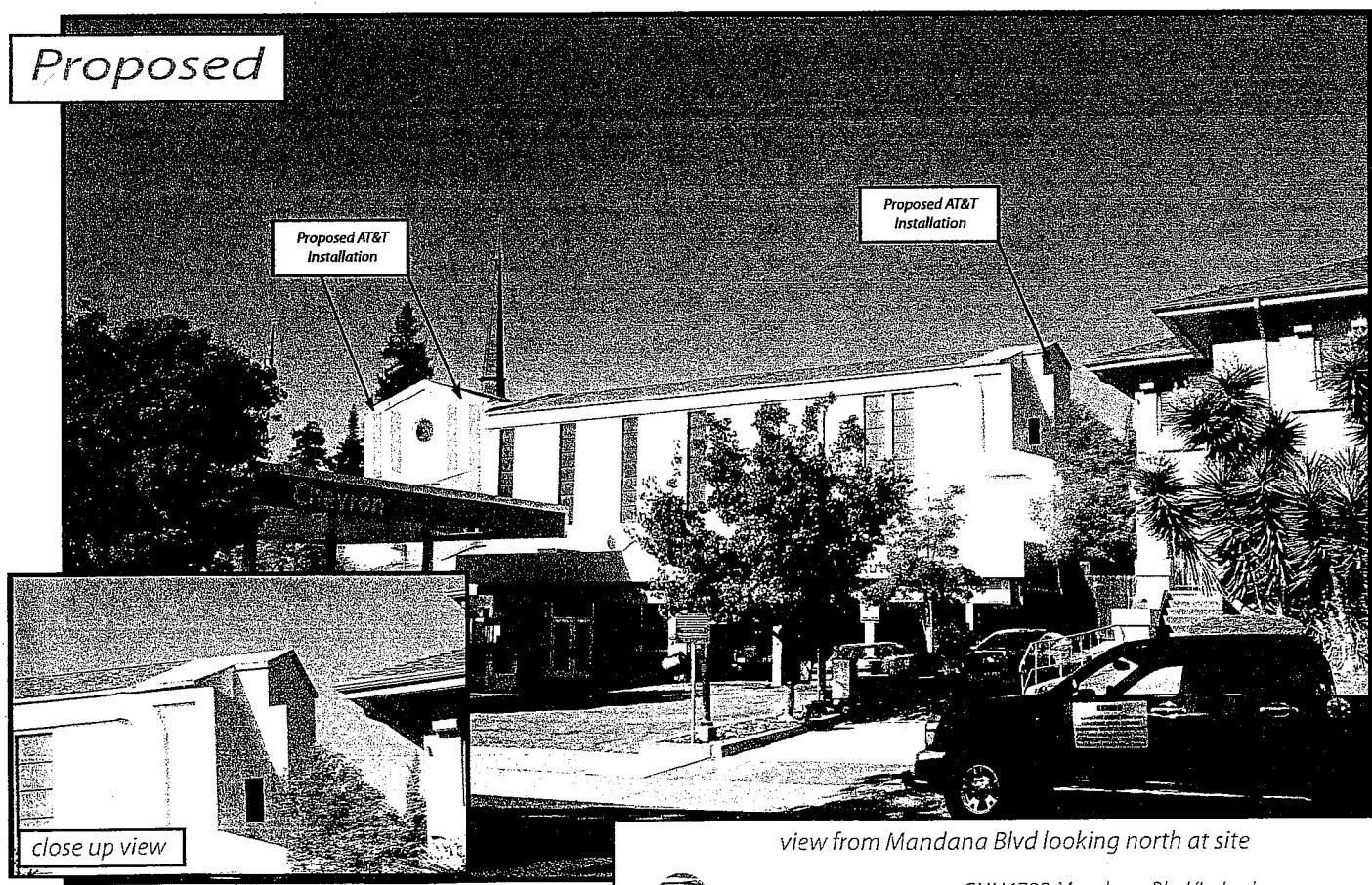
***CONDITIONS OF APPROVAL***

# ATTACHMENT A

*Existing*



*Proposed*



view from Mandana Blvd looking north at site

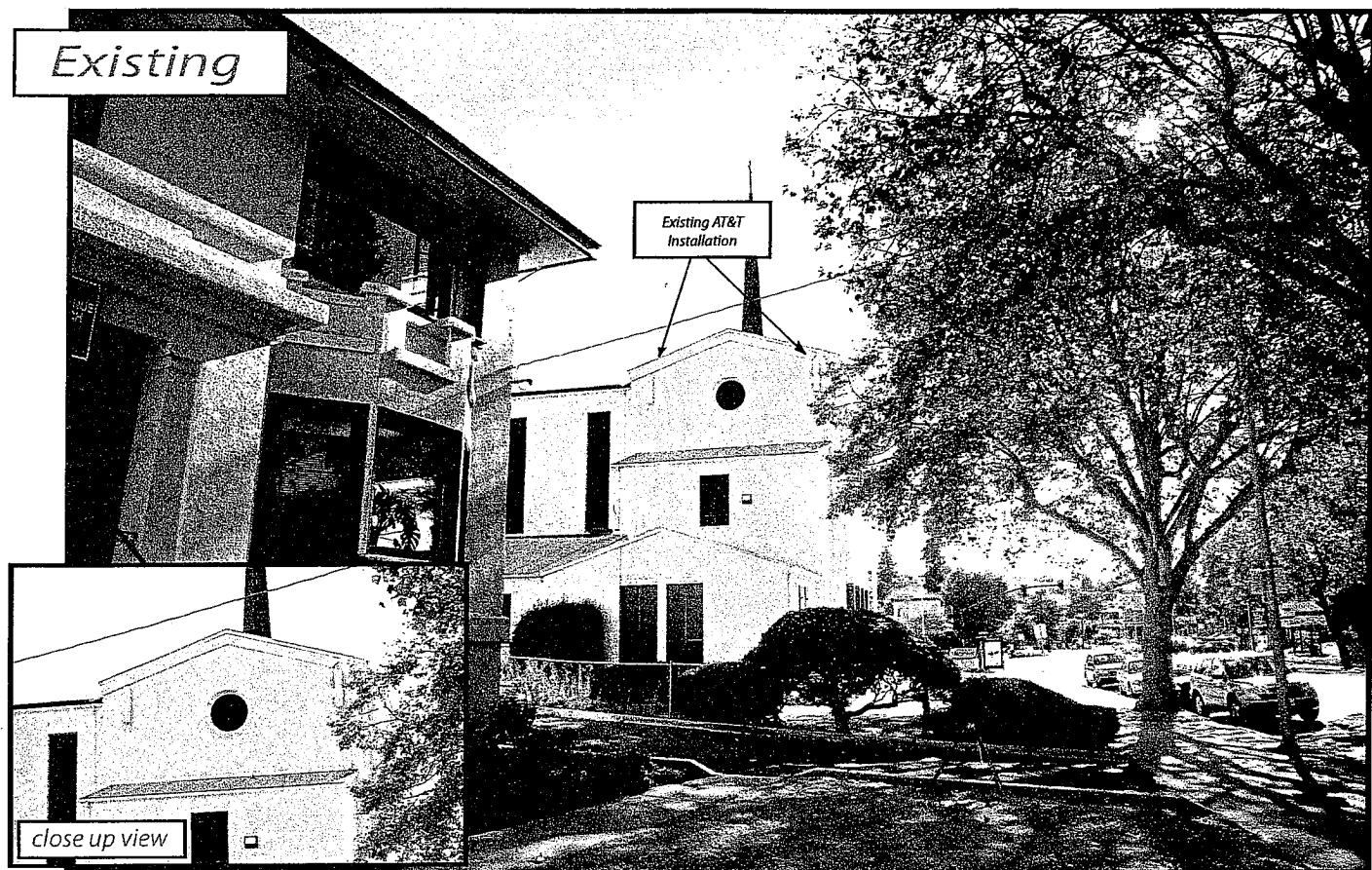


**AT&T Wireless**

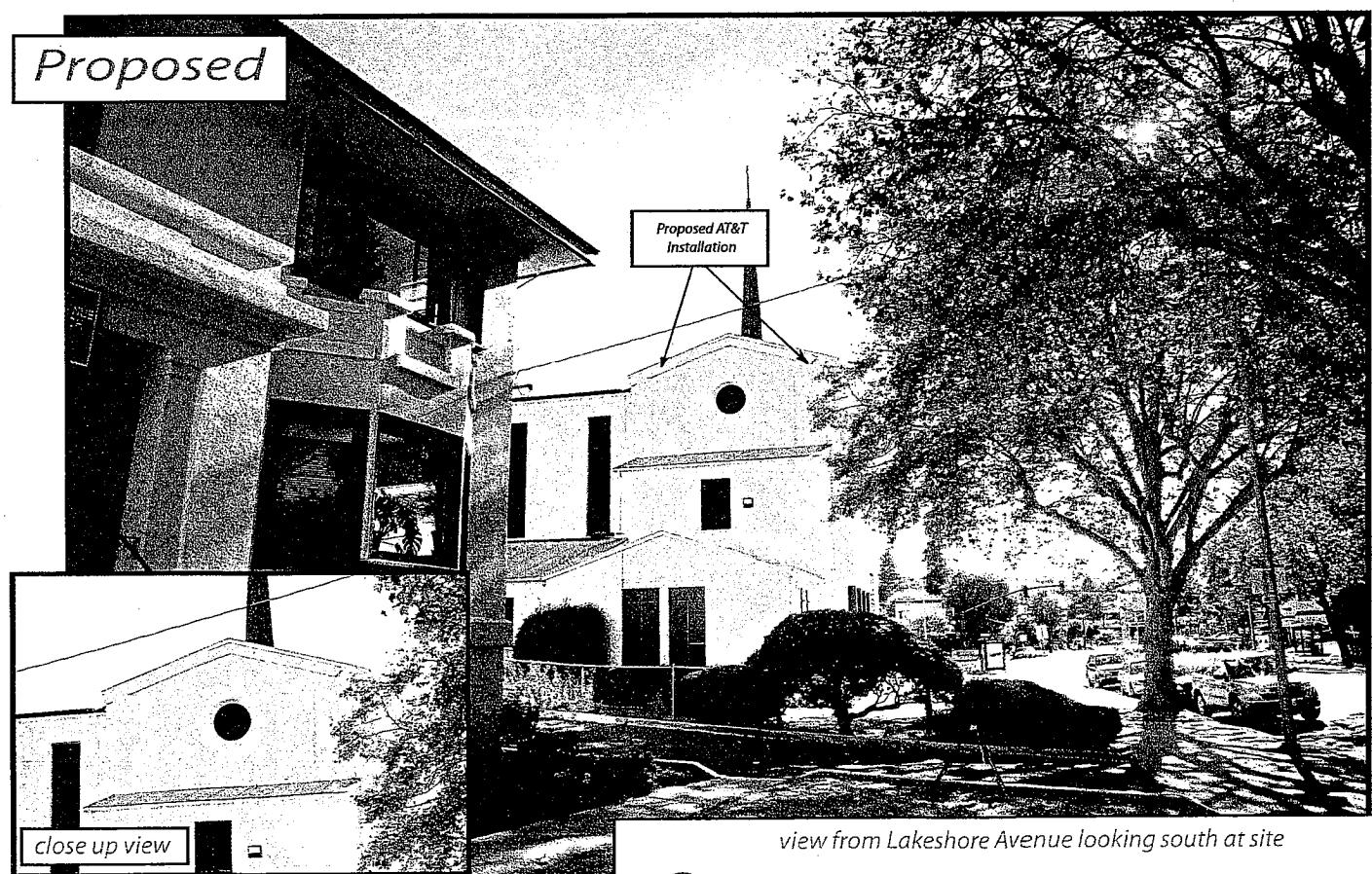
CNU4723 Mandana Blvd/Lakeshore  
3534 Lakeshore Avenue, Oakland, CA

AdvanceSlate  
Contact: 1-800-330-7507

## Existing



## Proposed



view from Lakeshore Avenue looking south at site



**AT&T Wireless**

CNU4723 Mandana Blvd/Lakeshore  
3534 Lakeshore Avenue, Oakland, CA

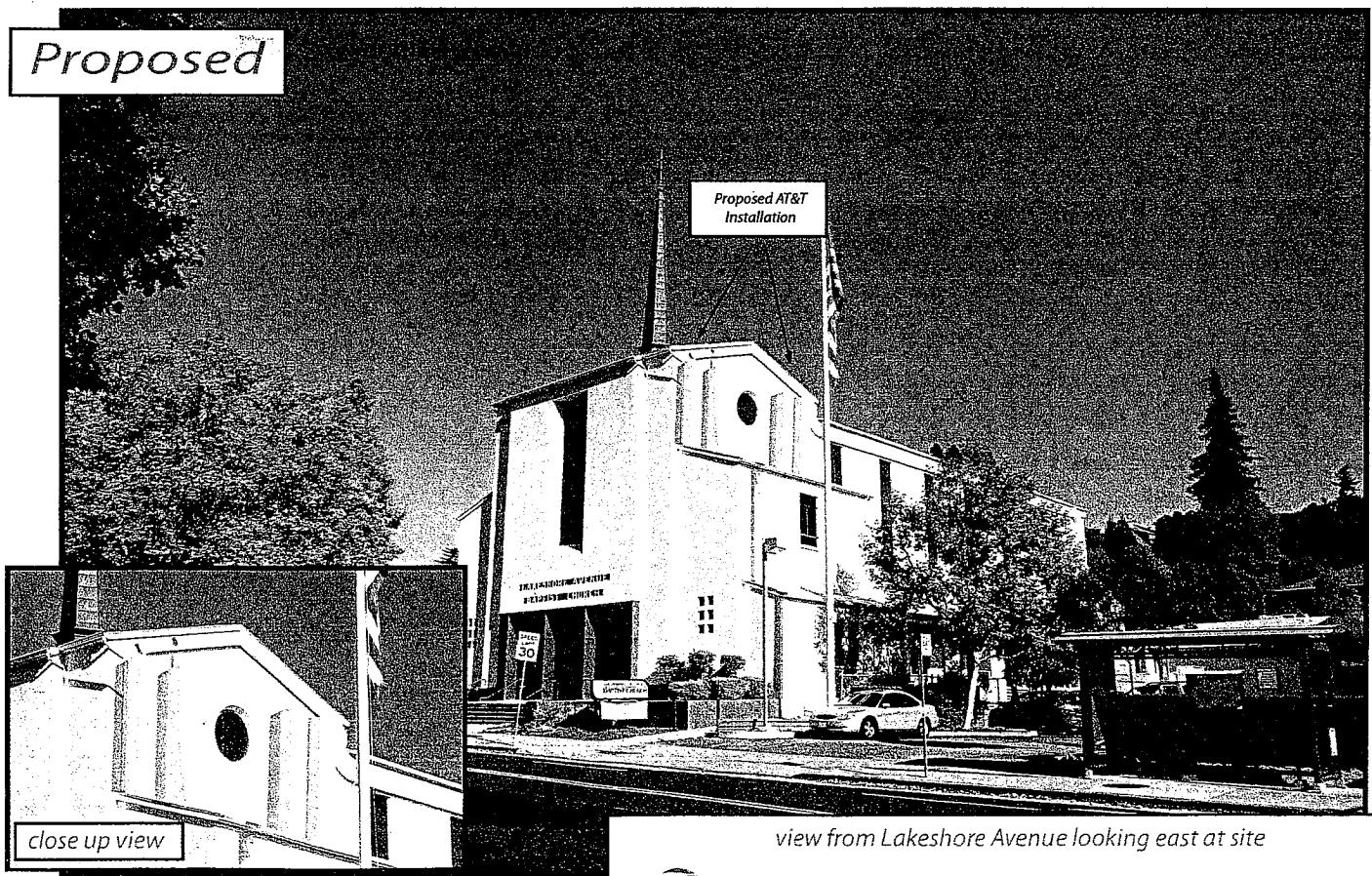
Advanced Blue

Contact: 415-363-8367

## Existing



## Proposed



view from Lakeshore Avenue looking east at site



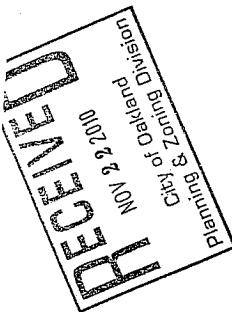
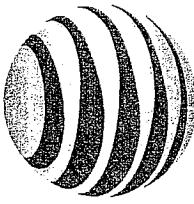
**AT&T Wireless**

