



# CITY OF CARSON

## PLANNING COMMISSION STAFF REPORT

PUBLIC HEARING: November 26, 2013

SUBJECT: Design Overlay Review No. 1514-13  
Conditional Use Permit No. 945-13

APPLICANT: SBA 2012 TC Assets, LLC  
c/o Kim Nguyen  
2749 Saturn Street  
Brea, CA 92821

REQUEST: Retrofit an existing 50-foot-high monopole wireless facility to be disguised as a pine tree with a maximum height of 55 feet

PROPERTY INVOLVED: 20411 Susana Road (APN 7306 026 026)

### COMMISSION ACTION

- Concurred with staff
- Did not concur with staff
- Other

### COMMISSIONERS' VOTE

AYE	NO		AYE	NO	
		Chairman Faletogo			Gordon
		Vice-Chair Verrett			Piñon
		Brimmer			Saenz
		Diaz			Schaefer
		Goolsby			

***Item No. 11B***

## I. Introduction

The applicant, Kim Nguyen of Core Development Services, as an agent for SBA2012 TC Assets, LLC, is requesting approval of Design Overlay Review (DOR) No. 1514-13 and Conditional Use Permit (CUP) No. 945-13 to retrofit an existing 50-foot-high monopole wireless facility. The facility will be disguised as a pine tree with faux pine bark and branches and will have a maximum height of 55 feet. The application will also relocate three existing 72-inch-high antennas to the facility, add three new 72-inch-high panel antennas and three RRH units mounted behind the antennas, and add fiber optic cabling (Exhibit 2). The proposed antennas would remain at the same height as the existing antennas at 50 feet to the top of the antennas. A new fiber junction box will be installed outside the equipment enclosure to replace the existing one and will be painted to match the enclosure. An existing chain-link fence provides security for the equipment enclosure area. Barbed wire is installed at top of the chain-link fence.

The subject facility is located within a retail complex with one building and is zoned Manufacturing Heavy (MH). The surrounding areas have similar uses and zoning (Exhibit 3).

## II. Background

The existing 50-foot-high monopole was constructed in 1998 prior to the City's adoption of Ordinance No. 03-1284 in 2003 establishing Section 9138.16 of the Carson Municipal Code (CMC) (Communications Ordinance). This section was subsequently amended in 2010. The Communications Ordinance requires existing facilities to be made conforming including a stealth design and obtaining approval for DOR and CUP applications.

## III. Analysis

The proposed project is a conversion of an existing monopole to a stealth communication facility disguised as a pine tree. Therefore, the proposed project meets the main goal of the Communication Ordinance which is stealthing of the facility. The proposed project meets all the other aspects of the CMC. The following provides a discussion of the two issues that require further analysis in the staff report:

### Height

The maximum height of the proposed project is 55'. Section 9146.12 of CMC, Height of Buildings and Structures, does not limit the height of structures within the MH zone. However, Section 9138.16.b. limits height of telecommunication facilities in zoning districts with no maximum height limit to 50'. In order for Planning Commission to approve the proposed facility with a height of 55', the Planning Commission would have to approve a minor exception pursuant to Sections 9138.16.d and 9138.16.G.1.a. A minor exception could approve heights up to 15% higher than the permitted 50' height or up to 57.5'. Since the proposed structure is



55', the Planning Commission could consider approving a minor exception if all the following findings included in Section 9138.16.G.1.a could be made:

1. If seeking a minor exception from height standards set forth herein, the applicant shall demonstrate that the proposed height is designed at the minimum height necessary for operation and/or for stealth purposes including design elements or architectural details.
2. The minor exception would not create a significant visual impact.
3. Granting the minor exception shall conform to the spirit and intent of this zoning code.
4. Granting the minor exception will not be materially detrimental to the public welfare or injurious to properties or improvements in the vicinity.

Staff believes these findings can be made as stated in the attached resolution. Therefore, the proposed height of 55' meets the requirements of the CMC.

### **Fencing**

The existing facility includes chain-link fencing at the perimeter of the lease area. In addition, barbed wire is installed on the top of the chain-link fence. Currently there are no restrictions on use of chain-link. However, the City is considering amending the ordinance to allow chain-link fence only if it is proposed at more than 25 feet from the front property line. Since the existing chain-link fence is over 40 feet from the front property line, it is determined to be consistent with the proposed standards.

### **Notable Conditions of Approval**

17. The trees surrounding the facility shall not be removed at any time. Throughout the life of the project, all removed, damaged, diseased or dead landscaping shall be replaced to the satisfaction of the Planning Division. The applicant shall obtain a letter from the property owner acknowledging this condition and providing permission to the applicant to replace the landscaping if deemed necessary by the Planning Division and required in this condition.

## **IV. Environmental Review**

Pursuant to Section 15332 – In-fill Development Projects (Class 1) of the California Environmental Quality Act (CEQA), the proposed wireless facility is exempt. The project does not have the potential to cause a significant effect on the environment.

V. Recommendation

That the Planning Commission:

- APPROVE the proposed project; and
- WAIVE further reading and ADOPT Resolution No. 13-\_\_\_, entitled "A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF CARSON APPROVING DESIGN OVERLAY REVIEW NO. 1514-13 AND CONDITIONAL USE PERMIT NO. 945-13 TO RETROFIT AN EXISTING 50-FOOT-HIGH MONOPOLE WIRELESS FACILITY TO BE DISGUISED AS A 55-FOOT-HIGH PINE TREE ON A PROPERTY LOCATED AT 20411 SUSANA ROAD."

