



## TELECOMMUNICATIONS COMMITTEE

The Telecommunications Committee meets on the second Tuesday of each month at 9:00 a.m. in the West Annex Commission Meeting Room. All meetings are open to the public.

Those wishing to speak on any matter on the agenda are asked to complete a "Speaker Information" card (available at the meeting) and deposit it in the box at the podium before leaving the meeting.

All persons interested in the above matter are requested to be present at the meeting or to submit their written approval or disapproval to the Telecommunications Committee, Community Development Department, City Hall, 3031 Torrance Boulevard, Torrance, CA 90503.

Actions of the Community Development Director or the Telecommunications Committee may be appealed by the applicant, City Council, City Manager, or other interested parties by filing a written notice of appeal along with the required appeal fee with the City Clerk within 15 days of the action.

For further information, contact the PLANNING DIVISION of the Community Development Department at (310) 618-5990.

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Community Development Department at (310) 618-5990. If you need a special hearing device to participate in this meeting, please contact the City Clerks office at (310) 618-2870. Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting. [28 CFR 35.102-35.104 ADA Title II]

### HOURS OF OPERATION

Monday through Friday from  
7:30 a.m. to 5:30 p.m.

Offices are closed alternate Fridays.

City Hall will be closed:

Friday, January 18, 2019

Monday, January 21, 2019 (Martin Luther King  
Day)

Friday, February 1, 2019

# TELECOMMUNICATIONS COMMITTEE

WEST ANNEX COMMISSION MEETING ROOM  
CITY HALL, 3031 TORRANCE BOULEVARD  
TORRANCE, CALIFORNIA 90503

TUESDAY, JANUARY 8, 2019  
9:00 A.M.

## AGENDA

1. **CALL TO ORDER**

2. **FLAG SALUTE**

3. **ROLL CALL**

4. **REPORT ON POSTING OF AGENDA**

The agenda was posted on the Public Notice Board at 3031 Torrance Boulevard on Thursday, January 3, 2019.

5. **APPROVAL OF MINUTES: NONE**

6. **AGENDA ITEMS**

A. **WTC17-00026:** Petition of **J5 INFRASTRUCTURE PARTNERS**

for approval of a Telecom Permit to allow the installation of a small cell antenna and support equipment attached to a replacement concrete street light pole (Pole ID #2246356E) in the public right-of-way adjacent to the 5600 Block of Del Amo Boulevard in the R-1 Zone. This project is Categorically Exempt from CEQA per Guidelines Section 15301 – Existing Facilities.

B. **WTC17-00027:** Petition of **J5 INFRASTRUCTURE PARTNERS**

for approval of a Telecom Permit to allow the installation of a small cell antenna and support equipment attached to a replacement concrete street light pole (Pole ID #4455983E) in the public right-of-way adjacent to the northwest corner of Artesia Boulevard and Glenburn Avenue in the R-1 Zone. This project is Categorically Exempt from CEQA per Guidelines Section 15301 – Existing Facilities.

C. **WTC17-00034:** Petition of **J5 INFRASTRUCTURE PARTNERS**

for approval of a Telecom Permit to allow the installation of a small cell antenna and support equipment attached to a replacement concrete street light pole (Pole ID #1300370E) in the public right-of-way adjacent to 18514 Prairie Avenue in the R-1 Zone. This project is Categorically Exempt from CEQA per Guidelines Section 15301 – Existing Facilities.

**D. WTC18-00005:** Petition of **CROWN CASTLE NG WEST, LLC** for approval of a Telecom Permit to allow the installation of a small cell antenna and support equipment attached to a replacement concrete street light pole (Pole ID #4171527E) in the public right-of-way adjacent to 2720 W. Carson Street in the R-2 Zone. This project is Categorically Exempt from CEQA per Guidelines Section 15301 – Existing Facilities.

**E. WTC18-00010:** Petition of **CROWN CASTLE NG WEST, LLC** for approval of a Telecom Permit to allow the installation of a small cell antenna and support equipment attached to a replacement concrete street light pole (Pole ID #2246342E) in the public right-of-way adjacent to 3401 W. 229th Place in the R-1 Zone. This project is Categorically Exempt from CEQA per Guidelines Section 15301 – Existing Facilities.

**7. ORALS**

**8. ADJOURNMENT**

If you challenge any of the above matters in court, you may be limited to raising only those issues you or someone else raised at the public meeting described in this notice, or in written correspondence delivered to the Community Development Department or the office of the City Clerk, prior to the public meeting and further, by the terms of Resolution No. 88-19, you may be limited to ninety (90) days in which to commence such legal action pursuant to Section 1094.6 of the Code of Civil Procedure.

DATE: January 3, 2019  
TO: Telecommunications Committee  
FROM: Planning Division  
SUBJECT: **WIRELESS TELECOM FACILITY (WTC17-00026) – LAURA CASTRO (J5 INFRASTRUCTURE PARTNERS)**

A request for approval of a Telecom Permit to allow the installation of a new wireless small cell antenna and support equipment attached to a replacement concrete street light pole (Pole ID #2246356E) in the public right-of-way adjacent to the 5600 Block of Del Amo Boulevard in the R-1 Zone.

Applicant: Laura Castro (J5 Infrastructure Partners)  
Case No: WTC17-00026  
Location: ROW 5600 Block of Del Amo Boulevard  
Zoning: R-1: Single Family Residential

The subject request is for the installation of a wireless site in the public right-of-way adjacent to the 5600 Block of Del Amo Boulevard in the R-1 Zone. Per Torrance Municipal Code 92.39.060(1), such requests within the public right-of-way adjacent to residentially zoned properties are reviewed by the Telecommunications Committee and requires notification to property owners within 300 feet of the proposed location. In compliance with prior City Council directives, on December 28, 2018, staff mailed notices to property owners within 500' radius and posted a notification to the subject pole. (Attachment #1).

The proposal involves the removal and replacement of an existing 29-foot tall SCE light pole with a 29-foot concrete light pole with a 2-foot tall antenna and shroud cap. The new light pole will provide an omni-directional antenna mounted to an antenna standoff bracket at the top of the pole within a canister enclosure, 2 remote radio heads (RRH) and UE relay within an MMS shroud enclosure mounted to the sides of the pole like a backpack, and will be powered by a ground-mounted meter pedestal that is adjacent to the new pole with all cables to be inside the pole. Staff notes that the replacement pole is proposed to be installed between a minimum of 3 feet and a maximum of 4 feet to the west from the original existing light standard location.

The overall height of the replacement pole and antenna is 32-feet 5-inches. The maximum overall diameter is 11.8-inches. The MMS shroud enclosures measure 2-feet 11-inches in height, 1-foot 3 ½ -inches in width, and 9-inches in depth and will be mounted starting at 26-feet 6-inches above the ground. Also, two radio frequency (RF) signage are proposed to be mounted on the pole starting at 21-feet, 5 inches above the ground.

The purpose of the proposed site, according to the applicant, is to “increase capacity by increased usage and demand of wireless data and technology in the area surrounding the project site.” The target area described in the RF Coverage maps is the surrounding residential area along Del Amo Boulevard and Redbeam Avenue. The submitted information

indicates that the proposed antenna will be transmitting omnidirectionally in the 1900-2100 MHz Frequency range.

The application was reviewed by the City's telecom consultant, Telecom Law Firm PC, for technical and regulatory issues and has included copies of the technical memorandums as Attachment #2. Staff notes that the consultant is recommending an alternative site. The alternative site would be located on the northeast corner of Del Amo Boulevard and Redbeam Avenue, abutting Sunnyglen Park. The alternative site is located within the PU (Public Use) Zone and would be the least intrusive location and lies outside of the residential zone. The applicant has shared with staff that the recommended alternative location is not technically feasible (Attachment #3). The consultant has also recommended that the proposed meter pedestal not be approved but have a wireless technology rate ("WTR") power connection instead. Staff is in agreement with the consultant's power connection recommendation and has included a condition to that effect, if approved.

The applicant has submitted an RF compliance report (included as part of Attachment #4) that evaluates the proposed facility's planned compliance with FCC Guidelines. Staff notes that the City cannot impose additional requirements with respect to FCC requirements with the exception of requesting verification that the site is operating in compliance. If approved, per TMC92.39.070 a radio frequency and compliance radiation report is required to be submitted within 30 days after installation of the facility.

As previously mentioned, the proposal falls into a location that requires a special review by the Telecommunication Committee as it is in the right-of-way adjacent to a residential district.

In order to recommend Approval of this Telecom Permit, the following findings must be made per 92.39.040(b)(3):

- i. Other locations that do not require special approval under this Section 92.39.040(B) are either not available or not feasible; and
- ii. Establishment of the facility at the requested location is necessary to provide service; and
- iii. Lack of such a facility would result in a prohibition of service; and

Staff notes that the proposal meets the first finding as there are no other tall non-residential structures in the vicinity which may lend themselves to a small cell installation that is on the prioritized location per the City's code. The applicant did not provide alternative locations for this request. In the judgement of staff, however, not all of the necessary findings can be made. Per the applicant's documentation and the City's consultant confirmation, there currently is Verizon Wireless service within the coverage area and as such, establishment of the facility is not necessary to provide service and lack of this facility does not result in a prohibition of service.

Although the proposed small cell facility has been designed to provide increased capacity, under the narrow purview of the code, staff cannot make the findings per TMC92.39.040(b)(3) and recommends denial of the request. Should the Committee wish to approve the facility,

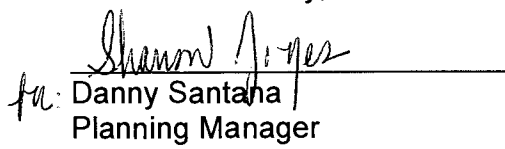
recommended conditions and code requirements have been attached for your review (Attachment #5).

**PROJECT RECOMMENDATION: DENIAL**

Prepared by,

  
\_\_\_\_\_  
Carlos Huizar  
Planning Assistant

Recommended by,

  
\_\_\_\_\_  
fa: Danny Santana  
Planning Manager

Attachments:

1. Notification Map and Posting
2. Telecom Law Firm Memorandums
3. Applicant Response to Alternative Site
4. Supplemental Technical Information Report and Documentation
5. Recommended Conditions and Code Requirements, if approved
6. Plans/Photo Simulations (Limited Distribution)

\_\_\_\_\_  
This request for a Telecom Permit (WTC17-00026) is \_\_\_APPROVED\_\_\_ DENIED per Ordinance No. 3561, Section 92.39.060, Satellite Antennas, of the Torrance Municipal Code, Division 9.

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Felipe Segovia  
Telecommunications Committee Chair

Decisions made by the Telecommunications Committee are appealable to the Planning Commission within 15 calendar days following the above date of approval/denial.

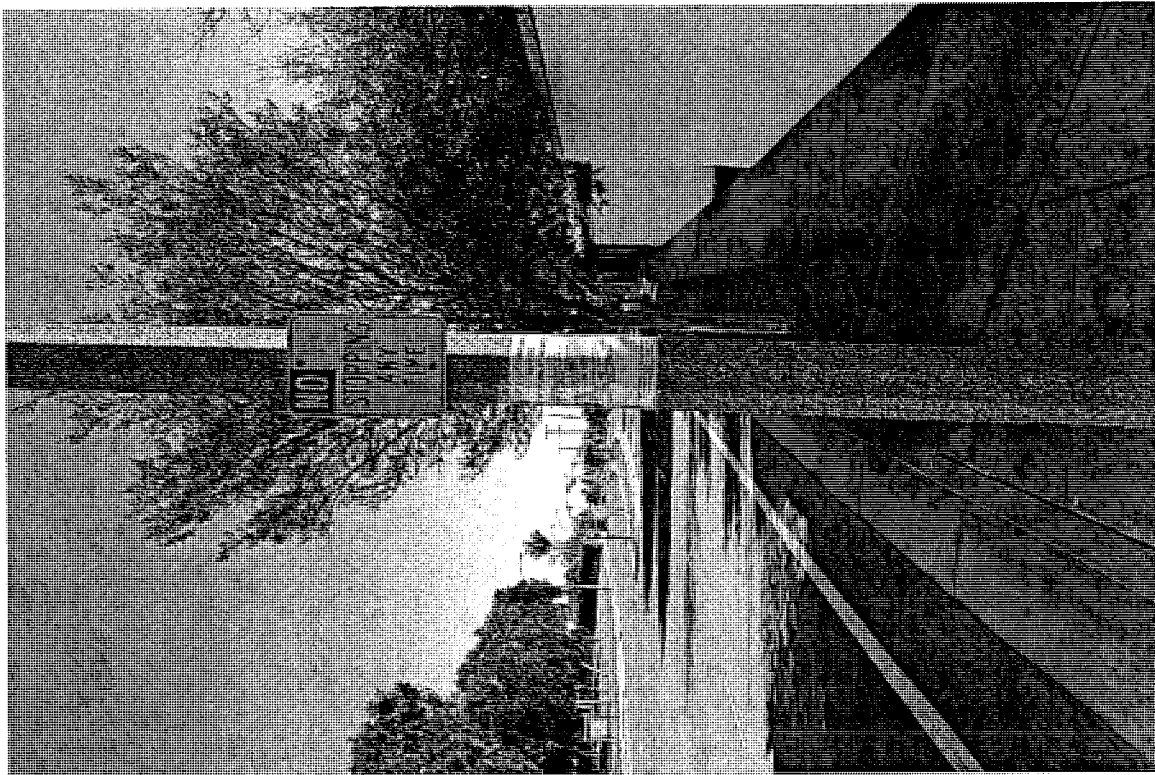


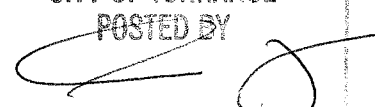
**LOCATION AND ZONING MAP**  
 IN THE PUBLIC RIGHT-OF-WAY ADJACENT TO  
 THE 5600 BLOCK OF DEL AMO BOULEVARD  
 WTC17-00026

**LEGEND**

- Notification Area
- Project Site

Feet  
 0 40 80 160



CITY OF TORRANCE  
POSTED BY  
  
DATE: 12/20/10

## WIRELESS PLANNING MEMORANDUM

**TO:** Mr. Oscar Martinez [REDACTED]  
**FROM:** Dr. Jonathan Kramer [REDACTED]  
**DATE:** December 3, 2018  
**RE:** Technical Review for New Pole-Mounted Wireless Facility in the  
Public Right-of-Way at F/O 20121 Redbeam Avenue

**APPLICANT:** J5 Infrastructure for Verizon Wireless  
**APPLICANT'S ID:** SCL Torrance 6/ VZW site 432405  
**POLE ID:** 2246356E

On November 27, 2017, J5 Infrastructure (the “**Applicant**”) on behalf of Verizon Wireless (“**Verizon**”) submitted wireless site application materials to the City of Torrance (“**City**”) (the **November 27, 2017 Submission**”).

Per the City’s request, on December 19, 2017, Telecom Law Firm, PC (“**TLF**” or “**We**”) submitted an Application Incomplete Memorandum (the “**First Memorandum**”) to the City that evaluated the Applicant’s application to operate a new wireless site in the public right-of-way (“**PROW**”) on a replacement Southern California Edison (“**SCE**”) concrete street light pole (“**Pole**”) to be located near 20121 Redbeam Avenue (Coordinates 33.848658/-118.375308). TLF notes that the Pole is on Del Amo Boulevard.

TLF’s First Memorandum concluded that the Applicant failed to submit a complete permit application that fully responded to the City’s publicly stated application requirements. TLF recommended that the City deem the Applicant’s application incomplete and issue a timely notice, which it did.

On February 6, 2018 the Applicant submitted additional materials (the “**February 6, 2018 Submission**”) which included a letter dated January 30, 2018 to the City from the Applicant (“**January 30, 2018 Applicant Letter**”) to address the deficiencies related to its initial submission.

On April 11, 2018 the Applicant submitted additional materials (the “**April 11, 2018 Submission**”). On April 18, 2018 TLF submitted another Application Incomplete Memorandum (the “**Third Memorandum**”). TLF’s Third Memorandum concluded that the Applicant again had failed to submit a complete permit application that fully responded to the City’s publicly stated application requirements. We recommended that the City deem the Applicant’s application incomplete and issue a timely notice, which it did.

On November 20, 2018 the Applicant responded with additional materials (the “**November 2018 Submission**”). Upon review, the application is now complete for the City to proceed with a substantive review of the Applicant’s proposal for compliance with applicable local, state and federal law.



Accordingly, this memorandum reviews (1) whether Section 6409(a) applies to the Applicant's project; (2) whether the project complies with the Torrance Municipal Code ("TMC"); and (3) whether the Applicant's project demonstrates planned compliance with the federal radio frequency ("RF") exposure guidelines.

Additionally, this memorandum reviews the application and related materials for technical and regulatory issues specific to wireless infrastructure. Although many technical issues implicate legal issues, the analysis and recommendations contained in this memorandum do not constitute legal advice.

## 1. Project Description

The project plans dated January 25, 2018 show that the Applicant proposes to remove the existing 29' tall light standard and install a Pole. Page A3, panels 1 and 2 of the Plans depict that the height of the Pole supporting this project is to remain at 29 feet above ground level ("AGL"); however, the total height of the vertical elevation will increase to 32'5"AGL due to the proposed installation of the antenna and the associated equipment on the Pole (This increase in height is acceptable since the total height of the structure does not exceed 35 feet AGL per the City's Municipal Code).

Additionally, the center of the Antenna is at 31'5" AGL, therefore the lowest point of the Antenna is at 30'5" AGL. On the Pole, the Applicant proposes to install a 2-foot tall pole-top canister antenna ("Antenna") and a 1'11" concealment skirt to enclose two diplexers below the Antenna. Also on the Pole, the Applicant proposes to mount two remote radio units ("RRUs") and two power supply units ("PSUs"). TLF notes that the Pole is proposed to be installed approximately 3 feet away from the original existing light standard location. The top of the RRUs are separated by 2 feet from the lowest point of the Antenna and the bottom of the RRUs are at 26'6" AGL. Also, two radio frequency ("RF") signage are proposed to be mounted on the Pole at 21'5"AGL. See Figure 1 and Figure 2 of the proposed Pole.

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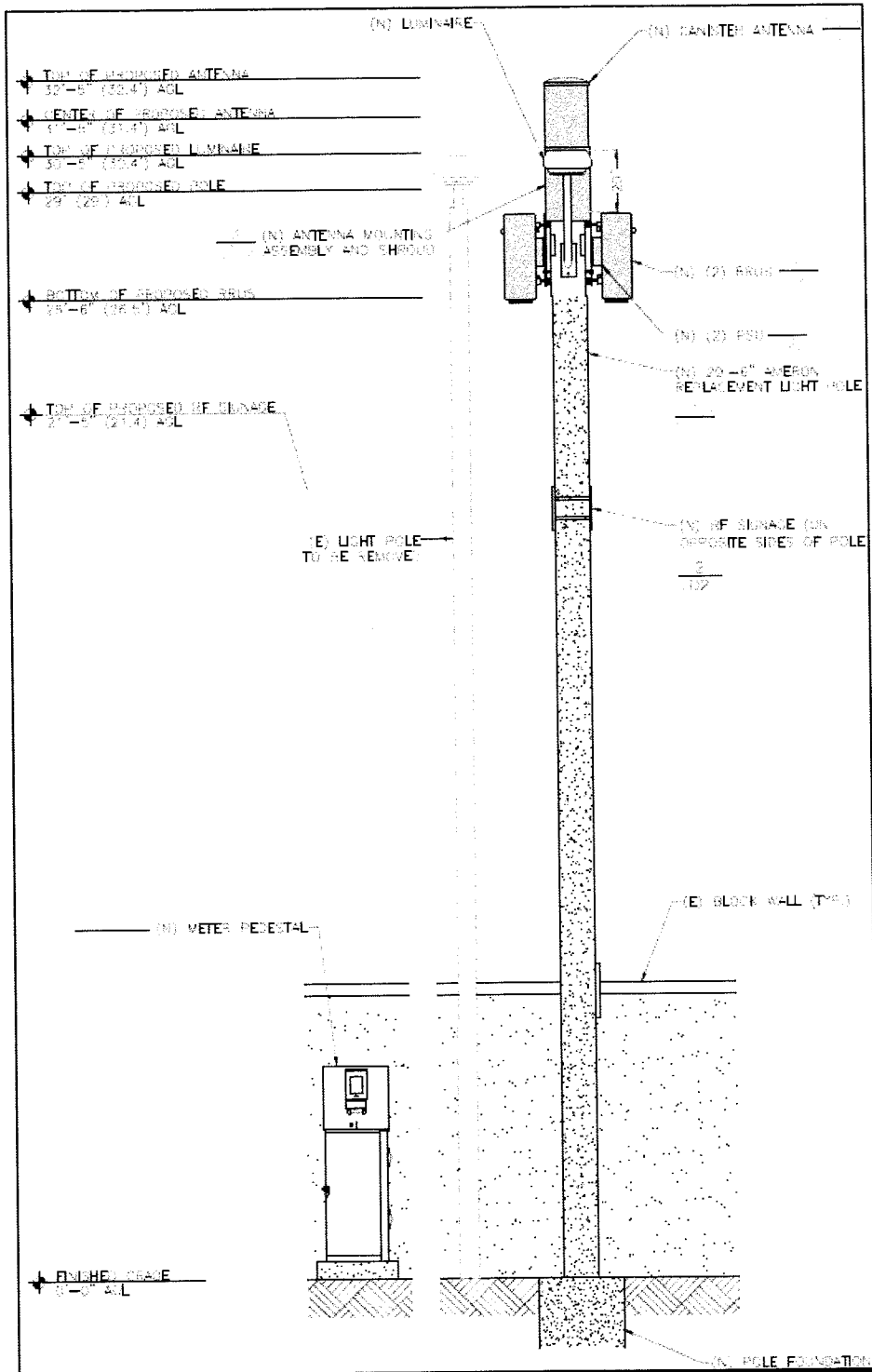
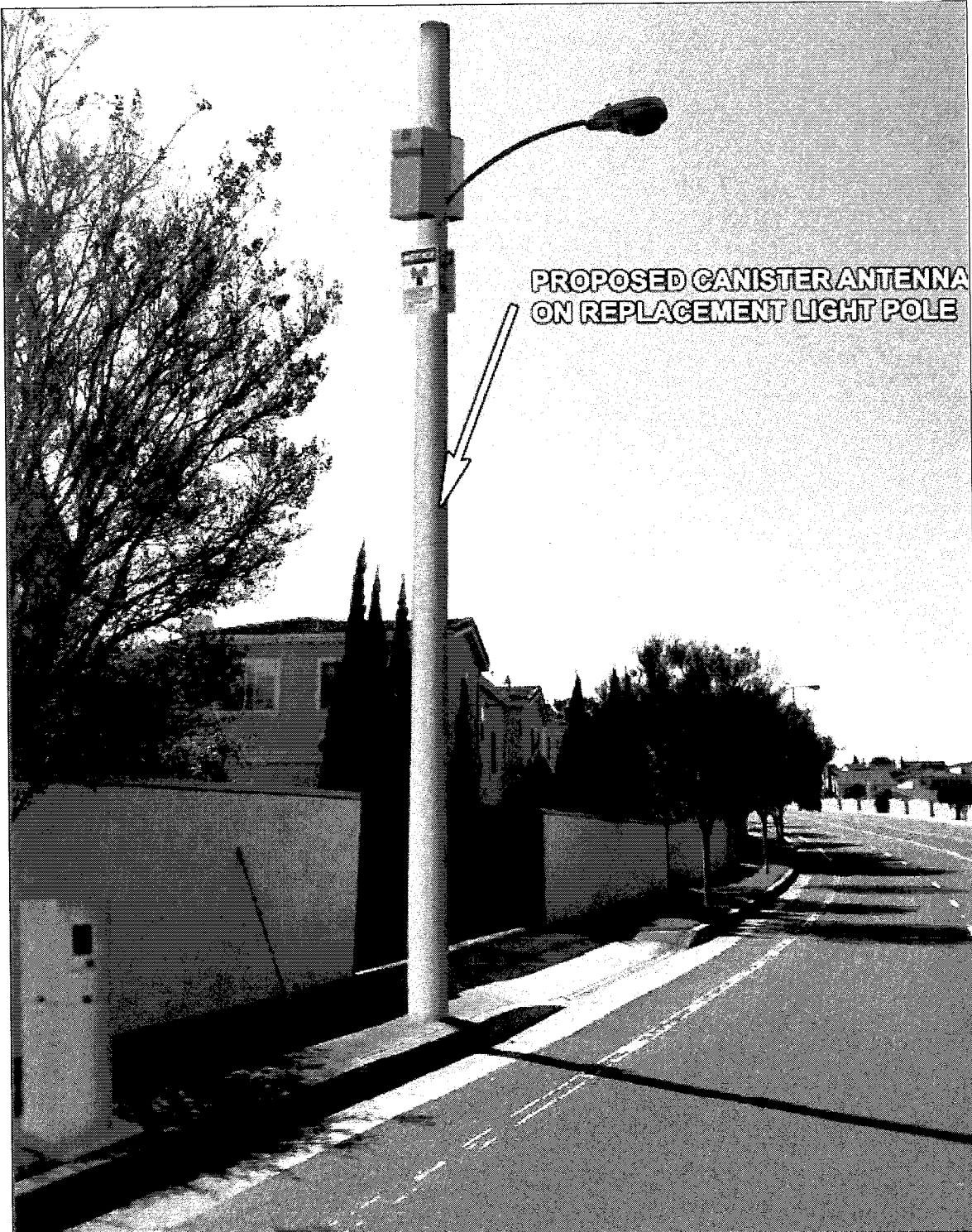