CNU4723 Mandana Blvd/Lakeshore  
3534 Lakeshore Avenue, Oakland, CA

AdvanceSite

Contact: 408-262-8900

**ATTACHMENT A**



**CNU4723/CNU4888**

LTE SITE: CCL04723

FA. #: 10102034 USID:47739

# MANDANA BLVD/LAKESHORE

3534 LAKESHORE AVE.  
OAKLAND, CA 94610



1-800-227-2600  
ATT&T Wireless  
ATT&T Mobility

## CODE COMPLIANCE

### PROJECT DESCRIPTION

THIS IS AN UNHANDED TELECOMMUNICATIONS FACILITY FOR AT&T WIRELESS CONSISTING OF THE INSTALLATION OF THE FOLLOWING:

1. NEW TWO (2) OUTDOOR CABINETS INSIDE NEW EXTENDED EQUIPMENT COMPARTMENT.
2. NEW THREE (3) LTE ANTENNAS MOUNTED ON EXISTING BUILDING.
3. NEW SIX (6) RRU'S MOUNTED ON EXISTING BUILDING.
4. NEW ONE (1) 3' CONDUIT FROM NEW OUTDOOR CABINETS TO FIBER/POWER BOX (FC12-PP6-16C), AND NEW THREE (3) 3 CONDUITS FROM OUTDOOR CABINETS TO NEW ONE (1) 3' SOURCE SUPPRESSOR BOXES (FC12-SP6-16P), ONE (1) PER SECTOR.
5. NEW SIX (6) RETS PER ANTENNA CONFIGURATION.
6. NEW ONE (1) FIBER/POWER BOX (FC12-PP6-16C).
7. NEW THREE (3) SURGE SUPPRESSION BOXES (052-48-60-10E), ONE (1) PER SECTOR.
8. NEW ONE (1) GPS ANTENNA MOUNTED ON NEW EQUIPMENT CABINET.

### DRIVING DIRECTIONS

### FROM AT&T OFFICE - PLEASANTON, CA

1. START OUT GOING WEST ON ROSEWOOD DR TOWARD OLD SANTA RITA RD.
2. TURN LEFT ONTO SANTA RITA RD.
3. TURN STRAIGHT TO GO ONTO AVENIDA VASARNA RD.
4. TURN STRAIGHT ONTO 1-580, TOWARD OAKLAND.
5. TURN STRAIGHT ONTO 1-580, TOWARD OAKLAND.
6. TURN STRAIGHT TO GO ONTO LAKESHORE AVE.
7. TURN STRAIGHT RIGHT ONTO LAKESHORE AVE.
8. 3534 LAKESHORE AVE IS ON THE RIGHT.

### GENERAL CONTRACTOR NOTES

DO NOT SCALE DRAWING.

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN RESPONSIBILITY FOR SAME IF THERE ARE ANY DISCREPANCIES OR CHANGES.

### SHEET INDEX

### PLANS PREPARED BY: CID

REV.: DATE: 09/20/10  
0 11/05/10

DESCRIPTION: 100% CONSTRUCTION  
DRAWING: HG

CONSULTANT: PDC CORPORATION

TELE: (925) 658-5118

DRAWN BY: CID: APV: LHL

DRAWN BY: CHK: APV: LHL

REV.: HG PP SAS

LICENSER: HG PP SAS

### GENERAL APPROVALS

### PROJECT INFORMATION

### VICINITY MAP

### PROJECT TEAM

### APPLICANT/LESSEE:

AT&T  
432 ROSEWOOD DR.  
PLEASANTON, CA 94568  
NAME: 011-874-017-1  
PROPERTY OWNER: TERR AVE. BAPTIST CHURCH

ADDRESS: 3534 LAKESHORE AVE.  
OAKLAND, CA 94610  
PHONE: (415) 665-1881  
FAX: (415) 665-1882  
EMAIL: rick.karr@att.com

CONTACT: PAULO PULIDO  
TITLE: RF REC'DR.  
PHONE: (925) 737-5500  
EMAIL: rick.karr@att.com

ENGINEER: ERICKSON  
6160 STONEBRIDGE MALL, OR. SUITE 410  
1025 ASSTON DR.  
COURTOM, CA 94670  
PHONE: (925) 737-5500  
EMAIL: rick.karr@erickson.net

SITE ACQUISITION MANAGER: ZONING MANAGER:  
LYLE COMPANY  
3140 GOLD CAMP DR. SUITE 30  
RANCH CORDOVA, CA 95670  
PHONE: (916) 717-4427  
EMAIL: jerry@lyleco.com

CONSTRUCTION MANAGER: ERICKSON  
432 ROSEWOOD DR.  
PLEASANTON, CA 94568  
CONTACT: SUCORRO RAMOS  
PHONE: (925) 455-3805  
EMAIL: sucorro.ramos@erickson.net

RF ENGINEER: ERICKSON  
432 ROSEWOOD DR.  
PLEASANTON, CA 94568  
CONTACT: ALEXANDER  
PHONE: (925) 737-5500  
EMAIL: alexander.alexander@erickson.net

LANDLORD: CITY OF OAKLAND  
CONSTRUCTION MANAGER: AT&T  
RF ENGINEER: AT&T  
SITE ACQUISITION MANAGER: AT&T  
ZONING MANAGER: AT&T  
UTILITY COORDINATOR: AT&T  
PROGRAM REGIONAL MANAGER: AT&T  
NETWORK OPERATIONS MANAGER: AT&T

SHEET TITLE: TITLE SHEET,  
SITE INFORMATION  
AND VICINITY MAP

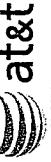
SHEET NUMBER: T-1

APPRAISALS

LANDLORD: CITY OF OAKLAND  
CONSTRUCTION MANAGER: AT&T  
RF ENGINEER: AT&T  
SITE ACQUISITION MANAGER: AT&T  
ZONING MANAGER: AT&T  
UTILITY COORDINATOR: AT&T  
PROGRAM REGIONAL MANAGER: AT&T  
NETWORK OPERATIONS MANAGER: AT&T

SHEET TITLE: TITLE SHEET,  
SITE INFORMATION  
AND VICINITY MAP

SHEET NUMBER: T-1



PROJECT INFORMATION:  
**CNU4723/CNU4888**  
LITE SITE: CLO4723  
FA. #: 10102034 USA-4739  
**MANDANA BLVD/LAKESHORE**  
3534 LAKESHORE AVE.  
OAKLAND, CA 94610

CURRENT ISSUE DATE:

11/05/10

ISSUED FOR:

100% CONSTRUCTION

DRAWING

REV-DATE:

100% CONSTRUCTION

BY:

PLANS PREPARED BY:

PDC CORPORATION

CONSULTANT:

L.H.L.E.

SHEET NUMBER:

1

GENERAL NOTES,

LEGEND AND

ABBREVIATIONS

T-2

4

## GENERAL CONSTRUCTION NOTES:

1. THE FACILITY IS AN UNOCUPIED DIGITAL TELECOMMUNICATION FACILITY.
2. PLANS ARE NOT TO BE SCALED AND ARE INTENDED TO BE A DRASTICALLY OUTLINE ONLY, UNLESS NOTED OTHERWISE. THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
3. PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTORS SHALL VISIT THE JOB SITE AND BE RESPONSIBLE FOR ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN, PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE APPROVING ENGINEER OR OWNER PRIOR TO PROCEEDING WITH THE WORK.
4. THE CONTRACTOR SHALL OBTAIN IN WRITING, AUTHORIZATION TO PROCEED, BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
5. THE CONTRACTOR SHALL INSTAL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS, UNLESS SPECIFICALLY INDICATED OTHERWISE, OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
6. ALL WORK PERFORMED AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACT SHALL INCLUDE ALL NOTICES AND COUPLES, WITHIN LAWS, ORDINANCES, WORK, MECHANICAL AND ELECTRICAL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, JURISDICTIONAL, COMPANY SPECIFICATIONS, AND LOCAL AND STATE ORDINANCES AND APPLICABLE REGULATIONS.
7. THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, USING THE BEST SKILLS AND ATTENTION, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, AND COORDINATE ALL ACTIVITIES WITH THE APPROVING ENGINEER AND WITH THE LANDLORD'S AUTHORIZED REPRESENTATIVE.
8. SEAL PENETRATIONS THROUGH FIRE EXTINGUISHERS WITH UL LISTED FIRE CODE APPROVED MATERIALS.
9. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 7-A OR 2-A:10C WITHIN 75 FEET TRAVEL DISTANCE FROM ALL PORTIONS OF THE PROJECT AREA DURING CONSTRUCTION.
10. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CHAPTER 2 OF THE CGS, REGARDING GASHOUSE, PIPING, ACCORDING TO LOCAL EARTHquake CODES AND REGULATIONS.
11. DETAILS ARE INTENDED TO SHOW AND RESULT OF DESIGN, MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB CONDITIONS, SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
12. REPRESENTATIONS OF TRUE NORTH, OTHER THAN THOSE FOUND ON THE PLAT OF SURVEY DRAWING, SHALL NOT BE MADE ON THE PLAT OF SURVEY DRAWING AND SHALL NOT BE MADE ON THE CONTRACTOR'S DRAWINGS. AN "S" SIGN IS INSUFFICIENT TO INDICATE TRUE NORTH. THE CONTRACTOR SHALL NOTIFY THE APPROVING ENGINEER OF THE TRUE NORTH ORIENTATION AS FOUND BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND THE TRUE NORTH ORIENTATION AS DECLINED ON THE CLO SURVEY. THE CONTRACTOR SHALL ASSUME SOLE LIABILITY FOR ANY FAILURE TO NOTIFY THE APPROVING ENGINEER.
13. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, PAVING, CURBS, SPOTS, DUST, OR SPADGES OF ANY NATURE.
14. KEEP GENERAL AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DIRT, DEBRIS, RUBBLE AND RELEVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. LEAVE PREMISES IN CLEAN CONDITION SPOTS, DUST OR SPADGES OF ANY NATURE.
15. REINFORCMENTS OF ROOF MEMBRANES SHALL BE PATCHED, CLAWED, AND USED WATERPROOF, INDOOR, LINE MATERIALS IN ACCORDANCE WITH ARCA TROWING STANDARDS AND DETAILS. CONTRACTOR SHALL OBTAIN DRAWING, DETAILING, CARBONATION IN SITE-SPECIFIC CONDITIONS FROM ENGINEER, IF NECESSARY, BEFORE PROCEEDING.
16. BEFORE ORDERING AND/OR BEFORE FABRICATING/CONSTRUCTING/INSTALLING ANY ITEMS, VERIFY THE TYPES AND QUANTITIES.
17. CONTRACTOR SHALL PROVIDE SITE FOREMAN WITH A CELLULAR PHONE AND PAGER, AND KEEP SAME ON SITE WHENEVER PERSONNEL ARE ON SITE.
18. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS ON THE SITE AND NOTIFY THE PROJECT MANAGER OF ANY DISCREPANCIES BEFORE STARTING ANY WORK.
19. KEEP GENERAL AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DIRT, DEBRIS, RUBBLE AND RELEVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY, LEAVE PREMISES IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SPADGES OF ANY NATURE.
20. CONTRACTOR TO PROVIDE COMPLETE SET OF AS BUILT DRAWINGS WITHIN 10 WORKING DAYS OF PROJECT
21. CONTRACTOR IS TO EXCAVATE 6" BELOW EXISTING GRADE AND SPRAY WITH WEED CONTROL. REPLACE WITH CLASS II AGREGATE BASE, AND CRUSHED WASHED DOCK, AS SPECIFIED ON PLATE.
22. CONTRACTOR SHALL PROVIDE TOILET FACILITY DURING ALL PHASES OF CONSTRUCTION.
23. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, OR THE FABRICATION OF MATERIALS TO BE INSTALLED AT THE SITE, THE CONTRACTOR SHALL NOTIFY THE APPROVING ENGINEER OF THE LOCATION OF THE WORK, AND THE APPROVING ENGINEER SHALL MAKE ARRANGEMENTS TO HAVE THE CONTRACTOR REMOVE THE MATERIALS TO AN APPROPRIATE LOCATION.
24. DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
25. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT BE ALLOWED TO OBSTRUCT EXISTING COMMERCIAL OPERATION. CONTRACTOR USES CONTRACTOR'S OWN EQUIPMENT, AND SHALL NOT ALLOW ANY OTHER EQUIPMENT TO BE LOCATED ON THE PROPERTY, UNLESS APPROVED BY APPROVING ENGINEER. CONTRACTOR SHALL NOT ALLOW ANY LOW TRAFFIC PERIODS AFTER MIDNIGHT.
26. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCARF MATERIALS SUCH AS COXAL CABLES AND OTHER ITEMS RECOVERED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER DISMANTLED LOCATION.