VI. Exhibits

1. Draft Resolution
2. Development Plans
3. Site Map
4. RF Emissions Report

Prepared by: \_\_\_\_\_

Saied Naaseh, Associate Planner

Reviewed by: \_\_\_\_\_

John F. Signo, AICP, Senior Planner

Approved by: \_\_\_\_\_

Sheri Repp Loadsman, Planning Officer



CITY OF CARSON  
PLANNING COMMISSION  
RESOLUTION NO. 13-\_\_\_\_\_

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF CARSON APPROVING DESIGN OVERLAY REVIEW NO. 1514-13 AND CONDITIONAL USE PERMIT NO. 945-13 TO RETROFIT AN EXISTING 50-FOOT-HIGH MONOPOLE WIRELESS FACILITY TO BE DISGUISED AS A 55-FOOT-HIGH PINE TREE ON A PROPERTY LOCATED AT 20411 SUSANA ROAD

THE PLANNING COMMISSION OF THE CITY OF CARSON, CALIFORNIA, HEREBY FINDS, RESOLVES AND ORDERS AS FOLLOWS:

**Section 1.** An application was duly filed by the applicant, Kim Nguyen, Core Development Services, with respect to Conditional Use Permit No. 945-13 and Design Overlay Review No. 1514-13 to retrofit an existing 50'-high monopole wireless facility with faux pine bark, install pine branches with a maximum height of 55' to disguise the facility as a pine tree on a property located at 20411 Susana Road, and described in Exhibit "A" attached hereto.

A public hearing was duly held on November 26, 2013, at 6:30 P.M. at City Hall, Council Chambers, 701 East Carson Street, Carson, California. A notice of time, place and purpose of the aforesaid meeting was duly given.

**Section 2.** Evidence, both written and oral, was duly presented to and considered by the Planning Commission at the aforesaid meeting.

**Section 3.** The Planning Commission finds that:

CMC Section 9172.21, Conditional Use Permit Findings

According to CMC Section 9172.21 – Conditional Use Permit, the Planning Commission shall recommend approval of the proposal if it is able to make affirmative findings based on the following criteria:

- a. **The proposed use and development will be consistent with the General Plan.**  
The proposed project is consistent with the General Plan of the City of Carson in that it promotes sustainable communication systems that meet the needs of the community (Goal TI 9).
- b. **The site is adequate in size, shape, topography, location, utilities, and other factors to accommodate the proposed use and development.**  
The proposed project is on a 62,000-square-foot lot that is adequate in size, topography, and location to accommodate the proposed project.
- c. **There will be adequate street access and traffic capacity.**  
Adequate access is provided to the site from Susana Road. No additional traffic is expected as a result of the proposed project.
- d. **There will be adequate water supply for fire protection.**



Prior to the issuance of building permits, the Los Angeles County Fire Department will ensure adequate water supply for fire protection is provided.

- e. **The proposed use and development will be compatible with the intended character of the area.**

The proposed project will be more compatible with the intended character of the area than the existing antennas and the originally proposed project as it better blends in with the surrounding development.

- f. **Such other criteria as are specified for the particular use in other Sections of this Chapter.**

The Planning Commission shall make the findings for telecommunication facilities pursuant to Section 9138.16(H), Wireless Telecommunications Facilities. As stated below in section "CMC Section 9138.16H, Telecommunication Facilities Findings" of the staff report, the planning commission can make all the findings required for telecommunication facilities; therefore, the proposed project meets this finding.

CMC Section 9172.21 further states that:

**"If the Commission finds that any adverse effects will occur as a result of the proposed use and development, such effects must be found to be justified by the benefits to the public interest which will occur as a result of such use and development."**

With the proposed stealth design, the Commission can find the benefit of providing upgraded antennas and better wireless service would outweigh the adverse effects of the proposed facility.

**"If the Commission does not make affirmative findings with respect to the above criteria and is unable to impose conditions to mitigate any adverse finding, the Commission shall disapprove a Conditional Use Permit."**

The Commission can make affirmative findings with respect to the above criteria and is able to impose conditions to mitigate any adverse finding.

**In making its decision, the Commission shall adopt written findings with respect to the above criteria.**

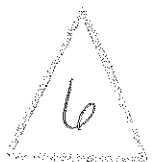
The Commission has made written findings.

*CMC Section 9172.23.D, Development Plan Findings*

According to CMC Section 9172.23.D.1, Site Plan and Design Review Findings and Decisions, the Commission shall approve a Development Plan if it is able to make affirmative findings based on the following criteria:

- a. **Compatibility with the General Plan, any specific plans for the area, and surrounding uses.**

The proposed project is consistent with the General Plan of the City of Carson in that it promotes sustainable communication systems that meet the needs of the community (Goal TI 9).



- b. Compatibility of architecture and design with existing and anticipated development in the vicinity, including the aspects of site planning, land coverage, landscaping, appearance and scale of structures and open spaces, and other features relative to a harmonious and attractive development of the area.**

The proposed project is more compatible with the intended character of the area than the existing antennas as it better blends in with appearance and scale of the surrounding structures and area.

- c. Convenience and safety of circulation for pedestrians and vehicles.**

Adequate and safe access is provided to the site for pedestrians and vehicles.

- d. Attractiveness, effectiveness and restraint in signing graphics and color.**

No signs or graphics is proposed as part of the proposed project.

- e. Development scheduling (if phased development) which will satisfy the above criteria in each phase.**

No phasing is proposed.

- f. Conformance to any applicable design standards and guidelines which have been adopted pursuant to CMC 9172.15. Such design standards and guidelines may be generally applicable or may specify different requirements for different areas.**

The proposed facility, as proposed conforms to all applicable design standards applicable to this project.

The section continues that if a proposed development complies with all applicable requirements and standards of this Chapter and other laws and regulations, and the approving authority finds that the criteria of Section 9172.23.D.1 are adequately met, or can be met if specified conditions are observed, the Development Plan shall be approved, subject to such specified conditions. If the approving authority finds that the proposal cannot meet and cannot be modified to meet the requirements of this Chapter and the above criteria, the Development Plan shall be disapproved. In all cases, findings shall be made concerning the grounds for approval or disapproval.

The proposed facility complies with most the requirements of Chapter 1 of Article IX of the CMC.

After a decision is made, a notice of the Commission's decision will be mailed to the applicant as provided in CMC 9173.32.

CMC Section 9138.16H, Telecommunication Facilities Findings

CMC Section 9138.16.H requires that in addition to findings in CMC Sections 9172.21 and 9172.23 for approval of a DOR and CUP, the following additional findings would have to be made:

- a. The proposed site is the least intrusive after considering co-location with another facility, other networks available such as distributed antenna systems, and location at another site. If located in the public right-of-way or**



**on City-owned or leased property, the facility must meet the requirements of the Engineering Division.**

The proposed wireless facility is an upgrade of an existing wireless facility. The proposed design is considered a stealth facility which is the least intrusive design.

