Oakland City Planning Commission STAFF REPORT

Case File Number: CMD10-289 **July 20, 2011**

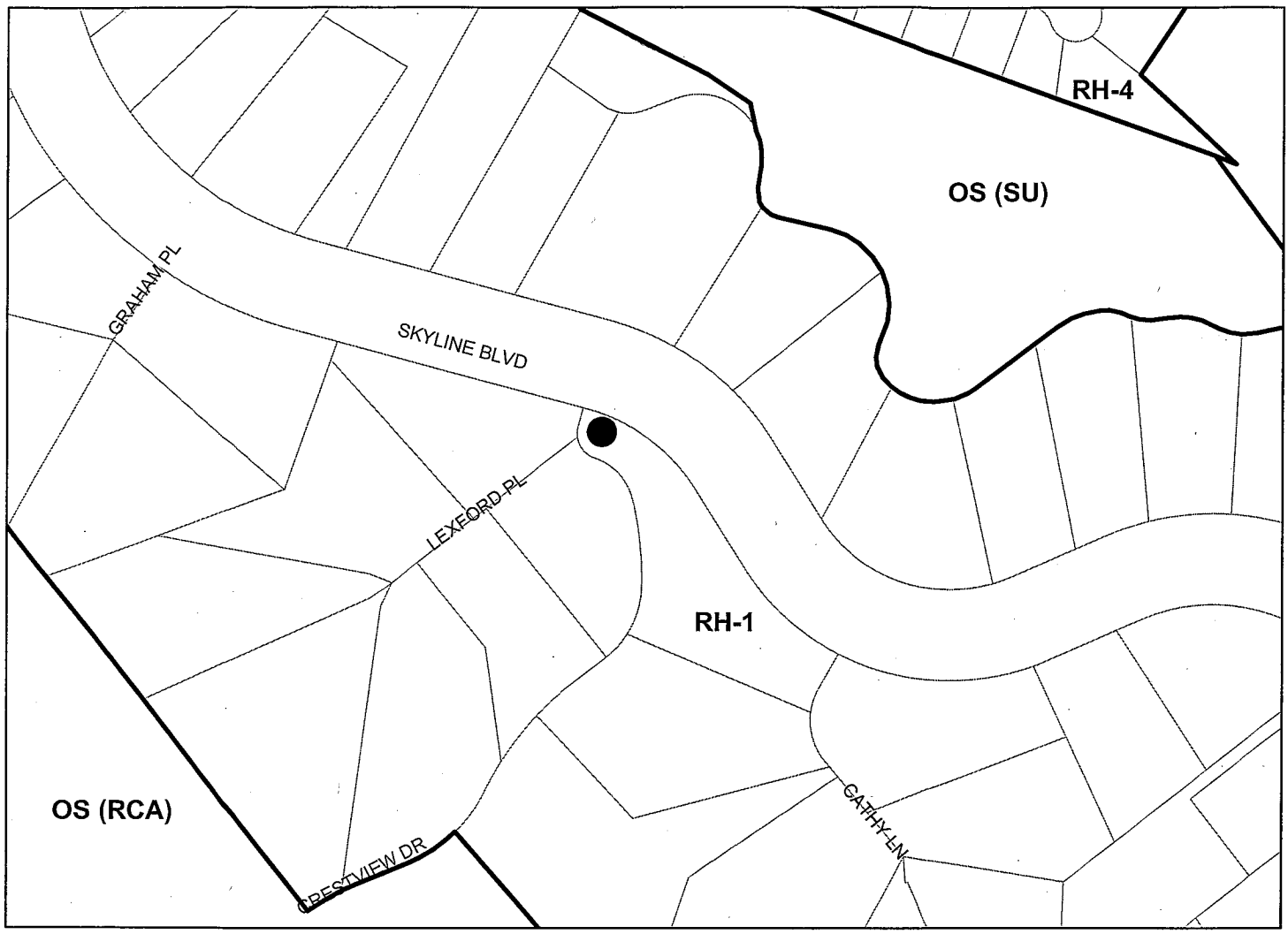
Location:	**Lexford Place (located in the Public Right-of-Way adjacent to 43 Lexford Place) (See map on reverse)**
Assessors Parcel Number:	**Adjacent to 040A-3467-006-00**
Proposal:	Replacement of a City light pole and the installation of a wireless telecommunication facility attached to a new 35'-0" high City light pole with two (2) panel antennas mounted to the top of the pole; and associated equipment box (6' tall by 18" wide); one battery backup, and one meter box attached to the light pole, at a height of between 7' to 9'-6" above ground located in public right of way.
Applicant:	Extenet Systems
Contact Person/ Phone Number:	Rick Hirsch (415) 377-7826
Owner:	City of Oakland
Case File Number:	CMD10-289
Planning Permits Required:	Regular Design Review to install a Monopole Telecommunication Facility located in the public right-of-way within a residential zone. Major Conditional Use Permit for the installation of a Monopole telecommunication facility within 100 feet of a residential zone.
General Plan:	Hillside Residential
Zoning:	RH-1 Hillside Residential Zone-1
Environmental Determination:	Exempt, Section 15303 of the State CEQA Guidelines; new construction of small structures. Section 15183 of the State CEQA Guidelines; Projects consistent with a Community Plan, General Plan or Zoning.
Historic Status:	No Historic Record
Service Delivery District:	4
City Council District:	6
Date Filed:	11/9/10
Finality of Decision:	Appealable to City Council within 10 days
For Further Information:	Contact case planner **Michael Bradley** at **(510) 238-6935** or mbradley@oaklandnet.com

SUMMARY

This project would provide for the replacement of a 29' high City light pole and the installation of a wireless telecommunication facility attached to a new 35'-0" high City light pole with two (2) panel antennas mounted to the top of the pole; and associated equipment box; one battery backup; and one meter box attached to the existing pole located in the public right-of-way at the intersection of Lexford Place and Skyline Boulevard.

Regular Design Review and a Major Conditional Use Permit are required for establishing a new Monopole telecommunications facility and to modify an existing City light pole located in or within 100' of 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



Case File: CMD10-289
Applicant: Extenet Systems
Address: Lexford Place (in Public Right-of-Way adjacent to 43 Lexford Place)
Zone: RH-1

PROJECT DESCRIPTION

The applicant (Extenet Systems) is proposing to install a total of two (2) wireless telecommunication panel antenna mounted on a City light pole. The two (2) panel antennas would be mounted to the top of the pole; and associated equipment box (6' tall by 18" wide); one battery backup; and one meter box attached to the City light pole, at a height of between 7' to 9'-6" above ground located in public right of way. The proposed antenna, equipment cabinet, and new light pole would be painted a tan color to match the existing on-site light pole (**See Attachment A**).

BACKGROUND

Under the Telecommunications Act of 1996, the Federal Communications Commission (FCC) preempted cities' zoning jurisdiction over wireless telecommunications facilities, limiting their authority to aesthetic review and confirmation of satisfactory radio frequency (RF) emissions reports. For further information the FCC can be contacted at 1-888-225-5322 or www.fcc.gov.

PROPERTY DESCRIPTION

The subject property is located on the corner of Lexford Place and Skyline Boulvard along the vegetated public right-of-way next to a stop sign. The subject property is located within a residential zone and surrounded by residential properties.

GENERAL PLAN ANALYSIS

The subject property is located within the Hillside Residential General Plan designation. The Hillside Residential land use classification is intended to create, maintain and enhance neighborhood residential areas that are characterized by detached, single unit structures on hillside lots. The proposed unmanned wireless telecommunication facility will not adversely affect or detract from the residential characteristics of the neighborhood along Lexford Place. The proposed antennas will be mounted on an a new City light pole that will replace the existing wood City light pole and will be painted to match the existing wooden pole thus visual impacts will be mitigated since the antennas and equipment cabinet will not detract any character from the hillside residential neighborhood.

ZONING ANALYSIS

The zoning for the subject property is RH-1 Hillside Residential Zone-1. The intent of the RH-4 zone is to create, maintain, and enhance areas for single-family living on lots of one acre or more, and is appropriate in portions of the Oakland Hills. The proposal is for a new unmanned wireless telecommunication facility to be mounted on a City light pole located along the public right-of-way at the corner of Lexford Place and Skyline Boulevard. A Design Review and Major Conditional Use permit are 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 lists the projects that qualify as categorical exemptions from environmental review. The proposed project is categorically exempt from the environmental review requirements pursuant to Sec. 15303, new construction of small structures, and 15183, projects consistent with the general plan or zoning.

KEY ISSUES AND IMPACTS

1. Design Review

The project is located along the public right-of-way of Lexford Place at Skyline Boulevard. The proposed antenna will be painted to match the existing wood utility pole and placed approximately 35'-0" above grade, away from vehicular and pedestrian line of sight. The equipment cabinet will be concealed in an 18"x6' box mounted on the pole and painted to match the utility pole meeting the intent to fully conceal the new telecommunications facility.

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 telecommunications facility on an existing public City light pole, the proposed development meets the (B) City owned properties or other public or quasi-public facilities, 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. This project is a proposed co-location establishing a new telecommunications facility.

The project meets design criteria (E) since the panel antenna will be pole mounted on a replacement light pole 35'-0" above the public right of way and painted to match the pole. All proposed antennas are to be painted to match the light pole thus minimizing their impacts from the public view. Furthermore, to

mitigate visual impacts the antenna will be mounted at least 35'-0" above any pedestrian pathway. The associated equipment cabinets will be pole mounted 7'-0" to 9'-6" above the right of way and painted to match the light pole to minimize visual impact since the equipment cabinets will be fully enclosed and will be adequately concealed from the public right of way or immediate neighbors. (**Attachment B**)

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.

A RF emissions report, prepared by Matthew J. Butcher, PE for Sitesafe RF Compliance Experts, (**Attachment C**) indicated 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 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 meets all of the required findings for approval. Therefore, staff recommends approval of the project subject to the attached conditions.

RECOMMENDATIONS:

1. Affirm staff's environmental determination
2. Approve Major Design Review application CMD10-289 subject to the attached findings and conditions of approval.

Prepared by:

Michael Bradley

Michael Bradley
Planner I

Approved by:

Scott Miller
Zoning Manager

Approved for forwarding to the
City Planning Commission

Eric Angstadt
Deputy Director of
Community & Economic Development Agency

ATTACHMENTS:

A. Project Plans & Photo simulation
B. Site & Design Alternative Analysis
C. Site Safe RF Compliance Experts Emissions Report

FINDINGS FOR APPROVAL

FINDINGS FOR APPROVAL:
This proposal meets all the required findings under Section 17.134.050, of the General Use Permit criteria; all the required findings under Section 17.136.050.(B), of the Non-Residential Design Review criteria; all the required findings under Section 17.128.080(B), of the telecommunication facilities (Monopole) Design Review criteria; and all the required findings under Section 17.128.080.(C), of the telecommunication facilities (Monopole) Conditional Use Permit criteria; and as set forth below and which are required to approve your application. Required findings are shown in **bold** type; reasons your proposal satisfies them are shown in normal type.

SECTION 17.134.050 – GENERAL USE PERMIT FINDINGS:

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

The location, size, design and operational characteristics of the proposal will not adversely affect the livability or appropriate development of abutting properties and the surrounding neighborhood. Consideration was given to the harmony in scale, bulk, and coverage; to the availability of civic facilities and utilities; to harmful effect, if any, upon desirable neighborhood character; to the generation of traffic and the capacity of surrounding streets; and to any other relevant impact of the development. The replacement of a City light pole and the installation of a wireless telecommunication facility attached to a new 35'-0" high City light pole with two (2) panel antennas mounted to the top of the pole; and associated equipment box (6' tall by 18" wide); one battery backup, and one meter box attached to the light pole in an unpopulated intersection at Skyline Boulevard will not adversely affect the operating characteristic or livability of the existing area. The facility will be unmanned and will not create additional vehicular traffic in the area.

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

The location, design and site planning of the proposed development will provide a convenient and functional working and shopping environment, and will attempt to preserve the attractive nature of the use and its location and setting warrant. The proposal will preserve a convenient and functional working and living environment; therefore it would not affect the general quality and character of the neighborhood.

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

The proposed development will enhance the successful operation of the surrounding area in its basic community function and will provide an essential service to the community or region. This will be achieved by improving the functional use of the site by providing a regional telecommunication facility for the community and will be available to police, fire, public safety organizations and the general public.

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

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

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

The proposal conforms in all significant aspects with the Oakland General Plan and with any other applicable plan or zoning maps adopted by the City of Oakland. The proposed monopole telecommunication facility installation in the Hillside Residential General Plan designation will enhance and improve communication service for a mixture of civic, commercial, residential and institutional uses in the area.

17.136.050(B) – NONRESIDENTIAL DESIGN REVIEW CRITERIA:

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

The proposal is for the installation of a monopole telecommunications facility in the form of a replacement of a City light pole. The proposed new City light pole would have two (2) panel antennas mounted to the top of the pole; and associated equipment box (6' tall by 18" wide); one battery backup, and one meter box attached to the light pole. The two antennas and associated equipment would be placed on a replacement light pole which is located in an unpopulated public right of way stretch along Lexford Place and Skyline Boulevard, and therefore is consistent and well related to the surrounding area in scale, bulk, height, materials, and textures. Through the design and conditions of approval all proposed antennas and equipment will be paint a muted tan to match the existing wood utility poles in the surrounding area.