Figure 1: Proposed Antenna and associated equipment (Source: Plans Page A-3 Panel 2).





**Figure 2:** Proposed Antenna and Associated Equipment (Source: Photo Simulations). Note that the annotation provided by the Applicant is incorrect, and the photo simulation is not accurate.



The Plans depict a new underground power service run from an existing wood utility pole (number 1232324E) approximately 250 feet away to the Pole. See Figure 3. Additionally, a new meter pedestal (“**Meter Cabinet**”) with dimensions (50”H x 16”W x 16”D) will be installed on a concrete pad. The Meter Cabinet will contain the electrical disconnect switch. A new fiber pull box vault will be installed near the base of the Pole (dimensions: 17”H x 30”W x 18”D).

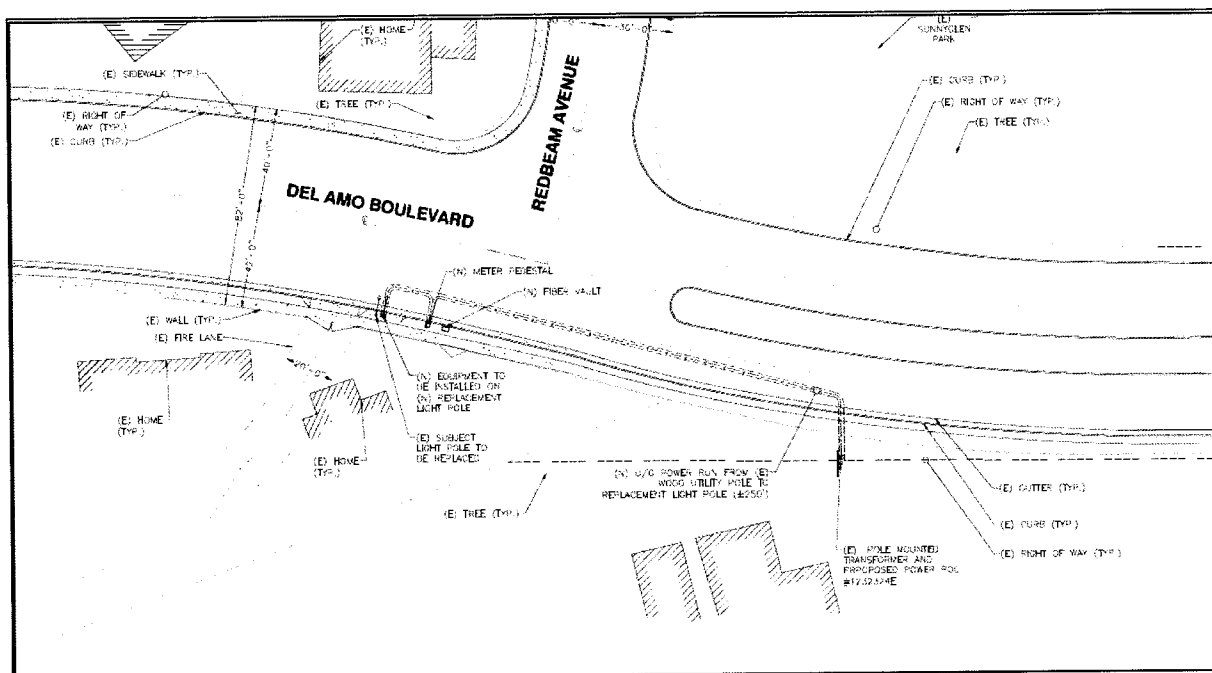


Figure 3: Underground power and fiber connections (Source: Plans Page A1 Panel 1).

TLF recommends that the City inquire from the Applicant about the feasibility of installing a wireless tariff rate (“**WTR**”) power connection rather than the proposed Meter Cabinet. If available, the WTR connection should be a condition of approval for this project.

## 2. Section 6409(a) Analysis

As a threshold matter, the City must determine whether federal law mandates approval for this permit application. Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012 requires that State and local governments “may not deny, and shall approve” any “eligible facilities request” for a wireless site collocation or modification so long as it does not cause a “substant[ial] change in [that site’s] physical dimensions.”<sup>1</sup> FCC regulations interpret key terms in this statute and impose certain substantive and procedural limitations on local review.<sup>2</sup> Localities must review

<sup>1</sup> See Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, 126 Stat. 156. (Feb. 22, 2012) (codified as 47 U.S.C. § 1455(a)).

<sup>2</sup> See In the Matter of Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies, *Report and Order*, 29 FCC Rcd. 12864 (Oct. 17, 2014) (codified as 47 C.F.R. §§ 1.40001, *et seq.*).



applications submitted for approval pursuant to Section 6409(a), but the applicant bears the burden to show it qualifies for mandatory approval.

Section 6409(a)(2) defines an “eligible facilities request” as a request to collocate, remove or replace transmission equipment on an existing wireless tower or base station.<sup>3</sup> This definition necessarily excludes permit requests for new facilities. Thus, no matter how large or small, Section 6409(a) does not mandate approval for a permit to construct an entirely new wireless facility.

Here, the Applicant did not submit an eligible facilities request because rather than collocate on an existing facility, the Applicant proposes to construct a new wireless facility where none currently exists. Accordingly, Section 6409(a) does not require that the City approve the application and the City should review the Applicant’s proposal for compliance with the local values expressed in the TMC subject to certain federal limitations in Section 704 of the Telecommunications Act of 1996 (the “**Telecom Act**”).

### **3. Significant Gap and Least Intrusive Means Analysis**

Under the Telecom Act, State and local governments cannot prohibit or effectively prohibit personal wireless communication services.<sup>4</sup> The United States Court of Appeals for the Ninth Circuit holds that a single permit denial can violate the Telecom Act when the applicant demonstrates that (1) a “significant gap” in its own service coverage exists and (2) its proposed site constitutes the “least intrusive means” to mitigate that significant gap.<sup>5</sup> This section discusses both issues as related to the present application.

#### **3.1. Significant Gap**

The Ninth Circuit does not precisely define what a “significant gap” in service coverage means because this “extremely fact-specific [question] def[ies] any bright-line legal rule.”<sup>6</sup> Although sometimes courts find that weak service coverage constitutes a significant gap, the Ninth Circuit also holds that “the [Telecom Act] does not guarantee wireless service providers coverage free of small ‘dead spots’ . . . .”<sup>7</sup> Accordingly, whether a gap rises to a legally significant gap depends on the contextual factors in each individual application.<sup>8</sup>

To guide the analysis, the Ninth Circuit suggests that applicants and localities should focus on “context-specific factors” such as: (1) whether the gap affects a significant commuter thoroughfare; (2) how many users the alleged gap affects; (3) whether the proposed site will fill a

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<sup>3</sup> See 47 U.S.C. § 1455(a)(2).

<sup>4</sup> See Section 704 of the Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (codified as 47 U.S.C. § 332(c)(7)(B)(i)(II)).

<sup>5</sup> See *MetroPCS, Inc. v. City and County of San Francisco*, 400 F.3d 715, 733 (9th Cir. 2005).

<sup>6</sup> See *id.*

<sup>7</sup> See *id.*

<sup>8</sup> See *Sprint PCS Assets, LLC v. City of Palos Verdes Estates*, 583 F.3d 716, 727 (9th Cir. 2009) (citing *San Francisco*, 400 F.3d at 733).



complete void or merely improve weak signal; (4) whether the alleged gap affects a commercial area; (5) whether the alleged gap threatens public safety; and (6) whether the applicant presented empirical or merely predictive evidence.<sup>9</sup> The Ninth Circuit identifies these factors as relevant but does not explicitly limit the analysis to these factors or consider any particular factor more important than the others.

The Applicant provided propagation maps dated November 16, 2018 (“Maps”). The Maps show the existing coverage and proposed coverage in the area. See Figure 4 and Figure 5.

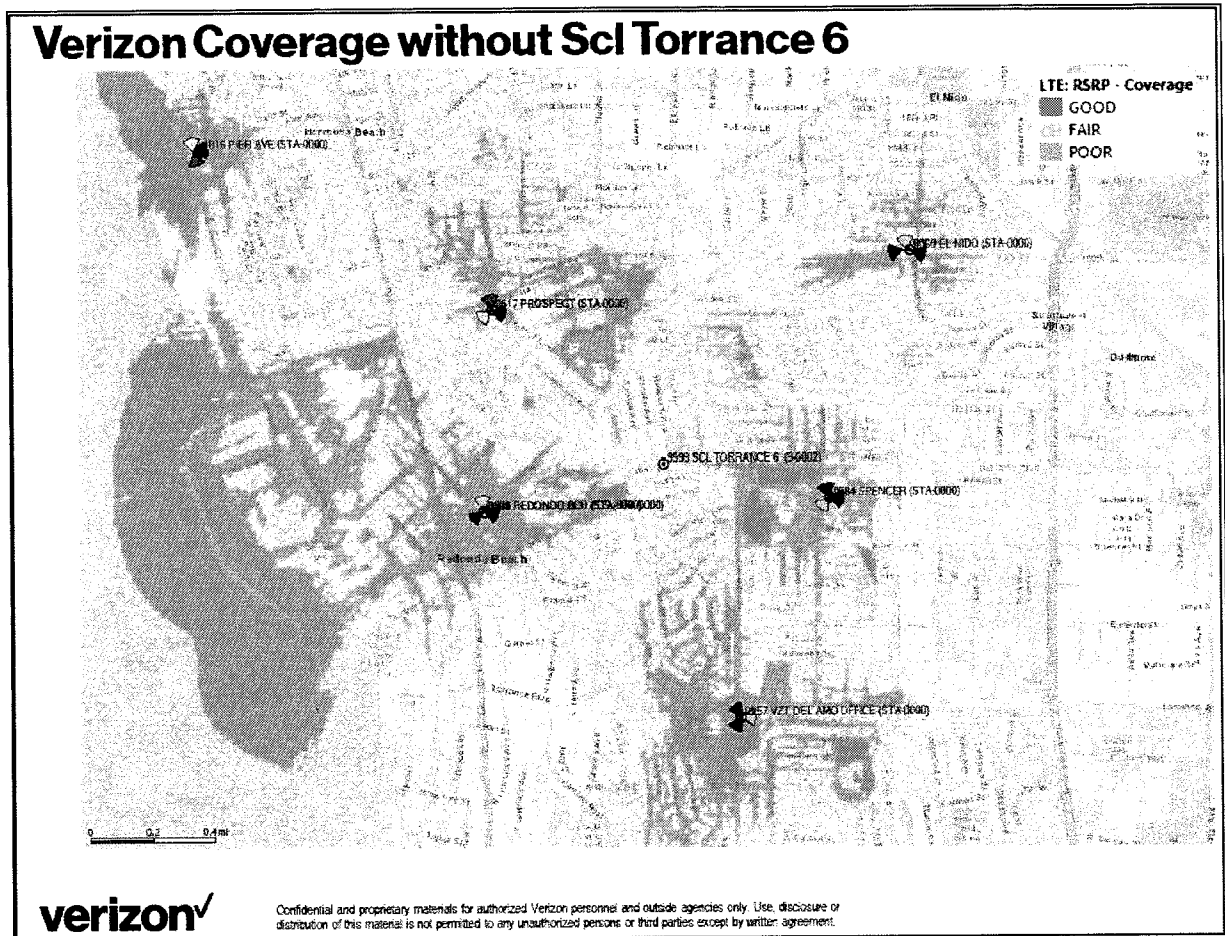


Figure 4: Existing Verizon Coverage without the proposed site (Source: Verizon Maps)

The propagation map reproduced in Figure 4 is a computer model of Verizon’s existing signal strength within the area based on a color-coded legend. Green indicates “Good” signal, yellow indicates “Fair” signal and purple indicates “Poor” signal. Without the proposed site, Verizon’s Map shows that the area surrounding the proposed site suffers from primarily “Poor” signal levels

<sup>9</sup> See *id.* (collecting cases that examine each enumerated factor).



with pockets of “Fair” signal levels. However, Verizon’s Maps contain subjective characterizations rather than empirical signal strength levels in dBm.

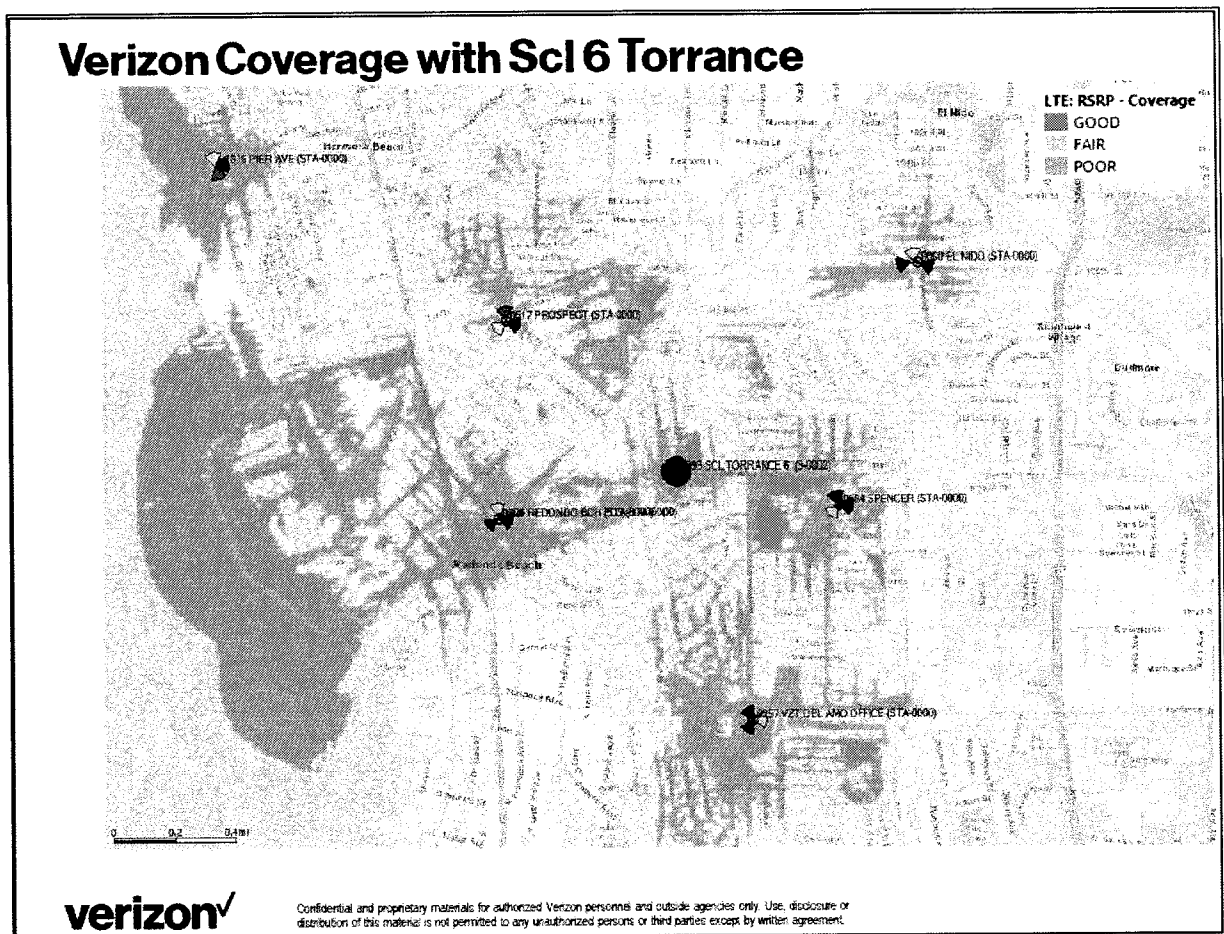


Figure 5: Proposed Verizon Coverage with the proposed site (Source: Verizon Maps).

The Map submitted with the application and reproduced in Figure 5 models Verizon’s service coverage with the combined signals from the proposed and surrounding sites. Verizon’s proposed coverage depicts “Green” in all directions immediately around the proposed site. However, Verizon’s propagation maps provide only limited objective signal measurements for the proposed coverage area and do not provide sufficient context for assessing how the signal measurements and the color-coding relate to an inability to provide wireless services. Moreover, the application does not contain any empirical data to suggest that users experience dropped calls.

Verizon has not established that a significant gap in coverage exists. That said, the City should not interpret Verizon’s failure to prove a significant gap as a reason to deny the project. Rather, the City simply possesses its traditional land-use discretion preserved in the Telecom Act and authorized under the TMC. Accordingly, the City should evaluate whether Verizon’s proposal is the least intrusive in light of the values embodied in the City’s wireless and land-use regulations.



### 3.2. Least Intrusive Means

The Telecom Act does not grant the applicant the right to build whatever site in whatever location it chooses. State and local jurisdictions may require wireless applicants to adopt the “least intrusive means” to achieve their technical objectives.<sup>10</sup> This balances the national interest in wireless services with the local interest in planned development.

In the Ninth Circuit, the least intrusive means refers to the technically feasible and potentially available alternative design and location that most closely conforms to the local values a permit denial would otherwise serve.<sup>11</sup> A “technically feasible and potentially available alternative” means that the applicants can reasonably (1) meet their demonstrated service needs and (2) obtain a lease or other legal right to construct the proposed site at the proposed location.<sup>12</sup>

The process to determine whether a proposal constitutes the least intrusive means involves a “burden-shifting” framework. First, the applicant establishes a presumption that it proposes the least intrusive means when it submits an alternative sites analysis. Localities can rebut the presumption when it proposes other alternatives. Applicants may then rule-out proposed alternatives when it provides a “meaningful comparative analysis” for why an alternative is not technically feasible or potentially available.<sup>13</sup> This back-and-forth continues until either the jurisdiction fails to propose a technically feasible or potentially available alternative, or the applicant fails to rule-out a proposed alternative.<sup>14</sup>

Applicants cannot rule-out potential alternatives on the grounds that it believes its preferred site is subjectively “better” than the jurisdiction’s preferred alternative.<sup>15</sup> Only the local government can decide which among several feasible and available alternatives constitutes the best option. Similarly, an applicant cannot rule-out a proposed alternative based on a bare conclusion that it is not technically feasible or potentially available—it must provide a meaningful comparative analysis that allows the jurisdiction to reach its own conclusions.<sup>16</sup>

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<sup>10</sup> See, e.g., *American Tower Corp. v. City of San Diego*, 763 F.3d 1035, 1056 (9th Cir. 2014).

<sup>11</sup> See *id.*; see also *AT&T USA, Inc. v. City of Anacortes*, 572 F.3d 987, 995 (9th Cir. 2009).

<sup>12</sup> See *Anacortes*, 572 F.3d at 996–999.

<sup>13</sup> See *American Tower Corp.*, 763 F.3d at 1056.

<sup>14</sup> Compare *id.* (upholding a permit denial because the applicant failed to rule-out the technical feasibility or potential availability of proposed alternatives), with *Anacortes*, 572 F.3d at 999 (invalidating a permit denial because the city insisted on an unavailable location). These cases provide a guide for planners on how to evaluate alternative site analyses. Planners should also note that a strong administrative record is essential to this analysis.