- b. The proposed communications facility will be aesthetically compatible, located and designed to minimize the visual impact on surrounding properties and from public streets, including adequate screening through the use of landscaping that harmonize with the elements and characteristics of the property and/or stealth which incorporates the facility with the structure in which it will be mounted through use of material, color, and architectural design.**

The proposed facility is proposed as a stealth design; therefore, it is aesthetically compatible and designed to minimize the visual impact on surrounding properties and from public streets. In addition, it is located in an area surrounded by mature trees further screening it from public view.

- c. The proposed communications facility is not located on any residential dwelling or on any property which contains a residential dwelling, or any property wherein a person resides, except as may be associated with a church, temple, or place of religious worship.**

The proposed communications facility is not located on any residential dwelling or on any property that contains residential uses.

*CMC Section 9138.16.G.1.a Findings*

- a. If seeking a minor exception from height standards set forth herein, the applicant shall demonstrate that the proposed height is designed at the minimum height necessary for operation and/or for stealth purposes including design elements or architectural details.**

The proposed stealth antennas will be the same height as the existing non- stealth antennas. Therefore, the proposed height is necessary for the operation of the facility.

- b. The minor exception would not create a significant visual impact.**

The proposed exception will not create a significant visual impact since the facility will be completely stealth.

- c. Granting the minor exception shall conform to the spirit and intent of this zoning code.**

Granting the minor exception conforms to the spirit and intent of this zoning code since the proposed design is a stealth facility.

- d. Granting the minor exception will not be materially detrimental to the public welfare or injurious to properties or improvements in the vicinity.**

Granting the minor exception will not be materially detrimental to the public welfare or injurious to properties or improvements in the vicinity since the proposed design





is a stealth facility and will have less visual impact than the existing facility. Other impacts of the proposed facility will be substantially the same as the existing facility.

**Section 4.** The Planning Commission further finds that the proposed project will not have a significant effect on the environment. Pursuant to Section 15332 – In-fill Development Projects (Class 1) of the California Environmental Quality Act (CEQA), the proposed wireless facility is exempt. The project does not have the potential to cause a significant effect on the environment.

**Section 5.** Based on the aforementioned findings, the Commission hereby approves Design Overlay Review No. 1514-13 and Conditional Use Permit No. 945-13 to retrofit an existing 50'-high monopole wireless facility with faux pine bark, install pine branches with a maximum height of 55' to disguise the facility as a pine tree with respect to the properties described in Section 1 hereof, subject to the conditions set forth in Exhibit "B" attached hereto.

**Section 6.** The Secretary shall certify to the adoption of the Resolution and shall transmit copies of the same to the applicant.

**Section 7.** This action shall become final and effective fifteen days after the adoption of this Resolution.

**PASSED, APPROVED AND ADOPTED THIS 26<sup>th</sup> DAY OF November, 2013**

\_\_\_\_\_  
**CHAIRMAN**

**ATTEST:**

\_\_\_\_\_  
**SECRETARY**



**Exhibit "A"**  
**Legal Description**

An interest in land, said interest being over a portion of the following described parent parcel:

Parcel 6 of Parcel Map No. 8746 in the City of Carson, County of Los Angeles, State of California, as per Map filed in Book 100, Pages 47 and 48 of Parcel Maps, in the Office of the County Recorder of said County. Excepting therefrom that portion of said property lying below a depth of five hundred (500) Feet measured vertically from the contour of the surface thereof, provided, however that grantor, its successors and assigns, shall not have the right of any purpose whatsoever to enter upon, into or through the surface of the property granted herein or any part thereof lying between said surface and five hundred (500) feet below said surface.

AND BEING the same property conveyed to Sobel Realty Holdings, L. P. from Irv Sobel and Mina Sobel, as tenants in common by Grant Deed dated September 06, 2001 and recorded November 30, 2001 in Instrument No. 01-2282356.

Tax Parcel No. 7306-026-026

Said interest being over land more particularly described by the following description:

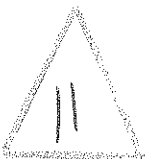
Insert metes and bounds description of area



**CITY OF CARSON**  
**ECONOMIC DEVELOPMENT**  
**PLANNING DIVISION**  
**EXHIBIT "B"**  
**CONDITIONS OF APPROVAL**  
**DESIGN OVERLAY REVIEW NO. 1514-13**  
**CONDITIONAL USE PERMIT NO. 945-13**

**GENERAL CONDITIONS**

1. If a building permit plan check submittal proposing the implementation of DOR No. 1514-13 and CUP No. 945-13, is not submitted to the City of Carson within one year of its effective date, said permit shall be declared null and void unless an extension of time is previously approved by the Planning Commission.
2. The approved Resolution, including the Conditions of Approval contained herein, and signed Affidavit of Acceptance, shall be copied in their entirety and placed directly onto a separate plan sheet behind the cover sheet of the development plans prior to Building and Safety plan check submittal. Said copies shall be included in all development plan submittals, including any revisions and the final working drawings.
3. The applicant shall comply with all city, county, state and federal regulations applicable to this project.
4. The applicant shall make any necessary site plan and design revisions to the site plan and elevations as directed by the Planning Commission in compliance with all the Conditions of Approval and applicable Zoning Ordinance provisions. Substantial revisions will require review and approval by the Planning Commission.
5. The applicant and property owner shall sign an Affidavit of Acceptance form and submit the document to the Planning Division within 30 days of receipt of the Planning Commission Resolution.
6. It is further made a condition of this approval that if any condition is violated or if any law, statute or ordinance is violated, this permit may be revoked by the Planning Commission or City Council, as may be applicable; provided the applicant has been given written notice to cease such violation and has failed to do so for a period of thirty days.
7. The applicant shall submit two complete sets of plans that conform to all the Conditions of Approval to be reviewed and approved by the Planning Division prior to the issuance of a building permit.