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

The design will be appropriate and compatible with current zoning and general plan land use designations. The proposal protects and preserves the surrounding neighborhood context by adding additional wireless telecommunication antennas to a residential and institutional area. The antennas will be located approximately 35' above grade on a level area at the intersection of Lexford Place and Skyline Boulevard and will not have any visual impact on the adjacent neighborhood.

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

The proposal conforms with the City of Oakland Comprehensive General Plan meeting specific General Plan policies and the Supplemental Report and Recommendations on Revisions to the Citywide Telecommunications Regulations. The proposal will conform to performance standards for noise set forth in Section 17.120.050 for decibels levels in residential areas for both day and nighttime use. The Project conforms to all monopole-facility definitions set forth in Section 17.128.080 and meets all design review criteria to minimize all impacts throughout the neighborhood.

17.128.080(B) DESIGN REVIEW CRITERIA FOR MONOPOLE FACILITIES

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

The proposed project entails the locating of the telecommunication antennas and associated equipment onto a City light pole which will serve two functions and will not increase negative visual impacts. Furthermore when viewed in its entirety the proposal will improve the existing conditions by requiring the replacement of an older wood light pole with a new metal light pole that will be paint a muted tan to match the existing wood utility poles in the surrounding area.

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

The site has an existing wood light pole which as proposed would be replaced with a new 35'high metal light pole with antennas and associated equipment attached. Thus there is an existing light pole at the site and the new pole will only increase by 6' which will not have a significant impact on the surrounding property owners. Furthermore, the site is in a unpopulated level section of City right of way at the intersection of Lexford Place and Skyline Boulevard and is approximately 20' lower and separated from any uphill neighbors by a great deal of vegetation.

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

The proposed antennas will be located on a City light pole adjacent to a City stop sign which is currently located in an unpopulated area of public right of way. The proposed new City light pole would have two (2) panel antennas mounted to the top of the pole at approximately 35' above grade and all associated equipment to the pole and will be painted a muted tan, thus when looking at the pole the telecommunication facility will not be visually prominent.

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

The associated equipment will be mounted to the light pole at approximately 7'-0" to 9'-6" above grade and will be painted to match the pole.

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

The proposed replacement City light pole with antennas attached will be located where an existing light pole is place thus it will not result in a visual impact and will blend in with the existing characteristics of the site. Further the light pole, proposed antennas, and all associated equipment attached to the pole will be painted tan to match the color of other poles in the surrounding area..

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

The antennas will be mounted approximately 35' above grade on a City owned light pole and will not be accessible to the public due to its design and lack of climbing features. The equipment and antennas will only be accessible to maintenance workers and not to the public.

Section 17.128.080(C) CONDITIONAL USE PERMIT (CUP) FINDINGS FOR MONOPOLE FACILITIES

1. The project must meet the special design review criteria listed in subsection B of this section (17.128.080C):

The proposed project meets the special design review criteria listed in section 17.128.080B.

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

The site is appropriate because the project entails the replacement of an existing light pole and will serve two functions as a telecommunication facility and a light pole. The light pole, proposed antennas, and all associated equipment attached to the pole will be painted tan to match the color of the other poles in the surrounding area.

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

Due to the proposed project co-locating with another utility function; it will not disrupt the overall community character of the site.

4. *If a Major Conditional Use Permit is required*, the Planning Director or the Planning Commission may request independent expert review regarding site location, collocation and facility configuration. Any party may request that the Planning Commission consider making such request for independent expert review.
a. If there is any objection to the appointment of an independent expert engineer, the applicant must notify the Planning Director within ten days of the Commission request. The Commission will hear arguments regarding the need for the independent expert and the applicant's objection to having one appointed. The Commission will rule as to whether an independent expert should be appointed.
b. Should the Commission appoint an independent expert, the Commission will direct the Planning Director to pick an expert from a panel of licensed engineers, a list of which will be compiled, updated and maintained by the Planning Department.
c. No expert on the panel will be allowed to review any materials or investigate any application without first signing an agreement under penalty of perjury that the expert will keep confidential any and all information learned during the investigation of the application. No personnel currently employed by a telecommunication company are eligible for inclusion on the list.

d. An applicant may elect to keep confidential any proprietary information during the expert's investigation. However, if an applicant does so elect to keep confidential various items of proprietary information, that applicant may not introduce the confidential proprietary information for the first time before the Commission in support of the application.
e. The Commission shall require that the independent expert prepare the report in a timely fashion so that it will be available to the public prior to any public hearing on the application.
f. Should the Commission appoint an independent expert, the expert's fees will be paid by the applicant through the application fee, imposed by the city.

CONDITIONS OF APPROVAL
CMD10-289

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, **CMD-289**, and the plans dated **April 19, 2011** and submitted on **July 1, 2011** 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: **replacement of a City light pole and the installation of a wireless telecommunication facility attached to a new 35'-0" high City light pole with two (2) panel antennas mounted to the top of the pole; and an associated equipment box (6' tall by 18" wide); one battery backup, and one meter box attached to the light pole, located in the public right-of-way adjacent to property address 43 Lexford Place (adjacent to APN: 040A-3467-006-00), under Oakland Planning Code 17.128, 17.134, and 17.136.**

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

4. **Conformance with other Requirements**
   Prior to issuance of a demolition, grading, P-job, or other construction related permit
   a) The project applicant shall comply with all other applicable federal, state, regional and/or local codes, requirements, regulations, and guidelines, including but not limited to those imposed by

the City's Building Services Division, the City's Fire Marshal, and the City's Public Works Agency.

b) The applicant shall submit approved building plans for project-specific needs related to fire protection to the Fire Services Division for review and approval, including, but not limited to automatic extinguishing systems, water supply improvements and hydrants, fire department access, and vegetation management for preventing fires and soil erosion.

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

Ongoing

a) Site shall be kept in a blight/nuisance-free condition. Any existing blight or nuisance shall be abated within 60-90 days of approval, unless an earlier date is specified elsewhere.

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

c) Violation of any term, conditions or project description relating to the Approvals is unlawful, prohibited, and a violation of the Oakland Municipal Code. The City of Oakland reserves the right to initiate civil and/or criminal enforcement and/or abatement proceedings, or after notice and public hearing, to revoke the Approvals or alter these conditions if it is found that there is violation of any of the conditions or the provisions of the Planning Code or Municipal Code, or the project operates as or causes a public nuisance. This provision is not intended to, nor does it, limit in any manner whatsoever the ability of the City to take appropriate enforcement actions.

6. Signed Copy of the Conditions

With submittal of a demolition, grading, and building permit

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

7. Indemnification

Ongoing

a) To the maximum extent permitted by law, the applicant shall defend (with counsel acceptable to the City), indemnify, and hold harmless the City of Oakland, the Oakland City Council, the City of Oakland Redevelopment Agency, the Oakland City Planning Commission and its respective agents, officers, and employees (hereafter collectively called City) from any liability, damages, claim, judgment, loss (direct or indirect)action, causes of action, or proceeding (including legal costs, attorneys' fees, expert witness or consultant fees, City Attorney or staff time, expenses or costs) (collectively called "Action") against the City to attack, set aside, void or annul, (1) an approval by the City relating to a development-related application or subdivision or (2) implementation of an approved development-related project. The City may elect, in its sole discretion, to participate in the defense of said Action and the applicant shall reimburse the City for its reasonable legal costs and attorneys' fees.

b) Within ten (10) calendar days of the filing of any Action as specified in subsection A above, the applicant shall execute a Letter 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 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

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 CONDTIONS:

12. Sinking Fund For Facility Removal or Abandonment.

Prior to the issuance of 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 of 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 determined by the Office of Budget and Finance and shall be adequate to defray expenses associated with the removal of the telecommunication facility.

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

14. **Architectural Detailing and Painting**
Prior to the final building permit sign off
The applicant shall paint the light pole (monopole), all proposed antennas, and other related equipment attached to it a muted tan.

ATTACHMENT A

Issued For Permitting

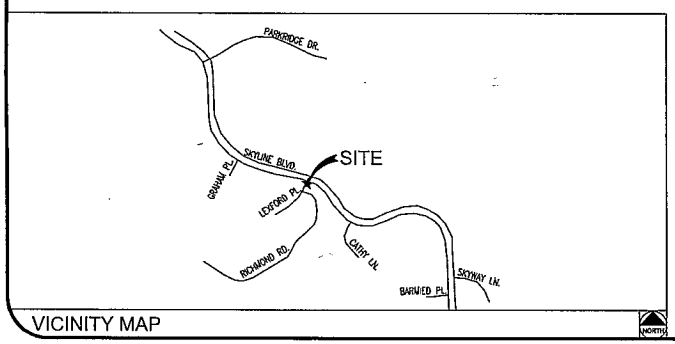
extenet SM SYSTEMS

SKYLINE NETWORK

SKY-049C

NEAR 43 LEXFORD PL.

OAKLAND, CA 94619



VICINITY MAP

CLIENT

EXTENET SYSTEMS, INC.
3030 WARRENVILLE RD.
SUITE 340
LISLE, IL 60532
CONTACT JIM SULLIVAN
PHONE 510-229-0064

POLE OWNER

OAKLAND CITY
1 FRANK H. OGAWA PLAZA
OAKLAND, CA 94612
PHONE: (510) 444-CITY

ENGINEERING FIRM/SURVEYING

MAXIMIZE COMMUNICATION GROUP, INC.
1351 POMONA ROAD
SUITE 100
CORONA, CA 92882
CONTACT ERIC MENDOZA
PHONE 909-435-0433
FAX 909-992-3113

COORDINATES

LAT: 37.78595
LONG: -122.14658

CODE COMPLIANCE:

ALL WORK AND MATERIALS SHALL BE PERFORMED & INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY LOCAL GOVERNING AUTHORITIES AND LOCAL/CITY/COUNTY ORDINANCES:

1. CALIFORNIA ADMINISTRATIVE CODE (INCLUDING TITLE 24 & 25).
2. 2007 CALIFORNIA BUILDING CODE.
3. 2007 CALIFORNIA ELECTRICAL CODE.
3. BUILDING OFFICIALS AND CODE ADMINISTRATORS (BOCA).
4. UNIFORM PLUMBING & MECHANICAL CODES.
5. ANSI/EIA-222-F LIFE SAFETY CODE.
6. CALIFORNIA GENERAL ORDER 95 & 128.

PROJECT DESCRIPTION

PROJECT IS A DAS(DISTRIBUTED ANTENNA SYSTEM), UTILIZING UTILITY POLES IN THE PUBLIC RIGHT OF WAY, UNDER CPUC GENERAL ORDER 170, AND AUTHORIZED AS A PUBLIC UTILITY UNDER EXTENET SYSTEMS CPCN: U-6959-C.

SHEET INDEX

SHEET	DESCRIPTION
T1	TITLE SHEET
T2	GENERAL NOTES & SCHEDULE
A1	SITE PLAN
A2	ELEVATIONS
A3	EQUIPMENT DETAILS
E1	ELECTRICAL DETAILS

extenet SM SYSTEMS
3030 WARRENVILLE RD.
SUITE 340
LISLE, IL 60532
www.extenet.com

REV.	DATE	DESCRIPTION
1	1/31/11	CONSTRUCTION DRAWINGS
2	2/16/11	REVISION PER CLIENT REQUEST
3	2/18/11	REVISION PER CLIENT REQUEST
4	3/23/11	REVISION PER CITY COMMENTS
5	4/19/11	REVISION PER CITY COMMENTS
6	5/19/11	REVISION PER CITY COMMENTS

CURRENT ISSUE DATE:

5/19/11

PLANS PREPARED BY:

Maximize Comm. Group, Inc.
1351 POMONA ROAD
SUITE 100
CORONA, CA 92882
OFFICE: (909) 786-2170
FAX: (909) 992-3113

LICENSURE:

SITE NO.:

SKY-049C

SITE NAME & ADDRESS:

SKYLINE-049C
NEAR 43 LEXFORD PL.
OAKLAND, CA 94619

SHEET TITLE:

TITLE SHEET

DRAWN BY:	CHECKED BY:	APPROVED BY:
NP	EM	EM

SHEET NUMBER: T1 REVISION: 6

A.B.	ANCHOR BOLT
ABV.	ABOVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AGL	ABOVE GROUND LEVEL
ALUM	ALUMINUM
ALT	ALTERNATE
ANT	ANTENNA
APPROX	APPROXIMATE(LY)
ARCH	ARCHITECT(URAL)
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
B.N.	BOUNDARY NAILING
B.O.F.	BOTTOM OF FOOTING
B/U	BACK-UP CABINET
CAB	CABINET
CANT	CANTILEVER(ED)
C.I.P.	CAST IN PLACE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT(S)
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION(OR)
CONST	CONSTRUCTION
CONT	CONTINUOUS
d	PENNY (NAILS)
DBL	DOUBLE
DEPT	DEPARTMENT
DF	DOUGLAS FIR
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DWG	DRAWING(S)
DWL	DOWEL(S)
EA	EACH
EGR	EMERGENCY GENERATOR RECEPTACLE
ELEC	ELECTRICAL
ELEV(EL-)	ELEVATION
EMT	ELECTRICAL METALLIC TUBING
E.N.	EDGE NAIL
ENG	ENGINEER
EQ	EQUAL
EXP	EXPANSION
EXST(E)	EXISTING
EXT	EXTERIOR
FAB	FABRICATION(OR)
F.F.	FINISH FLOOR
F.G.	FINISH GRADE
FIN	FINISH(ED)
FLR	FLOOR
FDN	FOUNDATION
F.O.C.	FACE OF CONCRETE
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUD
F.O.W.	FACE OF WALL
F.S.	FINISH SURFACE
FT(')	FOOT(FEET)
FTG	FOOTING
GA	GAUGE
GI	GALVANIZED()
G.F.I.	GROUND FAULT CIRCUIT INTERRUPTER
GLB(GLU-LAM)	GLUE LAMINATED BEAM
GPS	GLOBAL POSITIONING SYSTEM
GRND	GROUND
HDR	HEADER
HGR	HANGER
HT	HEIGHT
IGSB	ISOLATED COPPER GROUND BUS
IN(")	INCH(ES)
INT	INTERIOR
K()	POUND(S)
L.B.	LAG BOLTS
LF.	LINEAR FEET (FOOT)
L	LONG(ITUDINAL)
MAX	MAXIMUM
M.B.	MACHINE BOLT
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MTL	METAL
(N)	NEW
NO.(#)	NUMBER
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
OPNG	OPENING
P/C	PRECAST CONCRETE
PCS	PERSONAL COMMUNICATION SERVICES
PLYWD(PLY)	PLYWOOD
PPC	POWER PROTECTION CABINET
PRC	PRIMARY RADIO CABINET
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
P.T.D.F.	PRESSURE TREATED DOUGLAS FUR
PWR	POWER (CABINET)
QTY	QUANTITY
RAD(IR)	RADIUS
REF	REFERENCE
REINF	REINFORCEMENT(ING)
REQ'D	REQUIRED
RGS	RIGID GALVANIZED STEEL
SCH	SCHEDULE
SHT	SHEET
SIM.	SIMILAR
SPEC	SPECIFICATION(S)
SQ	SQUARE
S.S.	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STRUC	STRUCTURAL
TEMP	TEMPORARY
THK	THICK(NESS)
T.N.	TOE NAIL
T.O.A.	TOP OF ANTENNA
T.O.C.	TOP OF CURB (CONCRETE)
T.O.F.	TOP OF FOOTING
T.O.P.	TOP OF PLATE (PARAPET)
T.O.S.	TOP OF STEEL (SLAB)
T.O.W.	TOP OF WALL
TYP	TYPICAL
UG	UNDER GROUND
UL	UNDERWRITERS LABORATORY
U.N.O.	UNLESS NOTED OTHERWISE
V.I.F.	VERIFY IN FIELD
W	WIDE(WIDTH)
W/	WITH
WD	WOOD

NEW ANTENNA

EXISTING ANTENNA

UTILITY POLE

GROUND BUS BAR

MECHANICAL GRND. CONN. CADWELD

CHRISTY BOX

ELECTRIC BOX

LIGHT POLE

FND. MONUMENT

SPOT ELEVATION

SET POINT

REVISION

GRID REFERENCE

DETAIL REFERENCE

ELEVATION REFERENCE

SECTION REFERENCE

GROUT OR PLASTER

(E) BRICK

(E) MASONRY

CONCRETE

EARTH

GRAVEL

PLYWOOD

SAND

WOOD CONT.

WOOD BLOCKING

STEEL

CENTERLINE

PROPERTY/LEASE LINE

MATCH LINE

WORK POINT

GROUND CONDUCTOR

TELEPHONE CONDUIT

TELEPHONE CONDUIT U.G.

ELECTRICAL CONDUIT

ELECTRICAL CONDUIT U.G.

COAXIAL CABLE

COAXIAL CABLE U.G.

OVERHEAD SERVICE CONDUCTORS

U.G. SERVICE CONDUCTORS

CHAIN LINK FENCING

ABBREVIATION AND LEGEND | 4

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR MUST FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS PRIOR TO ANY EARTHWORK. IF DESTROYED, SUCH MONUMENTS SHALL BE REPLACED WITH APPROPRIATE MONUMENTS BY A LAND SURVEYOR. A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT.

2. IMPORTANT NOTICE: SECTION 4215 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT, TOLL FREE 1-800-422-4133, TWO DAYS BEFORE YOU DIG.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE POT HOLE AND LOCATING OF ALL EXISTING UTILITIES THAT CROSS THE PROPOSED TRENCH LINE AND MUST MAINTAIN A 1" MINIMUM VERTICAL CLEARANCE.

4. IF ANY EXISTING HARDSCAPE OR LANDSCAPE INDICATED ON THE APPROVE PLANS IS DAMAGED OR REMOVED DURING DEMOLITION OR CONSTRUCTION, IT SHALL BE REPAIRED AND/OR REPLACED IN KIND PER THE APPROVED PLANS.

5. CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUIT, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.

6. THIS PROJECT WILL BE INSPECTED BY ENGINEERING AND FIELD ENGINEERING DIVISION.

7. MANHOLES OR COVERS SHALL BE LABELED EXTENET.

8. CONTRACTOR SHALL IMPLEMENT AN EROSION CONTROL PROGRAM DURING THE PROJECT CONSTRUCTION ACTIVITIES. THE PROGRAM SHALL MEET THE APPLICABLE REQUIREMENTS OF THE STATE WATER RESOURCE CONTROL BOARD.

9. THE CONTRACTOR SHALL HAVE EMERGENCY MATERIALS AND EQUIPMENT ON HAND FOR UNFORESEEN SITUATIONS, SUCH AS DAMAGE TO UNDERGROUND WATER, SEWER, AND STORM DRAIN FACILITIES WHEREBY FLOWS MAY GENERATE EROSION AND SEDIMENT POLLUTION.

SPECIAL NOTES

1. PAINT ALL EQUIPMENT TO MATCH POLE

811 Know what's below. Call before you dig.

SPECIAL NOTES

1. INDEMNIFICATION CLAUSE: THE CONTRACTOR AGREES AND SHALL: ASSUME SOLE AND COMPLETE RESPONSIBILITY OF THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTIES. THAT THESE REQUIREMENTS SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONDITIONS. THE CONTRACTOR FURTHER AGREES TO DEFEND INDEMNIFY AND HOLD EXTENET, REPRESENTATIVES, AND ENGINEERS HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT.

2. PRIOR TO THE BEGINNING OF ANY CONSTRUCTION AND THROUGHOUT THE COURSE OF CONSTRUCTION WORK, THE CONTRACTOR SHALL FULLY COMPLY WITH "CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH" ACT OF 1973 INCLUDING ALL REVISIONS AND AMENDMENTS THERETO.

3. ALL WORK SHALL CONFORM TO THE LATEST EDITIONS OF 6095.128 AND THE STANDARD "SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" AS ADOPTED BY THE CITY, COUNTY OR STATE AS MODIFIED BY STANDARD PLANS AND ADDENDUMS.

4. THE EXISTENCE AND LOCATION OF UTILITIES AND OTHER AGENCY'S FACILITIES AS SHOWN HEREON ARE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. OTHER FACILITIES MAY EXIST. THE CONTRACTOR SHALL VERIFY PRIOR TO THE START OF CONSTRUCTION AND SHALL USE EXTREME CARE AND PROTECTIVE MEASURES TO PREVENT DAMAGE TO THESE FACILITIES. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITY OR AGENCY FACILITIES WITHIN THE LIMITS OF WORK, WHETHER THEY ARE SHOWN ON THIS PLAN OR NOT.

5. THE CONTRACTOR SHALL NOTIFY THE CITY, COUNTY OR STATE ENGINEER INSPECTION DEPARTMENT, AT LEAST TWO DAYS BEFORE START OF ANY WORK RESUMING THEIR INVOLVEMENT.

6. THE CITY, COUNTY OR STATE SHALL SPECIFY THE EXPIRATION PERIOD OF THE PERMIT FOR THIS CONSTRUCTION PROJECT.

7. THE MINIMUM COVER FOR ALL CONDUITS PLACED UNDERGROUND SHALL BE 36 INCHES TO THE FINISHED GRADE AT ALL TIMES.

8. THE CONTRACTOR SHALL TRIMMED ALL CURB AND GUTTERS AND BORE ALL CONCRETE DRIVEWAYS AND WALKWAYS AT THE DIRECTION OF THE CITY, COUNTY OR STATE ENGINEER.

9. ALL A.C AND/OR CONCRETE PAVEMENT SHALL BE REPLACED AT THE DIRECTION OF THE CITY, COUNTY OR STATE ENGINEERS.

10. ALL SHRUBS, PLANTS OR TREES THAT HAVE BEEN DAMAGED OR DISTURBED DURING THE COURSE OF THE WORK, SHALL BE REPLANTED AND/OR REPLACED SO AS TO RESTORE THE WORK SITE TO ITS ORIGINAL CONDITION.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROCESSING OF ALL APPLICANT PERMIT FORMS ALONG WITH THE REQUIRED LIABILITY INSURANCE FORMS. CLEARLY DEMONSTRATING THAT EXTENET, THE CITY, COUNTY OR STATE IS ALSO INSURED WITH THE REQUIRED LIABILITY INSURANCE IN THE AMOUNT OF $1,000,000.00 FOR THIS CONSTRUCTION PROJECT.

12. VAULTS, PEDESTALS, CONDUITS AND OTHER TYPES OF SUBSTRUCTURE ARE EITHER SPECIFIED ON THIS PLAN OR SHALL BE SPECIFIED BY THE CONSTRUCTION ENGINEER. ANY AND ALL DEVIATIONS FROM THE SPECIFIED TYPES OF MATERIAL MUST BE APPROVED BY THE SYSTEM ENGINEER, IN WRITING BEFORE INSTALLATION THEREOF.

13. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES IN INCLUDING SEWER LATERALS & WATER SERVICES TO INDIVIDUAL LOTS BOTH VERTICAL AND HORIZONTAL PRIOR TO COMMENCING APPROVEDIT OPERATIONS.

14. CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISION IS NECESSARY BECAUSE OF LOCATION OF EXISTING UTILITIES.

15. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE FROM EXISTING RECORDS AND CORROBORATED, WHERE POSSIBLE, WITH FIELD TIES. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE LOCATIONS SHOWN, BOTH HORIZONTAL AND VERTICALLY, PRIOR TO CONSTRUCTION. IF EXISTING LOCATIONS VARY SUBSTANTIALLY FROM THE PLANS, THE ENGINEER SHOULD BE NOTIFIED TO MAKE ANY CONSTRUCTION CHANGES REQUIRED.

EROSION AND SEDIMENT CONTROL NOTES

TEMPORARY EROSION/SEDIMENT CONTROL PRIOR TO COMPLETION OF FINAL IMPROVEMENTS, SHALL BE PERFORMED BY THE CONTRACTOR OR QUALIFIED PERSON AS INDICATED BELOW:

1. ALL REQUIREMENTS OF THE CITY, COUNTY AND STATE "STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED GRADING/IMPROVEMENTS CONSISTENT WITH THE APPROVED STORM WATER POLLUTION PREVENTION PLAN (SWPPP), WATER QUALITY TECHNICAL REPORT (WQTR), AND/OR WATER POLLUTION CONTROL PLAN (WPCP).

2. FOR STORM DRAIN INLETS, PROVIDE A GRAVEL BAG SILT BASIN IMMEDIATELY UPSTREAM OF INLET AS INDICATED ON DETAILS.

3. FOR INLETS LOCATED AT SWALES ADJACENT TO TOP OF SLOPES, THE CONTRACTOR SHALL ENSURE THAT WATER DRAINING TO THE SWALE IS DIRECTED INTO THE INLET AND THAT A MINIMUM OF 1.00' FREEBOARD EXISTS AND IS MAINTAINED ABOVE THE TOP OF THE INLET. IF FREEBOARD IS NOT PROVIDED BY GRADING SHOWN ON THESE PLANS THE CONTRACTOR SHALL PROVIDE IT VIA TEMPORARY MEASURES, I.E. GRAVEL BAGS OR DIKES.

4. THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET(S) AND STORM DRAIN SYSTEM DUE TO CONSTRUCTION ACTIVITY.

5. THE CONTRACTOR OR QUALIFIED PERSON SHALL CHECK AND MAINTAIN ALL LINED AND UNLINED DITCHES AFTER EACH RAINFALL.

6. THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL.

7. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON. ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.

8. THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL DEVICES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER OF RESIDENT ENGINEER AFTER EACH RUN-OFF PRODUCING RAINFALL.

9. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION/SEDIMENT CONTROL MEASURES AS MAY BE REQUIRED BY THE RESIDENT ENGINEER DUE TO UNCOMPLETED GRADING OPERATIONS OR UNFORESEEN CIRCUMSTANCES, WHICH MAY ARISE.

10. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.