<sup>15</sup> See *American Tower Corp.*, 763 F.3d at 1057 (finding that the applicant “did not adduce evidence allowing for a meaningful comparison of alternative designs or sites, and the [c]ity was not required to take [the applicant]’s word that these were the best options”).

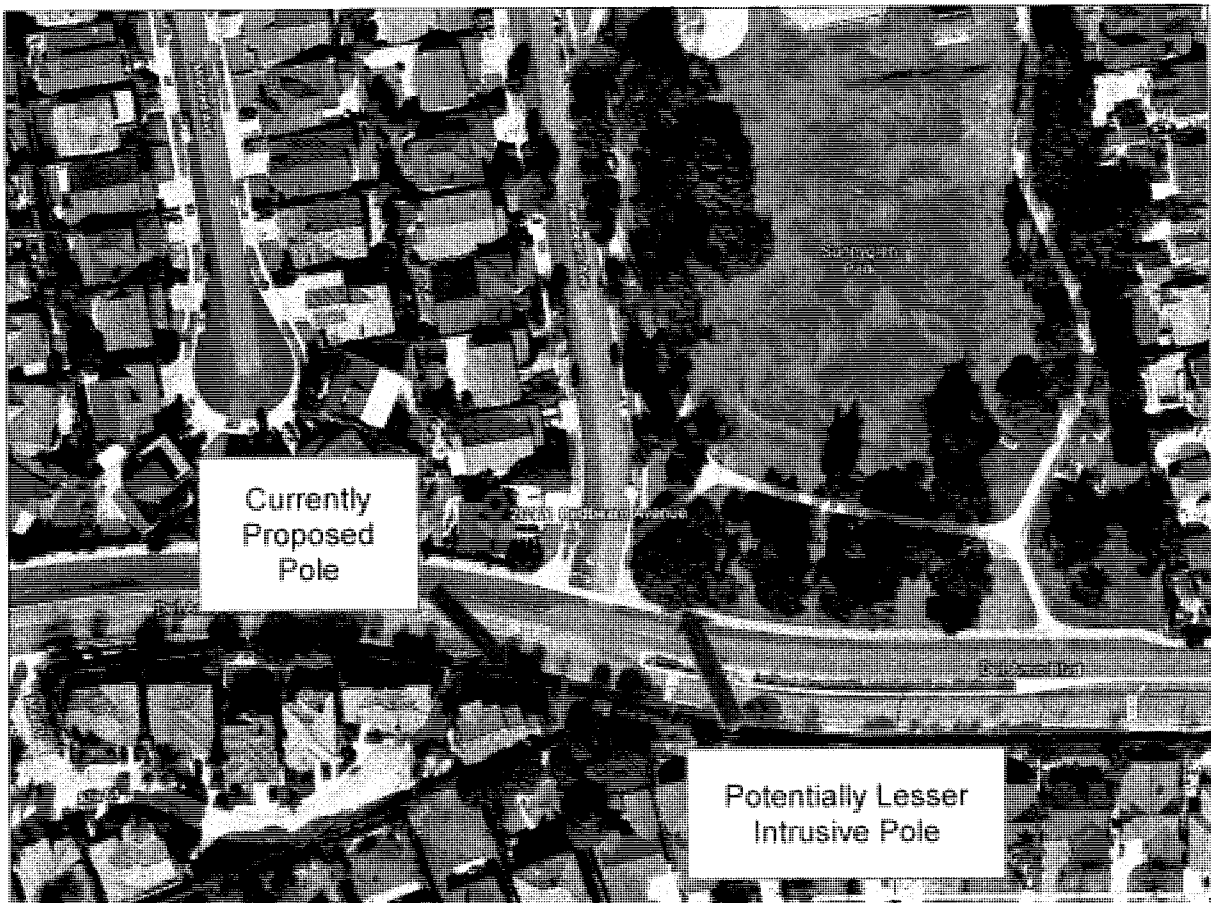
<sup>16</sup> See *id.*





### 3.2.1. Alternative Sites Analysis

Based on a desktop review of the area surrounding the proposed location, TLF believes that the pole on the opposite side of the street to the East of the existing street light pole on Del Amo Boulevard appears to offer a meaningfully better aesthetic alternative in comparison to the proposed location. See Figure 6. The recommended pole, abuts Sunny Glen Park.



**Figure 6:** Proposed Pole and Recommended Lesser Intrusive Pole (Source: Google Maps, Annotated by Dr. Kramer).

Accordingly, the City should ask the Applicant whether this less intrusive alternative location is technically feasible or not. To the extent that this alternative is technically feasible, the Applicant should be required to use the alternative location.

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### 3.2.2. Compliance with Torrance Municipal Code

The City's second most-preferred location for wireless facilities is existing street light poles.<sup>17</sup> The City must consider the following criteria in connection with its processing of any telecom permit: (1) the extent to which the proposed facility blends into the surrounding environment or is architecturally integrated into a structure;<sup>18</sup> (2) the extent to which the proposed facility is concealed, screened or camouflaged by existing or proposed new topography, vegetation, buildings, or other structures;<sup>19</sup> and (3) the total size of the proposed facility, particularly in relation to surrounding and supporting structures.<sup>20</sup> In addition, the maximum overall height cannot exceed 35 feet on street light poles.<sup>21</sup>

Here, the Applicant's application complies with the applicable standards in the TMC. The facility would be installed on a street light pole that replaces an existing pole in order to create a more streamlined design that blends with the underlying support structure. The antenna and radio equipment would be concealed within pole-mounted shrouds and all the electrical connections would be underground and fully concealed from public view. The replacement pole would be consistent with the surrounding support structures because the pole would be approximately the same size and material as the existing street lights. In addition, the overall height of the facility would be 32'5" AGL, which is approximately 2.5 feet below the City's overall height limit.

Accordingly, the Applicant's proposed facility complies with the TMC and the City may wish to approve the application subject to design conditions to promote compliance with the local standards:

1. The permittee shall remove, or cause to be removed, the existing street light pole within 10 days of commencing on-air operations. The permittee shall also restore, or cause to be restored, the foundation and ground space around the removed pole foundation to its original condition. Such removal and restoration work shall be subject to the planning director and/or public works director's review and approval.
2. The permittee shall paint, color or finish all the pole-mounted equipment to match the color of the underlying light pole. The color, texture and material of the replacement pole shall be consistent with the surrounding street light poles in nearby vicinity.
3. The permittee shall route all cables, wires, jumpers and connectors internally through the pole and/or conceal them within the antenna or equipment shrouds. In addition, the permittee acknowledges and agrees that a material consideration of the City's approval of this permit is that the pole-top antenna and shroud are approximately the same width as the

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<sup>17</sup> See TORRANCE, CAL., MUN. CODE § 92.39.040(b)(1)(B).

<sup>18</sup> See *id.* § 92.39.050(a)(1).

<sup>19</sup> See *id.* § 92.39.050(a)(2).

<sup>20</sup> See *id.* § 92.39.050(a)(3).

<sup>21</sup> See *id.* § 92.39.040(a)(1)(A).



pole, which creates a streamlined design and concealment element that effectively blends the antenna with the underlying pole.

These suggested conditions are not intended to be an exhaustive list of conditions to impose on the City's potential permit approval. The City should consider adopting any other standard conditions and/or design conditions that promote compliance with the City's public health and safety standards and any applicable wireless development standards.

#### **4. Planned Compliance with RF Exposure Regulations**

Under the Telecom Act, the FCC completely occupies the field with respect to RF emissions regulation. The FCC established comprehensive rules for human exposure to RF emissions (the "FCC Guidelines").<sup>22</sup> State and local governments cannot regulate wireless facilities based on environmental effects from RF emissions to the extent that the emissions comply with the FCC Guidelines.<sup>23</sup>

Although localities cannot establish their own standards for RF exposure, local officials may require wireless applicants to demonstrate compliance with the FCC Guidelines.<sup>24</sup> Such demonstrations usually involve a predictive calculation because the site has not yet been built.

##### **4.1. FCC Guidelines, Categorical Exclusions and Exposure Mitigation Measures**

FCC Guidelines regulate *exposure* rather than *emissions*.<sup>25</sup> Although the FCC establishes a maximum permissible exposure ("MPE") limit, it does not mandate any specific limitations on power levels applicable to all antennas and requires the antenna operator to adopt exposure-mitigation measures only to the extent that certain persons might become exposed to the emissions. Thus, a relatively low-powered site in proximity to the general population might require more comprehensive mitigation measures than a relatively high-powered site in a remote location accessible only to trained personnel.

The MPE limit also differentiates between "general population" and "occupational" people. Most people fall into the general population class, which includes anyone who either does not know about potential exposure or knows about the exposure but cannot exert control over the transmitters.<sup>26</sup> The narrower occupational class includes persons exposed through their

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<sup>22</sup> See 47 U.S.C. § 332(c)(7)(B)(iv); see also 47 C.F.R. § 1.1307 *et seq.*; FCC Office of Engineering and Technology, *Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields*, OET Bulletin 65, ed. 97-01 (1997).

<sup>23</sup> See 47 U.S.C. § 332(c)(7)(B)(iv).

<sup>24</sup> See *In re Procedures for Reviewing Requests for Relief from State and Local Regulations Pursuant to Section 332(c)(7)(B)(iv) of the Communications Act of 1934*, *Report and Order*, 15 FCC Rcd. 22821, 22828–22829 (Nov. 13, 2000) (declining to adopt rules that limit local authority to require compliance demonstrations).

<sup>25</sup> See generally Human Exposure to Radio Frequency Fields: Guidelines for Cellular and PCS Sites, *Consumer Guide*, FCC (Oct. 22, 2014), available at <https://www.fcc.gov/guides/human-exposure-rf-fields-guidelines-cellular-and-pcs-sites> (discussing in general terms how wireless sites transmit and how the FCC regulates the emissions).

<sup>26</sup> See 47 C.F.R. § 1.1310, Note 2.



employment and able to exert control over their exposure.<sup>27</sup> The MPE limit for the general population is five times lower than the MPE limit for the occupational class.

Lastly, the FCC “categorically excludes” certain antennas from routine environmental review when either (1) the antennas create exposures in areas virtually inaccessible to humans or (2) the antennas operate at extreme low power. As a general rule, a wireless site qualified for a categorical exclusion when mounted on a structure built solely or primarily to support FCC-licensed or authorized equipment (*i.e.*, a tower) and such that the lowest point on the lowest transmitter is more than 10 meters (32.8 feet) above ground.<sup>28</sup>

Categorical exclusions establish a presumption that the emissions from the antennas will not significantly impact humans or the human environment. Such antennas are exempt from routine compliance evaluations but not exempt from actual compliance. Under some circumstances, such as a heavily collocated tower or when in close proximity to general population members, even a categorically excluded site will require additional analysis.

#### **4.2. Planned Compliance Evaluation and Recommendations**

The FCC Guidelines do **not** categorically exclude the Applicant’s facility from routine compliance review. This is because the replacement street light’s primary function is to provide street illumination, and the street light was not solely or primarily constructed to support wireless equipment. Therefore, an additional analysis for whether the facility will comply with the FCC Guidelines is appropriate.

To demonstrate planned compliance with the FCC Guidelines, the Applicant submitted a Radio Frequency-Electromagnetic Energy (RF-EME) Jurisdictional Report prepared by EBI Consulting Inc. dated October 9, 2017 (the “**EBI Report**”). The EBI Report, which contains the basic emissions information needed to independently evaluate the proposed facility’s planned compliance with the FCC Guidelines, concludes that mitigation measures such as following routine signage protocols are sufficient to comply with the FCC Guidelines. We generally agree with the conclusion.

Based on the transmitter frequencies and power levels disclosed in the EBI Report for both the downlink and backhaul radio transmitters, the antenna will create a “controlled access zone” that extends approximately 3.4 feet from the face of the omni-directional antenna at approximately the same height as the emissions centers of that antenna. The controlled access zone extends horizontally from the antennas with very little emissions that stray upwards or downwards.

The fact that a site creates a controlled access zone does not necessarily mean that it violates the FCC Guidelines. Rather, a controlled access zone means that the carrier must affirmatively restrict

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<sup>27</sup> See *id.*

<sup>28</sup> See *id.* § 1.1307(b)(1).



public access to that area so that members of the general population (including trespassers) cannot unknowingly enter and be exposed to radio emissions in excess of limits prescribed by the FCC.

Here, the controlled access zone is inaccessible to members of the general population, except for potential trespassers and street light maintenance workers. Accordingly, the City may wish to consider the following conditions of approval before potentially issuing any permit approval for the subject facility:

1. The permittee shall install and at all times maintain in good condition an “RF Notice” sign and network operations center sign adjacent to the bottom of proposed site. The signs required in this condition must be placed in a location where they are clearly visible to a person when he or she approaches the shroud.
2. The permittee shall ensure that all RF signage complies with FCC OET Bulletin 65 or ANSI C95.2 for color, symbol and content conventions. All such signage shall provide a working local or toll-free telephone number to its network operations center that reaches a live person who can exert transmitter power-down control over this site as required by the FCC.

## **5. Conclusion**

The Applicant’s proposed project is not subject to mandatory approval under Section 6409(a).

Although the Applicant’s application complies with the development standards contained in the TMC, there appears to be at least one less intrusive alternative location in close proximity to the proposed pole, and the City may also wish to consider the recommended design conditions in this memorandum.

Lastly, subject to the conditions in this memorandum regarding RF emissions safety, the Applicant’s proposed facility will be in planned compliance with the FCC Guidelines. If the Applicant alters the equipment, site configuration or location, the City may wish to re-evaluate planned compliance with the FCC Guidelines based on those changed circumstances.

/JLK





## APPLICATION INCOMPLETE MEMORANDUM

**TO:** Mr. Oscar Martinez [REDACTED]  
**FROM:** Dr. Jonathan Kramer [REDACTED]  
**DATE:** April 18, 2018  
**RE:** Application Completeness Review – New Proposed Wireless Facility in the Public Right-of-Way at F/O 20121 Redbeam Avenue

**APPLICANT:** J5 Infrastructure for Verizon Wireless  
**APPLICANT'S ID:** SCL Torrance 6/ VZW site 432405  
**UTILITY POLE ID:** 2246356E

On November 27, 2017, J5 Infrastructure (the “**Applicant**”) on behalf of Verizon Wireless (“**Verizon**”) submitted wireless site application materials to the City of Torrance (“**City**”). Per the City’s request, on December 19, 2017, Telecom Law Firm, PC (“**TLF**” or “**We**”) submitted an Application Incomplete Memorandum (the “**First Memorandum**”) to the City that evaluated the Applicant’s application to operate a new wireless site in the public right-of-way (“**PROW**”) on a replacement Southern California Edison (“**SCE**”) concrete street light pole (“**Pole**”) to be located near 20121 Redbeam Avenue (Coordinates 33.848658/-118.375308).

TLF’s First Memorandum concluded that the Applicant failed to submit a complete permit application that fully responded to the City’s publicly stated application requirements. We recommended that the City deem the Applicant’s application incomplete and issue a timely notice, which it did.

On February 6, 2018 the Applicant submitted additional materials (the “**February 6, 2018 Submission**”) which included a letter dated January 30, 2018 to the City from the Applicant (“**January 30, 2018 Applicant Letter**”) to address the deficiencies related to its initial submission.

On February 12, 2018, we submitted another Application Incomplete Memorandum (the “**Second Memorandum**”). TLF’s Second Memorandum concluded that the Applicant again had failed to submit a complete permit application that fully responded to the City’s publicly stated application requirements. We recommended that the City deem the Applicant’s application incomplete and issue a timely notice, which it did.

On April 11, 2018 the Applicant submitted additional materials (the “**April 11, 2018 Submission**”) which included:

- A letter from Mackenzie and Albritton dated April 5, 2018 to the City the (“**April 5, 2018 Letter**”).
- A revised Supplemental Technical Information Report (“**STIR**”).
- A “Response to Notice of Incomplete (“**NOI**”)” dated April 10, 2018.

This memorandum reviews the April 11, 2018 Submission and provides the City further analysis on whether the Applicant submitted a complete and responsive application complying with the City's application requirements and complies with the Torrance Municipal Code ("TMC").

### **COMMENTS AND RECOMMENDATION**

The Applicant has failed to submit the required coverage maps per the STIR of the City. Specifically the map specified in 6.03 remains missing from the application.

TLF believes that the Applicant has not yet submitted a complete permit application. The City may have other items that remain incomplete.

We recommend that the City deem the Applicant's application incomplete and again issue a timely incomplete notice to the Applicant **no later April 20, 2018** (based on the application materials tender date of April 11, 2018). TLF recommends the City send the incomplete notice by email and on the same day also sends it by First Class or Certified U.S. Mail postage prepaid.

Once a reply to the City's incomplete notice is received back from Applicant, the City has only 10 calendar days to determine whether the reply is responsive to the incomplete notice, and each of the 10 days counts against the overall 150 day shot clock, thus immediate review upon resubmission should occur.

/JLK



## APPLICATION INCOMPLETE MEMORANDUM

**TO:** Mr. Oscar Martinez [REDACTED]  
**FROM:** Dr. Jonathan Kramer [REDACTED]  
**DATE:** February 12, 2018  
**RE:** Application Completeness Review – New Proposed Wireless Facility in the Public Right-of-Way at F/O 20121 Redbeam Avenue

**APPLICANT:** J5 Infrastructure for Verizon Wireless  
**APPLICANT'S ID:** SCL Torrance 6/ VZW site 432405  
**UTILITY POLE ID:** 2246356E

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TLF’s First Memorandum concluded that the Applicant failed to submit a complete permit application that fully responded to the City’s publicly stated application requirements. We recommended that the City deem the Applicant’s application incomplete and issue a timely notice, which it did.

On February 6, 2018 the Applicant submitted additional materials (the “**February 6, 2018 Submission**”) which included a letter dated January 30, 2018 to the City from the Applicant (“**January 30, 2018 Applicant Letter**”) to address the deficiencies related to its initial submission.

This memorandum reviews the February 6, 2018 Submission and provides the City further analysis on whether the Applicant submitted a complete and responsive application complying with the City’s application requirements and complies with the Torrance Municipal Code (“**TMC**”).

This memorandum reviews the application and related materials to determine whether the applicant submitted a complete and responsive application. The following review may also discuss regulatory and technical issues related to wireless infrastructure. Although many technical issues implicate legal issues, the analysis and recommendations contained in this memorandum do not constitute legal advice.

Through this round of material submission, the Applicant submitted a set of plans dated January 25, 2018 (“**Plans**”) which describe the following proposed project. On top of the Pole, the Applicant proposes to install a new 2-foot tall pole-top canister antenna (“**Antenna**”) and a 1’11” concealment skirt to enclose two diplexers below the Antenna. Also on the Pole, the Applicant



proposes to mount a two remote radio units (“RRUs”) and two power supply units (“PSUs”). TLF notes that the Pole is proposed to be installed approximately 2 feet away from the original existing light standard location. See Figure 1 for proposed design and antenna and all associated equipment.

Page A3, panels 1 and 2 of the Plans depict that the height of the Pole supporting this project is to remain at 29 feet above ground level (“AGL”); however, the total height of the vertical elevation will increase to 32’ 5” AGL due to the proposed installation of the antenna and the associated equipment on the Pole (This increase in height is acceptable since the total height of the structure does not exceed 35 feet AGL per the City’s Municipal Code). Additionally, the center of the Antenna is at 31’5” AGL, therefore the lowest point of the Antenna is at 30’5” AGL. The top of the RRUs are separated by 2 feet from the lowest point of the Antenna and the bottom of the RRUs are at 26’6” AGL.

Also, two radio frequency (“RF”) signs are proposed to be mounted on opposite sides of the pole. The top of both RF signs are at 21’ 5” AGL.

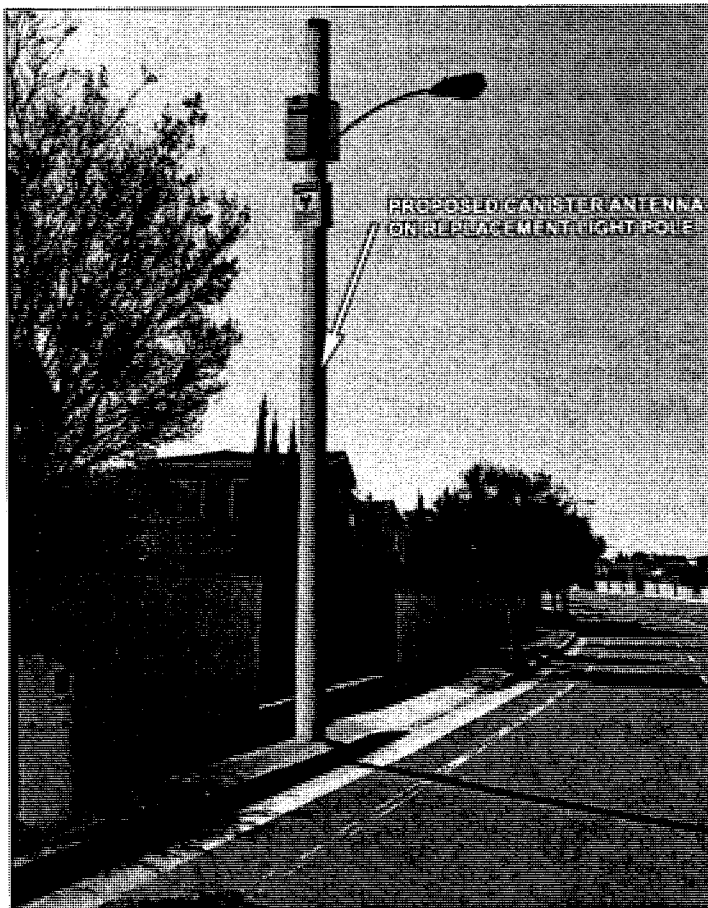


Figure 1: Antenna, Antenna skirt enclosing Diplexers, Fiber Node, 2 RRUs, RF signage, Meter etc. (Source: Photo Simulations provided by Applicant).