**ABBREVIATIONS****GENERAL NOTES FOR EXISTING AT&T CELL SITES:**

1. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS, AND TO CONFIRM AS SHOWN ON THE CONTRACT DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR.
2. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
3. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT BE ALLOWED TO OBSTRUCT EXISTING COMMERCIAL OPERATION. CONTRACTOR USES CONTRACTOR'S OWN EQUIPMENT, AND SHALL NOT ALLOW ANY OTHER EQUIPMENT TO BE LOCATED ON THE PROPERTY, UNLESS APPROVED BY APPROVING ENGINEER.
4. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTRICAL EQUIPMENT. EQUIPMENT SHOULD BE SHUNDED AND POWERED OFF, AND PERSONNEL ARE ADVISED TO BE WORN TO AVOID ANY DANGEROUS EXPOSURE LEVELS.
5. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND TI CABLES, GROUNDBING CABLES AS SHOWN ON THE POWER, GROUNDBOND AND TI PLAT DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRANS ADDITION, SPAN, ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE APPROVING ENGINEER.
6. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCARF MATERIALS SUCH AS COXAL CABLES AND OTHER ITEMS RECOVERED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER DISMANTLED LOCATION.

**GENERAL NOTES FOR EXISTING AWS CELL SITES****3 GENERAL CONSTRUCTION NOTES**

SCALE NOTE:  
DRAWINGS ARE DRAWN ON PLAN DO NOT SCALE CORRECTLY.  
CHECK FOR REDUCTION OR ENLARGEMENT FROM ORIGINAL PLANS.

GENERAL NOTES:

- THE PROPOSAL IS FOR THE MODIFICATION OF AN EXISTING UNMANAGED TELECOMMUNICATIONS FACILITY CONSISTING OF INSTALLATION OF THE FOLLOWING: TWO (2) NEW OUTDOOR CABINETS INSIDE NEW EXTENDED EQUIPMENT COMPARTMENT, THREE (3) NEW LI-PO PANEL ANTENAS FROM EXISTING CHASSIS, ONE (1) NEW LI-PO BATTERY, ONE (1) NEW LI-PO BATTERY CHARGER, ONE (1) NEW LI-PO BATTERY THERMOMETER, ONE (1) CONDUIT, ONE (1) SURGE SUPPRESSOR BOX, ONE (1) FIBER POWER BOX, THREE (3) SURGE SUPPRESSOR BOXES, AND ONE (1) NEW LI-PO ANTENNA MOUNTED TO NEW OUTDOOR EQUIPMENT CABINET.
- THE EXISTING FACILITY WILL BE UNMANAGED AND DOES NOT REQUIRE POTABLE WATER OR SEWER SERVICE.
- THE EXISTING FACILITY IS UNMANAGED AND IS NOT FOR HUMAN HABITAT.
- NO OCCUPANCY IS INTENDED TO BE PROVIDED FOR MAINTENANCE AND INSPECTION.
- NO SMOKE, DUST OR ODOR WILL RESULT FROM THIS PROPOSAL.
- OUTDOOR STORAGE AND SOLID WASTE CONTAINERS ARE NOT NEW.
- ALL MATERIAL SHALL BE PREPACKAGED AND STORED NEAR THE WORK AREA WITH THE FREIGHT SECURE BANDS.
- SUBCONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY THE CONSTRUCTION OPERATOR.
- SUBCONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTION REQUIRED FOR CONSTRUCTION.
- SUBCONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
- INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM SITE VISITS AND DRAWINGS PROVIDED BY THE SITE OWNER. SUBCONTRACTOR SHALL NOTIFY ATZ OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.

SITE WORK GENERAL NOTES:

- ALL EXISTING ACTIVE SERVICES (WATER, GAS, ELECTRIC, AND OTHER UTILITIES) WILL BE ENCAPSULATED 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 ENGINEERS. EXISTING CAUTION BANDS AROUND OTHER UTILITIES SHALL BE REMOVED AND DISPOSED OF LEGALLY.
- IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICHS, STONES AND OTHER IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICHS, STONES AND OTHER DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE SITE EQUIPMENT AND TOWER AREAS.
- NO FILTRATION OR ENCAPSULATION MATERIAL SHALL BE PLACED ON FROZEN GROUND, SOILED MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FLOOR OR DRAWDRAUGHT.
- THE SUB-GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- ALL EXISTING ACTIVE SERVICES (WATER, GAS, ELECTRIC, AND OTHER UTILITIES) WILL BE ENCAPSULATED IN THE EXCAVATION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS, WHICH WHICH WILL NOT INTERFERE WITH THE APPROVAL OF ENGINEERING, OWNER AND/OR LOCAL AUTHORITIES.
- THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, TOWERHOUSE OR UTILITYWAY, SHALL BE GRADED TO A PROPER SLOPE AND STABILIZED TO PREVENT EROSION AS SPECIFIED IN THE PROPOSED CHANNEL.
- SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION, AND SHALL TAKE CARE NOT TO DAMAGE EXISTING UTILITIES, CONCRETE, AND OTHER SURFACES WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
- ALL ELECTRICAL CONNECTIONS IN THE PUBLIC RIGHT-OF-WAY SHALL BE INSTALLED UNDERGROUND TO THE NEAREST UTILITY POLE.
- NO WORK SHALL BE PERFORMED WITHIN THE PUBLIC RIGHT-OF-WAY WITHOUT THE APPROVAL OF THE PUBLIC UTILITY COMPANY AND PUBLIC WORKS MANAGEMENT DEPARTMENT - ADMINISTRATIVE SERVICES.
- CONTRACTOR IS RESPONSIBLE FOR ARRANGEMENTS FOR REMOVAL OF ALL DAMAGED OFFICE WORK.
- NO CONSTRUCTION DEBRIS SHALL BE SPILLED OR STORED ONTO PUBLIC RIGHT-OF-WAY.
- NO RUNOFF SEDIMENT OR WASTES IS ALLOWED IN WATER LEAVING THE SITE.
- ALL SITE UTILITIES SHALL BE CONSTRUCTED UNDERGROUND TO THE NEAREST POLE.
- THE RESPONSIBILITY OF THE CONTRACTOR.

DISCLAIMER NOTE:  
THIS HAS BEEN DESIGNED AS A SITE PLAN WITHOUT USING A TOPOGRAPHIC SURVEY. NO TOPOGRAPHIC SURVEY HAS BEEN PERFORMED. THIS PLAN IS AN ESTIMATE OF THE PLACEMENT OF THE EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE FOR GETTING A TOPOGRAPHIC SURVEY FOR THE PROPERTY TO VERIFY THE MEASUREMENTS AND ACCURACY.

PROJECT INFORMATION:

CNU4723/CNU4883

MANDANA BLUFF LAKESHORE  
3334 LAKESHORE AVE.  
ORLANDO, CA 94110

CURRENT ISSUE DATE:

11/05/10

ISSUED FOR:  
100% CONSTRUCTION  
DRAWING

REV. DATE:

DESCRIPTION:

BY:

A 09/26/10

BIM CONSTRUCTION

HG DRAWING

0 11/05/10

00% CONSTRUCTION

HG DRAWING

PLANS PREPARED BY:

POD CORPORATION

CONSULTANT:

CLLIE

3400 GLEN COVE RD, SUITE 3B  
BURLINGAME, CA 94010  
(415) 695-9995

DRAWN BY:

CHK. AVN.

HG PP SAS

LICENSEE:

1 EXISTING ATZ PROJECT AREA  
A-2 GROUND LEVEL/BUILDING ROOF TOP

SITE PLAN  
SITE NUMBER:  
A-1

SHEET TITLE:

1

SCALE:

1/216' x 1'-0"

0 6' 16' 32'

1

SITE PLAN



CNU4723/CNU4888

4150 BURKEWOOD DRIVE  
Foothills, CO 80132-3529  
**MANDANA BLVD/LAKESHORE**  
3334 LAKESHORE AVE.  
ONALASKA, CA 95810

PROJECT INFORMATION:

11/05/10

ISSUED FOR:  
100% CONSTRUCTION  
DRAWING

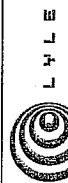
REV.: DATE: DESCRIPTION: BY:  
A 09/20/10 100% CONSTRUCTION HG  
D 0 11/05/10 100% CONSTRUCTION NS

CURRENT ISSUE DATE:

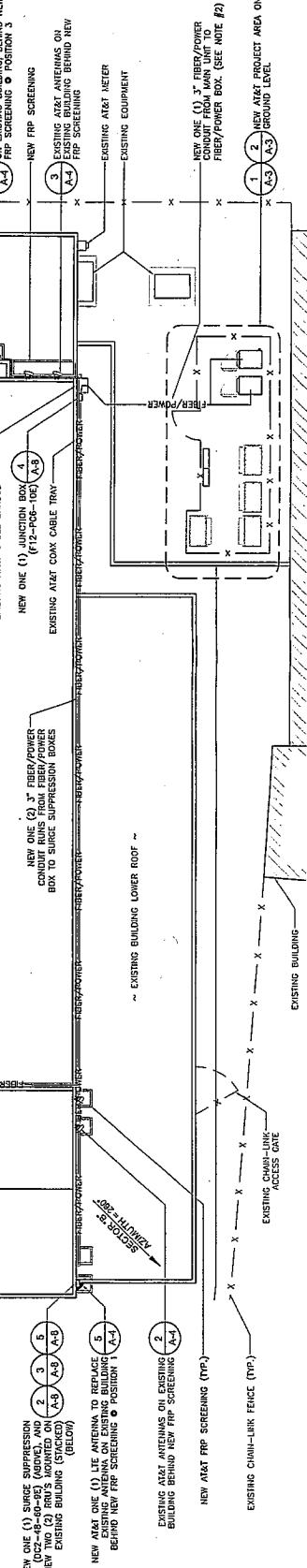


1002 CEDARHORN DR.  
LITTLETON, CO 80120  
TEL: (303) 265-5958

CONSULTANT:



POD CORPORATION



## ROOF PLAN

SHEET NUMBER:

**ROOF PLAN**  
A-2

SCALE: 1/8" = 1'-0"

0 4' 8' 16'

SCALE: 1/8" = 1'-0"

0 4' 8' 16'

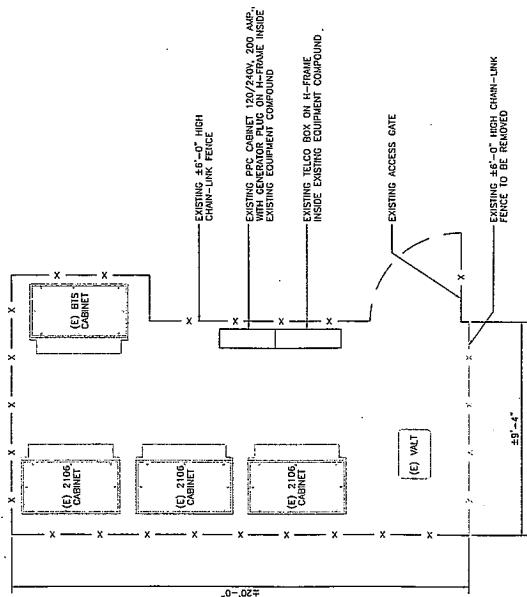
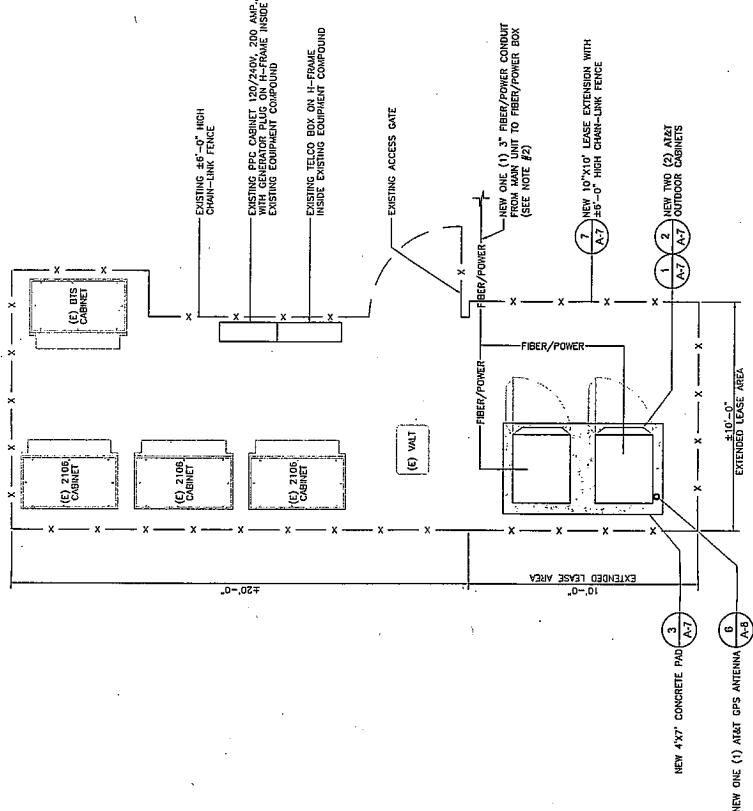
**DISCLAIMER NOTE:**  
PGC HAS GENERATED A SITE PLAN WITHOUT USING A TOPOGRAPHIC SURVEY.  
PROPERTY LINES, PROPERTY LINE COORDINATES, POINT OF CONNECTIONS, ROUTES, AND  
MEASUREMENTS ARE APPROXIMATE AND NOT TO BE USED AS THE BASIS FOR CONSTRUCTION.  
GETTING A TOPOGRAPHIC SURVEY FOR THE PROPERTY TO VERIFY THE  
MEASUREMENTS AND ACCURACY.