11. ALL EROSION/SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED GRADING PLAN SHALL BE INCORPORATED HEREIN; ALL EROSION/SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE DONE TO THE SATISFACTION OF THE RESIDENT ENGINEER.

12. GRADED AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.

13. ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.

14. THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING FOR THE AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED PERSON CAN PROVIDE EROSION/SEDIMENT CONTROL MEASURES.

15. THE CONTRACTOR SHALL ARRANGE FOR WEEKLY MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF AL, ENGINEER OF WORK, OWNER/DEVELOPER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION/SEDIMENT CONTROL MEASURE AND OTHER RELATED CONSTRUCTION ACTIVITIES.

GENERAL NOTES | 2

ROW GROUND CONSTRUCTION NOTES:

1. 120/240 POWER REQUIRED FOR 3-WIRE SERVICE.
2. GC TO REMOVE/CLEAN ALL DEBRIS, NAILS, STAPLES, OR NON-USED VERTICALS OFF THE POLE.
3. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH MUNICIPAL, COUNTY, STATE, FEDERAL, CORS AND G0126 STANDARDS AND REGULATIONS.
4. CALL USA 48 HOURS PRIOR TO EXCAVATING AT (800) 422-4133.
5. ALL LANDSCAPING TO BE RESTORED TO ORIGINAL CONDITION OR BETTER.
6. ALL EQUIPMENT TO BE GROUNDED.
7. METERING CABINET REQUIRES 3'[.914M] CLEARANCE AT DOOR OPENING.
8. CAULK CABINET BASE AT PAD.

STANDARD GROUNDING NOTES:

1. GROUND TESTED AT 5 OHMS OR LESS.
2. 5/8"x8'[.016x2.44M] ROD, CAD WELD BELOW GRADE
3. #8 GROUND AND BOND WIRE.
4. WOOD MOLDING, STAPLED EVERY 3'[.914M] AND AT EACH END
5. GROUNDS 3'[.914M] FROM POLE.
6. PLACE 3 #10GA WIRES FROM BREAKER TO METER BOX.

STANDARD CONDUIT NOTES:

1. FOR UNDERGROUND USE SCHEDULE 40.
2. FOR RISERS USE SCHEDULE 80.
3. PLACE 2"[.051M] GALVANIZED STEEL CONDUIT FOR ANY CONDUIT UNDER 3"[.076M], STUB UP 10'[3.04M] THEN CONVERT TO SCHEDULE 80.
4. CONVERT 4"[.102M] CARRIER CONDUIT TO 3"[.076M] AT BASE OF POLE.
5. GC TO STUB UP POLE 10'[3.04M] w/3" POWER CONDUIT, POWER CO. TO CONVERT FROM 3"[.076M] SCH. 80 TO 2"[.051M] SCH. 80 FROM TOP OF STUB UP.
6. ALL CONDUIT WILL BE MAN DRILLED AND EQUIPPED WITH 3/8"[.010M] PULL ROPE.

STANDARD TRENCHING NOTES:

1. MAINTAIN 40"[1.02M] MINIMUM COVER FOR ELECTRICAL CONDUIT.
2. MAINTAIN 30"[.762M] MINIMUM COVER FOR COMMUNICATIONS CONDUIT.
3. SAND SHADING MINIMUM 1"[.025M] UNDER CONDUITS, AND 6"[.152M] COVERING ON TOP REQUIRED.
4. ALL ELECTRICAL SERVICE CONDUITS FROM POWER COMPANY, WHETHER FROM POLES, TRANSFORMERS, OR OTHER LOCATIONS; WILL BE SLURRY BACKFILLED.
5. IN STREET SLURRY TO GRADE AND MILL DOWN 1-1/2"[.038M] FOR AC CAP.
6. IN DIRT SLURRY 18"[.457M] FROM GRADE, AND FILL WITH 95% COMPACTION NATIVE SOIL FOR BALANCE.
7. PLACE WARNING TAPE IN TRENCH 12"[.305M] ABOVE ALL CONDUITS AND #18 WARNING TAPE ABOVE GROUND RING.

ROW UTILITY POLE CONSTRUCTION NOTES:

1. NO BOLT THREADS TO PROTRUDE MORE THAN 1-1/2"[.038M].
2. FILL ALL HOLES LEFT IN POLE FROM REARRANGEMENT OF CLIMBERS.
3. ALL CLIMB STEPS NEXT TO CONDUIT SHALL HAVE EXTENDED STEPS.
4. CABLE NOT TO IMPEDE 15"[.381M] CLEAR SPACE OFF POLE FACE (12:00).
5. 90° SHORT SWEEPS UNDER ANTENNA ARM, ALL CABLES MUST ONLY TRANSITION ON THE INSIDE OR BOTTOM OF ARMS (NO CABLE ON TOP OF ARMS).
6. USE CABLE CLAMPS TO SECURE CABLE TO ARMS; PLACE 2"[.051M] CARRIER CABLE ID TAGS ON BOTH SIDES OF ARMS.
7. USE 90° CONNECTOR AT CABLE CONNECTION TO ANTENNAS.
8. PLACE GPS ON ARM WITH SOUTHERN SKY EXPOSURE AT MINIMUM 6'[1.83M] FROM TRANSMIT ANTENNA, WHICH IS 24"[.61M] AWAY FROM CENTER OF POLE.
9. USE 1/2"[.013M] CABLE ON ANTENNAS UNLESS OTHERWISE SPECIFIED.
10. FILL VOID AROUND CABLES AT CONDUIT OPENING WITH FOAM SEALANT TO PREVENT WATER INTRUSION.

ROW CONSTRUCTION GENERAL NOTES | 3

WIND LOADING INFORMATION

ANTENNA/MOUNT AREA TOTAL	77.48 SQ. FT.
TOP GRADE	31'-9"
BOTTOM GRADE	28'-4"
METER/BREAKER AREA TOTAL	4.33 SQ. FT.
TOP GRADE	8'-0"
BOTTOM GRADE	7'-0"
BATTERY BACK-UP AREA TOTAL	16.25 SQ. FT.
TOP GRADE	11'-8"
BOTTOM GRADE	9'-8"
DELTA DECK AREA TOTAL	10.74 SQ. FT.
TOP GRADE	14'-9"
BOTTOM GRADE	12'-9"
DELTA DECK (TUT.) AREA TOTAL	10.74 SQ. FT.
TOP GRADE	17'-9"
BOTTOM GRADE	15'-9"
EXT. RISER SIZE	4"ø
EXT. RISER LENGTH	13'-0"
EXT. RISER BTM GRADE	16'-10"
PWR RISER SIZE	1"ø
PWR RISER LENGTH	21'-8"
PWR RISER BTM GRADE	8'-8"

ANTENNA & CABLE SCHEDULE

ANTENNA SECTOR	AZIMUTH	ANTENNA MAKE / MODEL	COAXIAL CABLE LENGTH	CABLES PER SECTOR	CABLE SIZE
SECTOR ALPHA	315°	KATHREIN 742 226	26'	2	1/2"
SECTOR BETA	146°	KATHREIN 742 226	26"	2	1/2"
SECTOR GAMMA					

NOTE: CONTRACTOR TO FIELD VERIFY CABLE LENGTHS PRIOR TO ORDERING, FABRICATION, OR INSTALLATION OF CABLES.

LOADING AND ANTENNA CABLE SCHEDULES | 1

extenet SYSTEMS
3030 WARRENVILLE RD.
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LISLE, IL 60532
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CURRENT ISSUE DATE:

5/19/11

PLANS PREPARED BY:

Maximize Comm. Group, Inc.
1351 POMONA ROAD
SUITE 100
CORONA, CA 92882
OFFICE: (909) 786-2170
FAX: (909) 992-3113

LICENSURE:

SITE NO.:

SKY-049C

SITE NAME & ADDRESS:

SKYLINE-049C

NEAR AS DEPICTED IN ONE-LINE DIAGRAM

SHEET NO.:

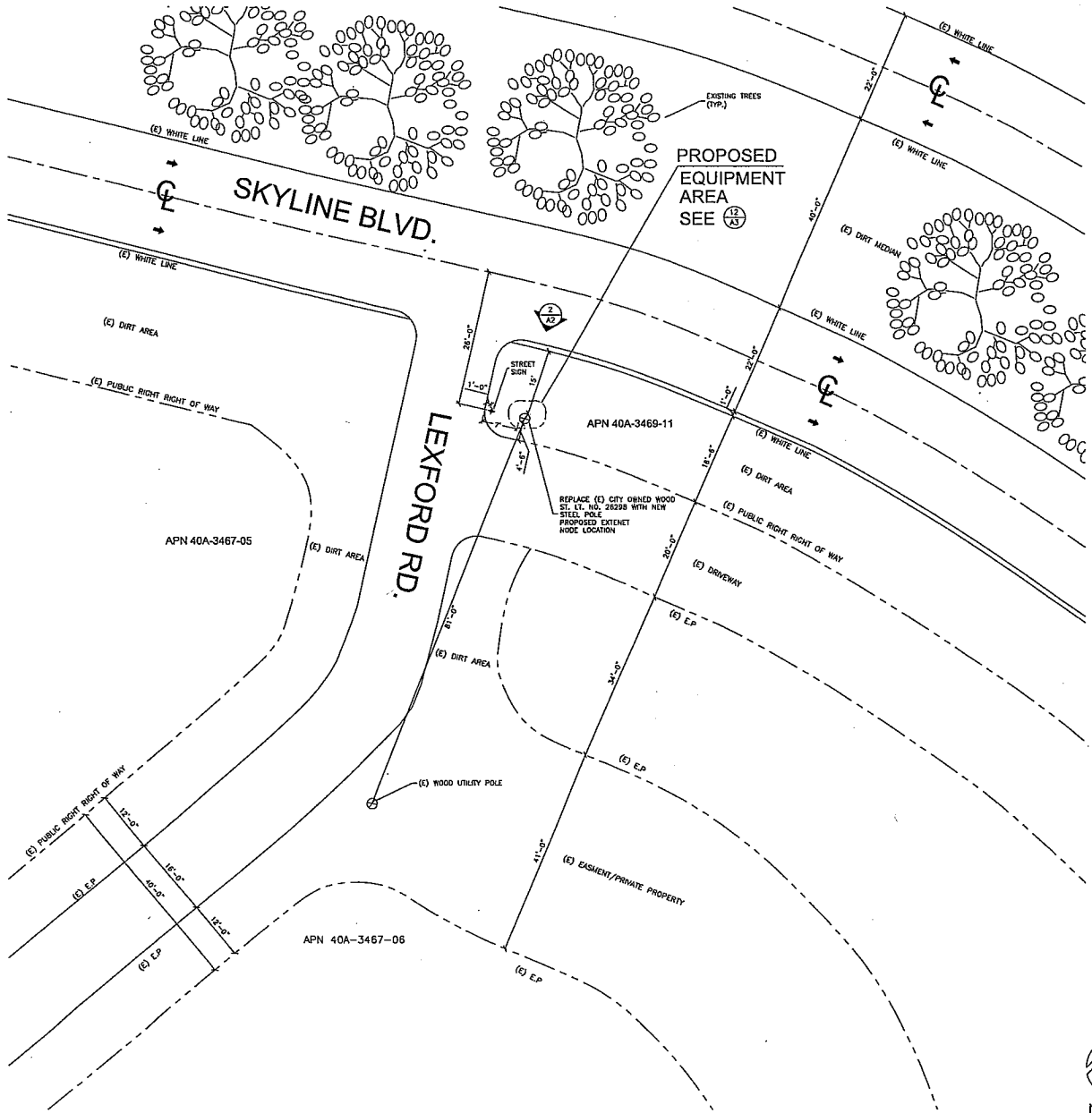
GENERAL NOTES & SCHEDULES

DRAWN BY:	CHECKED BY:	APPROVED BY:
TF	BM	BM

SHEET NUMBER: T2

REVISION: 6

CONSTRUCTION WARNING:
THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THE PLANS WERE MADE BY SEARCHING AVAILABLE EXISTING RECORDS. HOWEVER, NO GUARANTEE IS MADE THAT SUBSTRUCTURES OR THEIR LOCATIONS ARE EXACT. THE CONTRACTOR SHALL TAKE DUE PRECAUTIONARY MEASURES TO PROTECT ALL UTILITY LINES INCLUDING THOSE NOT SHOWN OR NOT ON RECORD BY CALLING USA 48 HOURS BEFORE EXCAVATING. CONTRACTOR SHALL EXPOSE AND POT HOLE (HAND DIG) ALL EXISTING UTILITIES WITHIN CONSTRUCTION ZONE.