For its electrical connections, the Plans depict that the Applicant proposes a new underground power service run from an existing wood utility pole (number 1232324E) approximately 250 feet away to the Pole. Additionally, a new meter pedestal (“**Meter Cabinet**”) with dimensions (50”H x 16”W x 16”D) will be installed on a concrete pad. The Meter Cabinet will contain the electrical disconnect switch. For its fiber connections, a new fiber pull box vault will be installed near the base of the Pole (dimensions: 17”H x 30” W x 18” D). Figure 2 below demonstrates the electrical and fiber connections.

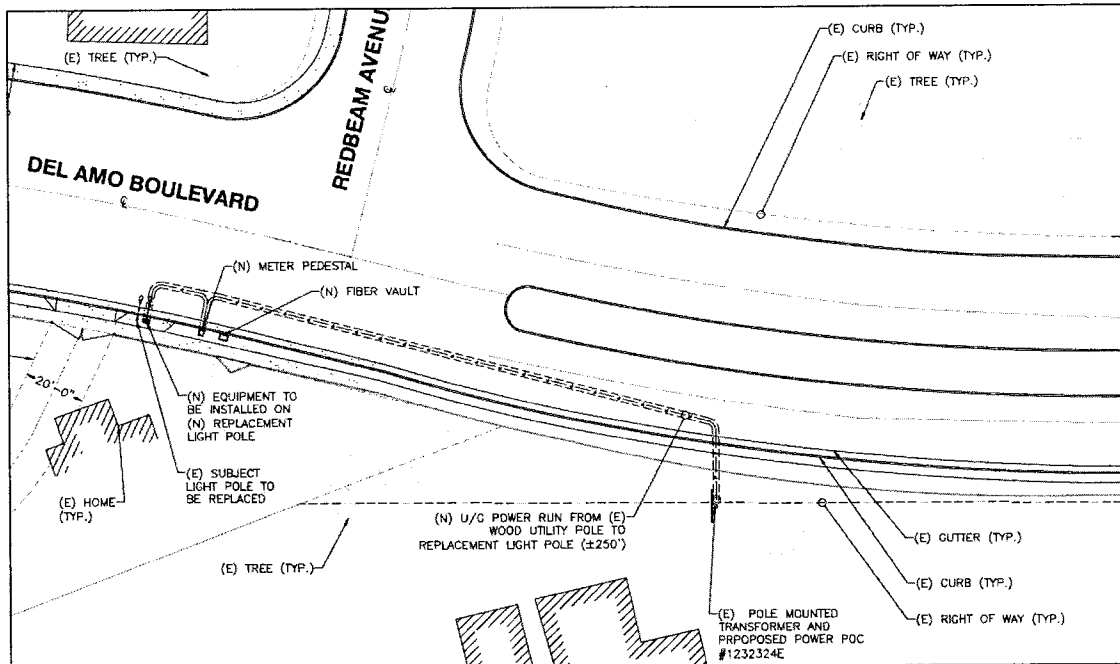


Figure 2: Underground electrical connections for the Applicant (Source: Plans page A-1, panel 1).

Verizon proposes to install a Meter Cabinet, whereas other wireless carriers in the City with similar equipment configurations are dispensing with the cabinet in favor of utilizing SCE’s wireless technology rate (“**WTR**”). The elimination of the Meter Cabinet is less intrusive than proposed by Verizon, thus they must either remove the Meter Cabinet and use the WTR, or factually demonstrate to the City why they cannot use SCE’s WTR.

#### A. APPLICATION COMPLETENESS REVIEW

Based on the City’s Submittal Requirements for Wireless Telecommunications Facility (“**Requirements Form**”), we recommend that the City deem Applicant’s application submittal **incomplete** and issue an incomplete notice on or before February 16, 2018 regarding the items more fully discussed in the next sections:



## REQUIREMENTS FORM

### I. APPLICATION FORM

The City requires an applicant to complete and submit a (1) Development Application and (2) a Supplemental Technical Information Report (“STIR”).

#### ▪ Supplemental Technical Information Report:

- Sec. 3.10 – The January 30, 2018 Applicant Letter indicated the following content within Figure 3.

Please note, 3.10 was not changed to “Yes.” Upon discussion with Southern California Edison, only trained/qualified SCE personnel are allowed to work within close proximity to radio frequency energy that exceeds public exposure limits where telecommunication antennas have been installed. The SCE Radio Frequency Energy Safety Program (RFESP) - (SCE-CHS-SO-PG-20) is the program and respective guidance document that provides requirements for identifying, evaluating, and working near or around RF emitting antennas per FCC and Cal/OSHA requirements. As such, 3.12 remains unchanged also, and 3.13 will not be provided. Please contact Phil Hickerson from SCE at (626) 695-5888 should you have any questions regarding the program or guidance document.

**Figure 3:** Answer to Section 3.10 of the STIR through the January 30, 2018 Applicant Letter (Source: Applicant).

If the City wishes to accept Verizon’s representation in Figure 3 regarding SCE’s use of RF-qualified personnel, rather than having SCE make its own representation, then this element will no longer be incomplete.

- Sec. 3.12 **remains** incomplete-this proposed project is **not** categorically excluded since the SCE light standard was not originally constructed for wireless purposes. The primary reason this light standard was constructed was for street illumination. Additionally, the lowest point of the antenna is **less** than 10 meters AGL. The FCC “categorically excludes” wireless facilities from routine RF exposure analysis when antennas are mounted (1) to structure solely or primarily built to support wireless antennas and (2) more than 10 meters above ground level.<sup>1</sup>
- Sec. 3.13- The January 30, 2018 Applicant Letter indicated: “3.13 will not be provided”- As mentioned in Sec. 3.12, this project is not categorically excluded and the information must be provided. However, while technically incomplete, we are aware that the Applicant, through its November 27, 2017 submission, provided an Electromagnetic Energy

<sup>1</sup> See 47 C.F.R. § 1.1307(b)(1).



(RF-EME) Jurisdictional Report by EBI Consulting dated October 9, 2017 (“**EBI RF Report**”). Therefore, we recommend the City forego citing the Applicant remaining incomplete for this section.

- Sec. 6.01-Sec.6.04- the Applicant did not provide the required information through these Sections. The January 30, 2018 Applicant Letter indicated the following content within Figure 4.

We reiterate our position that the proposed installations do not require Verizon Wireless to provide coverage maps per 6.01-6.04, nor additional radio frequency data per 8.05. The proposed installations are in the public right-of-way for the purpose of increasing capacity (Public Utilities Code Section 7901 grants telephone corporations such as Verizon Wireless a statewide right to use the right-of-way, and as such there is no requirement to demonstrate the need for a facility). Further references can be made to California Court Rulings supporting this position and the lack of a response to further clarification on RF data (e.g. propagation maps, coverage/capacity data) at these locations.

**Figure 4:** Answer to Section 6.01-6.04 of the STIR through the January 30, 2018 Applicant Letter (Source: Applicant).

Given that this project is for the installation of a new site, rather than a collocation at an existing wireless site that would be subject to Section 6409(a), the Applicant is simply incorrect in asserting that it need not provide coverage maps per Application §§ 6.01-6.04. While a telephone corporation has compulsory access to the public right of way, PUC Section 7901.1, omitted by the Applicant, conditions that compulsory access, which states in its entirety:

7901.1.

(a) It is the intent of the Legislature, consistent with Section 7901, that *municipalities shall have the right to exercise reasonable control as to the time, place, and manner in which roads, highways, and waterways are accessed.*

(b) The control, to be reasonable, shall, at a minimum, be applied to all entities in an equivalent manner.

(c) Nothing in this section shall add to or subtract from any existing authority with respect to the imposition of fees by municipalities.

(Emphasis added.)



Were the City to take the Applicant's position and not require the propagation maps (which we strongly oppose), the City would be unable to know whether any changes it might propose to the design or location of the proposed site would create a signal conflict. This lack of necessary information would effectively defeat the balancing control set out in Section 7901.1(a).

## II. PROPERTY OWNERSHIP

The Applicant did not provide any additional information on this section, we recommend the City proceed based on our First Memorandum suggestions.

## III. MAPS

As mentioned above, the maps for Section 6 are missing.

## B. OTHER PERMITS, APPLICATIONS REQUIRED AND PERMIT RECOMMENDATIONS

This project is likely to require an encroachment permit as a separate set of approvals including potentially an excavation permit and a building permit.

The City shall insure that when granting the excavation permit for the new light standard it also requires as a condition that the discontinued light standard's foundation is hammered out and the ground be restored and properly compacted.

The City should condition the project, if approved, to show that the replacement Pole is not a wireless tower for any purpose, but rather it is considered only a replacement light pole to be owned by the City. The primary purpose of this Pole is and shall remain for street illumination rather than for any primary use as a wireless tower and/or base station.

## C. CLOSING COMMENTS AND RECOMMENDATION

TLF believes that the Applicant has not yet submitted a complete permit application that complies with the City's Requirements Form. The list of incomplete items in this memo contains TLF's observations. The City may have other items for the incomplete notice. Under the FCC rules, there is only one incomplete notice, so it is imperative that all items which are incomplete are listed in the first notice.

We recommend that the City deem the Applicant's application incomplete and again issue a timely incomplete notice to the Applicant **no later February 16, 2018** (based on the application materials tender date of February 6, 2018). TLF recommends the City send the incomplete notice by email and on the same day also sends it by First Class or Certified U.S. Mail postage prepaid.



Once a reply to the City's incomplete notice is received back from Applicant, the City has only 10 calendar days to determine whether the reply is responsive to the incomplete notice, and each of the 10 days counts against the overall 150 day shot clock, thus immediate review upon resubmission should occur.

/JLK





## APPLICATION INCOMPLETE MEMORANDUM

**TO:** Mr. Oscar Martinez [REDACTED]  
**FROM:** Dr. Jonathan Kramer [REDACTED]  
**DATE:** December 19, 2017  
**RE:** Application Completeness Review – New Proposed Wireless Facility in the Public Right-of-Way at F/O 20121 Redbeam Avenue

**APPLICANT:** J5 Infrastructure for Verizon Wireless  
**APPLICANT'S ID:** SCL Torrance 6/ VZW site 432405  
**UTILITY POLE ID:** 2246356E

The City of Torrance (the “City”) requested that Telecom Law Firm, PC (“TLF”) review the J5 Infrastructure’s (“Applicant”) application on behalf of Verizon Wireless (“Verizon”) to operate a new wireless site on a replacement light pole (“Pole”) in the public right-of-way (“ROW”) located at in front of 20121 Redbeam Avenue. The date the Applicant submitted this project to the City was on November 27, 2017.

This memorandum reviews the application and related materials to determine whether the applicant submitted a complete and responsive application. The following review may also discuss regulatory and technical issues related to wireless infrastructure. Although many technical issues implicate legal issues, the analysis and recommendations contained in this memorandum do not constitute legal advice.

The Applicant submitted a set of plans dated August 11, 2017 (“Plans”) which describe the following proposed project. On top of the Pole, the Applicant proposes to install a new 2-foot tall pole-top canister antenna (“Antenna”) and a 1’11’ concealment skirt to enclose two diplexers below the Antenna. Also on the Pole, the Applicant proposes to mount a two remote radio units (“RRUs”) and two power supply units (“PSUs”). TLF notes that the Pole is proposed to be installed approximately 2 feet away from the original existing light standard location.

Page A3, panels 1 and 2 of the Plans depict that the height of the Pole supporting this project is to remain at 29 feet above ground level (“AGL”); however, the total height of the vertical elevation will increase to 32’ 5” AGL due to the proposed installation of the antenna and the associated equipment on the Pole (This increase in height is acceptable since the total height of the structure does not exceed 35 feet AGL per the City’s Municipal Code). Additionally, the center of the Antenna is at 31’5” AGL, therefore the lowest point of the Antenna is at 30’5” AGL. The top of the RRUs are separated by 2 feet from the lowest point of the Antenna and the bottom of the RRUs are at 26’6” AGL.

Also, two radio frequency (“RF”) signage are proposed to be mounted on the pole. The upper RF signage is at 26’6” AGL and the bottom RF signage is situated with the lowest part of the site at about 8-feet AGL.

Page A1 of the Plans depict a new underground power service run from an existing wood utility pole (number 1232324E) approximately 250 feet away to the Pole. Additionally, a new meter pedestal (“**Meter Cabinet**”) with dimensions (50”H x 16”W x 16”D) will be installed on a concrete pad. The Meter Cabinet will contain the electrical disconnect switch. A new fiber pull box vault will be installed near the base of the Pole (dimensions: 17”H x 30” W x 18” D).

#### A. APPLICATION COMPLETENESS REVIEW

Based on the City’s Submittal Requirements for Wireless Telecommunications Facility (“**Requirements Form**”), we recommend that the City deem Applicant’s application submittal **incomplete** and issue an incomplete notice on or before December 27, 2017 regarding the items more fully discussed below:

#### REQUIREMENTS FORM

##### I. APPLICATION FORM

The City requires an applicant to complete and submit a (1) Development Application and (2) a Supplemental Technical Information Report (“**STIR**”).

##### ▪ Development Application:

All information required on the Development Application checklist appears to be filled out by the Applicant.

##### ▪ Supplemental Technical Information Report:

- Sec 3.02 is incomplete – Attachment 3.02 includes only FCC licenses for the PCS frequencies; however, the Electromagnetic Energy (RF-EME) Jurisdictional Report by EBI Consulting dated October 9, 2017 (“**EBI RF Report**”) notes the additional use of AWS-1 frequencies.
- While technically incomplete, we are aware that AT&T hold an AWS license that covers the Torrance area, so the City may wish to forego citing AT&T as being incomplete on this item for this application, but requiring that AT&T submit complete applications in the future.
- Sec. 3.08 is incorrect - The Plans depict that the centerline of the Antenna is at 31’ 5” AGL, but Sec. 3.08 calls out 31’ 6”. The application must be internally consistent.
- Sec. 3.10 – The Applicant indicated that there are no general population areas accessible near the antenna. This may be incorrect unless SCE

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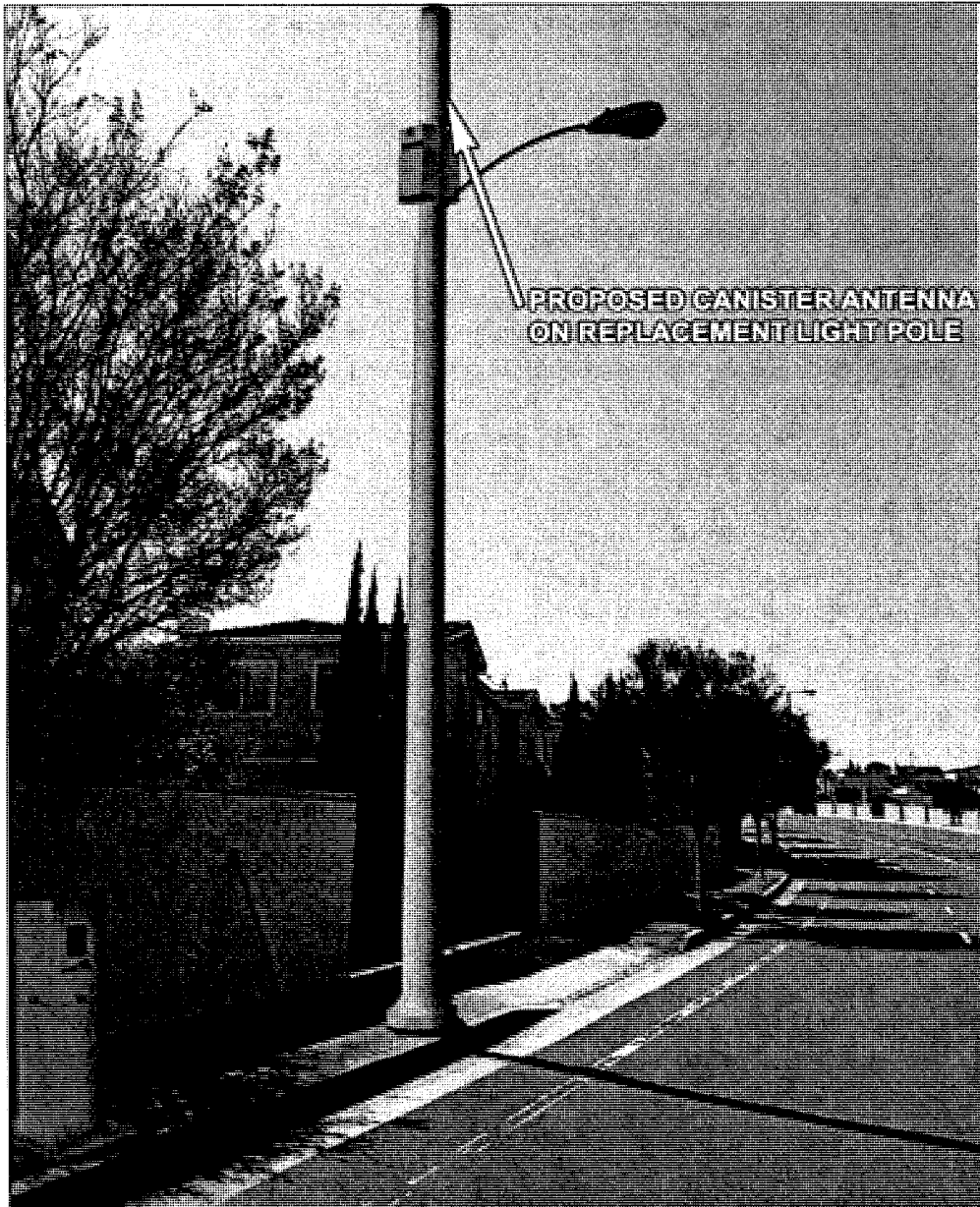
certifies that only RF-trained and qualified technicians maintain the Pole and the light attached to the Pole.

- Sec. 3.11 is not provided, however the Applicant provided an EBI RF Report.
- Sec. 3.12 is incorrect-this proposed project is not categorically excluded.
- Sec. 3.13 must be provided - As mentioned in Sec. 3.12, this project is not categorically excluded. The Applicant must provide the required information.
- Sec. 3.14 is left blank - Applicant must tick the “YES” line. TLF notes that even though this section is left blank, the Applicant provided the attachment as required in Sec. 3.15.
- Sec. 6.01-Sec. 6.04- The Applicant did not provide the required information through these Sections. However, within an Attachment 6.00 the Applicant stated: “Please note, RF coverage maps will be provided with Attachment 8.05 to respond to the requested “technically expansive and detailed explanation supported as required by comprehensive radio frequency data fully describing why the proposed site is the one and only one location within or without the City of Torrance that can possibly meet the radio frequency objectives of the project.” The coverage maps provided in attachment 8.05 are non-responsive to Section 6.01-6.04. The required maps in the required formats specified in Section 6 must be provided to respond to Section 6 of the Application.
- Section 6.05 is not separately provided, however the Applicant provided an EBI RF Report. The EBI RF Report is a satisfactory substitute.
- Section 7.01–subsection 2: Missing elements on the photo simulations (e.g., RF signage, fiber pull box etc.) See Figure 1 below.
- Section 7.01–subsection 3: The Applicant has satisfied the number of views of the photos of the existing site, however, the Applicant failed to provide five or more photo simulations of the proposed site as required in the STIR. This site is visible from residential properties, therefore additional photo simulations are required. TLF recommends the Applicant discuss the photo simulation requirements with the City.

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**Figure 1:** Antenna, Antenna skirt enclosing Diplexers, Fiber Node, 2 RRUs (Missing visual elements, e.g. RF signage, Fiber Pull Box, etc.) (Source: Photo Simulations provided by Applicant).

- Sec. 8.05: The maps provided in this Section are not consistent for the purposes of this section, nor are then sufficient for the Sec. 6.01-6.04 coverage maps. The Applicant provided the following coverage maps in connection with section 8 of the application:

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- SCL Torrance 1-10 Area Map without any coverage, just node locations. This map is helpful.
- Without SCL Torrance 1-10: The Applicant provided all existing coverage within the area without the proposed small cell nodes of 1-10 with “Good”, “Fair” and “Poor” with no numerical signal strength data.
- SCL Torrance 1-10 Individual Coverage with “Good”, “Fair” and “Poor” with no numerical signal strength data.
- SCL Torrance 1-10 with neighbors Coverage with “Good”, “Fair” and “Poor” with no numerical signal strength data.

TLF notes that the Applicant has failed to provide empirical data. Also, it failed to provide node isolated coverage specific to this project as required in Section 6.

## II. PROPERTY OWNERSHIP

The Applicant provided the following letters:

1. Edison Carrier Solutions letter from Brian P. Ryan dated August 10, 2017. The portion of this letter related to consent is not signed and filled out with the appropriate necessary information. (TLF notes that this letter, if executed, should be executed by the City Manager’s office, not Planning.)
2. Letter indicating: “PLEASE TRANSFER LETTER TO CITY LETTERHEAD” not sign nor dated. (TLF notes that this letter, if executed, should be executed by the City Manager’s office, not Planning.)
3. Letter of Authorization dated August 10, 2017 from Edison Carrier Solutions from Brian P. Ryan and signed by Brian P. Ryan.
4. Southern California Edison Streetlight Authorization form partially filled out. (TLF notes that this letter, if executed, should be executed by the City Manager’s office, not Planning.)

Prior to City Planning considering this project for completeness the four items above must be considered by the City Manager’s office or designee (not Planning) to determine if the project as described should proceed forward.

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**III. PROJECT PLANS**

The Plans appear to be satisfactory for zoning processing purposes.

**IV. JUSTIFICATION**

The site justification contained in Section 4 of the application appears to be satisfactory for zoning processing purposes.

**V. MAPS**

As mentioned above, the maps are either missing (Section 6) or incomplete (Section 8).

**VI. VISUAL SIMULATIONS**

As mentioned above, the number of views of the photo simulations as required in the STIR are missing. Additionally, as already discussed, the photo simulations provided by the Applicant are incomplete.

**B. ADDITIONAL INCOMPLETE, INCONSISTENT ITEMS**

The EBI RF Report in Section 2 of that document discloses an antenna which is different from that specified in the Plans. Additionally, the EBI RF Report in Section Verizon Signage Plan discloses different signage locations from that specified in the Plans. The signage in the Verizon Signage Plan should be relied upon as Verizon is the FCC's licensee.

**C. OTHER PERMITS AND APPLICATIONS REQUIRED**

This project is likely to require an encroachment permit as a separate set of approvals including potentially an excavation permit, fiber installation permit, building permit, and electrical permit.