**NOTES:**

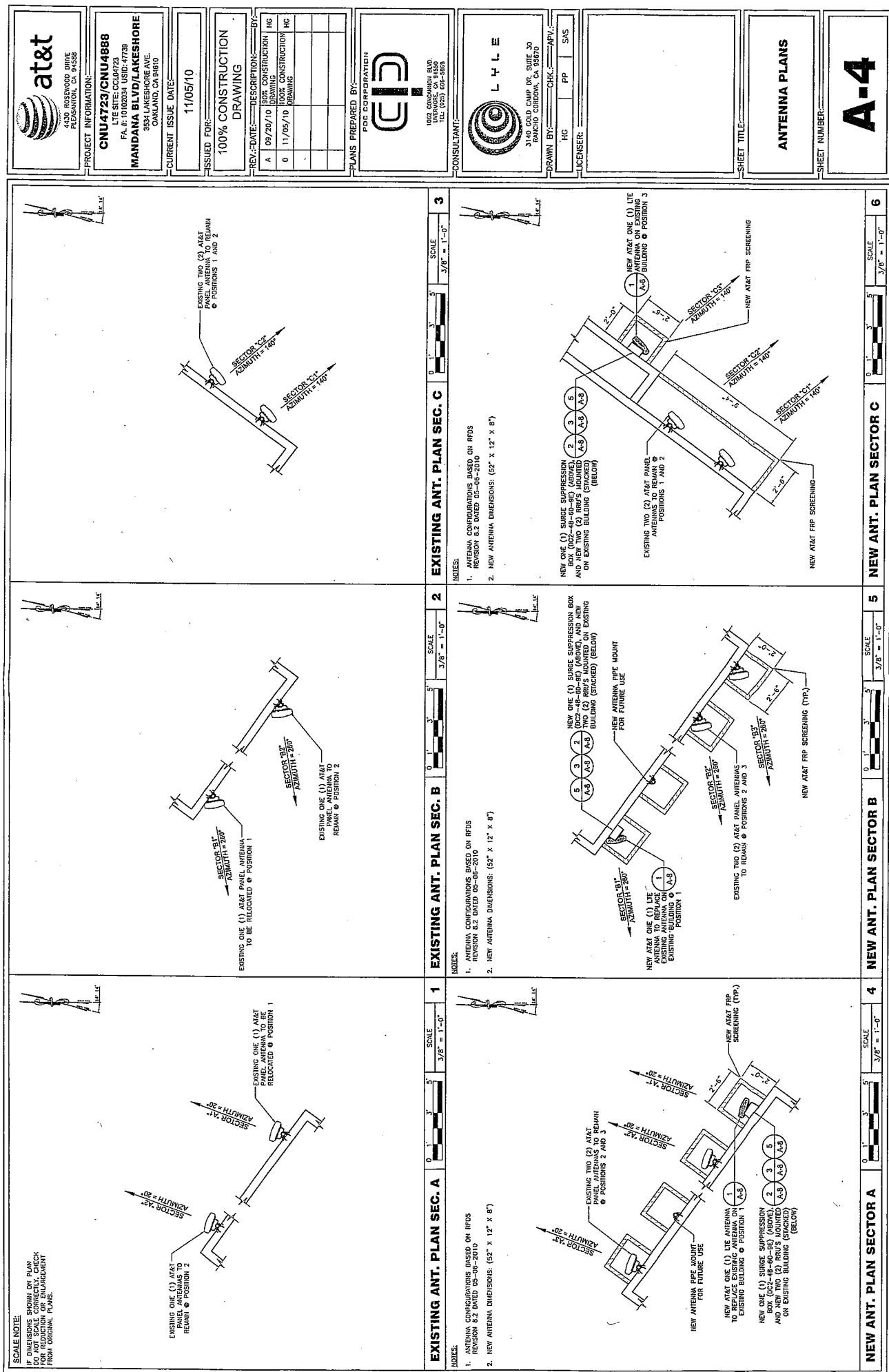
1. NEW AT&T CABINET TO BE CONNECTED TO EXISTING DC POWER, TELCO CANNET & GROUND BAR.
2. NEW AT&T FIBER RUN TO BE MOUNTED ALONG SIDE OF EXISTING COAX CABLE RUN. (GENERAL CONTRACTOR TO VERIFY EXACT ROUTE PRIOR TO CONSTRUCTION)

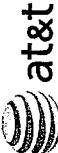
**SCALE NOTE:**  
If dimensions shown on plan do not scale correctly, check for reduction or enlargement from original plans.

	PROJECT INFORMATION:
CNU4723/CNU4888	LITE SITE: CLO04723 PA #: 10102034 USID-17739
MANDANA BLVD/LAKESHORE	4430 ROSEWOOD DRIVE FLESHMORE, CA 94588
CURRENT ISSUE DATE:	11/05/10
ISSUED FOR:	100% CONSTRUCTION DRAWING
REV-S/DATE:	09/20/10 REV. CONSTRUCTION HG 0 11/05/10 DRAWING HG
PLANS PREPARED BY:	PDC CORPORATION 
CONSULTANT:	TEL: (925) 655-4550 3140 GOLD CAMP DR, SUITE 3D RANCHO CORDOVA, CA 95870 CHICAGO AVENUE
DRAWN BY:	HG PP SAS
LICENSER:	
SHEET TITLE:	EQUIPMENT LAYOUTS
SHEET NUMBER:	A-3



SCALE NOTE: IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE CORRECTLY, CHECK FOR REDUCED OR ENLARGED PLANS.	0 1' 3' 5'	3' 5' 3' 5'	SCALE: 1/8" = 1'-0"	SCALE: 1/8" = 1'-0"
EXISTING ANTENNA PLAN	3	3	3	3
NEW ANTENNA PLAN				





PROJECT INFORMATION:  
440 ROSEWOOD DRIVE  
FELTON, CA 95018

CNU#723/CNU#4888  
LTE SITE: CCL04723  
FA #: 10102034 USID: 47739  
MANDANA BLVD/LAKESHORE  
3584 LAKESHORE AVE  
OAKLAND, CA 94610

CURRENT ISSUE DATE:

1/1/05/10

ISSUED FOR:  
100% CONSTRUCTION  
DRAWING

REV./DATE	DESCRIPTION	BY
A	08/20/10	B2A CONSTRUCTION HG
O	11/05/10	B2B CONSTRUCTION HG
		DRAWING

PLANS PREPARED BY:



PDC CORPORATION

102 GOLD CAMP RD.

CORDOVA, CA 95620

TEL: (925) 685-5888

CONSULTANT:	
L L L E	
3140 GOLD CAMP DR, SUITE 30 RANCHER, CORDOVA, CA 95620	
DRAWN BY: CMC: AMY:	
HG PP SAS	
LICENSER:	

SHEET TITLE:ELEVATION	
NORTHWEST ELEVATION	
SHEET NUMBER: A-5	

1

SCALE: 1'-0"

1'

2'

3'

4'

5'

6'

7'

8'

9'

10'

11'

12'

13'

14'

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81'

82'

83'

84'

85'

86'

87'

88'

89'

90'

91'

92'

93'

94'

95'

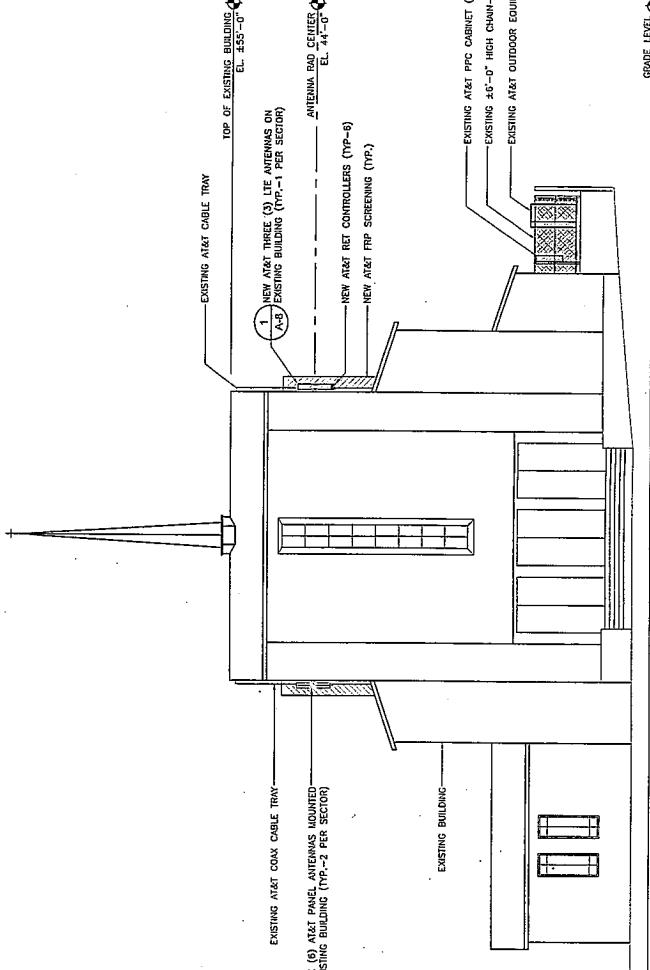
96'

97'

98'

99'

100'





**SCALE NOTE:**  
If dimensions shown on plan do not scale correctly, check for reduction or enlargement from original plans.

1. NEW AT&T CABINET TO BE CONNECTED TO EXISTING DC POWER, TELE COAX & GROUND WIRE.
2. NEW AT&T FIBER RUN TO BE MOUNTED ALONG SIDE OF EXISTING COAX. CARE MUST BE RUN, GONE OVER AND CONSTRUCTED NEAR END NOTE PRIOR TO CONSTRUCTION.

PROJECT INFORMATION:	
CNU#723/CNU#4888	
LTE SITE: CCL04723	
PA #: 10102034 LID:47739	
MANDANA BLVD/LAKESHORE	
3531 LAKESHORE AVE.	
OAKLAND, CA 94610	
CURRENT ISSUE DATE:	
11/05/10	

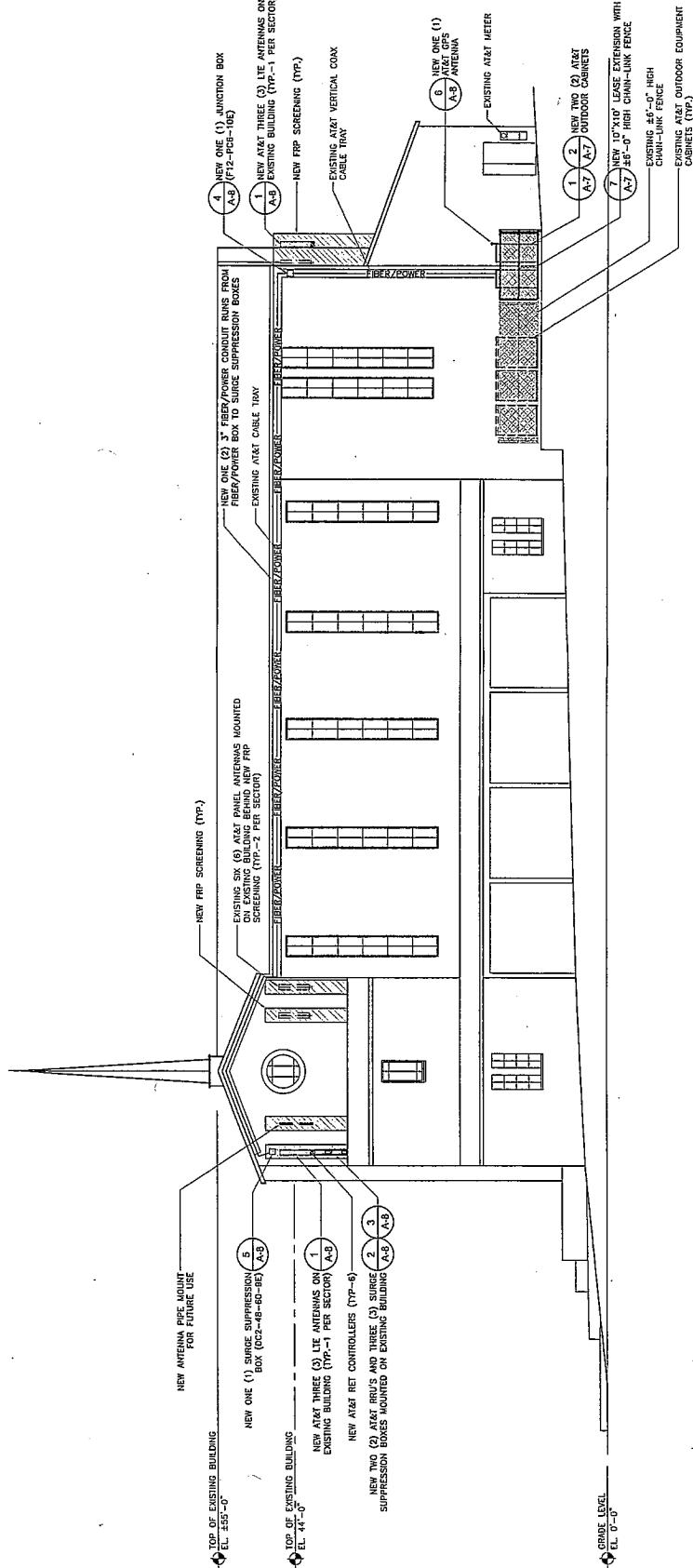
ISSUED FOR:	
100% CONSTRUCTION	
DRAWING	
REV./DATE:	DESCRIPTION:
A 09/20/10	SITE CONSTRUCTION HG
0 11/05/10	DRAWING HG

PLANS PREPARED BY:
PDC CORPORATION
102 CORNISHON BLVD.
LAKESHORE, CA 94610
TEL: (415) 658-5958
CONSULTANT:
C.L.L.E.
3100 GOLD CAMP DR, SUITE 3D
MARIN COUNTY, CA 94570
DRAWN BY: JPN:
HG FP SAS
LICENSER:



SHEET TITLE:
SOUTHWEST ELEVATIONS
SHEET NUMBER:

<b>A-6</b>
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0' 4' 8' 16' SCALE  
1/6" = 1'-0"

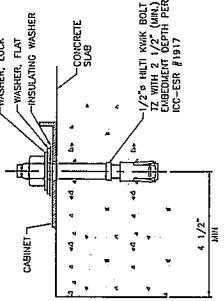
**SOUTHWEST ELEVATION**



4130 ROSEWOOD DRIVE  
REEDSBURG, CA 94588

PROJECT INFORMATION:

CRU4723/CNU4888	LTE SITE: CLO0723
	F/A #: 10102034 USD-1739
MANDANA BLVD/LAKESHORE	
3531 LAKESHORE AVE, OAKLAND, CA 94610	
CURRENT ISSUE DATE:	1/10/5/10
ISSUED FOR:	100% CONSTRUCTION DRAWING



PLANS PREPARED BY:  
PDC CORPORATION  
  
1072 CONCHONIA LEWIS.  
TOLL FREE 1-800-475-5456  
TEL (925) 370-9500

REV.: DATE: DESCRIPTION: B-1:  
A 09/26/10 90% CONSTRUCTION HG  
DRAWING  
0 11/05/10 100% CONSTRUCTION HG  
DRAWING

CONSULTANTS:

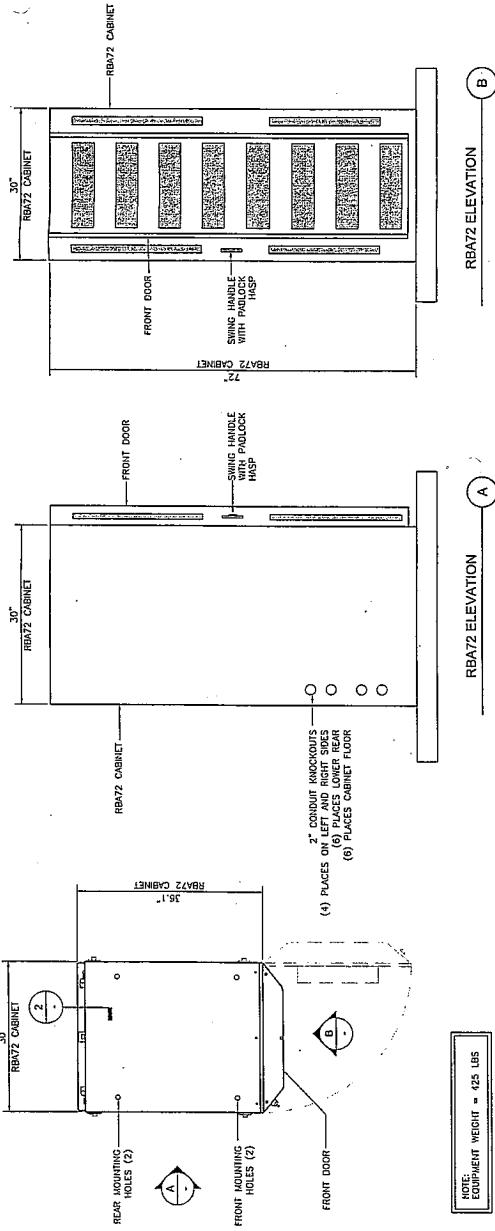
L+L+E  
3140 GOLD CAMP DR. SUITE 3D  
RANCH CORDOVA, CA 95670

DRAWN BY: C.H.K., P.I.V.  
HG PP SAS

LICENSEE: =

EQUIPMENT AND  
CONSTRUCTION  
DETAILS

A-7



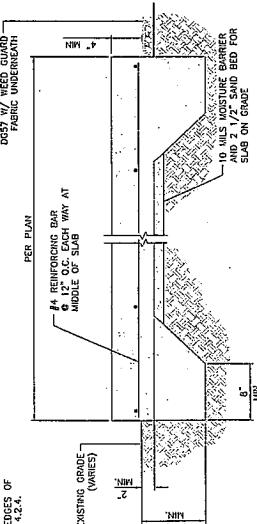
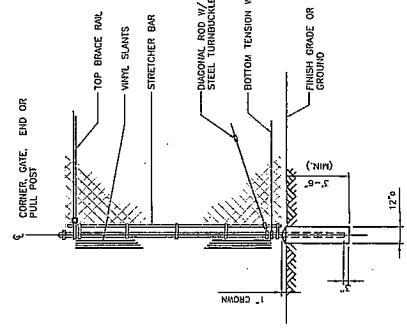
EQUIPMENT DETAILS AND SPECS

CONCRETE AND REINFORCING STEEL NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI-301, ACI 316, ACI 336, ASTM A315, ASTM A36, AND CONSTRUCTION CONSTRUCTION PER CAST-IN-PLACE CONCRETE.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, DEFORMED WIRE FABRIC SHALL CONFORM TO ASTM A162, WELDED STEEL WIRE FABRIC UNLESS JOINED OTHERWISE. SPlices SHALL BE CLASS 'B' AND ALL HOURS SHALL BE SWAGED, UNLESS OTHERWISE.
4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL, UNLESS OTHERWISE ON DRAWINGS: CONCRETE EXPOSED TO EARTH.....3 IN.  
CONCRETE NOT OTHERWISE.....2 IN.  
#5 AND LARGER.....1 1/2 IN.  
#5 AND SMALLER & W/F.....1 1/2 IN.  
COMPOSITE NO EXPOSED TO EARTH OR WEATHER OR NOT CAST AGED.....1 1/4 IN.  
SUB IN. IN. SUB IN.  
BEAMS AND COLUMNS.....1 1/4 IN.  
1 1/2 IN.
5. A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS IN ACCORDANCE WITH ACI 301 SECTION 4.2...

1 CABINET ANCHORAGE

2

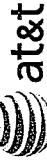


ELEVATION VIEW

3 CONCRETE PAD

4 CHAIN-LINK FENCE

CONCRETE PAD



4430 ROSEWOOD DRIVE  
FELTONIAN, CA 91539

PROJECT INFORMATION:  
**CHU4723/CNU488B8**  
LTE SITE: CLO0723  
FA: #10102034 USD-47739  
**MANDANA BLVD/LAKESHORE**  
3535 LAKESHORE AVE.  
OAKLAND, CA 94610

CURRENT ISSUE DATE:  
11/05/10

ISSUED FOR:  
100% CONSTRUCTION

DRAWING

REV.: DATE: DESCRIPTION:

A 09/20/10 50% CONSTRUCTION HG

0 11/05/10 100% CONSTRUCTION HG

PLANS PREPARED BY:



CONSULTANTS:

L. H. L. E.

3140 GOLD CAMP DR. SUITE 3D  
RAVENCHORD, CORDOVA, CA 94570

DRAWN BY:

CHC-A/PV:

HG PP SAS

LICENSER:

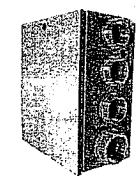
EQUIPMENT AND  
CONSTRUCTION  
DETAILS

SHEET NUMBER:

# A-8

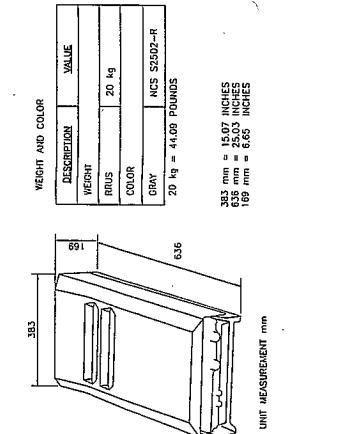
## FC12-PC6-10E

Central Fiber Optic & DC Power Connection



### FEATURES

- Features integrated connectivity and cable
- Delivers up to 100W of DC power to the central power source for equipment
- Delivers up to 10Gb/s optical throughput for simultaneous optical and power delivery
- Features a built-in 12 pair of fiber and 6 DC power outputs
- Features 10Gb/s SFP+ WDM transmitter
- Features integrated DC power input and output port or barrier strip
- Components are rated for -40°C to +50°C operating temperature
- Output is via fibre distribution
- Unit weight 28.35 kg (61.77 lb)



WEIGHT AND COLOR

DESCRIPTION	VALUE
WEIGHT	20 kg

GRAY

NCS S2502-R

20 kg = 44.09 POUNDS

381 mm = 15.07 INCHES

636 mm = 25.03 INCHES

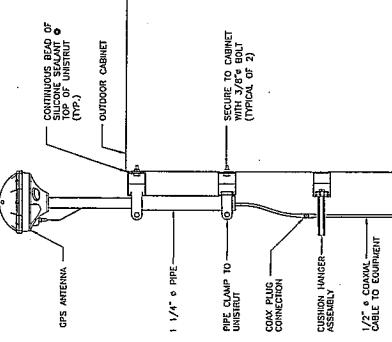
169 mm = 6.65 INCHES

UNIT MEASUREMENT mm

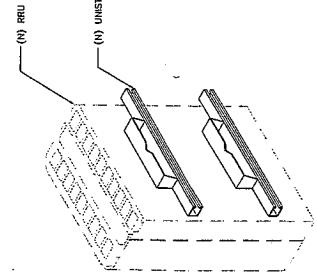
4

## FC12-PC6-10E Specs

4



LOCATION OF ANTENNA MUST HAVE CLEAR VIEW OF SOUTHERN SKY AND CAN NOT HAVE ANY obstructions exceeding 25% of the surface area of hemispherical around the ops antenna. ALL OPS ANTENNA LOCATIONS MUST BE ABLE TO RECEIVE CLEAR SIGNALS FROM DIRECTION OF TOWER(s) ANTENNA, TOWER(s) ANTENRAS AND TOWER(s) GND PLATE. THE HEIGHT OF THE ANTENNA MAST IS 6.5 MTS.  
"GPS" PORT ON THIS SPEC SHEET IS FOR GND CONNECTION TO POST AND CONNECTED TO GROUND RING.



PANEL ANTENNA  
(OPTIONAL)

ANTENNA DOWNHILL MOUNTING KIT  
(OPTIONAL)

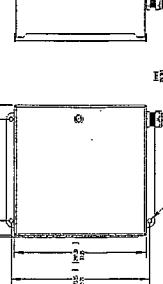
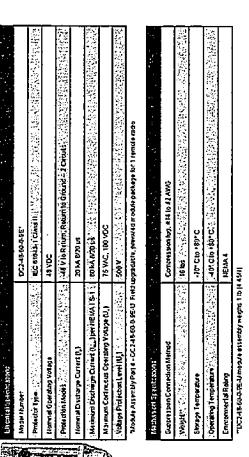
NEW ANTENNA  
PIPE MAST

## RRU Specs

1 RRU MOUNTING DETAIL

2

RRU Specs



The Surge Suppression modules are rated for 1500V surges. They are designed to provide surge protection for DC power circuits for both primary and secondary power feeds. The DCDC 48V-48V provides 48VDC to the power source. The DCDC 48V-12V provides 12VDC to the RRU. The RRU has two connection ports to protect two radios. Provides protection for two (2) 48 VOLT DC feeds. Normal DC voltage requirement is 48 VDC ± 10%. Nominal input voltage requirement is 50 VDC ± 10%. Nominal output voltage requirement is 48 VDC ± 10%. Nominal output current requirement is 16A. Nominal output voltage requirement is 12 VDC ± 10%. Surge protection rating for both radios is 1500V. Surge protection rating for both power feed modules is 1500V. Surge protection rating for both DCDC modules is 1500V. Surge protection rating for both power modules is 1500V. Surge protection rating for both DCDC modules is 1500V.

They are CE listed accordingly.

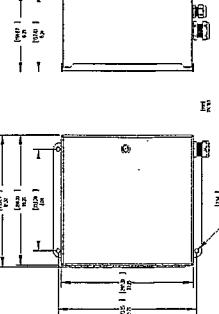
## DC2-48-60-0-9E

DC Surge Suppression Solution

The DC2-48-60-0-9E is a surge protection device designed to provide surge protection for DC power circuits for both primary and secondary power feeds. The DCDC 48V-48V provides 48VDC to the power source. The DCDC 48V-12V provides 12VDC to the RRU. The RRU has two connection ports to protect two radios. Provides protection for two (2) 48 VOLT DC feeds. Normal DC voltage requirement is 48 VDC ± 10%. Nominal input voltage requirement is 50 VDC ± 10%. Nominal output voltage requirement is 48 VDC ± 10%. Nominal output current requirement is 16A. Nominal output voltage requirement is 12 VDC ± 10%. Surge protection rating for both radios is 1500V. Surge protection rating for both power feed modules is 1500V. Surge protection rating for both DCDC modules is 1500V. Surge protection rating for both power modules is 1500V. Surge protection rating for both DCDC modules is 1500V.

The Surge Suppression modules are rated for 1500V surges. They are designed to provide surge protection for DC power circuits for both primary and secondary power feeds. The DCDC 48V-48V provides 48VDC to the power source. The DCDC 48V-12V provides 12VDC to the RRU. The RRU has two connection ports to protect two radios. Provides protection for two (2) 48 VOLT DC feeds. Normal DC voltage requirement is 48 VDC ± 10%. Nominal input voltage requirement is 50 VDC ± 10%. Nominal output voltage requirement is 48 VDC ± 10%. Nominal output current requirement is 16A. Nominal output voltage requirement is 12 VDC ± 10%. Surge protection rating for both radios is 1500V. Surge protection rating for both power feed modules is 1500V. Surge protection rating for both DCDC modules is 1500V. Surge protection rating for both power modules is 1500V. Surge protection rating for both DCDC modules is 1500V.

Hardware Item:	Description	Value
Surge Protection Rating	Surge Protection Rating (SPD) Standard:	IEC 62603-1:2005 2 <sup>nd</sup> Edition 2005
Protection Level (UL)	Protection Level (UL)	UL 1449 2 <sup>nd</sup> Edition 2006
Surge Voltage	Surge Voltage (UL)	16 kV
Operating Temperature	Operating Temperature (UL)	-30°C to 40°C
Environmental Rating	Environmental Rating (UL)	IP30



## DC2-48-60-09E Specs

## GPS Mounting Detail

6

at&amp;t

4430 INSEWOOD DRIVE  
PLEASANTON, CA 94568

PROJECT INFORMATION:

**CNU4723/CNU488B**  
LT.E SITE: CCL04723  
FA: #1010284 USID: 17738  
**MANDANA BLVD/LAKESHORE**  
3353 LAKESHORE AVE.  
OAKLAND, CA 94610

CURRENT ISSUE DATE:

11/05/10

ISSUED FOR:

**100% CONSTRUCTION DRAWING**

REV.: DATE:

BY:

POC CORPORATION

PLANS PREPARED BY:

A 09/26/10  
HG  
B 11/05/10  
HG  
C 10/05/10  
HG  
D 11/05/10  
HG

CONSULTANTS:

DRAWN BY: CHK: AP:

HG PP SAS

LICENSER:

SHEET TITLE: EQUIPMENT POWER PLAN AND PANEL SCHEDULE

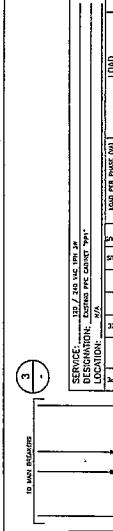
SHEET NUMBER: E-1

SCALE: 3/8" = 1'-0"

4

## ELECTRICAL NOTES:

- PROVIDE A MIN. 36" WORK CLEARANCE IN FRONT OF THE PANEL SCHEDULE.
- SEE SHEET 10 FOR THE PANEL SCHEDULE.
- ALL BREAKERS IN THE ELECTRIC PANEL ARE RATED 100A, 240V, 3PH, 3W UNITS.
- ALL WIRING SHALL BE COPPER 75°C UHD.
- UNDERGROUND: PVC (SCHED 40 OR 80) INDOR: EMT (RS IN TRAFFIC AREAS)
- OUTDOOR (ABOVE GRADE): RG5, PVC, (SCHED 40 OR 80).