811
Know what's below.
Call before you dig.

SITE PLAN

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LICENSURE:

SITE NO.:
SKY-049C

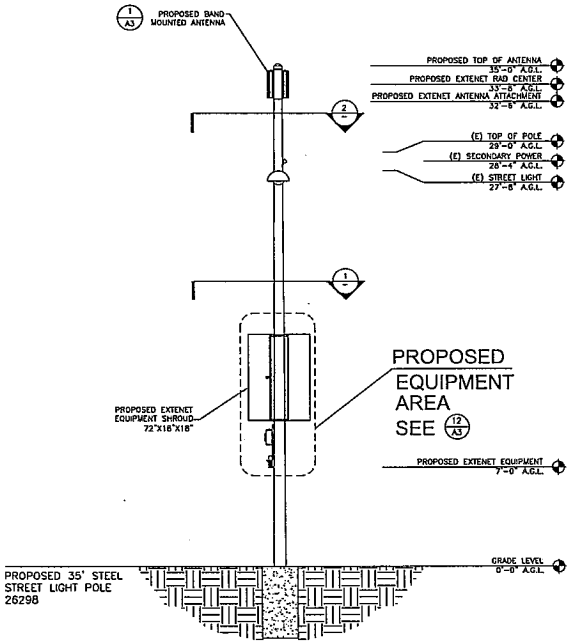
SITE NAME & ADDRESS:
SKYLINE-049C
NEAR 69 , EXTENDED P...
OAKLAND, CA 94619

SHEET NO.S:
SITE PLAN

DRAWN BY:	CHECKED BY:	APPROVED BY:
VF	EM	EM

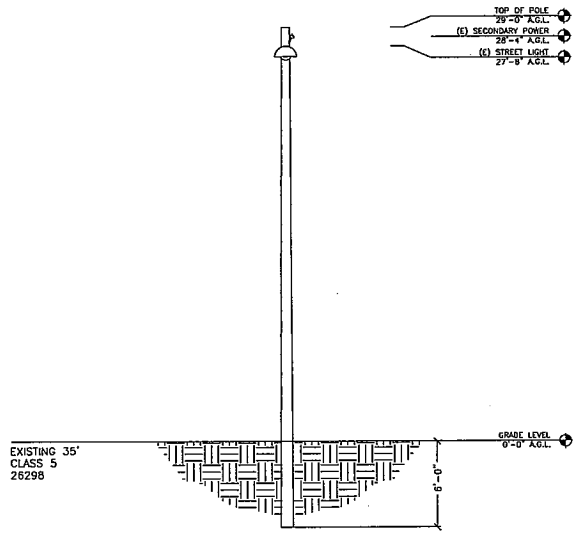
SHEET NUMBER: A1
REVISION: 6

NOTE:
POLE ANTENNAS AND EQUIPMENT TO BE PAINTED MATTE BROWN COLOR.



PROPOSED ELEVATION NORTH

SCALE: 1/4"=1'-0" 2



EXISTING ELEVATION NORTH

SCALE: 1/4"=1'-0" 1

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3	2/18/11	REVISION PER CLIENT REQUEST
4	3/23/11	REVISION PER CITY COMMENTS
5	4/19/11	REVISION PER CITY COMMENTS
6	5/19/11	REVISION PER CITY COMMENTS

CURRENT ISSUE DATE:
5/19/11

PLANS PREPARED BY:

Maximize Comm. Group, Inc.
1351 POMONA ROAD
SUITE 100
CORONA, CA 92882
OFFICE: (909) 786-2170
FAX: (909) 992-3113

LICENSURE:

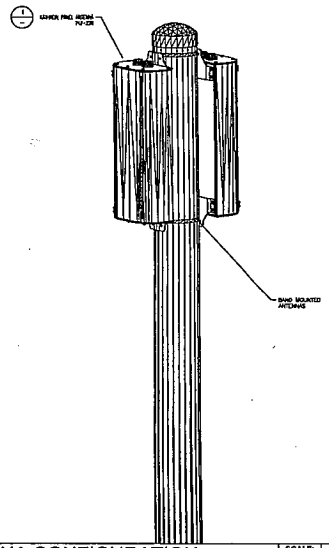
SITE NO.:
SKY-049C

SITE NAME & ADDRESS:
SKYLINE-049C
NEAR 80 EASTBOUND,
OAKLAND, CA 94621

SHEET NO.:
ELEVATIONS

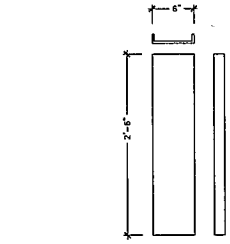
DRAWN BY:	CHECKED BY:	APPROVED BY:
VF	EM	EM

SHEET NUMBER: A2 OF 6

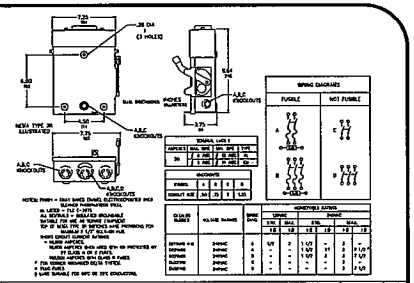


ANTENNA CONFIGURATION | SCALE: 1/4"=1'-0" | 13

NOT USED | SCALE: 1/4"=1'-0" | 11



C-CHANNEL BRACKET (BBU) | SCALE: 1"=1" | 8



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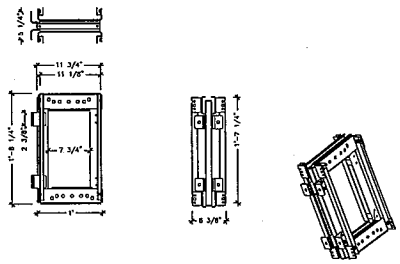
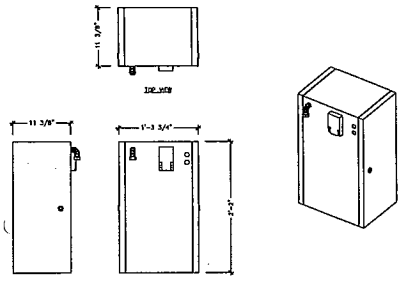
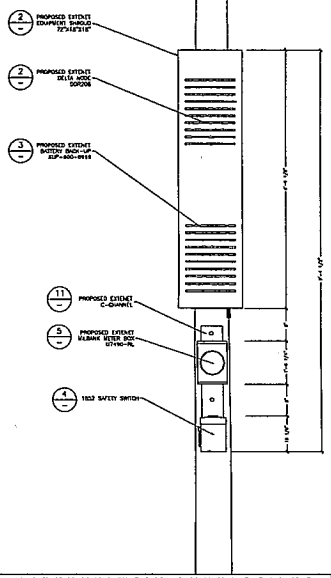


DELTA NODE MOUNTING BRACKET | SCALE: 1"=1" | 7

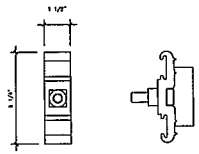


BATTERY BACK-UP XUPs 1000-7070 | SCALE: 1"=1" | 3

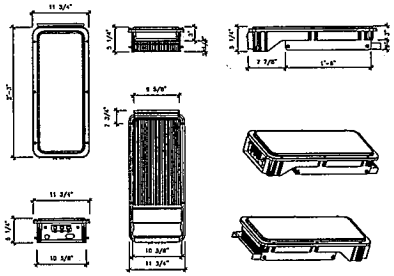


EXTENET EQUIPMENT CONFIG. | SCALE: 1"=1" | 12

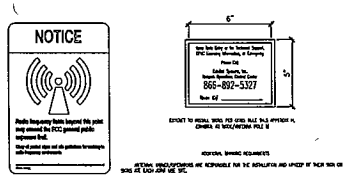
NOT USED | SCALE: 1"=1" | 10



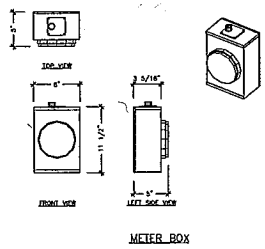
BANDIT BRACKET | SCALE: 1"=1" | 6



DELTA NODE DDR206 | SCALE: 1"=1" | 2

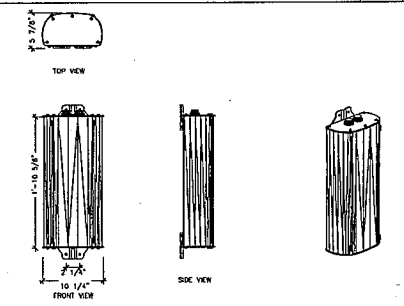


RULE G095 SIGNAGE | SCALE: 1"=1" | 9



METER BOX

4-JAW METER CABINET | SCALE: 1"=1'-0" | 5



KATHREIN PANEL ANTENNA 742-226 | SCALE: 1"=1" | 1

extenet SM SYSTEMS
3030 WARRENVILLE RD.
SUITE 340
LISLE, IL 60532
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REV.	DATE	DESCRIPTION
1	1/31/11	CONSTRUCTION DRAWINGS
2	2/16/11	REVISION PER CLIENT REQUEST
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	-	

CURRENT ISSUE DATE:

5/19/11

PLANS PREPARED BY:

Maximize Comm. Group, Inc.
1351 POMONA ROAD
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OFFICE: (909) 786-2170
FAX: (909) 992-3113

LICENSURE:

SITE NO.:

SKY-049C

SITE NAME & ADDRESS:

SKYLINE-049C

NEAR 45 JEFFORD P...
OAKLAND, CA 94619

SHEET TITLE:

EQUIPMENT DETAILS

DRAWN BY:	CHECKED BY:	APPROVED BY:
NF	EM	EM

SHEET NUMBER: A3 | REVISION: 6

ATTACHMENT A

Sky-49C

View One

Near 43 Lexford Pl. Oakland, Ca 94619

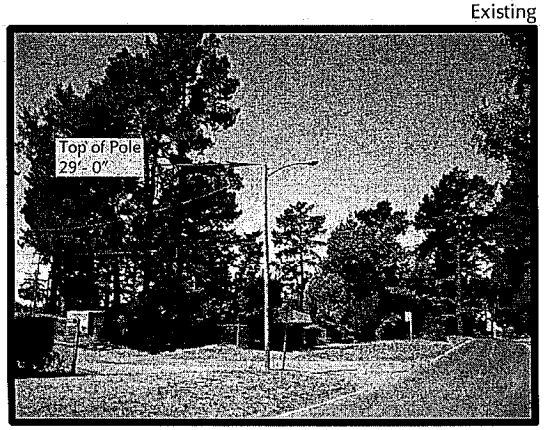
Date of Final : 06/21/2011

extenet SM SYSTEMS

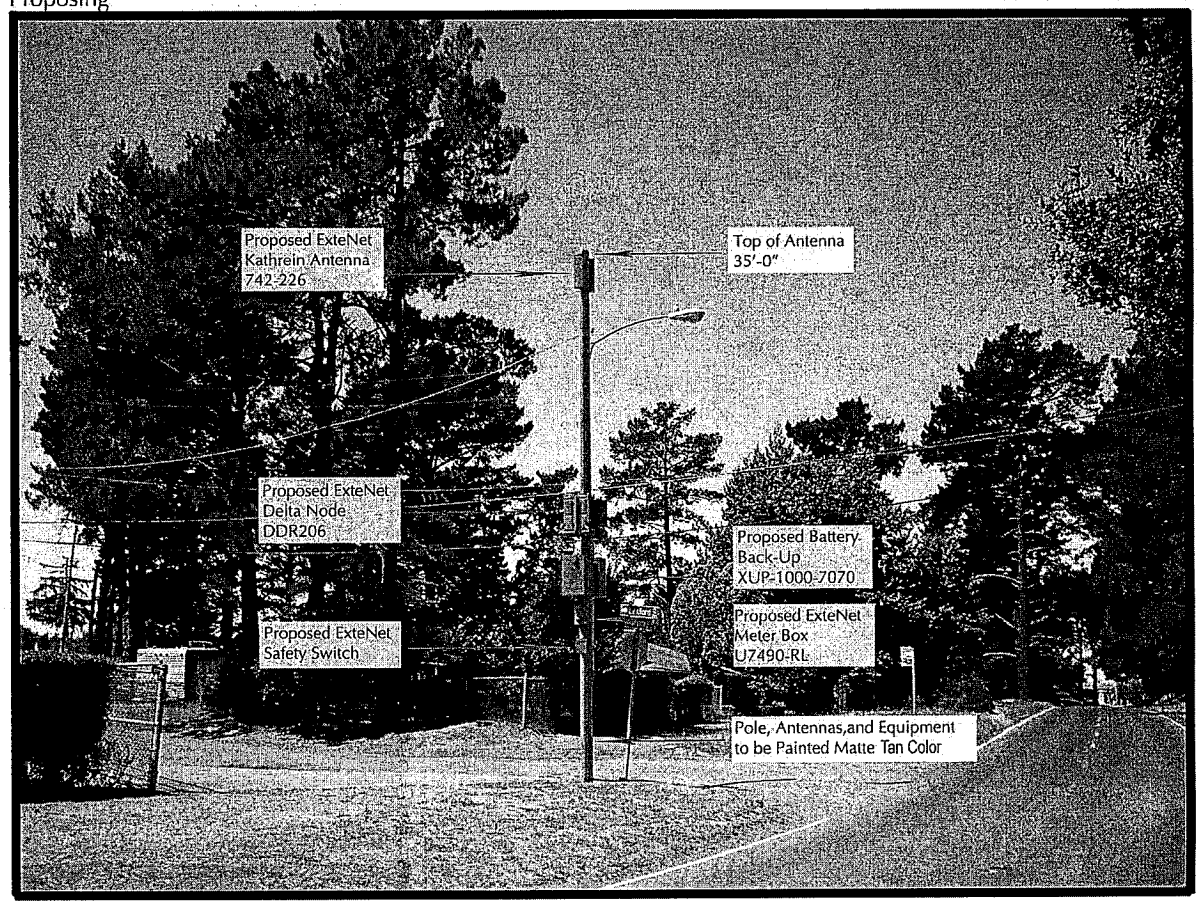
MAXIMIZE ENGINEERING GROUP

Site Map

Existing



Proposing



DAS Network Fundamentals

A Distributed Antenna System (DAS) network is a group of multiple transceivers all interconnected to provide wireless service into a target area. In effect, a DAS network is a much smaller of a traditional (macro) cellular network.