**D. CLOSING COMMENTS AND RECOMMENDATION**

TLF believes that the Applicant has failed to submit a complete permit application that complies with the City's Requirements Form. The list of incomplete items in this memo contains TLF's observations. The City may have other items for the incomplete notice. Under the FCC rules, there is only one incomplete notice, so it is imperative that all items which are incomplete are listed in the first notice.

We recommend that the City deem the Applicant's application incomplete and issue a timely incomplete notice to the Applicant **no later than December 27, 2017** (based on the application materials tender date of November 27, 2017). TLF recommends the City send the incomplete

{00018258;%1}



notice by email and on the same day also sends it by First Class or Certified U.S. Mail postage prepaid.

Once a reply to the City's incomplete notice is received back from Applicant, the City has only 10 calendar days to determine whether the reply is responsive to the incomplete notice, and each of the 10 days counts against the overall 150 day shot clock, thus immediate review upon resubmission should occur.

/JLK

{00018258;%1}



## Huizar, Carlos

---

**From:** Paul Romero [REDACTED]  
**Sent:** Thursday, January 3, 2019 10:24 AM  
**To:** Huizar, Carlos; Tami Pritchard; Kathryn Baxendale  
**Cc:** Martinez, Oscar; Whiting, Aaron  
**Subject:** RE: Notices of Incomplete WTC17-00031; WTC17-00033; WTC17-00032; WTC17-00026; WTC17-00034; WTC18-00015; WTC17-00027; WTC18-00014

Hi Carlos,

Verizon would *not* find the alternative site for SCL Torrance 6 (WTC17-00026) feasible.

More specifically, the alternative site has a water hydrant a few feet away from the base of the pole, which is a direct indication of underground water-pipelines running along the sidewalk. We need to dig around the immediate surrounding area of the pole in order to replace it with a new pole/foundation, as well as, bring a power cable to power up our small cell. Therefore, having underground water facilities to deal with will propose a big challenge and risk of that infrastructure being damaged.

That being the case, we understand our proposed pole does not fall within the P-U (Public Use) Zone, thus, cannot be administratively-approved.

Thank you.  
Paul

**Paul Romero**  
Sr. Project Manager  
[REDACTED]



**From:** Huizar, Carlos <CHuizar@TorranceCA.gov>  
**Sent:** Wednesday, January 2, 2019 3:59 PM  
**To:** Tami Pritchard [REDACTED]; Kathryn Baxendale [REDACTED]  
**Cc:** Martinez, Oscar <OMartinez@TorranceCA.gov>; Whiting, Aaron <AWWhiting@TorranceCA.gov>; Paul Romero [REDACTED]  
**Subject:** RE: Notices of Incomplete WTC17-00031; WTC17-00033; WTC17-00032; WTC17-00026; WTC17-00034; WTC18-00015; WTC17-00027; WTC18-00014

Hi Tami and Kathryn,

I am currently working on the staff reports for the three projects that will proceed to the Telecom Committee on January 8, 2019. I was reviewing the consultant memo, dated December 3, 2018 (attached to this email) for SCL Torrance 6 and the consultant has recommended an alternative site for this project to an existing street light pole that abuts Sunnyglen Park. The public right-of-way at the alternative site is located within the P-U (Public Use) Zone, which staff concurs and supports the consultant's recommendation. I wanted to see if Verizon would find this alternative site feasible, as staff would be recommending this alternative site for telecom committee consideration. Like previously mentioned, project located outside of the residential zones could be administratively approved.

If you have any questions or concerns, please let me know.



SCL Torrance 6

Jeffery W. Gibson, Director

City of Torrance, Community Development Department  
3031 Torrance Blvd., Torrance, CA 90503, Phone (310) 618-5990 Fax (310) 618-5829

## SUPPLEMENTAL TECHNICAL INFORMATION REPORT FOR WIRELESS TELECOMMUNICATION FACILITIES

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1.00: Project Address N/A - PROW (Closest address S/O 20121 Redbeam Ave. at Del Amo Blvd.)

Assessor Parcel Number N/A

2.00: Disclose the Name and Address of all Project Owners, and attach a letter of agency appointing the Applicant as representative of the Project Owners in connection with this application. Designate the letter of agency as "Attachment 2.00".

3.00: **FCC Licensee/FAA Compliance Information**

3.01: Identify each person or legal entity that will be using the wireless site and contact information (Attach additional sheets if necessary)

Name: Verizon Wireless

Address: 15505 Sand Canyon Rd. Bldg. D-1

City, State, Zip: Irvine, CA 92618

Phone: (949) 286-7000 Fax: \_\_\_\_\_

Email: Please see Attachment 3.01 for second entity

3.02: Attach a complete copy of each FCC license or FCC Construction Permit for each person/legal entity that will be subject to the FCC license for the Project site. Designate the license(s)/Construction Permit(s) as "Attachment 3.02". If none of the proposed radio facilities require an FCC license so indicate on Attachment 3.02.

3.03: What is the intended use of the facility (check all that apply):

- Broadcast Radio
- Broadcast TV
- Cellular telephone
- Enhanced Specialized Mobile Radio
- Microwave
- PCS telephone
- Paging
- Specialized Mobile Radio
- Other: \_\_\_\_\_

3.04: Project latitude and longitude: N 33.848658 W -118.375308



SCL Torrance 6

City of Torrance, Community Development Department Jeffrey W. Gibson, Director  
3031 Torrance Blvd., Torrance, CA 90503, Phone (310) 618-5990 Fax (310) 618-5829

## SUPPLEMENTAL TECHNICAL INFORMATION REPORT FOR WIRELESS TELECOMMUNICATION FACILITIES

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- 3.05: Specify DATUM use above:  WGS84  NAD23  NAD83
- 3.06: Project Maximum height (ft): 32'-6"
- 3.07: Bottom of lowest antenna (ft): 30'-6"
- 3.08: Rad-center of the antennas (ft): 31'-6"
- 3.09: For each licensee, and for each radio service, complete and attach the two page "Appendix A" form from "A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance" available from the following website: <http://www.FCC.gov/oet/rfsafety>. Designate the completed two page form as "Attachment 3.09". Additional RF safety disclosure information may be required by the government to determine compliance with FCC OET 65 requirements if the site is not "categorically excluded" under OET 65.
- 3.10 Are any areas adjacent to the antennas subject to RF emissions that are in excess of the "General Public/uncontrolled" standard in FCC OET 65? For this purpose, assume that all persons other than the Carrier's technical staff are considered to be members of the General Public.  
 Yes  No  
(If the answer to 3.10 is NO proceed to 3.12)
- 3.11 Provide a detailed RF analysis for each emitter and each band showing the distance, in feet, in all directions to the boundary of the General Public/uncontrolled boundary. Designate this attachment, "Attachment 3.11".
- 3.12 Considering your response to 3.10, above, and any other identifiable RF emitters that OET 65 requires be evaluated in connection with this project, are all portions of this project cumulatively "categorically excluded" under FCC OET 65 requirements?  
 Yes  No  
(If the answer to 3.12 is YES proceed to 3.14.)
- 3.13 Describe in an attachment each and every RF emitter of the project that is not "categorically excluded" under the FCC OET 65 requirements. Designate this attachment, "Attachment 3.13".
- 3.14: Does this project require the Applicant to file an FAA Form 7460 or other documentation under Federal Aviation Regulation Part 77.13 et seq, or under the FCC rules?  
 Yes  No  
(If the answer to 3.14 is NO proceed to 4.00.) Please see Attachment 3.15 for Airspace Report.





SCL Torrance 6

City of Torrance, Community Development Department     Jeffery W. Gibson, Director  
3031 Torrance Blvd., Torrance, CA 90503, Phone (310) 618-5990 Fax (310) 618-5829

**SUPPLEMENTAL TECHNICAL INFORMATION REPORT  
FOR WIRELESS TELECOMMUNICATION FACILITIES**

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3.15 Attach complete copies of all required FAA/FCC forms including all attachments and exhibits thereto, including without limitation FAA Form 7460. Designate this attachment, "Attachment 3.15".

**4.00: Project Purpose**

4.01: Justification. Provide a brief narrative, accompanied by written documentation where appropriate, which explains the purpose of the facility and validates the applicant's efforts to comply with the design, location, and co-location standards of Chapter 2, Division 9, Article 39 of the City's Municipal Code.

Please see Attachment 4.01

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4.02: Indicate whether the dominant purpose of the Project is to add additional network capacity, to increase existing signal level, or to provide new radio frequency coverage (check only one).

Add network capacity without adding substantial new RF coverage area (Proceed to 5.00)

Increase the existing RF signal level in an existing coverage area (Proceed to 5.00)

Provide new radio frequency coverage in a substantial area not already served by existing radio frequency coverage (Proceed to 5.00)

Other

4.03 Attach a statement fully and expansively describing the "Other" dominant purpose of this project. Designate this attachment, "Attachment 4.03".

**5.00: Build-Out Requirements**

5.01: Do any of radio services identified in 3.04 above require the licensee to provide specific radio frequency/population coverage pursuant to the underlying FCC license?

       Yes       x   No

(If the answer to 5.01 is NO proceed to 6.00.)

5.02: Have all of the FCC build-out requirements as required by all licenses covering all radio services proposed at this Project been met?

  N/A   Yes       N/A   No

(If the answer to 5.02 is YES proceed to 6.00.)



SCL Torrance 6

City of Torrance, Community Development Department     Jeffery W. Gibson, Director  
3031 Torrance Blvd., Torrance, CA 90503, Phone (310) 618-5990 Fax (310) 618-5829

**SUPPLEMENTAL TECHNICAL INFORMATION REPORT  
FOR WIRELESS TELECOMMUNICATION FACILITIES**

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5.03: State by licensee all remaining build-out requirements which have yet to be met, and the known or estimated date when the remaining build-out requirements will be met. Designate this attachment "Attachment 5.03".

**6.00: Radio Frequency Coverage Maps**

6.01: Where a licensee intends to provide radio frequency geographic coverage to a defined area from the Project (including applicants in the cellular, PCS, broadcast, ESMR/SMR categories, and others as requested by the City of Torrance), the coverage maps and information requested in Section 6 are required attachments. All others proceed to 7.00.

For the coverage maps required here, the following mandatory requirements apply. Failure to adhere to these requirements may delay your application processing.

1. The size of each submitted map must be no smaller than 11" by 8.5".
2. If the FCC rules for any proposed radio service defines a minimum radio frequency signal level that level must be shown on the map in a color easily distinguishable from the base paper or transparency layer, and adequately identified by RF level and map color or gradient in the map legend. If no minimum signal level is defined by the FCC rules you must indicate that in the legend of each RF coverage map. You may show other RF signal level(s) on the map so long as they are adequately identified by objective RF level and map color or gradient in the map legend.
3. Where the City of Torrance determines that one or more submitted maps are inadequate, it reserved the right to request that one or more supplemental maps with greater or different detail be submitted.

6.02: Existing RF coverage within the City of Torrance on the same network, if any (if none, so state). This map should not depict any RF coverage to be provided by the Project. Designate this attachment "Attachment 6.02".

6.03: RF coverage to be provided by the Project. This map should not depict any RF coverage provided any other existing or proposed wireless sites. Designate this attachment "Attachment 6.03".

6.04: RF coverage to be provided by the Project and by other wireless sites on the same network should the Project site be activated. Designate this attachment "Attachment 6.04".

6.05: Provide a written certification that the facility will continuously comply with FCC OET Bulletin 65 radio frequency emissions standards, and that use of the facility will not interfere with other communication, radio, or television transmission or reception.



## SUPPLEMENTAL TECHNICAL INFORMATION REPORT FOR WIRELESS TELECOMMUNICATION FACILITIES

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### 7.00: Project Photographs and Photo Simulations

7.01: Where an Applicant proposes to construct or modify a wireless site, and the wireless site is visible from other residential properties, the Applicant shall submit pre-project photographs, and photo simulations showing the project after completion of construction, all consistent with the following standards:

1. Minimum size of each photo simulation must be 11 inches by 8.5 inches (portrait or landscape orientation);
2. All elements of the project as proposed by the Applicant must be shown in one or more close-in photo simulations.
3. The overall project as proposed by the Applicant must be shown in five or more area photos and photo simulations. Photos and photo simulation views must, at a minimum, be taken from widely scattered positions separated by an angle of no greater than 72 degrees from any other photo location.

The number of site photos, and photo simulations, and the actual or simulated camera location of these photos and photo simulations is subject to City of Torrance determination. The Applicant should submit photos and photo simulations consistent with these instructions, and be prepared to provide additional photos and photo simulations should they be requested by the City of Torrance.

### 8.00: Candidate Sites

8.01: For applicants in the cellular, PCS, broadcast, ESMR/SMR categories, and others as requested by the City of Torrance, the information requested in Section 8 is required. All others proceed to 9.00.

8.02: Has the Applicant or Owner or anyone working on behalf of the Applicant or Owner secured or attempted to secure any leases or lease-options or similar formal or informal agreements in connection with this project for any sites other than the candidate site identified at 1.00?

Yes  No

(If the answer to 8.02 is NO, proceed to 8.05.)

8.03: Provide the physical address of each such other location, and provide an expansive technical explanation as to why each such other site was disfavored over the Project Site. Designate this attachment "Attachment 8.03".

8.04: Considering this proposed site, is it the one and only one location within or without the City of Torrance that can possibly meet the objectives of the project?

N/A Yes  N/A No

(If the answer to 8.04 is NO, proceed to 9.00.)



**SUPPLEMENTAL TECHNICAL INFORMATION REPORT  
FOR WIRELESS TELECOMMUNICATION FACILITIES**

8.05: Provide a technically expansive and detailed explanation supported as required by comprehensive radio frequency data fully describing why the proposed site is the one and only one location within or without the City of Torrance that can possibly meet the radio frequency objectives of the project. Explain, in exact and expansive technical detail, all of the objectives of this project. Designate this attachment "Attachment 8.05".

**9.00: Identification of Key Persons**

9.01: Identify by name, title, company affiliation, work address, telephone number and extension, and email address the key person or persons most knowledgeable regarding:

- (1) the site selection for the proposed project, including alternatives;
  - (2) the radio frequency engineering of the proposed project;
  - (3) rejection of other candidate sites evaluated, if any;
  - (4) approval of the selection of the proposed site identified in this project.
- Designate this attachment "Attachment 9.01"

9.02 If more than one person is/was involved in any of the four functions identified in this section, attach a separate sheet providing the same information for each additional person, and identifying which function or functions are/were performed by each additional person. Designate this attachment "Attachment 9.02".

Initial here LC to indicate that the information above is complete and there is no Attachment 9.02, or initial here \_\_\_\_\_ to indicate that Attachment 9.02 is attached hereto.

**10.00: Technical Information Report Certification**

10.01: The undersigned certifies on behalf of itself and the Applicant that the answers provided here are true and complete to the best of the undersigned's knowledge.

Signature	Site Acq. & Zoning Spec. Title
Laura Castro	LCastro@J5IP.com
Print Name	Provide Email Address
J5 Infrastructure	
Print Company Name	Provide Telephone Number
10/14/17	
Date Signed	

Verizon Wireless  
SCL Torrance 6

**Attachment 2.00**

2.00: Name and Address of all Project Owners

Verizon Wireless  
15505 Sand Canyon, Bldg. D-1  
Irvine, CA 92618

Southern California Edison  
4900 Rivergrade Rd., Bldg. 2B-1, Suite 120C  
Irwindale, CA 91706

Letter(s) of Agency (attached)



Brian P. Ryan  
Principle Manager  
Telephone: 909-274-1949  
Brian.Ryan@sce.com

August 10, 2017

To Whom It May Concern:

Since 1994, Southern California Edison (SCE) has assisted wireless service providers in expanding their networks to meet customers' needs for telecommunications service. SCE makes available existing structures that can be used to co-locate the wireless service providers' equipment, while lessening the visual impacts on the community and constituency that is served. This letter requests that you help us in this endeavor.

In an effort to minimize the potential clutter that new vertical structures would produce, many California cities have adopted ordinances and policies encouraging wireless facilities to be mounted on street light poles within the public rights of way.

As you are aware, SCE owns and maintains street light poles in your city pursuant to our LS-1 tariff. In order to accommodate the increasing demand for micro-cell site locations, SCE has agreed to allow wireless service providers to attach their antennas to some of these streetlight poles, and contractually requires the wireless service provider to comply with certain requirements, including a requirement that the facility will not impact SCE's ability to provide street lighting service.

Torrance has and retains full control over the entitlement and permitting process for these and future sites. The wireless service providers also pay for electrical usage resulting from their sites. This electrical service is metered and billed separately, and the City is not impacted.

While SCE believes this approach benefits local governments as well as their constituency, we would not engage in this solution if doing so resulted in extra costs to SCE. We would therefore appreciate you confirming that the Torrance consents to use of its public rights of way for the purpose of licensing space on an SCE Streetlight Pole # 2246356E located at: S/O 20121 Redbeam Ave.. Verizon Wireless Site number: SCL Torrance 6.

Please sign this letter to indicate your consent and return it to me at the below address. If you have any questions, please feel free to call Phil Hickerson at (626) 695-5888.

Regards,

A black rectangular redaction box covering the signature of Brian P. Ryan.

Brian P. Ryan

Signature \_\_\_\_\_  
Name \_\_\_\_\_  
Title \_\_\_\_\_  
Date: \_\_\_\_\_

PLEASE TRANSFER LETTER TO CITY LETTERHEAD

Date

Brian Ryan  
Southern California Edison  
Carrier Solutions Division  
2 Innovation Way 1st Floor  
Pomona, Ca 91768

Dear Mr. Ryan:

This letter authorizes Southern California Edison (SCE) to disconnect the SCE streetlight identified as – SCE Streetlight Pole #2246356E located adjacent: S/O 20121 Redbeam Ave.. Verizon Wireless Site number: SCL Torrance 6 So that work can be performed to replace the existing Streetlight.

Verizon Wireless (Wireless Carrier) has requested that SCE replace the Southern California Edison streetlight with a new streetlight that will be used for operating the wireless communications facility identified as SCE Light Pole #2246356E located adjacent to: S/O 20121 Redbeam Ave.. Verizon Wireless Site Reference: SCL Torrance 6.

Please coordinate the disconnecting of the streetlight directly with Torrance, (please provide County Contact, Name, Phone) so that the light will be out only for the above referenced work to be completed.

If you have any questions, please do not hesitate to call me.

Sincerely,

Name  
Public Agency



Brian Ryan  
Principal Manager Telecom Sales  
Edison Carrier Solutions  
e-mail: Brian.Ryan@sce.com

August 10, 2017

Torrance Planning Department

To Whom It May Concern:

Re: Letter of Authorization

SCE streetlight identified as – SCE Streetlight Pole # 2246356E located adjacent: S/O 20121 Redbeam Ave.. Verizon Site Name: SCL Torrance 6.

Southern California Edison Company (SCE) is the owner of the Light Pole, located in Torrance, CA. Verizon Wireless "Carrier" has requested that SCE replace the existing Light Pole so that it can be used for operating a wireless communications facility, ("Site").

SCE has reviewed Carrier's preliminary plans for this Site and believe these plans are compatible with SCE's use of this Light Pole. Thus, as a representative of SCE, I hereby authorize Carrier, and its representatives, to seek and secure all right(s), including any environmental review associated with granting such rights, that are needed from the Jurisdiction to use the Light Pole and other property for this purpose as long as there are no costs to SCE.

Notwithstanding this authorization, SCE reserves the right to reject Carrier's request for use of its Light Pole for any reason, including imposed conditions or required changes to the light pole by the Jurisdiction, are unacceptable to SCE.

All correspondence and/or notices regarding use of SCE's Light Pole by Carrier, or any later requests by the Carrier for authorizations or approvals needed for construction, operation or maintenance of an approved Site, should include a copy to SCE.

If you have any questions concerning this project, please contact Phil Hickerson @ 626-695-5888.

Sincerely,

A black rectangular redaction box covering the signature of Brian P. Ryan.

Brian P. Ryan



SOUTHERN CALIFORNIA EDISON STREETLIGHT AUTHORIZATION

DEVELOPER/APPLICANT MUST PROVIDE THIS FORM

COMPLETED BY THE PUBLIC AUTHORITY

FOR ANY SCE-OWNED STREETLIGHT INSTALLATION, REMOVAL OR CHANGE REQUESTS

Incomplete forms will be returned and not processed

PUBLIC AUTHORITY NAME: City of Torrance

Builder/Developer Name: Verizon Wireless/ J5 Infrastructure

Phone #: 714-272-3702

Tract/Ref #

Streetlight Location 2246356E/ S/O 20121 Redbeam Ave.

Please Check one: [ ] Installation [ ] Removal [x] Change

Number of Lamp(s)

Lamp Size

Lamp Type

1

New Installations

Public Authority Responsibility for Streetlight Monthly Billing

Please Check one and fill out applicable dates:

\_\_\_ Upon Energizing

[ ] If Public Authority is collecting Builder/Developer Advanced Energy Payment, indicate date collected. (\_\_\_\_\_)

Monthly Billing: \_\_\_ Establish new Service Account (SA) Use existing SA # \_\_\_\_\_

\_\_\_ Commitment Date-

Date Agreed upon by SCE and Public Authority (\_\_\_\_\_) or no later than 36 months from first streetlight energized whichever is earlier.

Monthly Billing: \_\_\_ Establish new Service Account (SA) Use existing SA # \_\_\_\_\_

x Public Authority is not responsible

[ ] HOA Area Name \_\_\_\_\_ Other Entity (please define) Verizon Wireless

Public Authority Notes:

Authorized Public Authority Agent

Print name

Date

Signature

Phone #

Title

TO BE COMPLETED BY SCE

ACTION: ENTER TRACT/REF# ON DM PROGRAM NAME FIELD.