8. The operator of the proposed facility, and/or the owner of the premises upon which it is located, shall promptly notify the Planning Division in writing in the event that the use of the facility is discontinued for any reason. In the event the facility is discontinued or abandoned for a period of more than 180 days, then the owner(s) and/or operator(s) shall promptly remove the facility, repair any damage to the premises caused by such removal, and restore the premises as appropriate so as to be in conformance with applicable zoning codes at the owner's and/or operator's expense. All such removal, repair and restoration shall be completed within 90 days after the use is discontinued or abandoned, and shall be performed in accordance with all applicable health and safety requirements.
9. Applicant shall defend, indemnify and hold harmless the City of Carson, its agents, officers, or employees from any claims, damages, action, or proceeding against the City or its agents, officers, or employees to attack, set aside, void or annul, and approval of the City, its advisory agencies, appeal boards, or legislative body concerning DOR No. 1514-13 and CUP No. 945-13. The City will promptly notify the Applicant of any such claim, action, or proceeding against the City and the Applicant will either undertake defense of the matter and pay the City's associated legal costs or will advance funds to pay for defense of the matter by the City Attorney. The City will cooperate fully in the defense. Notwithstanding the foregoing, the City retains the right to settle or abandon the matter without the Applicant's consent but should it do so, the City shall waive the indemnification herein, except, the City's decision to settle or abandon a matter following an adverse judgment or failure to appeal, shall not cause a waiver of the indemnification rights herein.

## PLANNING

### *Prior to Issuance of Building Permits*

10. All parking areas and driveways shall remain clear and maintained. No encroachment into parking areas and/or driveways shall be permitted.
11. The display of any sign or any other graphic on a wireless telecommunications facility or on its screening is prohibited, except for signs for health, safety, and welfare purposes, which is required to be posted in case of an emergency. Emergency signs shall be visibly posted at the facility and shall include contact information including the phone number of the utility provider.
12. All exterior lighting shall be provided in compliance with the standards as provided for in 9137.1 Exterior Lighting of the Zoning Ordinance.
13. All wireless telecommunication facilities shall be constructed and operated in such a manner as to meet the requirements of the Noise Ordinance.
14. Backup generators shall only be operated during power outages and for testing and maintenance purposes. No backup generator shall be utilized for longer than



seventy-two (72) hours without prior approval of the Engineering Division or Planning Division.

15. Future modifications to the approved development plans, including the installation of additional panels and equipment cabinetry, shall be subject to Planning Division review and approval. If deemed to be a major modification, the Planning Commission shall be the approval authority.
16. A faithful performance bond shall be submitted to ensure compliance with City codes and standards, and the removal of abandoned antennas or facilities.
17. The trees surrounding the facility shall not be removed at any time. Throughout the life of the project, all removed, damaged, diseased or dead landscaping shall be replaced to the satisfaction of the Planning Division. The applicant shall obtain a letter from the property owner acknowledging this condition and providing permission to the applicant to regarding the said landscpaing.

*Prior to Issuance of Final*

18. All Conditions of Approval shall be complied with.

**BUILDING AND SAFETY**

19. Submit for plan check, obtain all building permits and have a final inspection conducted for proposed project.

**FIRE DEPARTMENT - COUNTY OF LOS ANGELES**

20. Prior to the issuance of building permits, the Los Angeles County Fire Department will ensure adequate water supply for fire protection is provided.

**ENGINEERING SERVICES**

21. Any city-owned improvement damaged during the construction of the proposed project shall be removed and reconstructed per City Standard Plan and to the satisfaction of the City Engineer prior to the issuance of a building permit.
22. Prior to the issuance of a Building Permit, Proof of Worker's Compensation and Liability Insurance must be on file with the Los Angeles County Building and Safety Department.

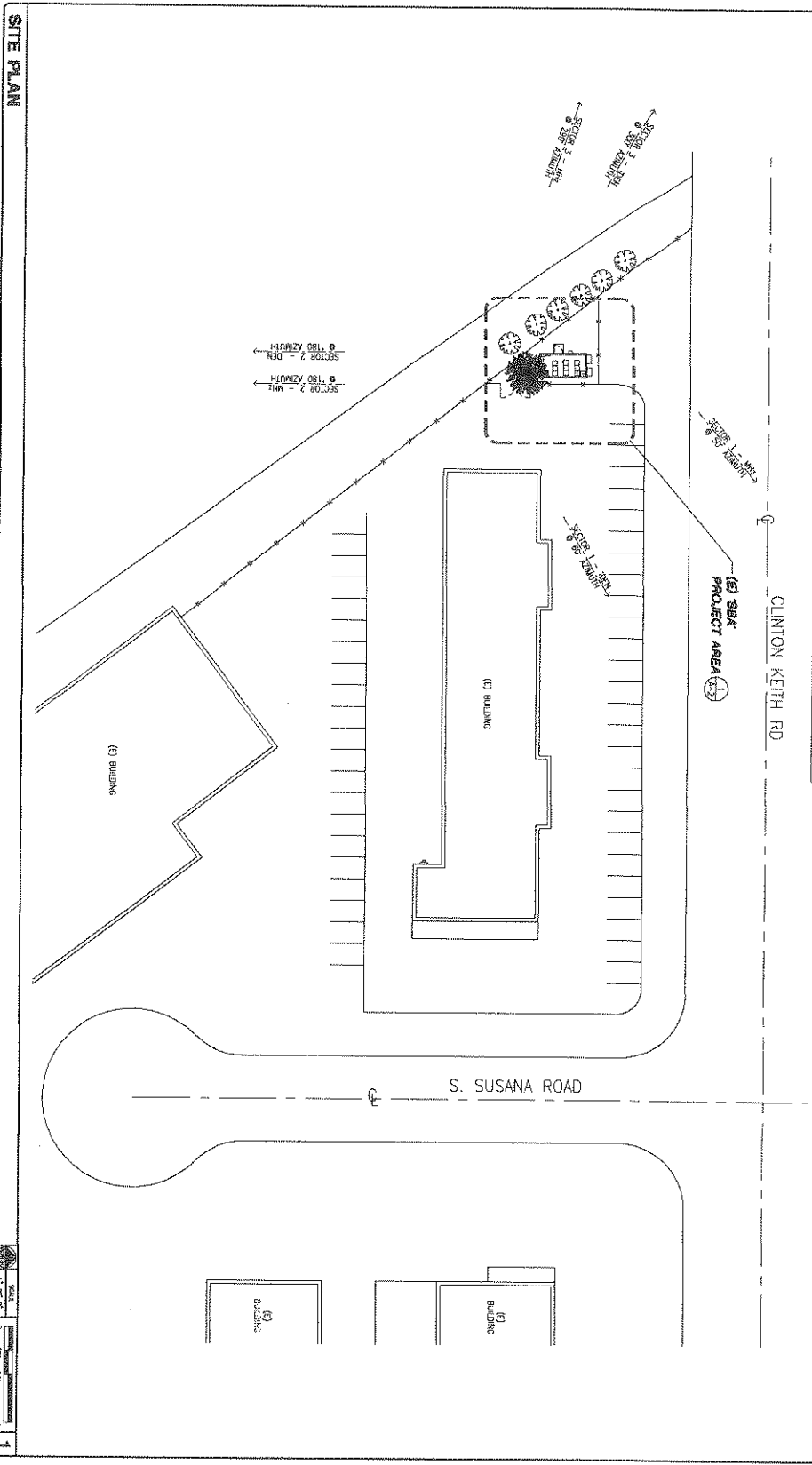
**BUSINESS LICENSE DEPARTMENT - CITY OF CARSON**