A DAS network has three major components:

- Node – a transceiver serving a small (0.25 mile radius) typically located on electrical poles, light poles, or other outside plant (OSP)
- Hub – a centralized location that interfaces with the node and Wireless Service Provider (WSP – e.g. AT&T, Sprint, Verizon, etc) equipment to deliver functioning wireless signals
- Interconnection – a medium, typically fiber optics, that interconnects the node equipment with the hub equipment

Design Process for Skyline

Similar to the design of a macro cellular network, a WSP will provide requirements that a Distributed Antenna System (DAS) network must fulfill. There are three general classifications of requirements:

- Coverage – delivering adequate wireless signal in an area where signal is either not present or not usable (e.g. interference)
- Capacity – providing additional wireless signal and bandwidth resources from many sources (versus one source) to segment traffic and increase the overall capacity of the area being served
- Performance – providing both coverage and capacity to reduce congestion, better facilitate mobility, and improve the overall network performance in that specific area

The requirements for a DAS design could be either any one of the classifications or could be a combination of any or all of them.

In the case of the Skyline network, the primary requirement was to provide coverage in the specified area.

In a coverage design, there are three major goals:

- Contiguous coverage – design a network that provides seamless coverage throughout the area of interest
- Interface with the macro network – ensure coverage and performance continuity between the DAS and the macro network
- Aesthetics – minimizing the number of nodes and equipment per node location required to serve the area of interest

Because the goals can somewhat conflict (e.g. providing seamless coverage while minimizing the number of nodes within the design), combined with the small effective coverage radius of each individual node, the design process is very iterative. It is not uncommon to modify designs three to four

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SYSTEMS

Summary

The designed node placement for the Skyline network is the optimal balance among the three main goals for a coverage-based DAS network. Even the slightest deviation in node locations, distance between nodes, antenna heights, etc. would have adverse effects for both the WSP and for the community.

sitesafe
rf compliance experts

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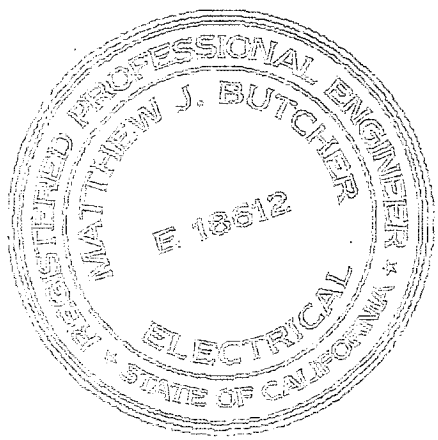
703.276.1100 • 703.276.1169 fax
info@sitesafe.com • www.sitesafe.com

Extenet Systems, LLC
Site Name – DAS Configuration 2B
Site Compliance Report

Structure Type: Existing or New Above Ground Facilities in Public Right-of-Way

Report generated date: December 2, 2010
Report by: Jerry Audi
Customer Contact: Michael Chow

Extenet Systems, LLC Will Be Compliant based on FCC Rules and Regulations.



Registration Expires December 31, 2010

Matthew J Butcher
Registered Professional Engineer
State of California License E 18612

sitesafe
rf compliance experts

Table of Contents

1 Executive Summary

Extenet Systems, LLC has contracted with Sitesafe, Inc. (Sitesafe), an independent Radio Frequency (RF) regulatory and engineering consulting firm, to determine whether the proposed communications site is in compliance with FCC Rules and Regulations for RF emissions.

This report contains a detailed summary of the RF environment at the site including:

- diagram of the site;
- inventory of the make / model of all transmitting;
- theoretical MPE based on modeling.

This report addresses exposure to radio frequency electromagnetic fields in accordance with the FCC Rules and Regulations for all individuals, classified in two groups, "Occupational or Controlled" and "General Public or Uncontrolled." This **site will be compliant** with FCC Rules and Regulations. The corrective actions needed to make this site compliant are located in Section 3.2.

The theoretical modeling of the RF electromagnetic fields on this site has been performed in accordance with the FCC's Office of Engineering and Technology Bulletin 65 ("OET Bulletin 65"), *Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields*, Edition 97-01, published August 1997.

This document and the conclusions herein are based on the information provided by Extenet Systems, LLC

If you have any questions regarding RF safety and regulatory compliance, please do not hesitate to contact Sitesafe's Customer Support Department at (703) 276-1100.

2 Regulatory Basis

2.1 FCC Rules and Regulations

In 1996, the Federal Communication Commission (FCC) adopted regulations for the evaluating of the effects of RF emissions in 47 CFR § 1.1307 and 1.1310. The guideline from the FCC Office of Engineering and Technology is Bulletin 65 ("OET Bulletin 65"), *Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields*, Edition 97-01, published August 1997. Since 1996 the FCC periodically reviews these rules and regulations as per their congressional mandate.

FCC regulations define two separate tiers of exposure limits: Occupational or "Controlled environment" and General Public or "Uncontrolled environment". The General Public limits are generally five times more conservative or restrictive than the Occupational limit. These limits apply to *accessible* areas where workers or the general public may be exposed to Radio Frequency (RF) electromagnetic fields.

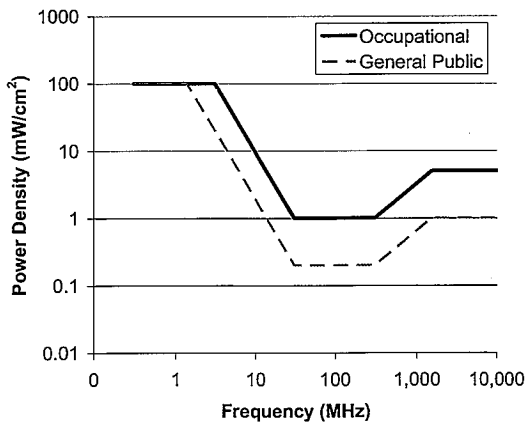
Occupational or Controlled limits apply in situations in which persons are exposed as a consequence of their employment and where those persons exposed have been made fully aware of the potential for exposure and can exercise control over their exposure.

An area is considered a Controlled environment when access is limited to these aware personnel. Typical criteria are restricted access (i.e. locked or alarmed doors, barriers, etc.) to the areas where antennas are located coupled with proper RF warning signage. A site with Controlled environments is evaluated with Occupational limits.

All other areas are considered Uncontrolled environments. If a site has no access controls or no RF warning signage it is evaluated with General Public limits.

The theoretical modeling of the RF electromagnetic fields has been performed in accordance with OET Bulletin 65. The Maximum Permissible Exposure (MPE) limits utilized in this analysis are outlined in the following diagram:

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



Limits for Occupational/Controlled Exposure (MPE)

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

Limits for General Population/Uncontrolled Exposure (MPE)

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

f = frequency in MHz *Plane-wave equivalent power density

2.2 OSHA Statement

The General Duty clause of the OSHA Act (Section 5) outlines the occupational safety and health responsibilities of the employer and employee. The General Duty clause in Section 5 states:

(a) Each employer –

(1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;

(2) shall comply with occupational safety and health standards promulgated under this Act.

(b) Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct.

OSHA has defined Radiofrequency and Microwave Radiation safety standards for workers who may enter hazardous RF areas. Regulation Standards 29 CFR § 1910.147 identify a generic Lock Out Tag Out procedure aimed to control the unexpected energization or start up of machines when maintenance or service is being performed.

3 Site Compliance

3.1 Site Compliance Statement

Upon evaluation of the cumulative RF emission levels from all operators at this site, Sitesafe has determined that:

Extenet Systems, LLC is predicted to contribute **greater than 5%** of the maximum permissible exposure (MPE) at the antenna level based on theoretical modeling using parameters supplied by the client. Extenet Systems, LLC is predicted to contribute **less than 5%** on the ground level. A detailed explanation of the 5% rule can be found in the Definition section of Appendix B.

The compliance determination is based on General Public MPE levels based on theoretical modeling, RF signage recommendations, information provided by customer and the level of restricted access to the antennas at the site. Any deviation from the proposed deployment plans my render the site in to non compliance.

3.2 Actions for Site Compliance

Based on common industry practice and our understanding of FCC and OSHA requirements, this section provides a statement of recommendations for site compliance. RF alert signage recommendations have been proposed based on theoretical analysis of MPE levels.

This site will be compliant with FCC Rules and Regulations. Extenet Systems, LLC contributes greater than 5% of the maximum permissible exposure (MPE); therefore, additional action is required by Extenet Systems, LLC to attain compliance. It is recommended that Extenet Systems, LLC review Appendix D in order to maintain a current RF Safety Awareness program.

Sitesafe found one or more issues that led to our determination. The site will be made compliant if the following changes are implemented:

- Posting RF signs that a person could read and understand the signs prior to accessing the site;

Site Access Location

Blue notice sign required. (Above the Extenet equipment, below the telco cable)

<u>Note</u>: Sitesafe recommends installing a Blue Notice Sign above the street lamp and underneath the antenna to alert tower climbers when performing services on site.

Extenet Systems, LLC Proposed Omni Location

No action required.

4 Safety Plan and Procedures

The following items are general safety recommendations that should be administered on a site by site basis as needed by the carrier.

General Maintenance Work: Any maintenance personnel required to work immediately in front of antennas and / or in areas indicated as above 100% of the Occupational MPE limits should coordinate with the wireless operators to disable transmitters during their work activities.

Training and Qualification Verification: All personnel accessing areas indicated as exceeding the General Population MPE limits should have a basic understanding of EME awareness and RF Safety procedures when working around transmitting antennas. Awareness training increases a workers understanding to potential RF exposure scenarios. Awareness can be achieved in a number of ways (e.g. videos, formal classroom lecture or internet based courses).

RF Signage: Everyone should obey all posted signs at all times. RF signs play an important role in properly warning a worker prior to entering into a potential RF Exposure area.

Assume all antennas are active: Due to the nature of telecommunications transmissions, an antenna transmits intermittently. Always assume an antenna is transmitting. Never stop in front of an antenna. If you have to pass by an antenna, move through as quickly and safely as possible thereby reducing any exposure to a minimum.

Maintain a 3 foot clearance from all antennas: There is a direct correlation between the strength of an EME field and the distance from the transmitting antenna. The further away from an antenna, the lower the corresponding EME field is.

Site RF Emissions Diagram: Section 5 of this report contains an RF Diagram that outlines various theoretical Maximum Permissible Exposure (MPE) areas at the site. The modeling is a worst case scenario assuming a duty cycle of 100% for each transmitting antenna at full power. This analysis is based on one of two access control criteria: General Public criteria means the access to the site is uncontrolled and anyone can gain access. Occupational criteria means the access is restricted and only properly trained individuals can gain access to the antenna locations.

5 Analysis

5.1 RF Emissions Diagram

The RF diagram(s) below display theoretical spatially averaged percentage of the Maximum Permissible Exposure for all systems at the site unless otherwise noted. These diagrams use modeling as proscribed in OET Bulletin 65 and assumptions detailed in Appendix B.

The key at the bottom of each diagram indicates if percentages displayed are referenced to FCC Occupational or General Public Maximum Permissible Exposure (MPE) limits. Color coding on the diagram is as follows:

- Areas indicated as Gray are below 5% of the MPE limits.
- Green represents areas predicted to be between 5% and 20% of the MPE limits.
- Yellow represents areas predicted to be between 20% and 100% of the MPE limits.
- Red areas indicated predicted levels greater than 100% of the MPE limits.

General Population diagrams are specified when an area is accessible to the public; i.e. personnel that do not meet Occupational or RF Safety trained criteria, could gain access.

If trained occupational personnel require access to areas that are delineated as Red or above 100% of the limit, Sitesafe recommends that they utilize the proper personal protection equipment (RF monitors), coordinate with the carriers to reduce or shutdown power, or make real-time power density measurements with the appropriate power density meter to determine real-time MPE levels. This will allow the personnel to ensure that their work area is within exposure limits.

The key at the bottom also indicates the level or height of the modeling with respect to the main level. The origin is typically referenced to the main rooftop level, or ground level for a structure without access to the antenna level. For example:

Average from 0 feet above to 6 feet above origin

and

Average from 20 feet above to 26 feet above origin

The first indicates modeling at the main rooftop (or ground) level averaged over 6 feet. The second indicates modeling at a higher level (possibly a penthouse level) of 20 feet averaged over 6 feet.