District

Planning AOR

PLANNER NAME (PRINT)

DM SR #

Product #

(one per SLA)

FORWARD COMPLETED COPIES OF THE SLA FORM, MAP AND CSD272 CONTRACT, IF APPLICABLE TO: "Street & Outdoor Lighting Organization" Santa Ana Bldg. D

Verizon Wireless  
SCL Torrance 6

**Attachment 3.01**

**3.01**- Additional contact information of legal entity that will be using the wireless site:

Name: Southern California Edison

Address: 4900 Rivergrade Rd. Bldg. 2B-1, Suite 120C Irwindale, CA 91706

Phone: 626-695-5888

Verizon Wireless  
SCL Torrance 6

**Attachment 3.02**

3.02: Complete copies of each FCC license (attached)



# Federal Communications Commission

Wireless Telecommunications Bureau

## RADIO STATION AUTHORIZATION

LICENSEE: AIRTOUCH CELLULAR

ATTN: REGULATORY  
AIRTOUCH CELLULAR  
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING  
ALPHARETTA, GA 30022

<b>Call Sign</b> KNLF889	<b>File Number</b> 0007638414
<b>Radio Service</b> CW - PCS Broadband	

FCC Registration Number (FRN): 0006146468

<b>Grant Date</b> 03-30-2017	<b>Effective Date</b> 03-30-2017	<b>Expiration Date</b> 04-28-2027	<b>Print Date</b> 03-31-2017
<b>Market Number</b> BTA262	<b>Channel Block</b> F	<b>Sub-Market Designator</b> 0	
<b>Market Name</b> Los Angeles, CA			
<b>1st Build-out Date</b> 04-28-2002	<b>2nd Build-out Date</b>	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

### Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

This authorization is conditioned upon the full and timely payment of all monies due pursuant to Sections 1.2110 and 24.716 of the Commission's Rules and the terms of the Commission's installment plan as set forth in the Note and Security Agreement executed by the licensee. Failure to comply with this condition will result in the automatic cancellation of this authorization.

### Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

**Licensee Name:** AIRTOUCH CELLULAR

**Call Sign:** KNLF889

**File Number:** 0007638414

**Print Date:** 03-31-2017

Grant of the request to update licensee name is conditioned on it not reflecting an assignment or transfer of control (see Rule 1.948); if an assignment or transfer occurred without proper notification or FCC approval, the grant is void and the station is licensed under the prior name.

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

Official  
Copy



# Federal Communications Commission

Wireless Telecommunications Bureau

## RADIO STATION AUTHORIZATION

LICENSEE: LOS ANGELES SMSA LIMITED PARTNERSHIP

ATTN: REGULATORY  
LOS ANGELES SMSA LIMITED PARTNERSHIP  
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING  
ALPHARETTA, GA 30022

Call Sign WPWH653	File Number 0007638763
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0002963817

Grant Date 03-31-2017	Effective Date 03-31-2017	Expiration Date 04-28-2027	Print Date 04-01-2017
Market Number BTA262	Channel Block E	Sub-Market Designator 2	
Market Name Los Angeles, CA			
1st Build-out Date 04-28-2002	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

### Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

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This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

**Licensee Name:** LOS ANGELES SMSA LIMITED PARTNERSHIP

**Call Sign:** WPWH653

**File Number:** 0007638763

**Print Date:** 04-01-2017

This authorization is subject to the condition that the remaining balance of the winning bid amount will be paid in accordance with Part 1 of the Commission's rules, 47 C.F.R. Part 1.

Official  
Copy

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**Attachment 3.09**

3.09 Appendix A from "A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance." (See attached)



**Optional Checklist for Local Government  
To Determine Whether a Facility is Categorically Excluded**

Purpose: The FCC has determined that many wireless facilities are unlikely to cause human exposures in excess of RF exposure guidelines. Operators of those facilities are exempt from routinely having to determine their compliance. These facilities are termed "categorically excluded." Section 1.1307(b)(1) of the Commission's rules defines those categorically excluded facilities. This checklist will assist state and local government agencies in identifying those wireless facilities that are categorically excluded, and thus are highly unlikely to cause exposure in excess of the FCC's guidelines. Provision of the information identified on this checklist may also assist FCC staff in evaluating any inquiry regarding a facility's compliance with the RF exposure guidelines.

**BACKGROUND INFORMATION**

1. Facility Operator's Legal Name: Verizon Wireless
2. Facility Operator's Mailing Address: 15505 Sand Canyon Blvd. Bldg. D-1, Irvine, CA 92618
3. Facility Operator's Contact Name/Title: Vinh Vuong
4. Facility Operator's Office Telephone: 949-379-9198
5. Facility Operator's Fax: \_\_\_\_\_
6. Facility Name: SCL Torrance 6
7. Facility Address: N/A - PROW
8. Facility City/Community: City of Torrance
9. Facility State and Zip Code: CA
10. Latitude: 33.848658
11. Longitude: -118.375308

continue  
→

## Optional Local Government Checklist (page 2)

**EVALUATION OF CATEGORICAL EXCLUSION**

12. Licensed Radio Service (see attached Table 1): Personal Communication Services
13. Structure Type (free-standing or building/roof-mounted): Free-Standing
14. Antenna Type [omnidirectional or directional (includes sectored)]: Omni-directional
15. Height above ground of the lowest point of the antenna (in meters): 9.3m
16.  Check if all of the following are true:
- (a) This facility will be operated in the Multipoint Distribution Service, Paging and Radiotelephone Service, Cellular Radiotelephone Service, Narrowband or Broadband Personal Communications Service, Private Land Mobile Radio Services Paging Operations, Private Land Mobile Radio Service Specialized Mobile Radio, Local Multipoint Distribution Service, or service regulated under Part 74, Subpart I (see question 12).
- (b) This facility will not be mounted on a building (see question 13).
- (c) The lowest point of the antenna will be at least 10 meters above the ground (see question 15).

If box 16 is checked, this facility is categorically excluded and is unlikely to cause exposure in excess of the FCC's guidelines. The remainder of the checklist need not be completed. If box 16 is not checked, continue to question 17.

17. Enter the power threshold for categorical exclusion for this service from the attached Table 1 in watts ERP or EIRP\* (note: EIRP = (1.64) X ERP): 3280 W EIRP
18. Enter the total number of channels if this will be an omnidirectional antenna, or the maximum number of channels in any sector if this will be a sectored antenna: 2 & 3
19. Enter the ERP or EIRP per channel (using the same units as in question 17): 123.61 & 166.75 Max ERP
20. Multiply answer 18 by answer 19:  $[(2 \times 123.61) + (3 \times 166.75)] \times 1.64 = 1226$  watts EIRP
21. Is the answer to question 20 less than or equal to the value from question 17 (yes or no)? Yes

If the answer to question 21 is YES, this facility is categorically excluded. It is unlikely to cause exposure in excess of the FCC's guidelines.

If the answer to question 21 is NO, this facility is not categorically excluded. Further investigation may be appropriate to verify whether the facility may cause exposure in excess of the FCC's guidelines.

\*"ERP" means "effective radiated power" and "EIRP" means "effective isotropic radiated power"

**TABLE 1: TRANSMITTERS, FACILITIES AND OPERATIONS SUBJECT TO ROUTINE ENVIRONMENTAL EVALUATION**

SERVICE (TITLE 47 CFR RULE PART)	EVALUATION REQUIRED IF:
Experimental Radio Services (part 5)	power > 100 W ERP (164 W EIRP)
Multipoint Distribution Service (subpart K of part 21)	<u>non-building-mounted antennas:</u> height above ground level to lowest point of antenna < 10 m <u>and</u> power > 1640 W EIRP <u>building-mounted antennas:</u> power > 1640 W EIRP
Paging and Radiotelephone Service (subpart E of part 22)	<u>non-building-mounted antennas:</u> height above ground level to lowest point of antenna < 10 m <u>and</u> power > 1000 W ERP (1640 W EIRP) <u>building-mounted antennas:</u> power > 1000 W ERP (1640 W EIRP)
Cellular Radiotelephone Service (subpart H of part 22)	<u>non-building-mounted antennas:</u> height above ground level to lowest point of antenna < 10 m <u>and</u> total power of all channels > 1000 W ERP (1640 W EIRP) <u>building-mounted antennas:</u> total power of all channels > 1000 W ERP (1640 W EIRP)

TABLE 1 (cont.)

SERVICE (TITLE 47 CFR RULE PART)	EVALUATION REQUIRED IF:
<p>Personal Communications Services (part 24)</p>	<p>(1) Narrowband PCS (subpart D):  <u>non-building-mounted antennas</u>: height above ground level to lowest point of antenna &lt; 10 m <u>and</u> total power of all channels &gt; 1000 W ERP (1640 W EIRP)  <u>building-mounted antennas</u>: total power of all channels &gt; 1000 W ERP (1640 W EIRP)</p> <p>(2) Broadband PCS (subpart E):  <u>non-building-mounted antennas</u>: height above ground level to lowest point of antenna &lt; 10 m <u>and</u> total power of all channels &gt; 2000 W ERP (3280 W EIRP)  <u>building-mounted antennas</u>: total power of all channels &gt; 2000 W ERP (3280 W EIRP)</p>
<p>Satellite Communications (part 25)</p>	<p>all included</p>
<p>General Wireless Communications Service (part 26)</p>	<p>total power of all channels &gt; 1640 W EIRP</p>
<p>Wireless Communications Service (part 27)</p>	<p>total power of all channels &gt; 1640 W EIRP</p>
<p>Radio Broadcast Services (part 73)</p>	<p>all included</p>

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**Attachment 3.15**

3.15 Please see attached site-specific Airspace Report in response to FAA requirements addressed under Section 3.14

\*\*\*\*\*

\* Federal Airways & Airspace  
\*  
\* Summary Report: New Construction  
\*  
\* Non-Antenna Structure  
\*

\*\*\*\*\*

Airspace User: Wendy Salazar

File: SCL\_TORRANCE\_6

Location: TORRANCE, CA

Latitude: 33°-50'-55.17" Longitude:  
118°-22'-31.11"

SITE ELEVATION AMSL.....109 ft.  
STRUCTURE HEIGHT.....33 ft.  
OVERALL HEIGHT AMSL.....142 ft.  
SURVEY HEIGHT AMSL.....142 ft.

NOTICE CRITERIA

FAR 77.9(a): NNR (DNE 200 ft AGL)  
FAR 77.9(b): NNR (DNE Notice Slope)  
FAR 77.9(c): NNR (Not a Traverse Way)  
FAR 77.9: NNR FAR 77.9 IFR Straight-In Notice Criteria  
for TOA  
FAR 77.9: NNR FAR 77.9 IFR Straight-In Notice Criteria  
for HHR  
FAR 77.9(d): NNR (Off Airport Construction)

NR = Notice Required  
NNR = Notice Not Required  
PNR = Possible Notice Required (depends upon actual IFR  
procedure)

For new construction review Air Navigation  
Facilities at bottom  
of this report.

Notice to the FAA is not required at the analyzed location  
and height for  
slope, height or Straight-In procedures. Please review the  
'Air Navigation'  
section for notice requirements for offset IFR procedures  
and EMI.

OBSTRUCTION STANDARDS

FAR 77.17(a)(1): DNE 499 ft AGL  
 FAR 77.17(a)(2): DNE - Airport Surface  
 FAR 77.19(a): DNE - Horizontal Surface  
 FAR 77.19(b): DNE - Conical Surface  
 FAR 77.19(c): DNE - Primary Surface  
 FAR 77.19(d): DNE - Approach Surface  
 FAR 77.19(e): DNE - Approach Transitional Surface  
 FAR 77.19(e): DNE - Abeam Transitional Surface

VFR TRAFFIC PATTERN AIRSPACE FOR: TOA: ZAMPERINI FIELD

Type: A RD: 17293.58 RE: 83  
 FAR 77.17(a)(1): DNE  
 FAR 77.17(a)(2): DNE - Height No Greater Than 200  
 feet AGL.  
 VFR Horizontal Surface: DNE  
 VFR Conical Surface: DNE  
 VFR Primary Surface: DNE  
 VFR Approach Surface: DNE  
 VFR Transitional Surface: DNE

The structure is within VFR - Traffic Pattern Airspace Climb/Descent Area.

Structures exceeding the greater of 350' AAE, 77.17(a)(2), or VFR horizontal and conical surfaces will receive a hazard determination from the FAA.

Maximum AMSL of Climb/Descent Area is 453 feet.

VFR TRAFFIC PATTERN AIRSPACE FOR: HHR: JACK NORTHROP FIELD/HAWTHORN

Type: A RD: 28555.1 RE: 65.5  
 FAR 77.17(a)(1): DNE  
 FAR 77.17(a)(2): DNE - Height No Greater Than 200  
 feet AGL.  
 VFR Horizontal Surface: DNE  
 VFR Conical Surface: DNE  
 VFR Primary Surface: DNE  
 VFR Approach Surface: DNE  
 VFR Transitional Surface: DNE

TERPS DEPARTURE PROCEDURE (FAA Order 8260.3, Volume 4)

FAR 77.17(a)(3) Departure Surface Criteria (40:1)  
 DNE Departure Surface

MINIMUM OBSTACLE CLEARANCE ALTITUDE (MOCA)

FAR 77.17(a)(4) MOCA Altitude Enroute Criteria  
 The Maximum Height Permitted is 500 ft AMSL

PRIVATE LANDING FACILITIES

FACIL	BEARING	RANGE
DELTA ARP FAA		
IDENT TYP NAME	To FACIL	IN NM

ELEVATION IFR

+82	3CL8	HEL TOYOTA HELISTOP	81.26	3.16	
		No Impact to Private Landing Facility Structure is beyond notice limit by 14200 feet.			
-262	CL03	HEL AIRPORT TOWERS NR 1	346.48	4.21	
		No Impact to Private Landing Facility Structure 262 ft below heliport.			
+113	4CA6	HEL CHEVRON REFINERY	326.66	4.72	
		No Impact to Private Landing Facility Structure is beyond notice limit by 23679 feet.			
-113	CL02	HEL KILROY AIRPORT CENTER	354.33	4.9	
		No Impact to Private Landing Facility Structure 113 ft below heliport.			
-67	32CN	HEL PACIFIC BELL-2300 IMPERIAL H	355.81	4.92	
		No Impact to Private Landing Facility Structure 67 ft below heliport.			
-96	CN33	HEL AIRPORT IMPERIAL BLDG HELIST	347.54	5.01	
		No Impact to Private Landing Facility Structure 96 ft below heliport.			
+125	7L1	HEL CARSON SHERIFF STATION	98.6	5.72	
		No Impact to Private Landing Facility Structure is beyond notice limit by 29755 feet.			

AIR NAVIGATION ELECTRONIC FACILITIES

GRND	FAC		ST		DIST	DELTA			
ANGLE	APCH	IDNT	TYPE	AT	FREQ	VECTOR	(ft)	ELEVA	ST LOCATION
	BEAR								
	TOA	LOCALIZER	I		111.9	149.21	16859	+63	CA RWY 29R
ZAMPERINI		.21 294							
ZAMPERINI	TOA	ATCT	ON	A/G	148.91	19994		-37	CA
		FIELD							
	HHR	LOCALIZER	I		109.1	19.85	28547	+76	CA RWY 25
JACK NORTH		.15 253							
	HHR	ATCT	Y	A/G	23.1	29578		+7	CA JACK



NORTHROP FIE .01  
 #1 LAXA RADAR Y 2705. 342.43 31961 -32 CA LAX ASR  
 -.06  
 No Impact. This structure does not require Notice based upon EMI.  
 The studied location is within 20 NM of a Radar facility. The calculated Radar Line-Of-Sight (LOS) distance is: 31 NM.  
 This location and height is within the Radar Line-Of-Sight.

LAX VORTAC R 113.6 330.78 35229 -43 CA LOS ANGELES  
 -.07  
 Alert! IFR Notice is not required for this structure. Predict within Final Segment of Approach plus Fix Error Area.  
 Within FAR 77.9 IFR Notice Requirement Area for TOA: VOR RWY 11L  
 The maximum IFR No Notice Height for new construction is: 680' AMSL.

QLA RADAR ARSR Y 1277.4 162.41 39222 -1405 CA Los Angeles San P -2.05  
 No Impact. This structure does not require Notice based upon EMI.  
 The studied location is within 20 NM of a Radar facility. The calculated Radar Line-Of-Sight (LOS) distance is: 63 NM.  
 This location and height is within the Radar Line-Of-Sight.

LAXB RADAR Y 2855. 345.47 39487 -14 CA LAX ASR  
 #2 -.02  
 No Impact. This structure does not require Notice based upon EMI.  
 The studied location is within 20 NM of a Radar facility. The calculated Radar Line-Of-Sight (LOS) distance is: 30 NM.  
 This location and height is within the Radar Line-Of-Sight.

CPM NDB D 37 69.25 41561 +45 CA COMPTON  
 .06  
 SMO VOR/DME R 110.8 337.24 63766 +28 CA SANTA MONICA  
 .03  
 SLI VORTAC R 115.7 103.82 100236 +120 CA SEAL BEACH  
 .07  
 LGB RADAR ON 2730. 100.46 115188 +30 CA LONG BEACH /DAUGH  
 .01  
 BUR RADAR Y 2810. 1.76 129413 -680 CA BURBANK- GLENDALE-  
 -.3  
 VNY VOR/DME R 113.1 345.54 140870 -670 CA VAN NUYS

- .27	SXC	VORTAC	I	111.4	184.49	172870	-1948	CA	SANTA
	CATALINA								
									- .65
	POM	VORTAC	R	110.4	64.73	196992	-1124	CA	POMONA
- .33									
	ELB	VOR/DME	R	117.2	107.97	205639	-194	CA	EL TORO
- .05									
	KSOX	RADAR WXL	Y		93.08	224808	-2964	CA	SANTA
	ANA MOUNTAI								- .76

CFR Title 47, §1.30000-§1.30004  
 AM STUDY NOT REQUIRED: Structure is not near a FCC  
 licensed AM station.  
 Movement Method Proof as specified in §73.151(c) is not  
 required.  
 Please review 'AM Station Report' for details.  
 Nearest AM Station: KNX @ 2667 meters.

Airspace® Summary Version 17.9.479

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 Airways & Airspace®  
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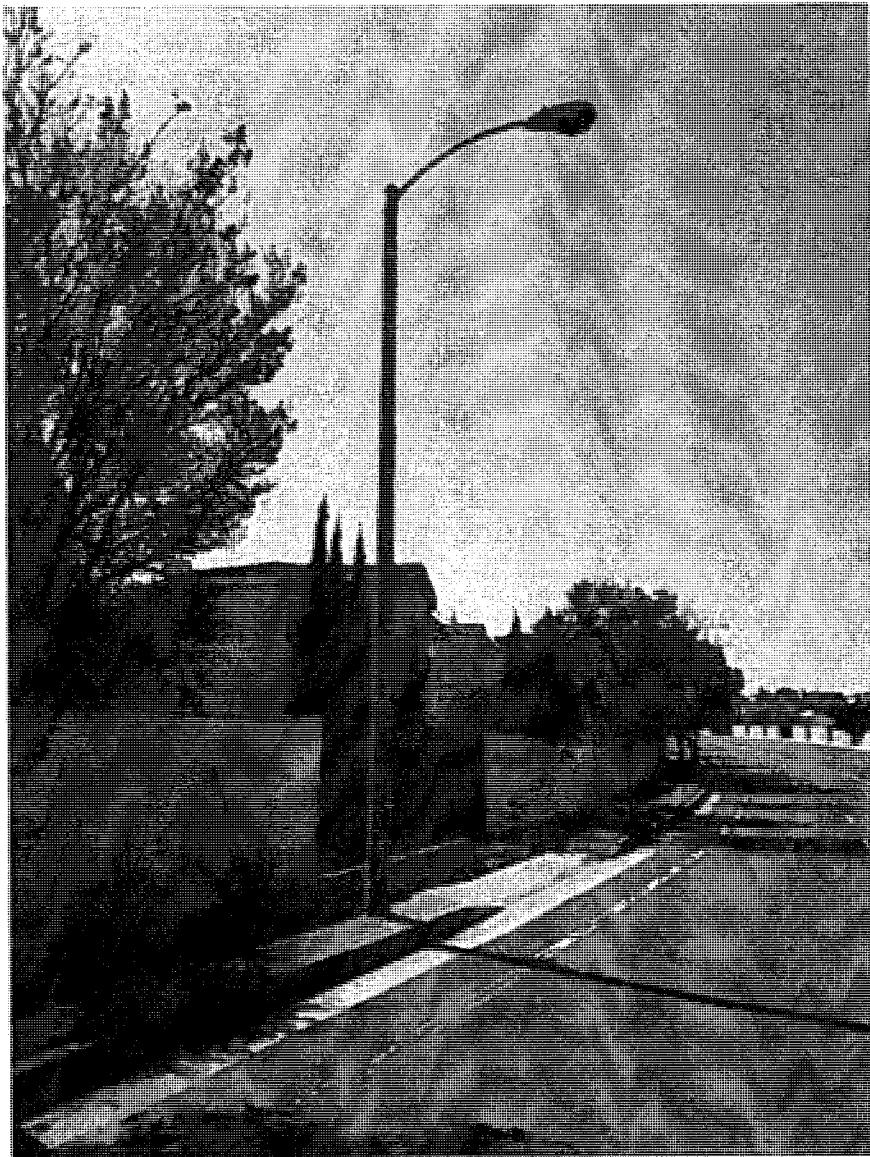
10-19-2017  
 15:40:36

**Attachment 4.01**

The purpose of installing SCL Torrance 6 is to increase capacity caused by increased usage and demand of wireless data and technology in the area surrounding the project site.

Pursuant to the City of Torrance's Municipal Code, Verizon Wireless proposes to attach small cell wireless equipment to a street light pole located within the City of Torrance's public right of way.

Site ID	Latitude	Longitude	Zone	Pole Type	Pole Owner
SCL Torrance 6	33.848658	-118.375308	R1 - Hillside	Concrete	SCE



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**Facility Type**

This is a "wireless telecommunications facility" per the definition in Torrance Municipal Code Section 92.39.030 (u) as it is an antenna attachment to a street light pole in the public right of way.

**Zoning**

The proposed facility is located in the Single Family Residential – Hillside Overlay zone (R1 - Hillside).

**Height** (92.39.040 (a)(1)(A))

The antenna will be attached to a street light pole with a height of 29.5 feet. The height of the structure after attachment will be 32.5 feet, which does not exceed the maximum 35 feet for antennas on street lights within the public right of way, as called out by the Code.

**Location** (92.39.040 (b))

The project meets location priority (B) as an existing light pole under Section 92.39.040 (b)(1) of the Code. The project requires special approval by the Telecommunications Committee under Section 92.39.040 (b)(3)(A) as it is located within the public right of way within a residential district.

**Co-Location** (92.39.040 (d))

This is not a feasible co-location project.