EXISTING PANEL SCHEDULE [BREAKER ASSIGNMENT .. PPC CABINET]

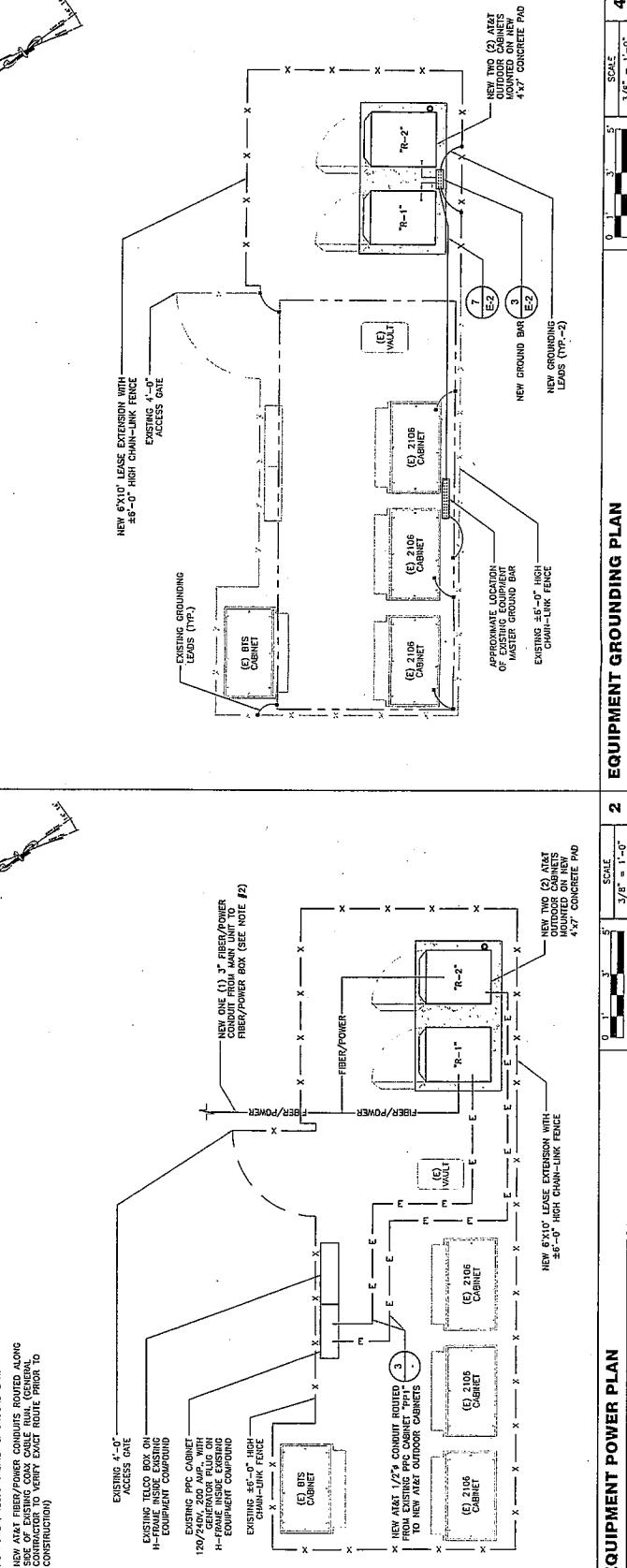
NOTES:

- NEW AT&T CABINET TO BE CONNECTED TO EXISTING H-TRUNKING FEEDING EXISTING DRAINAGE SIDE OF EXISTING COAX CABLE RUN GENERAL CONTRACTOR EXCECUTIVE PRIOR TO CONSTRUCTION.
- NEW AT&T FIBER/POWER CONDUITS ROUTED ALONG EXISTING PPC CABINET FROM EXISTING OUTDOOR CABINETS TO NEW AT&T PPC CABINET.
- NEW AT&T 1/2" & CONDUIT ROUSED FROM EXISTING PPC CABINET TO NEW AT&T PPC CABINET.
- NEW AT&T FIBER/POWER BOX (SEE NOTE #2)

EXISTING PANEL SCHEDULE [BREAKER ASSIGNMENT .. PPC CABINET]

NOTES:

- NEW AT&T CABINET TO BE CONNECTED TO EXISTING H-TRUNKING FEEDING EXISTING DRAINAGE SIDE OF EXISTING COAX CABLE RUN GENERAL CONTRACTOR EXCECUTIVE PRIOR TO CONSTRUCTION.
- NEW AT&T FIBER/POWER CONDUITS ROUTED ALONG EXISTING PPC CABINET FROM EXISTING OUTDOOR CABINETS TO NEW AT&T PPC CABINET.
- NEW AT&T 1/2" & CONDUIT ROUSED FROM EXISTING PPC CABINET TO NEW AT&T PPC CABINET.
- NEW AT&T FIBER/POWER BOX (SEE NOTE #2)



EQUIPMENT POWER PLAN

0' 1' 2' 3' 4'

0' 1' 2' 3' 4'

0' 1' 2' 3' 4'

0' 1' 2' 3' 4'

0' 1' 2' 3' 4'

0' 1' 2' 3' 4'

0' 1' 2' 3' 4'

0' 1' 2' 3' 4'

0' 1' 2' 3' 4'

0' 1' 2' 3' 4'

0' 1' 2' 3' 4'



**PROJECT INFORMATION:**  
LITE SITE: CCL09723  
FA #: 10102034 USID:4739  
440 ROSEWOOD DRIVE  
PLUMONATION, CA 94588

**CNU4723/CNU4988**  
**MANDANA BLVD/LAKESHORE**

3534 AVENUESHORE AVE.  
OAKLAND, CA 94610

CURRENT ISSUE DATE:

11/05/10

ISSUED FOR: 100% CONSTRUCTION DRAWING

REV.-DATE: 08/20/10  
DESCRIPTION: BY:  
FCI CORPORATION

PLANS PREPARED BY:  
FCI CORPORATION

CONSULTANTS: L.L.E.  
102 GOLD CAMP RD.  
LAKEWOOD, CO 80228  
TEL: (303) 619-3488

DRAWN BY: C.H.K.: APV:  
0 11/05/10  
DRAWING: HG  
DRAFTING: HC  
CHECKING: HG

LICENSEE: HG FP SAS

SHEET NUMBER: 6

100% CONSTRUCTION

REV.-DATE: 08/20/10  
DESCRIPTION: BY:  
FCI CORPORATION

PLANS PREPARED BY:  
FCI CORPORATION

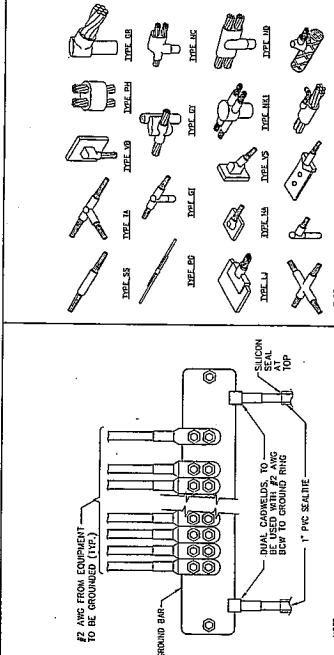
CONSULTANTS: L.L.E.  
102 GOLD CAMP RD.  
LAKEWOOD, CO 80228  
TEL: (303) 619-3488

DRAWN BY: C.H.K.: APV:  
0 11/05/10  
DRAWING: HG  
DRAFTING: HC  
CHECKING: HG

LICENSEE: HG FP SAS

SHEET NUMBER: 6

**E-2**



NOTE:

1. CONTRACTOR TO UNWIRE KOP-SHED (THINNUS & BETIS) BH
2. ALL LUGS TO BE DUL VOL LONG DURE, AND CRIMPED WIR
3. MANUFACTURE RECOMMENDS TOOL, INC.

NOTE:

ALL HARDWARE TO BE STAINLESS STEEL

## TYPICAL GROUND BAR

### 2 GROUND BAR DETAIL

### 3 EXOTHERMIC CONNECTIONS

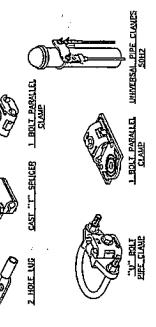
### 4

NOTES:

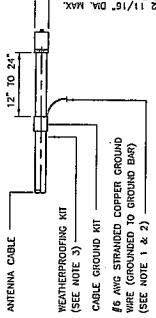
1. DO NOT INSTALL CABLE GROUND KIT AT A BEHIND GROUND BAR, NO PIPE IRON TO GROUND BAR
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHER PROOFING SHALL BE (TYPE AND PART NUMBER) AS SUPPLIED BY CABLE MANUFACTURER.

NOTE:

WEATHER PROOFING SHALL BE (TYPE AND PART NUMBER) AS SUPPLIED BY CABLE MANUFACTURER.



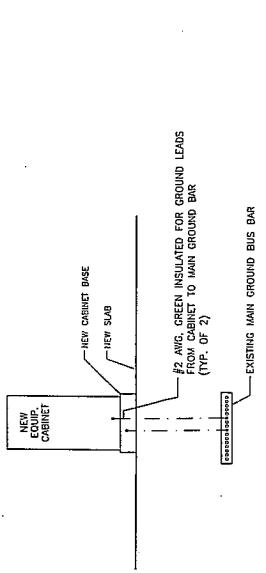
2 11/16" DIAM. MAX.



### 5 CONN. OF CABLE GRND KIT TO ANT. DETAIL

### 6

LEGEND:  
■ - EXOTHERMIC CONNECTION  
● - MECHANICAL TYPE CONNECTION



## TYP. SYSTEM GROUNDING SCHEMATIC

### 7 GROUND ROD DETAIL

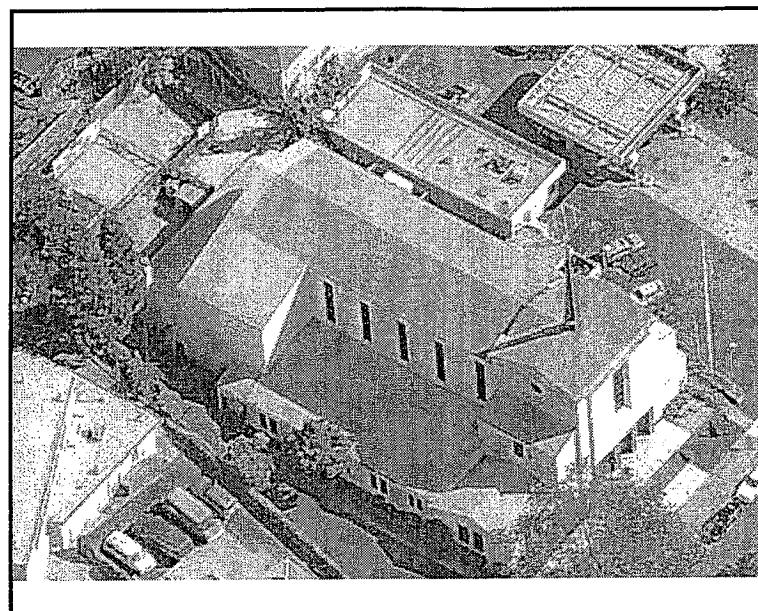
### 8 GROUND ROD w/ TEST WELL

9

## ATTACHMENT B

### Radio Frequency – Electromagnetic Energy (RF-EME) Compliance Report

Prepared for:  
AT&T Mobility, LLC  
c/o The Lyle Company  
3140 Gold Camp Drive Suite 30  
Rancho Cordova, CA 95670



USID# 47739  
Site No. CNU4723  
Mandana Blvd - Lakeshore  
3534 Lakeshore Avenue  
Oakland, California 94610  
Alameda County  
37.811810; -122.241560 NAD83

EBI Project No. 62101517  
October 21, 2010



## TABLE OF CONTENTS

EXECUTIVE SUMMARY.....	1
1.0 SITE DESCRIPTION .....	3
2.0 FEDERAL COMMUNICATIONS COMMISSION (FCC) REQUIREMENTS .....	3
3.0 AT&T RF EXPOSURE POLICY REQUIREMENTS .....	5
4.0 WORST-CASE PREDICTIVE MODELING.....	5
5.0 RECOMMENDED SIGNAGE/COMPLIANCE PLAN .....	7
6.0 SUMMARY AND CONCLUSIONS.....	8
7.0 LIMITATIONS .....	8

## APPENDICES

- Appendix A Personnel Certifications**
- Appendix B Antenna Inventory**
- Appendix C RoofView® Export File**
- Appendix D RoofView® Graphic**
- Appendix E Compliance/Signage Plan**

## EXECUTIVE SUMMARY

### Purpose of Report

EnviroBusiness Inc. (dba EBI Consulting) has been contracted by AT&T Mobility, LLC to conduct radio frequency electromagnetic (RF-EME) modeling for AT&T Site CNU4723 located at 3534 Lakeshore Avenue in Oakland, California to determine RF-EME exposure levels from proposed AT&T wireless communications equipment at this site. As described in greater detail in Section 2.0 of this report, the Federal Communications Commission (FCC) has developed Maximum Permissible Exposure (MPE) Limits for general public exposures and occupational exposures. This report summarizes the results of RF-EME modeling in relation to relevant FCC RF-EME compliance standards for limiting human exposure to RF-EME fields.

This report contains a detailed summary of the RF EME analysis for the site, including the following:

- Antenna Inventory
- Site Plan with antenna locations
- Antenna inventory with relevant parameters for theoretical modeling
- Graphical representation of theoretical MPE fields based on modeling
- Graphical representation of recommended signage and/or barriers

This document addresses the compliance of AT&T's transmitting facilities independently and in relation to all collocated facilities at the site.

### Statement of Compliance

A site is considered out of compliance with FCC regulations if there are areas that exceed the FCC exposure limits and there are no RF hazard mitigation measures in place. Any carrier which has an installation that contributes more than 5% of the applicable MPE must participate in mitigating these RF hazards.

Per AT&T's corporate policy, the FCC's general population limits are applicable to all rooftop sites, regardless of the level of access control. As presented in the sections below, based on worst-case predictive modeling, the worst-case emitted power density may exceed the FCC's general public limit within approximately 4 feet of AT&T's proposed antennas at the lower roof level. Modeling also indicates that the worst-case emitted power density will not exceed the FCC's occupational limit in front of AT&T's proposed antennas at the lower roof level.

### AT&T Recommended Signage/Compliance Plan

AT&T's RF Exposure Policy guidance, dated March 31, 2009, requires that:

1. All sites must be analyzed for RF exposure compliance;
2. All sites must have that analysis documented; and
3. All sites must have any necessary signage and barriers installed.