Abbreviations used in the RF Emissions Diagrams

PH=##'	Penthouse at ## feet above main roof

Additional Information in the RF Emissions Diagrams Key

The RF emissions diagram provides recommendations of RF signage, barriers and locked doors. The table below lists the abbreviations:

times before reaching an optimal balance between the three goals. Likewise, the designs become rather rigid, in that modifications to them after the design can produce unwanted outcomes that negate the initial goals. As an example, Figure 1 represents a prediction of the coverage the Skyline DAS network.

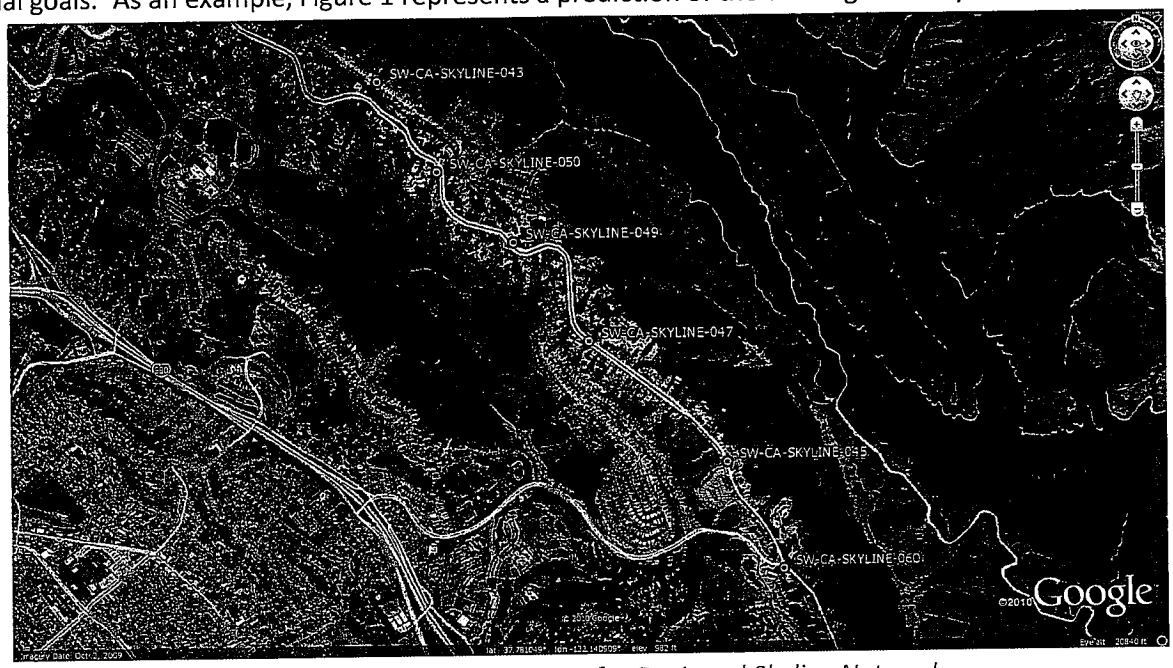


Figure 1 – Predicted Coverage for Designed Skyline Network

Figure 2 shows the same prediction with three of the nodes moved approximately 100 feet from their originally designed location, producing a coverage "hole," or unserved area of wireless coverage.

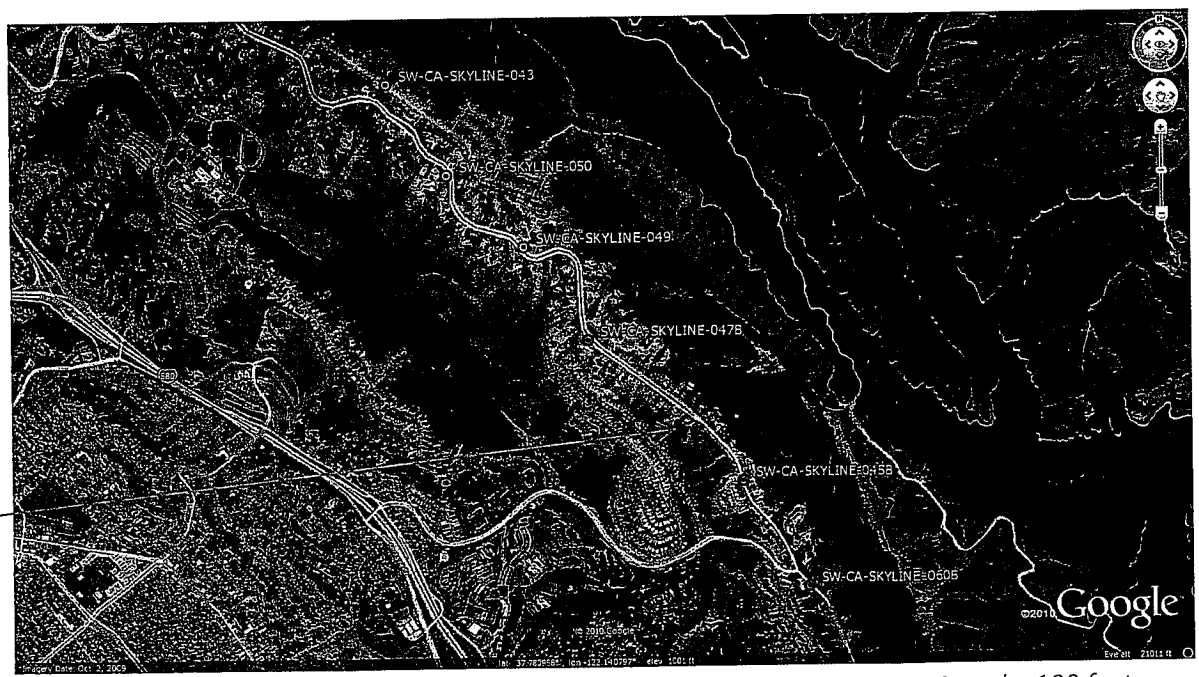


Figure 2 – Predicted Coverage for Skyline Network with Node Locations Moved ~ 100 feet

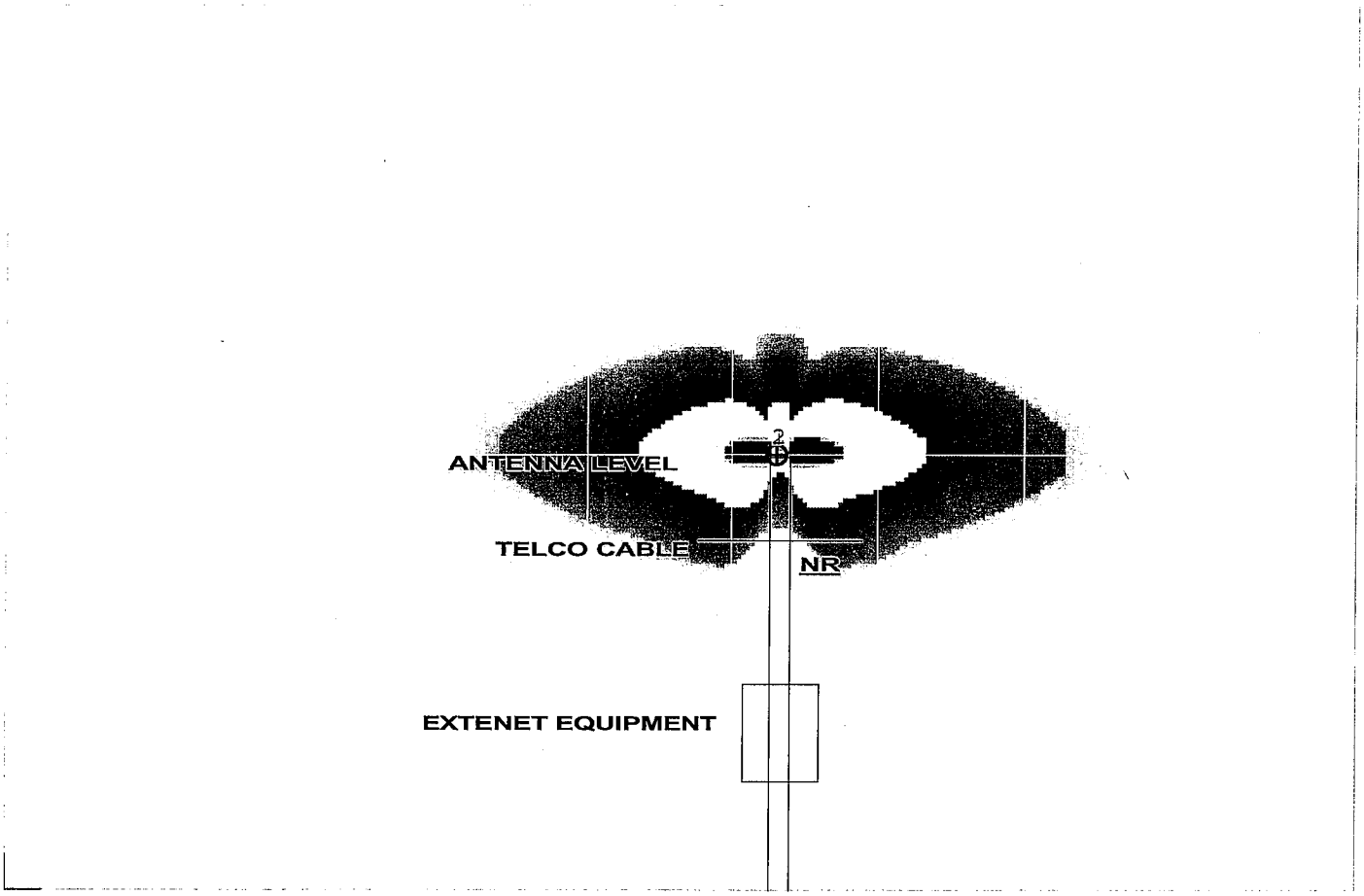
The result of this situation would negate the initial goals. Specifically, the network would not provide contiguous coverage within the designed area, so additional node and head end equipment would be necessary, impacting aesthetics and/or node counts.

The RF emissions diagram includes recommendations for RF signage, barriers and locked doors. The table below lists the abbreviations:

Table 1: RF Signage and Barrier Key

RF Signage			Barriers		
Type	Existing Location	Recommended Location	Type	Existing Location	Recommended Location
Notice	NE	NR	Locked Door	LE	LR
Caution	CE	CR	Fencing	RE	RR
Warning	WE	WR	Rope Chain		
Info Sign	IE		Paint Stripes		

RF Emissions Diagram for: DAS Configuration 2B
Elevation View



% of FCC Public Exposure Limit
Individual Points

- 100 <= X
- 20 <= X < 100
- 5 <= X < 20
- X <= 5

Sitesafe
www.sitesafe.com
Sitesafe ID# 63940
Site Name: DAS Configuration 2B

Feet
5 0 5 10
Grid Size is 10.0

6 Antenna Inventory

6.1 Transmitting Antenna Inventory

The Antenna Inventory shows all transmitting antennas at the site. The antenna inventory was provided by the customer, and was utilized by Sitesafe to perform theoretical modeling of RF emissions. The inventory coincides with the site diagrams in this report, identifying each antenna's location at DAS Configuration 2B. The antenna information collected includes the following information:

- Licensee or wireless operator name
- Frequency or frequency band
- Transmitter power – Effective Radiated Power ("ERP"), or Equivalent Isotropic Radiated Power ("EIRP") in Watts
- Antenna manufacturer make, model, and gain

For other carriers at this site, the use of "Generic" as an antenna model, or "Unknown" for an operator means the information with regard to carrier, their FCC license and/or antenna information was not available. Equipment, antenna models and nominal transmit power were used for modeling, based on past experience with radio service providers.

The following antenna inventory was obtained from the customer and was utilized to create the RF Emission diagrams in Section 5:

Table 3: Antenna Inventory

Ant #	Operated By	TX Freq (MHz)	ERP (Watts)	Antenna Gain (dBd)	Az (Deg)	Antenna Model	Ant Type	Length (ft)	Horizontal Half Power Beamwidth (Deg)	Location		
										X	Y	Z (ft)
1	T-Mobile (Proposed)	1972	104	11.24	90	Kathrein-Scala 742226 or like	Panel	2	65	75	193	30
1	T-Mobile (Proposed)	2140	111	11.61	90	Kathrein-Scala 742226 or like	Panel	2	65	75	193	30
2	T-Mobile (Proposed)	1972	104	11.24	270	Kathrein-Scala 742226 or like	Panel	2	65	75	193	30
2	T-Mobile (Proposed)	2140	111	11.61	270	Kathrein-Scala 742226 or like	Panel	2	65	75	193	30

NOTE: X, Y and Z indicate relative position of the antenna to the origin location on the site, displayed in the model results diagram. Specifically, the Z reference indicates antenna height above the main site level unless otherwise indicated. ERP values provided by the client and used in the modeling may be greater than are currently deployed. For other carriers at this site the use of "Generic" as an antenna model or "Unknown" for a wireless operator means the information with regard to carrier, their FCC license and/or antenna information was not available nor could it be secured while on site. Equipment, antenna models and nominal transmit power were used for modeling, based on past experience with radio service providers.