**Design Standards** (92.39.050)

Attach 2'-0" omnidirectional antenna and associated auxiliary equipment to a concrete street light pole within the right of way of the City.

This project consists of the installation of an antenna and associated equipment for Verizon Wireless' wireless telecommunications network.

Verizon Wireless contractor to install:

- (1) Canister antenna; and
- (2) RRUs onto pole.

Verizon Wireless contractor to place:

- (1) 17" x 30" x 18" (Fiber) pull box; and
- (1) Concrete pad mounted meter pedestal.

Southern California Edison is responsible for replacing the existing street light pole with the street light pole shown on the elevation sheet in the zoning drawing. No cost will be borne by the City of Torrance for the pole replacement. Southern California Edison has provided a Letter of

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Authorization for Verizon Wireless’s subsequent installation of wireless equipment on the pole, which is included in our application package under **Attachment 2.00**.

The volumetric total of the antenna for this project equals approximately 2.42 cubic feet. The volumetric total of all equipment associated with this project totals approximately 16.36 cubic feet. Please see calculations below.

EQUIPMENT	L	W	H	CU.IN.	CU.FT.	QUANTITY	TOTAL CU.FT.
METER PEDESTAL	50.00	16.00	16.00	12800.00	7.41	1.00	7.41
PSU	2.68	12.99	7.04	245.08	0.14	2.00	0.28
RRU	18.50	10.00	28.00	5180.00	3.00	2.00	6.00
DIPLEXER	5.90	1.90	5.90	66.14	0.04	4.00	0.15
2' ANTENNA	$\pi(7.45)^2(24)$			4184.79	2.42	1.00	2.42
DISCONNECT SWITCH	7.84	5.11	4.13	165.46	0.10	1.00	0.10
<b>TOTAL</b>							<b>16.36</b>

**Painting** (92.39.050 (2)(e))

The equipment is painted a neutral gray color to blend with the concrete surface of the street light pole and to minimize its appearance against the surrounding environment.

**Lighting & Signage** (92.39.050 (f & g))

The equipment will not have any lighting or signage other than that required for public safety and identification, such as is mandated by the FCC and FAA.

**Maintenance** (92.39.020 (g))

The installed equipment will be routinely maintained by Verizon Wireless in accordance with the Site License Agreement language that will be executed with Southern California Edison. The equipment will be labeled with signage indicating its ownership by Verizon Wireless with identifying equipment tags and a phone number to contact Verizon in the event of an emergency.

The installed replacement pole will be maintained by the original pole owner as identified above.

**Street Access and Parking** (92.39.020 (h))

Verizon will have a traffic control plan in place during placement of the equipment. As the equipment will be placed on a pole in the public right of way, Verizon does not anticipate an effect on traffic or parking beyond the construction stage and any scheduled maintenance.

**Radio Frequency** (92.39.060 (b)(5))

The Federal Communications Commission (FCC) requires compliance with its Radio Frequency (RF) emissions safety limits to ensure the safe operation of cellular facilities. Verizon Wireless fully complies with all standards and operates well within the safety guidelines set by the FCC.

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Additionally, we work with local jurisdictions to ensure all applicable federal, state and local regulations are followed. In general, due to their small size, low wattage and limited coverage, emissions from small cells are a small fraction of FCC-permitted levels in any publicly accessible area.

The proposed facility will be designed and constructed to meet all applicable government and industry standards for radio frequency emissions. An RF emissions report signed by a radio frequency engineer and prepared pursuant to FCC, Office of Engineering and Technology, Bulletin 65 is attached under **Attachment 6.05**.

**Site Justification**

Small cells augment Verizon Wireless's capacity in a given area. They consist of a radio, antenna, power and a fiber connection. Small cells are short range mobile cell sites used to complement larger macro cells (or cell towers). Small cells enable the Verizon Wireless network team to strategically add capacity to high traffic areas. Small cell networks add capacity in small, specific areas to improve in-building coverage, voice quality, reliability, and data speeds for local residents, businesses, first responders and visitors using the Verizon Wireless network.

U.S. mobile data usage is projected to grow nearly seven-fold from 2014 through 2019.<sup>1</sup> It's part of Verizon Wireless's network strategy to provide reliable service and to stay ahead of this booming demand for wireless data. For Verizon Wireless, small cells are part of a balanced approach to network capacity. Verizon Wireless will continue to add traditional macro cell sites and expand its 4G XLTE footprint for bandwidth and capacity. Verizon Wireless looks to add small cells in areas ranging from urban centers to residential communities where there is a need for extra capacity to serve customers to stay ahead of the demand for wireless data.

A small cell uses small radios and a single antenna placed on existing utility poles, transit poles, street lights, signs and signal light poles. The coverage area can range from a few hundred feet to upwards of 1,000 ft. depending on topography, capacity needs, and more. This small focused footprint supports 4G LTE-enabled devices, allowing individuals and businesses within the City of Torrance to do things like stream video or share photos on social media during events.

When selecting a small cell attachment site, there are many considerations including the identified coverage area, availability of existing infrastructure within the right of way, height of existing infrastructure, feasibility of using existing infrastructure, and the surrounding zoning district (industrial and commercial prioritized, if possible).

Choosing an effective project site required looking for potential candidates within a small area provided by our radio frequency engineers to identify the coverage area they wish to address. This search area is quite small due to the nature of the project, consisting of the area within approximately 250 feet of a provided coordinate location. With the search area identified, the next step was to determine what types of existing infrastructure were available in this area. The

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<sup>1</sup> Cisco VNI Mobile Forecast Highlights, 2014 – 2019, October 2015

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search area was in a residential area, with concrete street lights as the only available attachment options. The project site chosen was an unencumbered pole, nearest to the ideal coordinates provided by the RF engineers, with a low risk of RF interference.

Verizon Wireless's RF engineers have identified this location as necessary and appropriate to provide network densification. When selecting this location, Verizon Wireless's RF engineers looked at traffic patterns, geographic topography of the surrounding area, and population density when determining that this location was necessary to provide adequate network coverage to serve the City of Torrance's residents and businesses. The proposed site was chosen because of the coverage afforded by its strategic location and the lack of obstructions in the area to allow a signal to penetrate the geographical service area. The project will be able to provide connectivity to neighboring sites within the local network.

**Attachment 6.00**

**6.01:** Where a licensee intends to provide radio frequency geographic coverage to a defined area from the Project, the coverage maps and information requested in Section 6 are required attachments. All others proceed to 7.00.

This project is focused on providing increased capacity to the project area. The dominant purpose, as described in Question 4.02, is to “Add network capacity without adding substantial new RF coverage area.” As such, the licensee (Verizon Wireless) does not intend to “provide radio frequency geographic coverage to a defined area from the Project.” Therefore, no RF coverage maps are provided in response to this question.

Please note, RF coverage maps will be provided with Attachment 8.05 to respond to the requested “technically expansive and detailed explanation supported as required by comprehensive radio frequency data fully describing why the proposed site is the one and only one location within or without the City of Torrance that can possibly meet the radio frequency objectives of the project.”

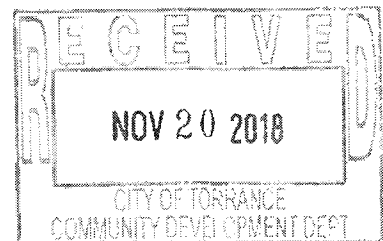


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**Attachment 6.00**

**6.01-6.04:** Where a licensee intends to provide radio frequency geographic coverage to a defined area from the Project, the coverage maps and information requested in Section 6 are required attachments. All others proceed to 7.00.

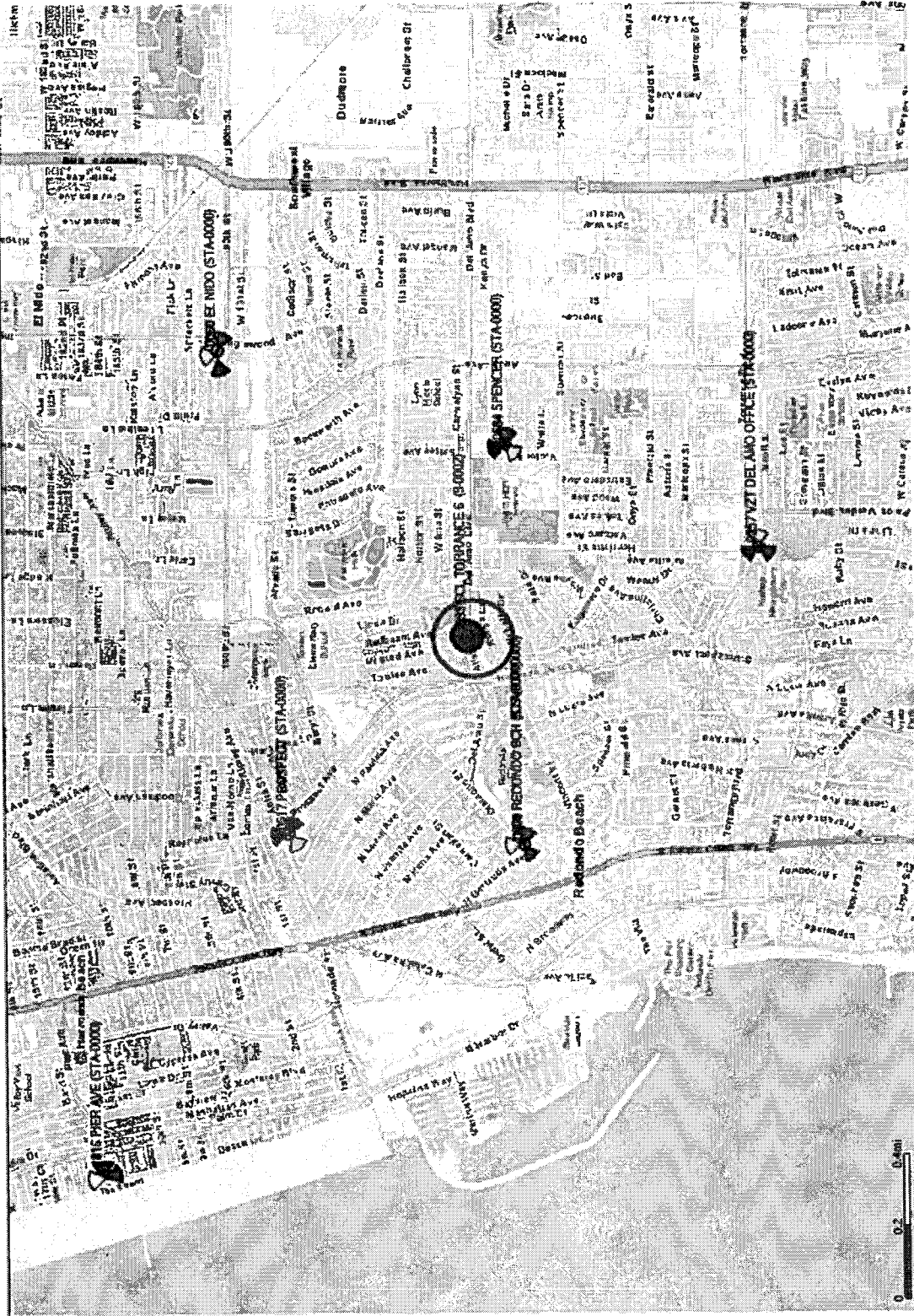
Please see attached maps as well as letter from Verizon Wireless legal counsel entitled "Verizon Wireless Statement Regarding Coverage Maps Wireless Facilities in the Right-of-Way" dated November 19, 2018.



only against coverage gaps or the like.” *Id.*, ¶ 38. The FCC also determined that the appropriate criteria for approving qualifying small cells are reasonable, non-discriminatory and objective aesthetic standards that are published in advance. *Id.*, ¶ 86. Such aesthetic criteria do not involve demonstration of need for a small cell. Specifically, the FCC rejected any “coverage gap-based analytical approaches” to the review of small cell applications. *Id.*, ¶ 40.

The submitted coverage maps fulfill all application requirements requested to be submitted by Notices Of Incomplete received from the City for the Applications. Verizon Wireless will not submit further information with respect to these Applications, and requests that all Applications be processed and final action taken by the expiration of the FCC Shot Clock time period calculated for each Application to be no later than March 4, 2019. *See In Re: Petition for Declaratory Ruling to Clarify Provisions of Section 332(c)(7)(B) to Ensure Timely Siting Review, Etc.*, FCC 09-99 (FCC November 18, 2009)

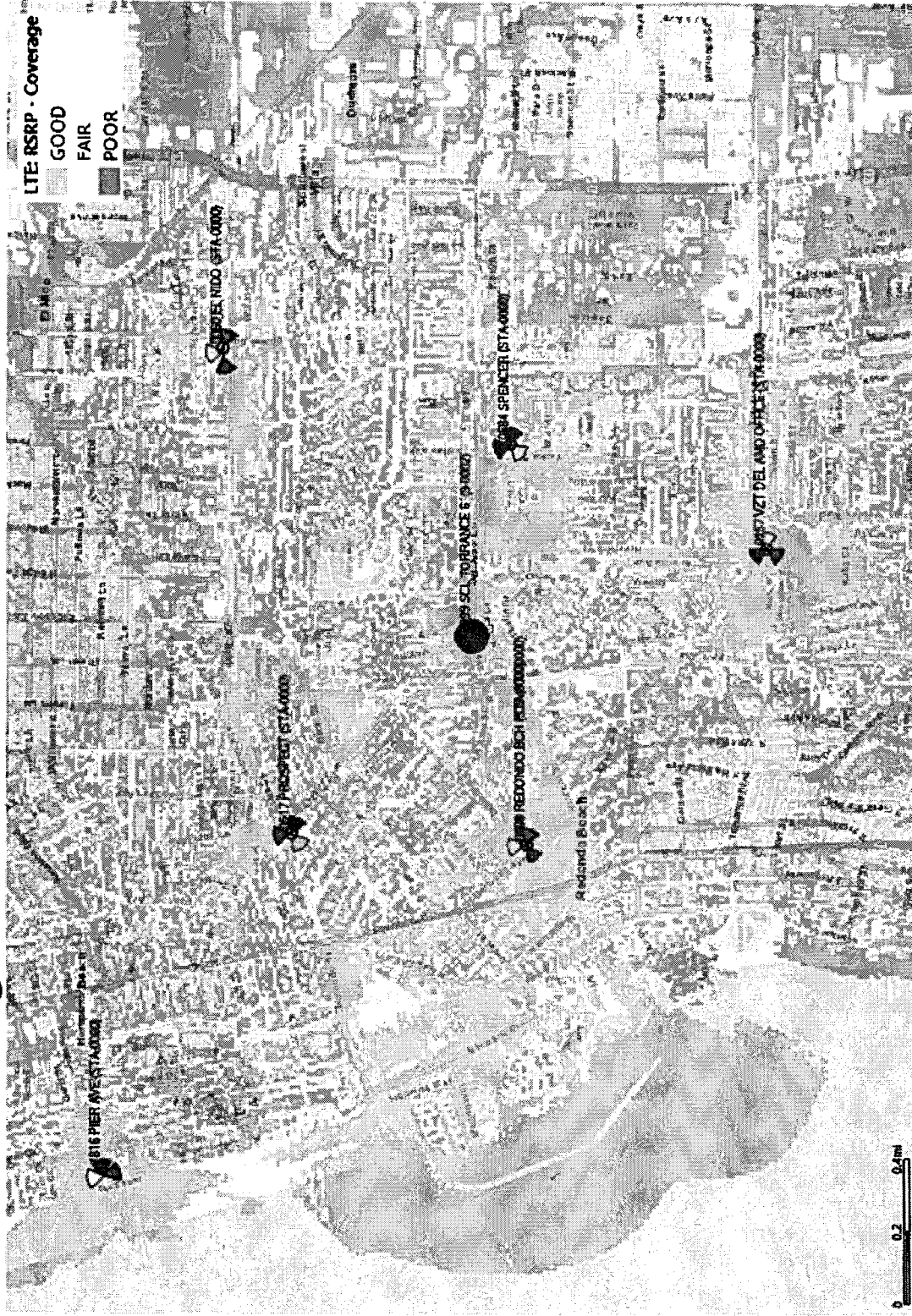
# Sci Torrance 6 - General Map



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# Verizon Coverage with Sc1 6 Torrance



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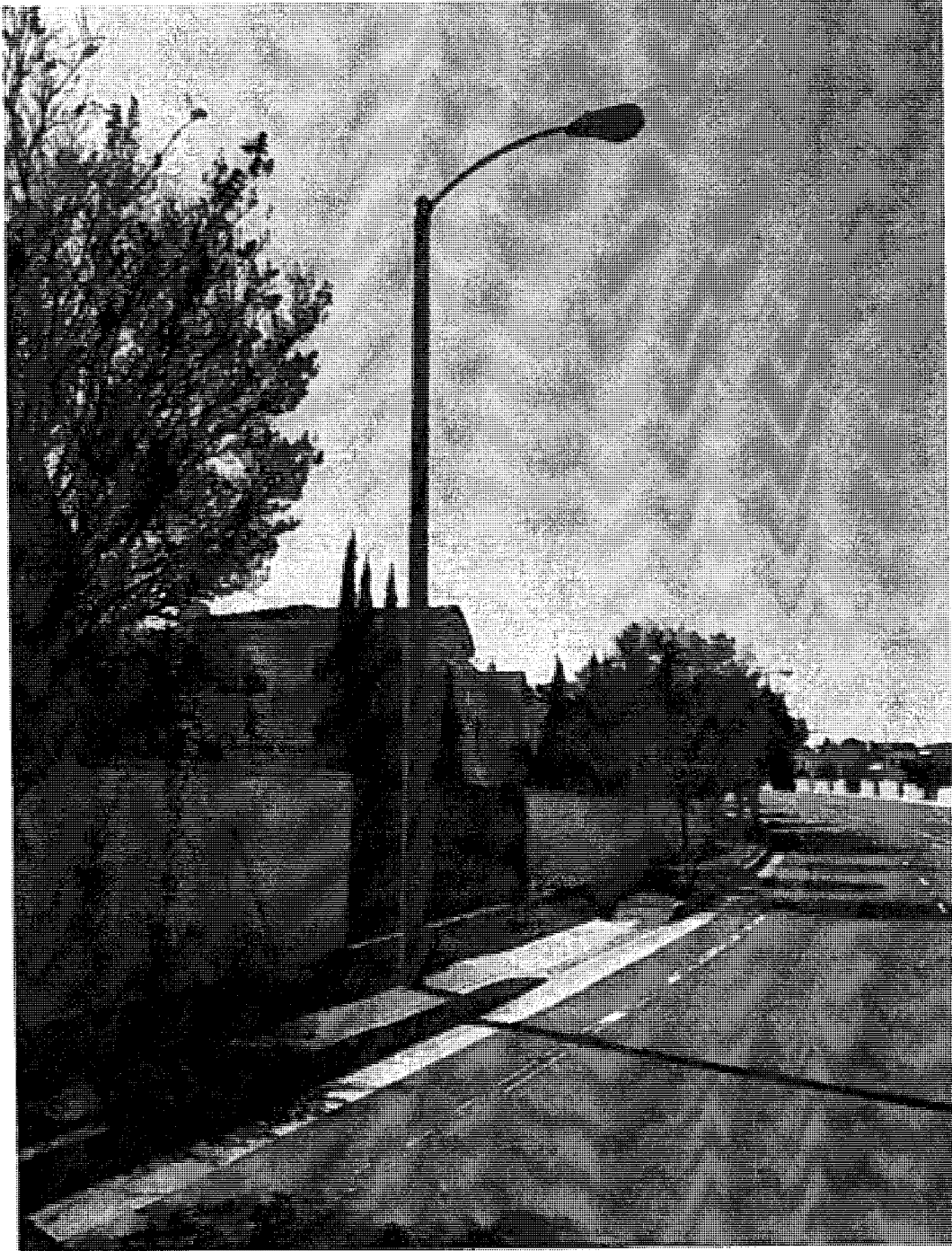
**Attachment 6.05**

6.05: Written certification that the facility will continuously comply with FCC OET Bulletin 65 radio frequency emissions standards, and that use of the facility will not interfere with other communication, radio, or television transmission or reception.

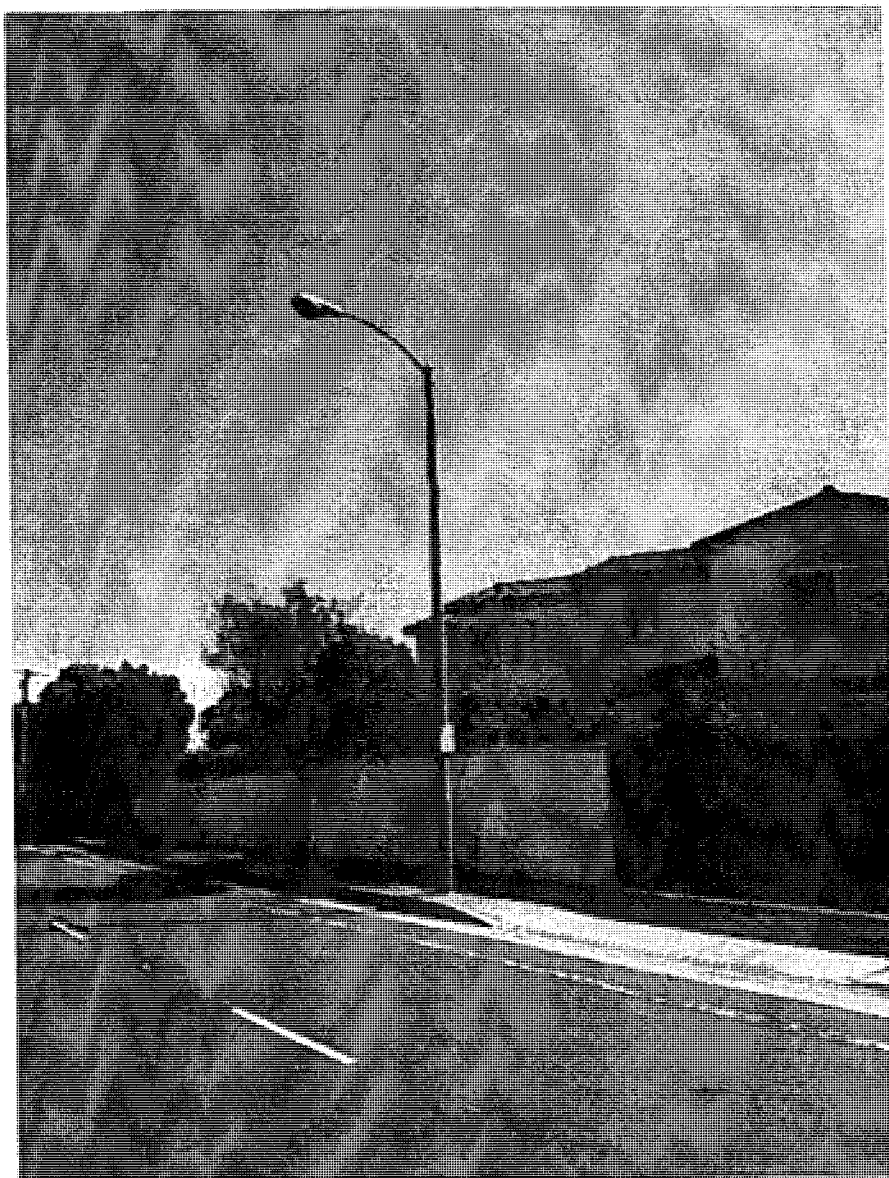
Please see the attached site-specific Radio Frequency - Electromagnetic Energy (RF-EME) Jurisdictional Report.