23. Per section 6310 of the Carson Municipal Code, all parties involved in the upgrade to the telecommunication facility, including but not limited to contractors and subcontractors, will need to obtain a City Business License.





SECTION NUMBER	SECTION DIMENSION	RAD CENTER	NUMBER OF ANTENNAS	ANTENNA MODEL	ELECTRIC TILT	Mechanical Tilt	REN	FIBER OPTIC MODEL	FIBER OPTIC LENGTH (±5')
1	50'	44.25'	1	RFS APVS9P7B-C-A20	-8	0	2	(1) HYBRIFLEX 1-1/2" H8114-1-DBU4-MSU	60'
2	180'	44.25'	1	RFS APVS9P7B-C-A20	-6	0	2	(1) HYBRIFLEX 1-1/2" H8114-1-DBU4-MSU	60'
3	1900'	44.25'	1	RFS APVS9P7B-C-A20	-1	0	2	(1) HYBRIFLEX 1-1/2" H8114-1-DBU4-MSU	60'
4	N/A								



**DATE**

**REVISION**

**APPROVED BY**

**SHEET NUMBER**

**SBA**

**CONSTRUCTION**

**core**

**DEVELOPMENT SERVICES**

**ARCHITECTS**

11111 S. SUSANA ROAD  
LOS ANGELES, CA 90048

**APPROVALS**

APPROVED BY	DATE

**SITE ADDRESS**

20411 SOUTH SUSANA ROAD  
OAKSON, CALIFORNIA 90870  
LOS ANGELES COUNTY

**SHEET TITLE**

**SITE PLAN**

**PROJECT NUMBER**

**SBA CA45438--A**

**DEL AMO**

**DATE**

**DESIGNED BY**

**CHECKED BY**

**DATE**

**JH**

**APP**

**06/24/2013**

**A-1**

**SBA**

**CONSTRUCTION**

**core**

**DEVELOPMENT SERVICES**

**ARCHITECTS**

11111 S. SUSANA ROAD  
LOS ANGELES, CA 90048

**APPROVALS**

APPROVED BY	DATE

**SITE ADDRESS**

20411 SOUTH SUSANA ROAD  
OAKSON, CALIFORNIA 90870  
LOS ANGELES COUNTY

**SHEET TITLE**

**SITE PLAN**

**PROJECT NUMBER**

**SBA CA45438--A**

**DEL AMO**

**DATE**

**DESIGNED BY**

**CHECKED BY**

**DATE**

**JH**

**APP**

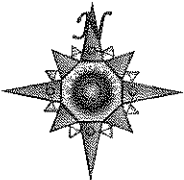
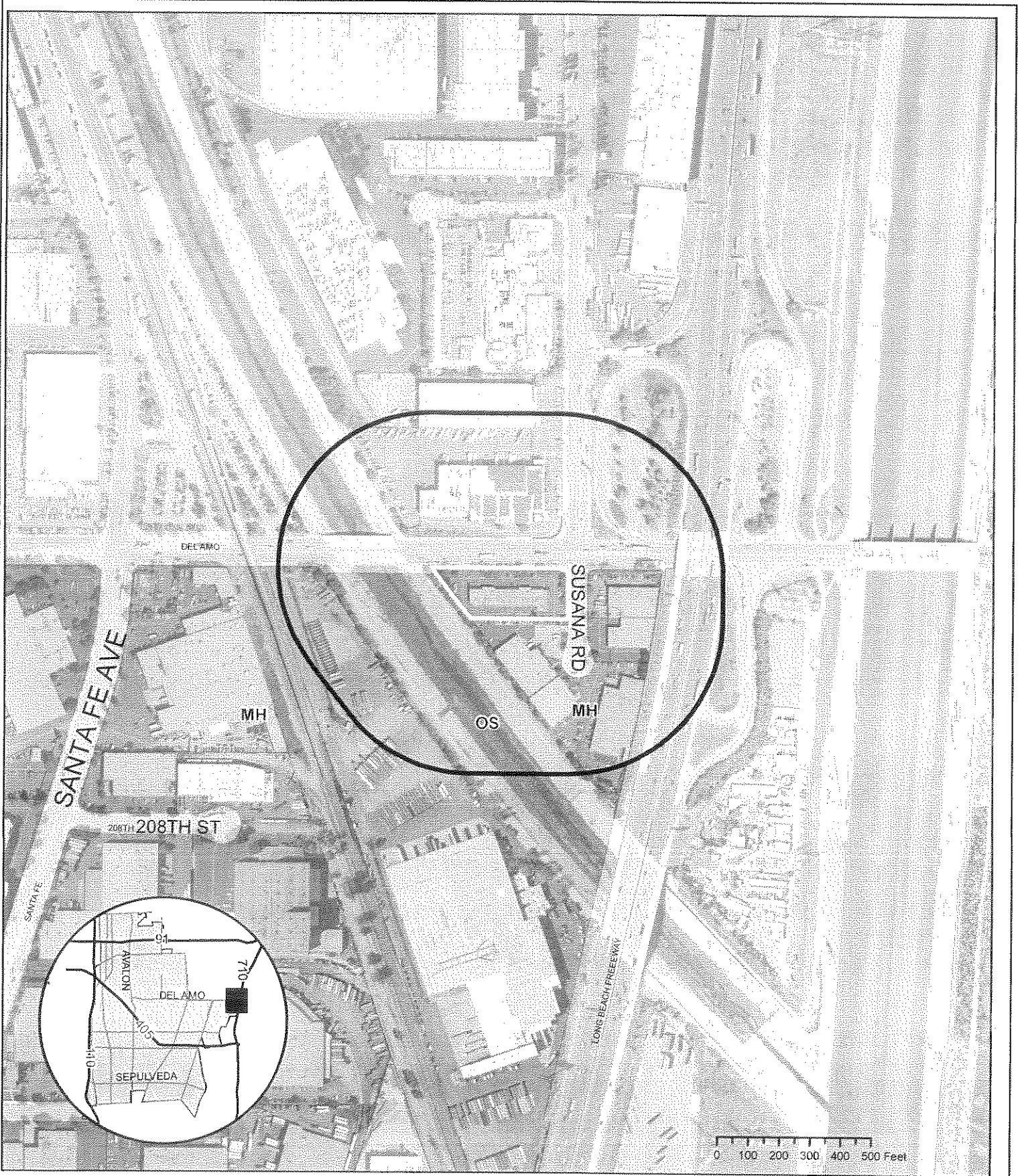
**06/24/2013**