Site compliance recommendations have been developed based upon protocols presented in AT&T's RF Exposure Policy guidance document, dated March 31, 2009, additional guidance provided by AT&T, EBI's understanding of FCC and OSHA requirements, and common industry practice. Barrier locations have been identified (when required) based on guidance presented in AT&T's RF Exposure Policy guidance document, dated March 31, 2009. The following signage is recommended at this site:

- Green INFO 1 sign posted next to the designated access points to the rooftop.
- Blue NOTICE sign posted at designated access points to the rooftop.
- Green INFO 4 signs posted on the side of the panel antennas.

The signage proposed for installation at this site complies with AT&T's RF Exposure Policy and therefore complies with FCC and OSHA requirements. No barriers are recommended for this site. Before being elevated above ground level at this site, workers should be provided with a copy of this report and signify their understanding of it. More detailed information concerning site compliance recommendations is presented in Section 5.0 and Appendix E of this report.

## 1.0 SITE DESCRIPTION

This project involves the proposed installation of up to nine (9) wireless telecommunication antennas on a rooftop in Oakland, California. There are three Sectors (A, B, and C) proposed at the site, with three (3) antennas that may be installed per sector. In each sector, there is proposed to be one (1) GSM antenna transmitting in the 850 MHz and the 1900 MHz frequency ranges, one UMTS antenna transmitting in the 850 MHz and 1900 MHz frequency ranges, and one LTE antenna transmitting in the 700 MHz and 1710 MHz frequency ranges. The Sector A antennas will be oriented 20° from true north. The Sector B antennas will be oriented 260° from true north. The Sector C antennas will be oriented 140° from true north. The bottoms of the antennas will be from 41.7 to 41.84 feet above ground level. Two of the antennas in Sector A will be transmitting over a lower roof. The bottoms of these antennas will be between 5.2 and 5.34 feet above this rooftop. Two of the antennas in Sector B will be transmitting over a lower roof. The bottoms of these antennas will be 5.34 feet above this rooftop. All of the antennas in Sector C will be transmitting over a lower roof. The bottoms of these antennas will be between 7.7 and 7.84 feet above this rooftop. Appendix B presents an antenna inventory for the site..

Access to this site is unknown and as such, the general public is assumed to be able to access the rooftop.

## 2.0 FEDERAL COMMUNICATIONS COMMISSION (FCC) REQUIREMENTS

The FCC has established Maximum Permissible Exposure (MPE) limits for human exposure to Radiofrequency Electromagnetic (RF-EME) energy fields, based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP) and, over a wide range of frequencies, the exposure limits developed by the Institute of Electrical and Electronics Engineers, Inc. (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines. Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

The FCC guidelines incorporate two separate tiers of exposure limits that are based upon occupational/controlled exposure limits (for workers) and general public/uncontrolled exposure limits for members of the general public.

***Occupational/controlled exposure limits*** apply to situations in which 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 public/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

***General public/uncontrolled exposure limits*** apply to situations in which the general public may be 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 would always be considered under this category when exposure is not employment-related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Table I and Figure I (below), which are included within the FCC's OET Bulletin 65, summarize the MPE limits for RF emissions. These limits are designed to provide a substantial margin of safety. They vary by frequency to take into account the different types of equipment that may be in operation at a particular facility and are "time-averaged" limits to reflect different durations resulting from controlled and uncontrolled exposures.

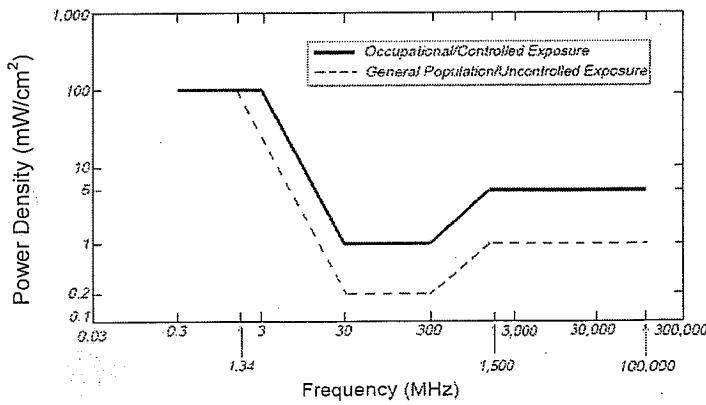
The FCC's MPEs are measured in terms of power (mW) over a unit surface area ( $\text{cm}^2$ ). Known as the power density, the FCC has established an occupational MPE of 5 milliwatts per square centimeter ( $\text{mW/cm}^2$ ) and an uncontrolled MPE of 1 mW/cm<sup>2</sup> for equipment operating in the 1900 MHz frequency range. For the AT&T equipment operating at 850 MHz, the FCC's occupational MPE is 2.83 mW/cm<sup>2</sup> and an uncontrolled MPE of 0.57 mW/cm<sup>2</sup>. These limits are considered protective of these populations.

Table I: Limits for Maximum Permissible Exposure (MPE)				
(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
300-1,500	--	--	f/300	6
1,500-100,000	--	--	5	6
(B) Limits for General Public/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
300-1,500	--	--	f/1,500	30
1,500-100,000	--	--	1.0	30

f = Frequency in (MHz)

\* Plane-wave equivalent power density

Figure 1. FCC Limits for Maximum Permissible Exposure (MPE)  
Plane-wave Equivalent Power Density



Based on the above, the most restrictive thresholds for exposures of unlimited duration to RF energy for several personal wireless services are summarized below:

Personal Wireless Service	Approximate Frequency	Occupational MPE	Public MPE
Personal Communication (PCS)	1,950 MHz	5.00 mW/cm <sup>2</sup>	1.00 mW/cm <sup>2</sup>
Cellular Telephone	870 MHz	2.90 mW/cm <sup>2</sup>	0.58 mW/cm <sup>2</sup>
Specialized Mobile Radio	855 MHz	2.85 mW/cm <sup>2</sup>	0.57 mW/cm <sup>2</sup>
Most Restrictive Freq, Range	30-300 MHz	1.00 mW/cm <sup>2</sup>	0.20 mW/cm <sup>2</sup>

MPE limits are designed to provide a substantial margin of safety. 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.

Personal Communication (PCS) facilities used by AT&T in this area operate within a frequency range of 850-1900 MHz. Facilities typically consist of: 1) electronic transceivers (the radios or cabinets) connected to wired telephone lines; and 2) antennas that send the wireless signals created by the transceivers to be received by individual subscriber units (PCS telephones). Transceivers are typically connected to antennas by coaxial cables.

Because of the short wavelength of PCS services, the antennas require line-of-site paths for good propagation, and are typically installed above ground level. Antennas are constructed to concentrate energy towards the horizon, with as little energy as possible scattered towards the ground or the sky. This design, combined with the low power of PCS facilities, generally results in no possibility for exposure to approach Maximum Permissible Exposure (MPE) levels, with the exception of areas directly in front of the antennas.

### 3.0 AT&T RF EXPOSURE POLICY REQUIREMENTS

AT&T's RF Exposure Policy guidance, dated March 31, 2009, requires that:

1. All sites must be analyzed for RF exposure compliance;
2. All sites must have that analysis documented; and
3. All sites must have any necessary signage and barriers installed.

Pursuant to this guidance, worst-case predictive modeling was performed for the site. This modeling is described below in Section 4.0. Lastly, based on the modeling and survey data, EBI has produced a Compliance Plan for this site that outlines the recommended signage and barriers. The recommended Compliance Plan for this site is described in Section 5.0.

### 4.0 WORST-CASE PREDICTIVE MODELING

In accordance with AT&T's RF Exposure policy, EBI performed theoretical modeling using RoofView® software to estimate the worst-case power density at the site rooftop and ground-level and nearby roof-tops resulting from operation of the antennas. RoofView® is a widely-used predictive modeling program that has been developed by Richard Tell Associates to predict both near field and far field RF power density values for roof-top and tower telecommunications sites produced by vertical collinear antennas that are typically used in the cellular, PCS, paging and other communications services. The models utilize several operational specifications for different types of antennas to produce a plot of

spatially-averaged power densities that can be expressed as a percentage of the applicable exposure limit.

For this report, EBI utilized antenna and power data provided by AT&T, and compared the resultant worst-case MPE levels to the FCC's occupational/controlled exposure limits outlined in OET Bulletin 65. The assumptions used in the modeling are based upon information provided by AT&T, and information gathered from other sources. There are no other wireless carriers with equipment installed at this site.

Per AT&T's corporate policy, the FCC's general population limits are applicable to all rooftop sites, regardless of the level of access control. Based on worst-case predictive modeling, the worst-case emitted power density may exceed the FCC's general public limit within approximately 4 feet of AT&T's Sector A GSM antenna on a lower roof level, within 3 feet of AT&T's Sector A LTE antenna and Sector B GSM antenna, and within 2 feet of AT&T's Sector B UMTS antenna, Sector C GSM antenna and LTE antenna on a lower roof level. Modeling also indicates that the worst-case emitted power density will not exceed the FCC's occupational limit in front of AT&T's antennas on any roof or ground level. At the nearest walking/working surfaces to the AT&T antennas, the maximum power density generated by the AT&T antennas is approximately 298.90 percent of the FCC's general public limit (59.78 percent of the FCC's occupational limit).

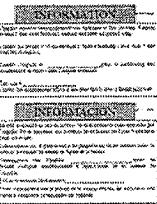
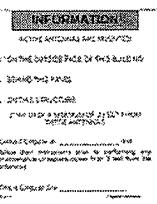
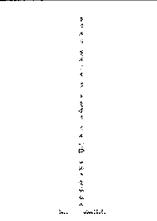
The inputs used in the modeling are summarized in the RoofView® export file presented in Appendix C. A graphical representation of the RoofView® modeling results is presented in Appendix D. It should be noted that RoofView is not suitable for modeling microwave dish antennas; however, these units are designed for point-to-point operations at the elevations of the installed equipment rather than ground level coverage.

## 5.0 RECOMMENDED SIGNAGE/COMPLIANCE PLAN

Signs are the primary means for control of access to areas where RF exposure levels may potentially exceed the MPE. As presented in the AT&T guidance document, the signs must:

- Be posted at a conspicuous point;
- Be posted at the appropriate locations;
- Be readily visible; and
- Make the reader aware of the potential risks prior to entering the affected area.

The table below presents the signs that may be used for AT&T installations.

Informational Signs		Alerting Signs	
	INFO 1		NOTICE
	INFO 2		CAUTION
	INFO 3		WARNING
	INFO 4		

Based upon protocols presented in AT&T's RF Exposure Policy guidance document, dated March 31, 2009, and additional guidance provided by AT&T, the following signage is recommended on the site:

Recommended Signage:

- Green INFO 1 sign posted next to the designated access points the rooftop.
- Blue NOTICE sign posted at designated access points to the rooftop.
- Green INFO 4 signs posted on the side of the panel antennas.

No barriers are required for this site. Barriers may consist of rope, chain, fencing, or painted/taped stripes. Before being elevated above ground level at this site, workers should be provided with a copy of this report signify their understanding of it. The signage and any barriers are graphically represented in the Signage Plan presented in Appendix E.

## **6.0 SUMMARY AND CONCLUSIONS**

EBI has prepared this Radiofrequency Emissions Compliance Report for the proposed AT&T telecommunications equipment at the site located at 3534 Lakeshore Avenue in Oakland, California.

EBI has conducted theoretical modeling to estimate the worst-case power density from AT&T antennas to document potential MPE levels at this location and ensure that site control measures are adequate to meet FCC and OSHA requirements, as well as AT&T's corporate RF safety policies. As presented in the preceding sections, based on worst-case predictive modeling, the worst-case emitted power density may exceed the FCC's general public limit within approximately 4 feet of AT&T's proposed antennas at the lower roof level. Modeling also indicates that the worst-case emitted power density will not exceed the FCC's occupational limit in front of AT&T's proposed antennas at the lower roof level.

Signage is recommended at the site as presented in Section 5.0 and Appendix E. Posting of the signage brings the site into compliance with FCC rules and regulations and AT&T's corporate RF safety policies.

## **7.0 LIMITATIONS**

This report was prepared for the use of AT&T Mobility, LLC. It was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same locale under like circumstances. The conclusions provided by EBI are based solely on the information provided by the client. The observations in this report are valid on the date of the investigation. Any additional information that becomes available concerning the site should be provided to EBI so that our conclusions may be revised and modified, if necessary. This report has been prepared in accordance with Standard Conditions for Engagement and authorized proposal, both of which are integral parts of this report. No other warranty, expressed or implied, is made.

RF-EME Compliance Report  
EBI Project No. 62101517

USID No. 47739 Site No. CNU4723  
3534 Lakeshore Avenue, Oakland, California

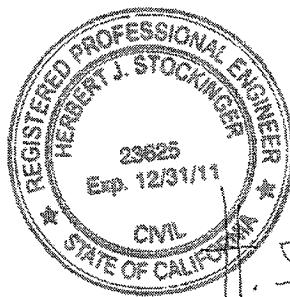
## **Appendix A**

### **Certifications**

RF-EME Compliance Report  
EBI Project No. 62101517

USID No. 47739 Site No. CNU4723  
3534 Lakeshore Avenue, Oakland, California

Reviewed and Approved by:



*Stockinger*  
10-25-2010

Herbert J. Stockinger, PE  
Senior Engineer

Note that EBI's scope of work is limited to an evaluation of the Radio Frequency - Electromagnetic Energy (RF-EME) field generated by the antennas and broadcast equipment noted in this report. The engineering and design of the building and related structures, as well as the impact of the antennas and broadcast equipment on the structural integrity of the building, are specifically excluded from EBI's scope of work.

## Preparer Certification

I, Timothy Costa, state that:

- I am an employee of EnviroBusiness Inc. (d/b/a EBI Consulting), which provides RF-EME safety and compliance services to the wireless communications industry.
- I have successfully completed RF-EME safety training, and I am aware of the potential hazards from RF-EME and would be classified "occupational" under the FCC regulations.
- I am familiar with the FCC rules and regulations as well as OSHA regulations both in general and as they apply to RF-EME exposure.
- I have been trained in on the procedures outlined in AT&T's RF Exposure Policy guidance (dated 3/31/09) and on RF-EME modeling using RoofView® modeling software.
- I have reviewed the data provided by the client and incorporated it into this Site Compliance Report such that the information contained in this report is true and accurate to the best of my knowledge.