7 Engineer Certification

The professional engineer whose seal appears on the cover of this document hereby certifies and affirms that:

I am registered as a Professional Engineer in the jurisdiction indicated in the professional engineering stamp on the cover of this document; and

That I am an employee of Sitesafe, Inc., in Arlington, Virginia, at which place the staff and I provide RF compliance services to clients in the wireless communications industry; and

That I am thoroughly familiar with the Rules and Regulations of the Federal Communications Commission (FCC) as well as the regulations of the Occupational Safety and Health Administration (OSHA), both in general and specifically as they apply to the FCC Guidelines for Human Exposure to Radio-frequency Radiation; and

That survey measurements of the site environment of the site identified as DAS Configuration 2B have been performed in order to determine where there might be electromagnetic energy that is in excess of both the Controlled Environment and Uncontrolled Environment levels; and

That I have thoroughly reviewed this Site Compliance Report and believe it to be true and accurate to the best of my knowledge as assembled by and attested to by Jerry Audi

November 29, 2010

Appendix A – Statement of Limiting Conditions

Due to the complexity of some wireless sites, Sitesafe performed this analysis and created this report utilizing supplied and collected information. Sitesafe cannot be held accountable or responsible for anomalies or discrepancies due to actual site conditions (i.e., mislabeling of antennas or equipment, undocumented cable runs, undocumented antennas or equipment, etc.) or information or data supplied by Extenet Systems LLC, the site manager, or their affiliates, subcontractors or assignees.

Sitesafe has provided computer generated model(s) in this Site Compliance Report to show approximate dimensions of the site, and the model is included to assist the reader of the compliance report to visualize the site area, and to provide supporting documentation for Sitesafe's recommendations.

Sitesafe may note in the Site Compliance Report any adverse physical conditions, such as needed repairs, observed during the survey of the subject property or that Sitesafe became aware of during the normal research involved in performing this survey. Sitesafe will not be responsible for any such conditions that do exist or for any engineering or testing that might be required to discover whether such conditions exist. Because Sitesafe is not an expert in the field of mechanical engineering or building maintenance, the Site Compliance Report must not be considered a structural or physical engineering report.

Sitesafe obtained information used in this Site Compliance Report from sources that Sitesafe considers reliable and believes them to be true and correct. Sitesafe does not assume any responsibility for the accuracy of such items that were furnished by other parties. When conflicts in information occur between data provided by a second party and physical data collected by Sitesafe, the physical data will be used.

Appendix B – Assumptions and Definitions

General Model Assumptions

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

The site has been modeled with these assumptions to show the maximum RF energy density. Sitesafe believes this to be a *worst-case* analysis, based on best available data. Areas modeled to predict emissions greater than 100% of the applicable MPE level may not actually occur, but are shown as a *worst-case* prediction that could be realized real time. Sitesafe believes these areas to be safe for entry by occupationally trained personnel utilizing appropriate personal protective equipment (in most cases, a personal monitor).

Thus, at any time, if power density measurements were made, we believe the real-time measurements would indicate levels below those depicted in the RF emission diagram(s) in this report. By modeling in this way, Sitesafe has conservatively shown exclusion areas – areas that should not be entered without the use of a personal monitor, carriers reducing power, or performing real-time measurements to indicate real-time exposure levels.

Use of Generic Antennas

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

Where the frequency is unknown, Sitesafe uses the closest frequency in the antenna's range that corresponds to the highest Maximum Permissible Exposure (MPE), resulting in a conservative analysis.

Definitions

5% Rule – The rules adopted by the FCC specify that, in general, at multiple transmitter sites actions necessary to bring the area into compliance with the guidelines are the shared responsibility of all licensees whose transmitters produce field strengths or power density levels at the area in question in excess of 5% of the exposure limits. In other words, any wireless operator that contributes 5% or greater of the MPE limit in an area that is identified to be greater than 100% of the MPE limit is responsible taking corrective actions to bring the site into compliance.

Compliance – The determination of whether a site is safe or not with regards to Human Exposure to Radio Frequency Radiation from transmitting antennas.

Decibel (dB) – A unit for measuring power or strength of a signal.

Duty Cycle – The percent of pulse duration to the pulse period of a periodic pulse train. Also, may be a measure of the temporal transmission characteristic of an intermittently transmitting RF source such as a paging antenna by dividing average transmission duration by the average period for transmission. A duty cycle of 100% corresponds to continuous operation.

Effective (or Equivalent) Isotropic Radiated Power (EIRP) – The product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna.

Effective Radiated Power (ERP) – In a given direction, the relative gain of a transmitting antenna with respect to the maximum directivity of a half wave dipole multiplied by the net power accepted by the antenna from the connecting transmitter.

Gain (of an antenna) – The ratio of the maximum intensity in a given direction to the maximum radiation in the same direction from an isotropic radiator. Gain is a measure of the relative efficiency of a directional antennas as compared to an omni directional antenna.

General Population/Uncontrolled Environment – Defined by the FCC, as an area where RFR exposure may occur to persons who are **unaware** of the potential for exposure and who have no control of their exposure. General Population is also referenced as General Public.

Generic Antenna – For the purposes of this report, the use of "Generic" as an antenna model means the antenna information was not provided and could not be obtained while on site. In the event of unknown information, Sitesafe will use our industry specific knowledge of antenna models to select a worst case scenario antenna to model the site.

Isotropic Antenna – An antenna that is completely non-directional. In other words, an antenna that radiates energy equally in all directions.

Maximum Measurement – This measurement represents the single largest measurement recorded when performing a spatial average measurement.

Maximum Permissible Exposure (MPE) – The rms and peak electric and magnetic field strength, their squares, or the plane-wave equivalent power densities associated with these fields to which a person may be exposed without harmful effect and with acceptable safety factor.

Occupational/Controlled Environment – Defined by the FCC, as an area where Radio Frequency Radiation (RFR) exposure may occur to persons who are **aware** of the potential for exposure as a condition of employment or specific activity and can exercise control over their exposure.

OET Bulletin 65 – Technical guideline developed by the FCC's Office of Engineering and Technology to determine the impact of Radio Frequency radiation on Humans. The guideline was published in August 1997.

***OSHA* (Occupational Safety and Health Administration)** – Under the Occupational Safety and Health Act of 1970, employers are responsible for providing a safe and healthy workplace for their employees. OSHA's role is to promote the safety and health of America's working men and women by setting and enforcing standards; providing training, outreach and education; establishing partnerships; and encouraging continual process improvement in workplace safety and health. For more information, visit www.osha.gov.

Radio Frequency Radiation – Electromagnetic waves that are propagated from antennas through space.

Spatial Average Measurement – A technique used to average a minimum of ten (10) measurements taken in a ten (10) second interval from zero (0) to six (6) feet. This measurement is intended to model the average energy an average sized human body will absorb while present in an electromagnetic field of energy.

Transmitter Power Output (TPO) – The radio frequency output power of a transmitter's final radio frequency stage as measured at the output terminal while connected to a load.

Appendix C – Rules & Regulations

Explanation of Applicable Rules and Regulations

The FCC has set forth guidelines in OET Bulletin 65 for human exposure to radio frequency electromagnetic fields. Specific regulations regarding this topic are listed in Part 1, Subpart I, of Title 47 in the Code of Federal Regulations. Currently, there are two different levels of MPE - General Public MPE and Occupational MPE. An individual classified as Occupational can be defined as an individual who has received appropriate RF training and meets the conditions outlined below. General Public is defined as anyone who does not meet the conditions of being Occupational. FCC and OSHA Rules and Regulations define compliance in terms of total exposure to total RF energy, regardless of location of or proximity to the sources of energy.

It is the responsibility of all licensees to ensure these guidelines are maintained at all times. It is the ongoing responsibility of all licensees composing the site to maintain ongoing compliance with FCC rules and regulations. Individual licensees that contribute less than 5% MPE to any total area out of compliance are not responsible for corrective actions.

OSHA has adopted and enforces the FCC's exposure guidelines. A building owner or site manager can use this report as part of an overall RF Health and Safety Policy. It is important for building owners/site managers to identify areas in excess of the General Population MPE and ensure that only persons qualified as Occupational are granted access to those areas.

Occupational Environment Explained

The FCC definition of Occupational exposure limits apply to persons who:

- are exposed to RF energy as a consequence of their employment;
- have been made aware of the possibility of exposure; and
- can exercise control over their exposure.

OSHA guidelines go further to state that persons must complete RF Safety Awareness training and must be trained in the use of appropriate personal protective equipment.

In order to consider this site an Occupational Environment, the site must be controlled to prevent access by any individuals classified as the General Public. Compliance is also maintained when any non-occupational individuals (the General Public) are prevented from accessing areas indicated as Red or Yellow in the attached RF Emissions diagram. In addition, a person must be aware of the RF environment into which they are entering. This can be accomplished by an RF Safety Awareness class, and by appropriate written documentation such as this Site Compliance Report.

All [Company_Name] employees who require access to this site must complete RF Safety Awareness training and must be trained in the use of appropriate personal protective equipment.

Appendix D – General Safety Recommendations

The following are *general recommendations* appropriate for any site with accessible areas in excess of 100% General Public MPE. These recommendations are not specific to this site. These are safety recommendations appropriate for typical site management, building management, and other tenant operations.

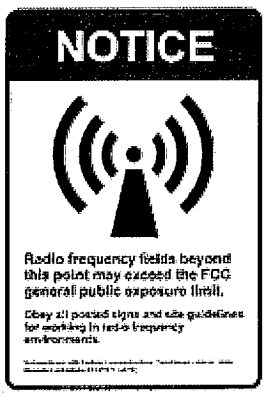
1. All individuals needing access to the main site (or the area indicated to be in excess of General Public MPE) should wear a personal RF Exposure monitor, successfully complete proper RF Safety Awareness training, and have and be trained in the use of appropriate personal protective equipment.

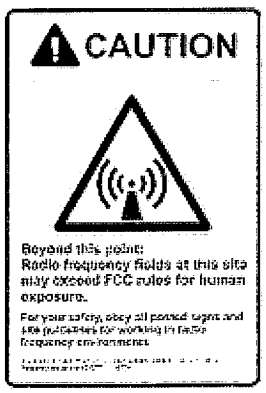
2. All individuals needing access to the main site should be instructed to read and obey all posted placards and signs.

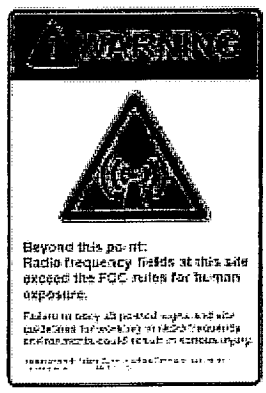
3. The site should be routinely inspected and this or similar report updated with the addition of any antennas or upon any changes to the RF environment including:

- adding new antennas that may have been located on the site
- removing of any existing antennas
- changes in the radiating power or number of RF emitters

4. Post the appropriate **NOTICE**, **CAUTION**, or **WARNING** sign at the main site access point(s) and other locations as required. Note: Please refer to RF Exposure Diagrams in Appendix B, to inform <u>everyone</u> who has access to this site that beyond posted signs there may be levels in excess of the limits prescribed by the FCC. The signs below are examples of signs meeting FCC guidelines.







5. Ensure that the site door remains locked (or appropriately controlled) to deny access to the general public if deemed as policy by the building/site owner.

6. For a General Public environment the four color levels identified in this analysis can be interpreted in the following manner:

- Areas indicated as Gray are at 5% of the General Public MPE limits. This level is safe for a worker to be in at any time.
- Green represents areas predicted to be between 5% and 20% of the General Public MPE limits. This level is safe for a worker to be in at any time.

- Yellow represents areas predicted to be between 20% and 100% of the General Public MPE limits. This level is safe for a worker to be in at any time.
- Red areas indicated predicted levels greater than 100% of the General Public MPE limits. This level is not safe for the General Public to be in.

7. For an Occupational environment the four color levels identified in this analysis can be interpreted in the following manner:

- Areas indicated as Gray are at 5% of the Occupational MPE limits. This level is safe for a worker to be in at any time.
- Green represents areas predicted to be between 5% and 20% of the Occupational MPE limits. This level is safe for a worker to be in at any time.
- Yellow represents areas predicted to be between 20% and 100% of the Occupational MPE limits. Only individuals that have been properly trained in RF Health and Safety should be allowed to work in this area. This is not an area that is suitable for the General Public to be in.
- Red areas indicated predicted levels greater than 100% of the Occupational MPE limits. This level is not safe for the Occupational worker to be in for prolonged periods of time. Special procedures must be adhered to such as lock out tag out procedures to minimize the workers exposure to EME.

8. Use of a Personal Protective Monitor: When working around antennas, Sitesafe strong recommends the use of a Personal Protective Monitor (PPM). Wearing a PPM will properly forewarn the individual prior to entering an RF exposure area.

7. Use of a Personal Protective Monitor: When working around antennas, Sitesafe strong recommends the use of a Personal Protective Monitor (PPM). Wearing a PPM will properly forewarn the individual prior to entering an RF exposure area.

Keep a copy of this report available for all persons who must access the site. They should read this report and be aware of the potential hazards with regards to RF and MPE limits.

Additional Information

Additional RF information is available by visiting both www.Sitesafe.com and www.fcc.gov/oet/rfsafety. OSHA has additional information available at: http://www.osha-slc.gov/SLTC/radiofrequencyradiation.