*City of Carson*  
*500 Foot Radius Map*  
*20411 Susana Road*

EXHIBIT NO. U 3

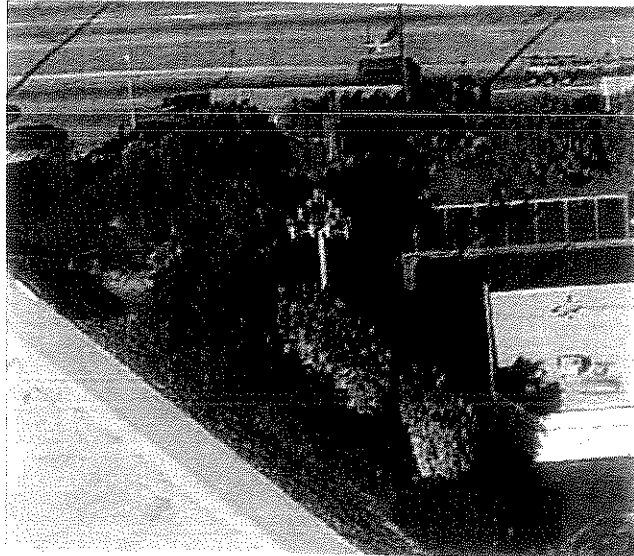
18

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

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Site No. LA73XC318  
CA6299 Del Amo  
20411 South Susana Road  
Long Beach, California 90810  
Los Angeles County  
33.846405; -118.208345 NAD83  
Monopole

EBI Project No. 62126422  
November 6, 2012

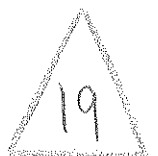


Prepared for:  
Sprint Nextel  
c/o Alcatel-Lucent  
26801 West Agoura Road  
Calabasas, CA, 91301

Prepared by:

 **EBI Consulting**  
environmental | engineering | due diligence

EXHIBIT NO. 04



## EXECUTIVE SUMMARY

### Purpose of Report

EnviroBusiness Inc. (dba EBI Consulting) has been contracted by Sprint Nextel to conduct radio frequency electromagnetic (RF-EME) modeling for Sprint Site LA73XC318 located at 20411 South Susana Road in Long Beach, California to determine RF-EME exposure levels from existing and proposed Sprint wireless communications equipment at this site. As described in greater detail in Section 11.0 of this report, the Federal Communications Commission (FCC) has developed Maximum Permissible Exposure (MPE) Limits for general public exposures and occupational exposures. This report summarizes the results of RF-EME modeling in relation to relevant FCC RF-EME compliance standards for limiting human exposure to RF-EME fields.

This report contains a detailed summary of the RF-EME analysis for the site.

This document addresses the compliance of Sprint's proposed transmitting facilities at this site.



#### **1.0 LOCATION OF ALL EXISTING ANTENNAS AND FACILITIES AND EXISTING RF LEVELS**

This project involves the removal of nine (9) existing antennas and the installation of three (3) proposed Sprint wireless telecommunication antennas on a monopole located at 20411 South Susana Road in Long Beach, California. There are three Sectors (A, B, and C) proposed to be replaced at the site, with one (1) antenna to be re-installed per sector. There are three (3) existing IDEN antennas, one antenna per sector, that are to be relocated on the monopole.

Based on drawings and aerial photography review, there were no collocated carriers on the monopole.

#### **2.0 LOCATION OR ALL APPROVED (BUT NOT INSTALLED) ANTENNAS AND FACILITIES AND EXPECTED RF LEVELS FROM THE APPROVED FACILITIES**

There are no antennas or facilities that are approved and not installed based on information provided to EBI and Sprint at the time of this report.

#### **3.0 NUMBER AND TYPES OF WTS WITHIN 100 FEET OF THE PROPOSED SITE AND ESTIMATES OF CUMULATIVE EMR EMISSIONS AT THE PROPOSED SITE**

With the exception of the antennas mentioned in Section 1.0, there are no other Wireless Telecommunication Service (WTS) sites observed within 100 feet of the proposed site.

#### **4.0 LOCATION AND NUMBER OF THE SPRINT ANTENNAS AND BACK-UP FACILITIES PER BUILDING AND NUMBER AND LOCATION OF OTHER TELECOMMUNICATION FACILITIES ON THE PROPERTY**

Sprint proposes the removal of nine (9) existing antennas and the installation of three (3) proposed Sprint wireless telecommunication antennas on a monopole located at 20411 South Susana Road in Long Beach, California. There are three Sectors (A, B, and C) proposed to be replaced at the site, with one (1) antenna to be re-installed in addition to one (1) existing IDEN antenna per sector. In each sector, there is proposed to be two antennas transmitting in the 1900 MHz frequency range. The Sector A antennas will be oriented 50° and 60° from true north. The Sector B antennas will be oriented 180° from true north. The Sector C antennas will be oriented 290° and 300° from true north. The bottoms of the IDEN antennas will be 42 feet above ground level. The bottoms of the other antennas will be 41.25 feet above ground level.