*Timothy Costa*

## **Appendix B**

### **Antenna Inventory**

Antenna Number	Antenna Operator	Antenna Type	TX Freq (MHz)	ERP (Watts)	Gain (dBi)	Model	Azimuth (deg.)	Length (ft)	Horizontal Beamwidth (Deg.)	X	Y	Z
ATT A1	AT&T	Panel	LTE 700	314	12.35	Kathrein 800-10764K	20	4.6	68	52	100	5.2
ATT A1	AT&T	Panel	LTE 1710	599	15.15	Kathrein 800-10764K	20	4.6	61	52	100	5.2
ATT A2	AT&T	Panel	GSM 850	500	11.85	Kathrein 742-264	20	4.32	68	48	100	5.34
ATT A2	AT&T	Panel	GSM 1900	500	14.65	Kathrein 742-264	20	4.32	65	48	100	5.34
ATT A3	AT&T	Panel	UMTS 850	250	11.85	Kathrein 742-264	20	4.32	68	27	100	41.84
ATT A3	AT&T	Panel	UMTS 1900	250	14.65	Kathrein 742-264	20	4.32	65	27	100	41.84
ATT A3	AT&T	Panel	UMTS 1900	250	14.65	Kathrein 742-264	20	4.32	65	27	100	41.84
ATT B1	AT&T	Panel	LTE 700	314	12.35	Kathrein 800-10764K	260	4.6	68	26	60	41.7
ATT B1	AT&T	Panel	LTE 1710	599	15.15	Kathrein 800-10764K	260	4.6	61	26	60	41.7
ATT B2	AT&T	Panel	GSM 850	500	11.85	Kathrein 742-264	260	4.32	68	49	60	5.34
ATT B2	AT&T	Panel	GSM 1900	500	14.65	Kathrein 742-264	260	4.32	65	49	60	5.34
ATT B3	AT&T	Panel	UMTS 850	250	11.85	Kathrein 742-264	260	4.32	68	53	60	5.34
ATT B3	AT&T	Panel	UMTS 1900	250	14.65	Kathrein 742-264	260	4.32	65	53	60	5.34

Antenna Number	Operator	Antenna Type	TX Freq (MHz)	ERP (Watts)	Gain (dBd)	Model	Azimuth (deg.)	Length (ft)	Horizontal Beamwidth (Deg.)	X	Y	Z
ATT B3	AT&T	Panel	UMTS 1900	250	14.65	Kathrein 742-264	260	4.32	65	53	60	5.34
ATT C1	AT&T	Panel	GSM 850	500	11.85	Kathrein 742-264	140	4.32	68	155	64	7.84
ATT C1	AT&T	Panel	GSM 1900	500	14.65	Kathrein 742-264	140	4.32	65	155	64	7.84
ATT C2	AT&T	Panel	UMTS 850	250	11.85	Kathrein 742-264	140	4.32	68	155	68	7.84
ATT C2	AT&T	Panel	UMTS 1900	250	14.65	Kathrein 742-264	140	4.32	65	155	68	7.84
ATT C2	AT&T	Panel	UMTS 1900	250	14.65	Kathrein 742-264	140	4.32	65	155	68	7.84
ATT C3	AT&T	Panel	LTE 700	314	12.35	Kathrein 800-10764K	140	4.6	68	157	72	7.7
ATT C3	AT&T	Panel	LTE 1710	599	15.15	Kathrein 800-10764K	140	4.6	61	157	72	7.7

- I. Note that EBI uses an assumed set of antenna specifications and powers for unknown and other carrier antennas for modeling purposes.

RF-EME Compliance Report  
EBI Project No. 62101517

USID No. 47739 Site No. CNU4723  
3534 Lakeshore Avenue, Oakland, California

## **Appendix C**

### **Roofview® Export File**



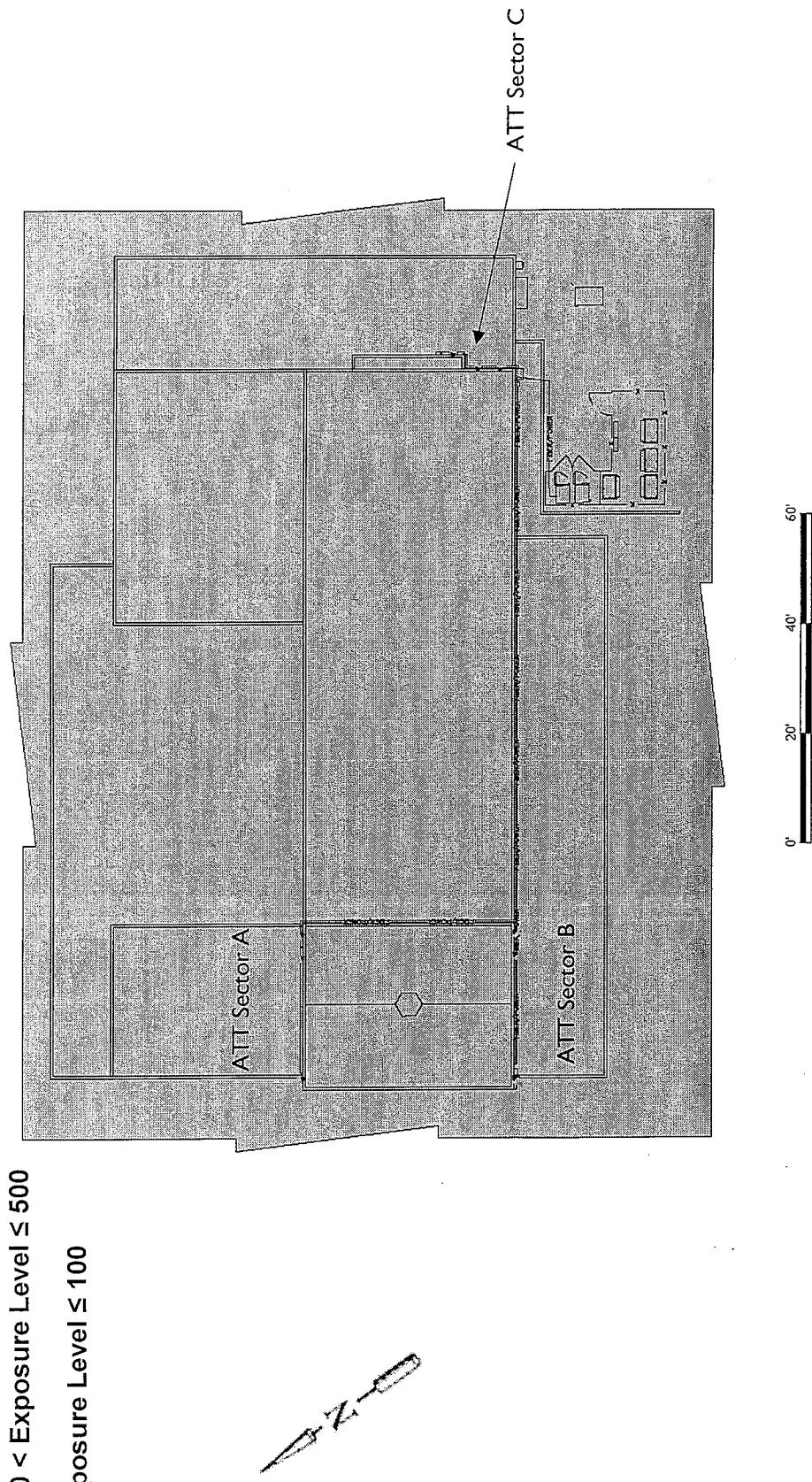


## **Appendix D**

### **Roofview ® Graphics**

**% of FCC Public Exposure Limit**

- Exposure Level  $\geq$  5,000**
- 500 < Exposure Level  $\leq$  5000**
- 100 < Exposure Level  $\leq$  500**
- Exposure Level  $\leq$  100**



**Roofview: Composite Exposure Levels**

Facility Operator: AT&T Mobility

Site Name: Mandana Blvd - Lakeshore

AT&T Site Number: CNU4723

USID Number: 47739

Report Date: 10-21-10

AT&T Antennas

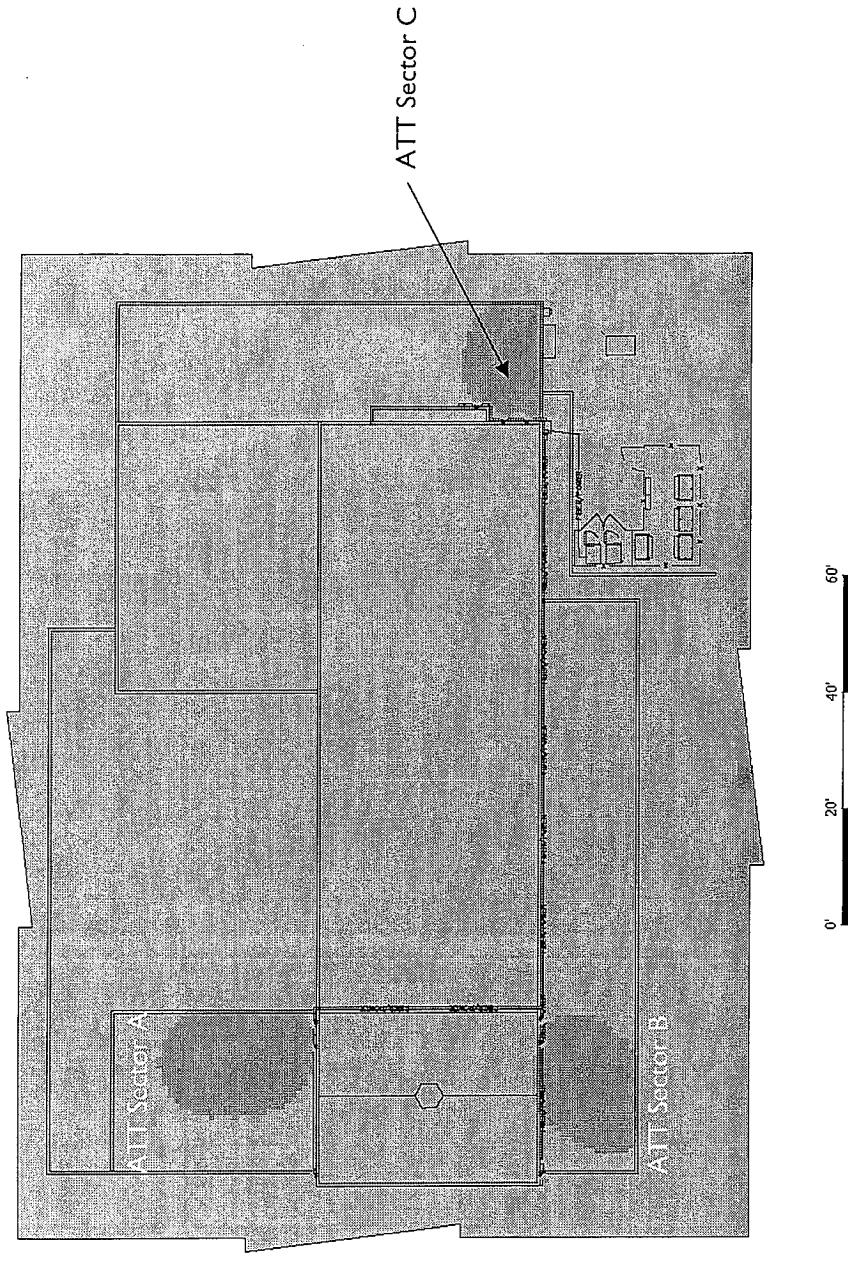


EBI  
Electromagnetic  
Biology  
Institute

% of FCC Public Exposure Limit

Exposure Level >5

Exposure Level  $\leq$  5



AT&T Antennas



### Roofview: AT&T Exposure Levels

Facility Operator: AT&T Mobility

Site Name: Mandana Blvd - Lakeshore

AT&T Site Number: CNU4723

USID Number: 47739

Report Date: 10-21-10

EBI  
ENVIRONMENTAL  
BUREAU INC.

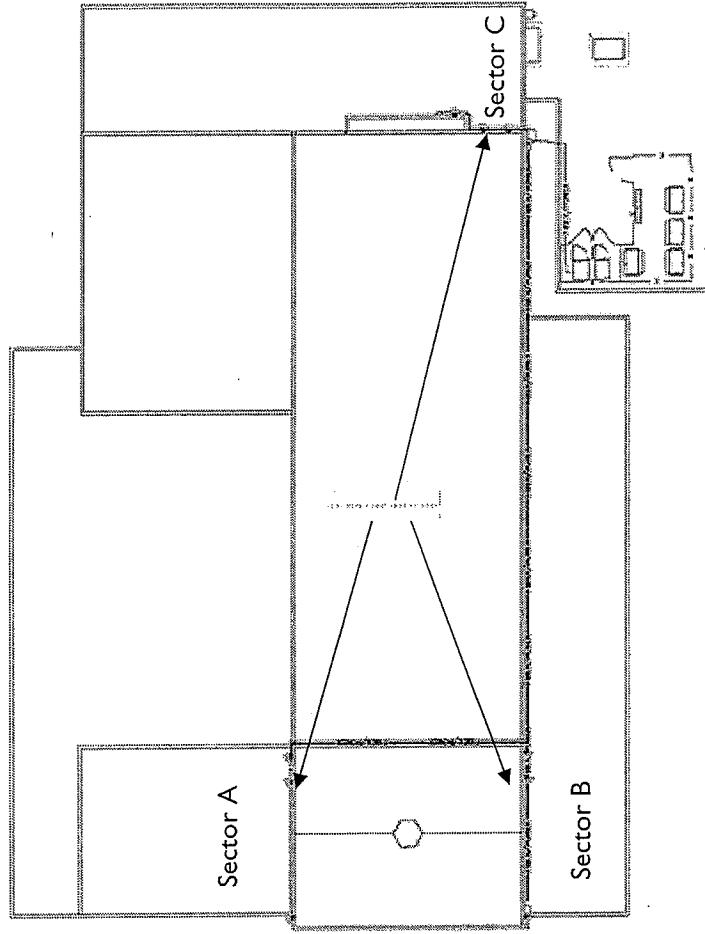
RF-EME Compliance Report  
EBI Project No. 62101517

USID No. 47739 Site No. CNU4723  
3534 Lakeshore Avenue, Oakland, California

## **Appendix E**

### **Compliance/Signage Plan**

Post below signs at designated access points to the rooftop. Please also provide a copy of this report to all workers being elevated above ground level.



#### Sign Identification Legend

	Denotes AT&T Informational Sign 1
	Denotes AT&T Informational Sign 2
	Denotes AT&T Informational Sign 3
	Denotes AT&T Informational Sign 4
	Denotes AT&T NOTICE Sign
	Denotes AT&T CAUTION Sign
	Denotes AT&T WARNING Sign

#### Compliance/Signage Plan

Facility Operator: AT&T Mobility  
 Site Name: Mandana Blvd - Lakeshore  
 AT&T Site Number: CNU4723  
 USID Number: 47739  
 Report Date: 10-21-10