Based on drawings and aerial photography review, there were no collocated carriers on the monopole.

#### **5.0 POWER RATING FOR ALL EXISTING AND PROPOSED BACKUP EQUIPMENT SUBJECT TO THE APPLICATION**

The operating power for modeling purposes was assumed to be 20 Watts per transmitter and six (6) transmitters operating at the 1900 MHz frequency. The existing antennas are not included within this count.

#### **6.0 TOTAL NUMBER OF WATTS PER INSTALLATION AND THE TOTAL NUMBER OF WATTS FOR ALL INSTALLATIONS ON THE BUILDING**

The effective radiated power (ERP) for the 1900 MHz transmitters combined on site is 6,215 Watts. The existing antennas are not included within this count.



#### **7.0 PREFERRED METHOD OF ATTACHMENT OF PROPOSED ANTENNA WITH PLOT OR ROOF PLAN INCLUDING: DIRECTIONALITY OF ANTENNAS, HEIGHT OF ANTENNAS ABOVE NEAREST WALKING SURFACE, DISCUSS NEARBY INHABITED BUILDINGS**

Based on the information provided to EBI, the information indicates that the proposed antennas are to be rack mounted atop the existing monopole, operating in the directions, frequencies, and heights mentioned in section 4.0 above. There is a large commercial building east of the site; a river located west of the site; East Del Amo Boulevard located north of the site beyond which are commercial properties; and commercial properties located south of the site.

#### **8.0 ESTIMATED AMBIENT RADIO FREQUENCY FIELDS FOR THE PROPOSED SITE**

Based on worst-case predictive modeling, there are no modeled exposures on any accessible ground-level walking/working surface related to proposed equipment in the area that exceed the FCC's occupational and general public exposure limits at this site. As such, the proposed Sprint project is in compliance with FCC rules and regulations. At the nearest walking/working surfaces to the proposed Sprint antennas, the maximum power density is 3.40 percent of the FCC's general public limit (0.68 percent of the FCC's occupational limit). The inputs used in the modeling are summarized in the RoofView® export file presented in Appendix B.

#### **9.0 SIGNAGE AT THE FACILITY IDENTIFYING ALL WTS EQUIPMENT AND SAFETY PRECAUTIONS FOR PEOPLE NEARING THE EQUIPMENT AS MAY BE REQUIRED BY THE APPLICABLE FCC ADOPTED STANDARDS (DISCUSS SIGNAGE FOR THOSE WHO SPEAK LANGUAGES OTHER THAN ENGLISH)**

Signs are the primary means for control of access to areas where RF exposure levels may potentially exceed the MPE. It is recommended that signage be installed for the new antennas making people aware of the antennas locations. There are no exposures above the FCC limits in front of the proposed antennas and therefore barriers are not recommended.

Additionally, there are areas where workers elevated above the ground may be exposed to power densities greater than the general population and occupational limits. Workers and the general public should be informed about the presence and locations of antennas and their associated fields.

Access to this site is accomplished via a gate in the fence surrounding the tower. Workers must be elevated to antenna level to access them, so these antennas are not accessible to the general public.

#### **10.0 STATEMENT ON WHO PRODUCED THIS REPORT AND QUALIFICATIONS**

Please see the certifications attached in Appendix A below.

#### **11.0 FEDERAL COMMUNICATIONS COMMISSION (FCC) REQUIREMENTS**

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



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

**Occupational/controlled exposure limits** apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general public/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

**General public/uncontrolled exposure limits** apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment-related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

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

The FCC's MPEs are measured in terms of power (mW) over a unit surface area (cm<sup>2</sup>). Known as the power density, the FCC has established an occupational MPE of 5 milliwatts per square centimeter (mW/cm<sup>2</sup>) and an uncontrolled MPE of 1 mW/cm<sup>2</sup> for equipment operating in the 1900 MHz frequency range. For the Sprint equipment operating at 800 MHz, the FCC's occupational MPE is 2.66 mW/cm<sup>2</sup> and an uncontrolled MPE of 0.53 mW/cm<sup>2</sup>. These limits are considered protective of these populations.

Table I: Limits for Maximum Permissible Exposure (MPE)				
(A) Limits for Occupational/Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time [E] <sup>2</sup> , [H] <sup>2</sup> , or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f <sup>2</sup> )*	6
30-300	61.4	0.163	1.0	6
300-1,500	--	--	f/300	6
1,500-100,000	--	--	5	6
(B) Limits for General Public/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time [E] <sup>2</sup> , [H] <sup>2</sup> , or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f <sup>2</sup> )*	30
30-300	27.5	0.073	0.2	30
300-1,500	--	--	f/1,500	30

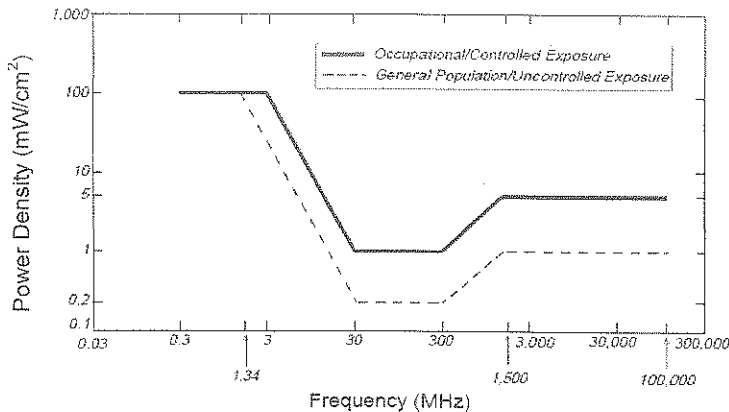


Table I: Limits for Maximum Permissible Exposure (MPE)				
(A) Limits for Occupational/Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time [E] <sup>2</sup> , [H] <sup>2</sup> , or S (minutes)
1,500-100,000	--	--	1.0	30

f = Frequency in (MHz)

\* Plane-wave equivalent power density

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



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

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

MPE limits are designed to provide a substantial margin of safety. These limits apply for continuous exposures and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health.

Personal Communication (PCS) facilities used by Sprint in this area operate within a frequency range of 800-1900 MHz. Facilities typically consist of: 1) electronic transceivers (the radios or cabinets) connected to wired telephone lines; and 2) antennas that send the wireless signals created by the transceivers to be received by individual subscriber units (PCS telephones). Transceivers are typically connected to antennas by coaxial cables.

Because of the short wavelength of PCS services, the antennas require line-of-site paths for good propagation, and are typically installed above ground level. Antennas are constructed to concentrate energy towards the horizon, with as little energy as possible scattered towards the ground or the sky. This design, combined with the low power of PCS facilities, generally results in no possibility for



exposure to approach Maximum Permissible Exposure (MPE) levels, with the exception of areas directly in front of the antennas.

### Statement of Compliance

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

### 12.0 LIMITATIONS

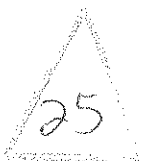
This report was prepared for the use of Sprint Nextel. It was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same locale under like circumstances. The conclusions provided by EBI are based solely on the information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

### 13.0 SUMMARY AND CONCLUSIONS

EBI has prepared this Radiofrequency Emissions Compliance Report for the proposed Sprint telecommunications equipment at the site located at 20411 South Susana Road in Long Beach, California.

EBI has conducted theoretical modeling to estimate the worst-case power density from Sprint antennas to document potential MPE levels at this location and ensure that site control measures are adequate to meet FCC and OSHA requirements. As presented in the preceding sections, based on worst-case predictive modeling, there are no modeled exposures on any accessible ground-level walking/working surface related to proposed equipment in the area that exceed the FCC's occupational and general public exposure limits at this site. As such, the proposed Sprint project is in compliance with FCC rules and regulations.

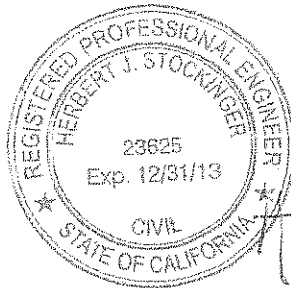
Signage is recommended at the site as presented in Section 9.0. Posting of the signage brings the site into compliance with FCC rules and regulations.



## Appendix A

### Certifications

Reviewed and Approved by:



A handwritten signature in black ink that reads "H. Stockinger".

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Herbert J. Stockinger, PE  
Senior Engineer

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

## Preparer Certification

I, Mary Hubbard, state that:

- I am an employee of EnviroBusiness Inc. (d/b/a EBI Consulting), which provides RF-EME safety and compliance services to the wireless communications industry.
- I have successfully completed RF-EME safety training, and I am aware of the potential hazards from RF-EME and would be classified "occupational" under the FCC regulations.
- I am familiar with the FCC rules and regulations as well as OSHA regulations both in general and as they apply to RF-EME exposure.
- I have reviewed the data provided by the client and incorporated it into this Site Compliance Report such that the information contained in this report is true and accurate to the best of my knowledge.

*M. Hubbard*

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**Appendix B**  
**Roofview® Export File**

Sprint

Roof Max Y 170 Map Max X 180 Map Max Y 170 Y Offset 10 X Offset 10 Number of Areas 10 Envelope 1 \$US41:\$FX\$210 List Of Areas \$US41:\$FX\$210

Sprint Settings Data

Standard Method 4 Uptime 2 160 Map Max X 180 Map Max Y 170 Y Offset 10 X Offset 10 Number of Areas 10 Envelope 1 \$US41:\$FX\$210

Sprint Antenna Data

ID	Name	Freq (MHz)	Uptime	Scale Factor	Low Thr	Low Color	Mid Thr	Mid Color	Hi Thr	Hi Color	Over Color	Ap Ht	Ap Ht Mult	Ap Ht Method	Type	(ft)	dBd	Gain	SWidth	Profile	Uptime	Flag	ON
SPT A1	Sprint	1900	1900	3	1	100	1	500	4	5000	2	3	1.5	1	18	41.25	5	14.9	80:50	1900	ON*	ON*	
SPT A2	Sprint IDEN	1900	1900	3	1	100	1	500	4	5000	2	3	1.5	1	20	42	4.5	16	65:60	1900	ON*	ON*	
SPT B1	Sprint	1900	1900	3	6	10	1/2	LDF	0.5	10.02374	Unknown	Unknown	Unknown	Unknown	9	42	4.5	14.9	80:180	1900	ON*	ON*	
SPT B2	Sprint IDEN	1900	1900	3	6	10	1/2	LDF	0.5	10.02374	Unknown	Unknown	Unknown	Unknown	9	42	4.5	16	65:180	1900	ON*	ON*	
SPT C1	Sprint	1900	1900	3	6	10	1/2	LDF	0.5	10.02374	Unknown	Unknown	Unknown	Unknown	7	10	41.25	6	15.9	65:290	1900	ON*	ON*
SPT C2	Sprint IDEN	1900	1900	3	6	10	1/2	LDF	0.5	10.02374	Unknown	Unknown	Unknown	Unknown	12	18	42	4.5	16	65:300	1900	ON*	ON*

Sprint Symbols

Map Marker	Roof X	Roof Y	Map Label	Description (notes for this table only)
Sym	5	35	AC Unit	Sample symbols
Sym	14	5	Roof Access	
Sym	45	5	AC Unit	
Sym	45	20	Ladder	



VICKSBURG AVE.

GAMMA  
350° AZIMUTH

(E) PARKING  
LOT AREA

(E) PROPERTY LINE

(E) DRIVEWAY

(E) PROPERTY LINE

(E) BUILDING  
ROOFTOP

**VERIZON WIRELESS'  
PROJECT AREA**

(E) PROPERTY LINE

(E) THREE (3)  
STORY BUILDING

(E) PROPERTY LINE

BETA  
230° AZIMUTH

ALPHA  
110° AZIMUTH

CENTURY BLVD.

**PLOT PLAN**