**Attachment 7.00**

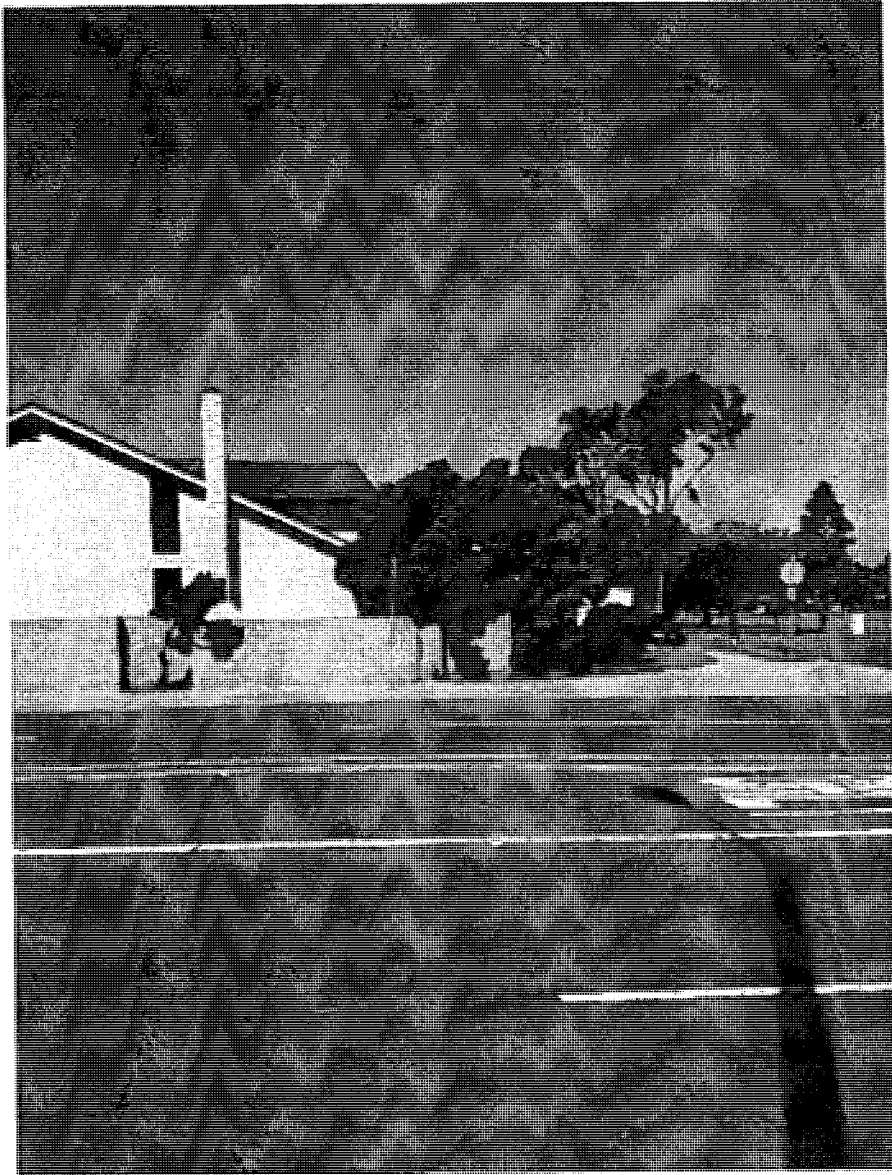
7.01: Pre-project Photographs (below) and Photo Simulations (attached)



**View 1**



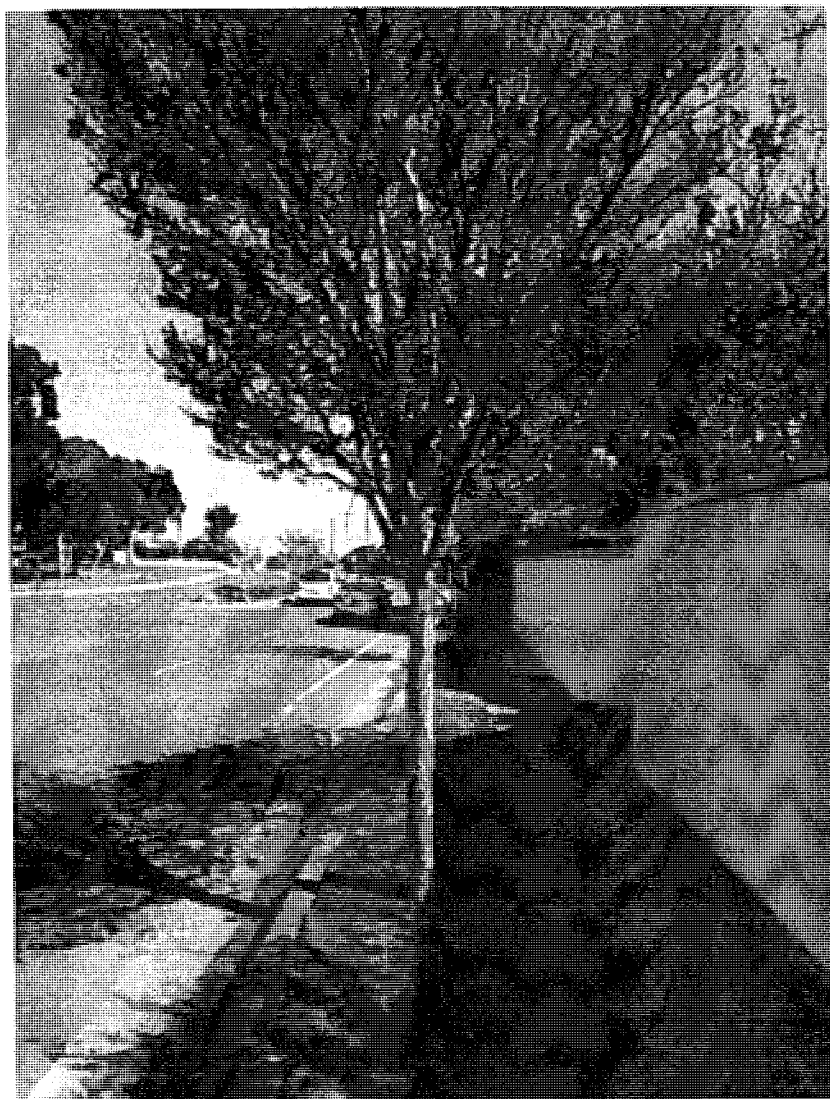
**View 2**



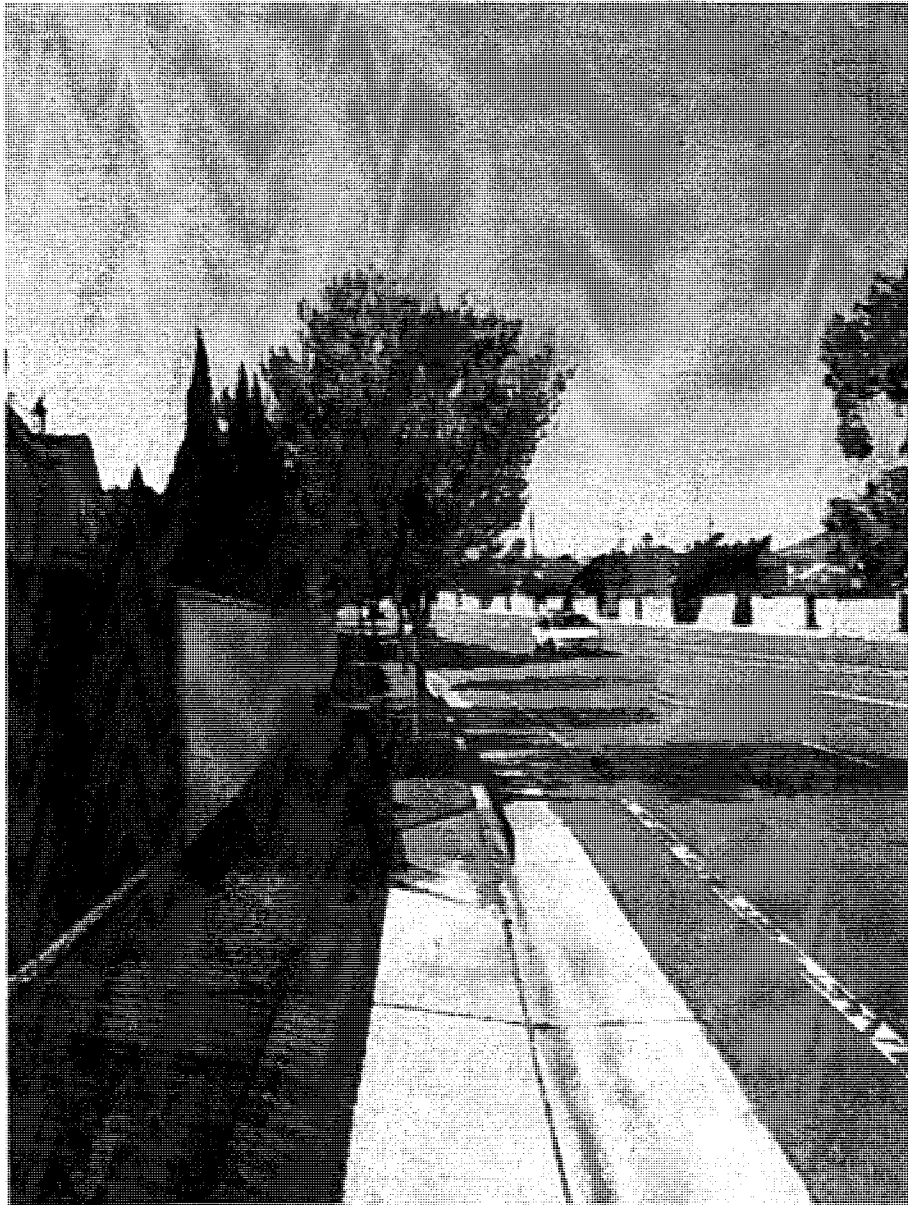
View 3



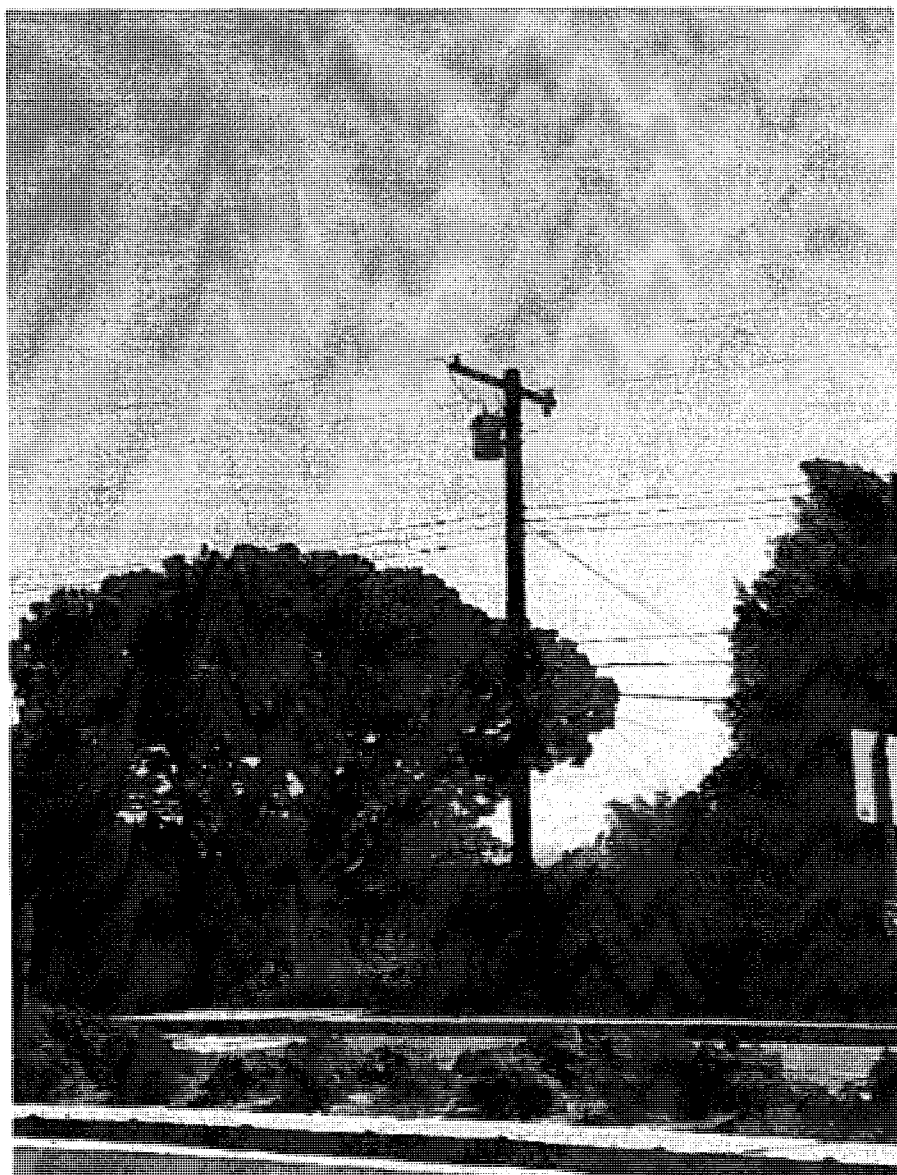
Verizon Wireless  
SCL Torrance 6



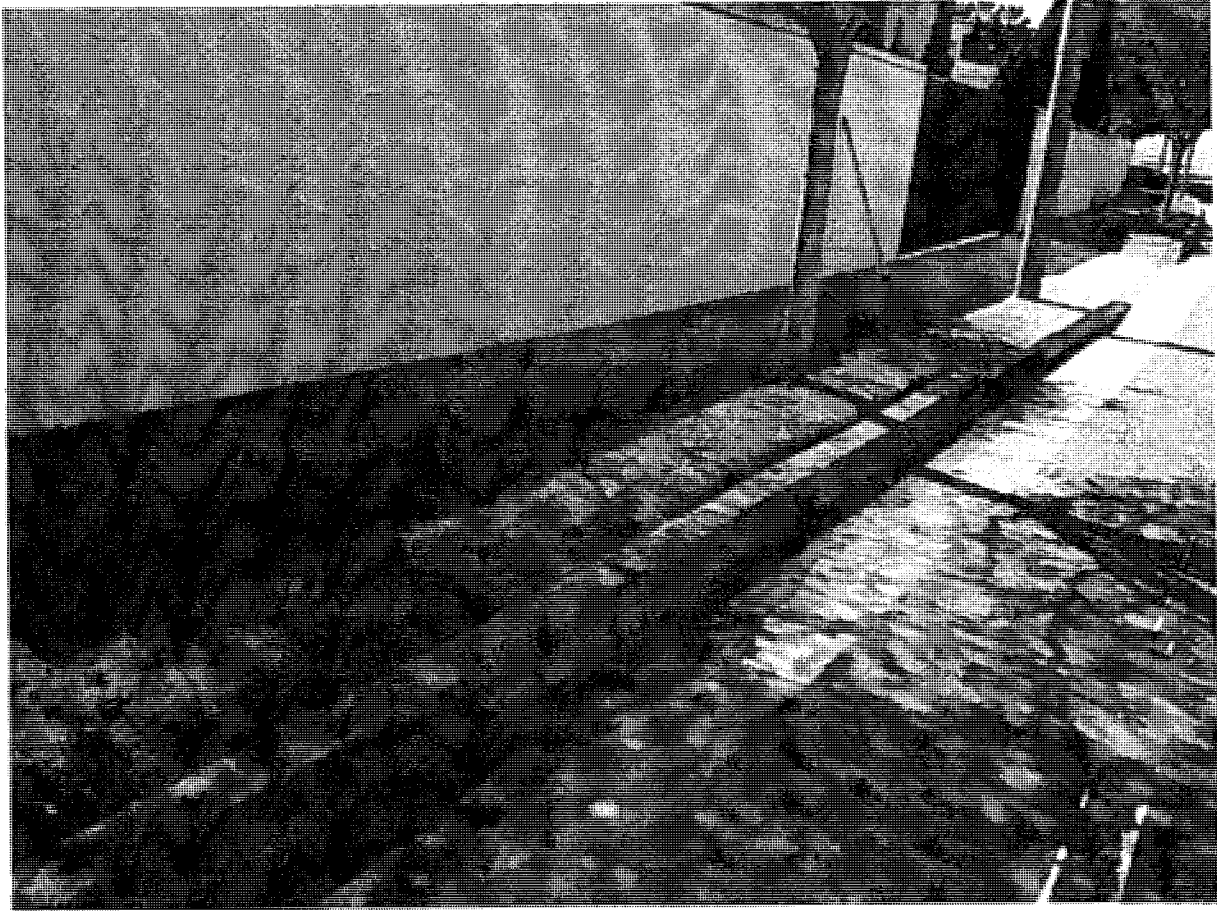
**View 4**



**View 5**



**View 6**



**View 7**

### Attachment 8.05

**8.05:** Technically expansive and detailed explanation describing why the proposed site is the only location that can meet the radio frequency objectives of the project.

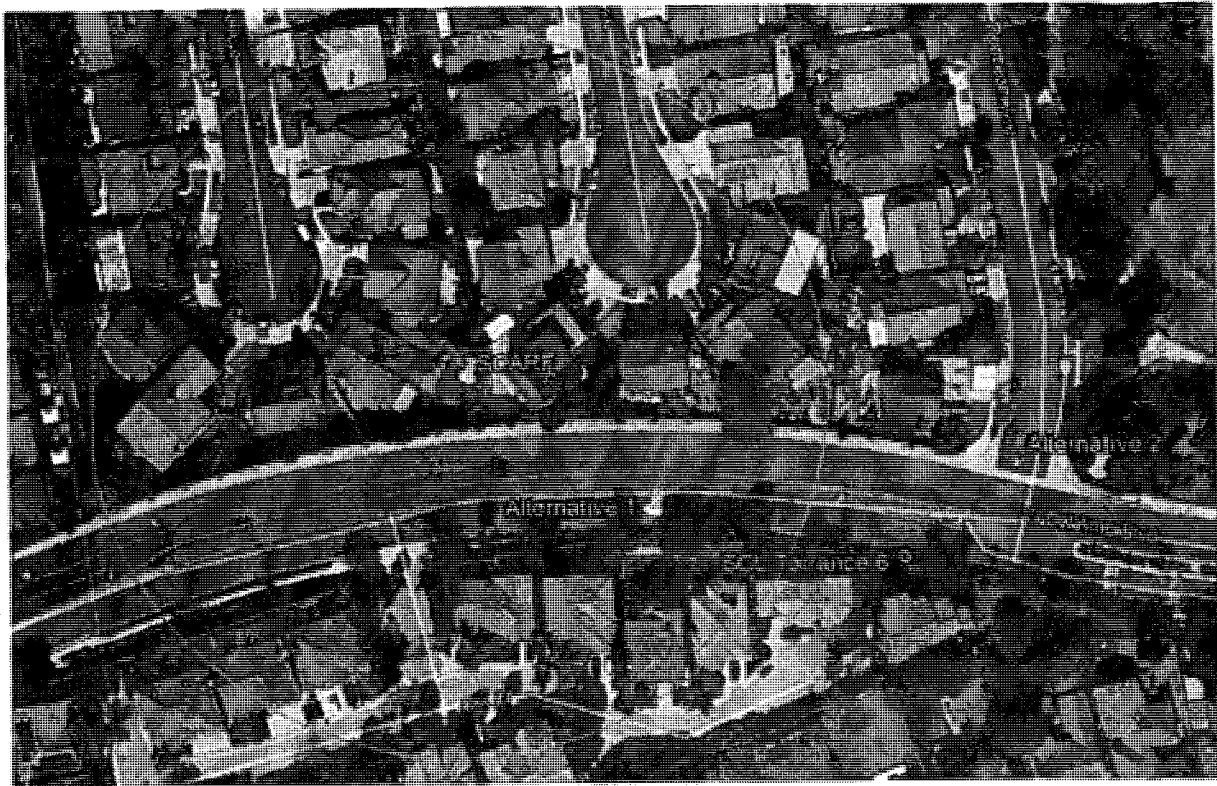
As usage increases in an existing wireless network, excessive demand is placed on the network's capacity. This demand may result in decreased network performance by impacting the effectiveness of the coverage area for the network. By adding additional base stations, more resources (added capacity) are available to serve the project area. The project area identified already has sufficient radio signal coverage from existing infrastructure (see attached propagation maps); however, over-capacity has decreased the effectiveness of these signals. By adding the proposed antenna at the project site, increased capacity will result in better performance for customers in the project area.

Verizon Wireless's RF engineers have identified the proposed location as necessary and appropriate for a small cell site to provide adequate densification. When selecting this site, Verizon Wireless's RF engineers considered traffic patterns, geographic topography of the surrounding area, and population density when determining that the proposed location was best suited to serve the City of Torrance's residents and businesses.

The green ring below represents the 250' radius parameters within which to locate the project site for the equipment to provide an effective capacity increase. The preferred location by Verizon Wireless's RF engineers is as close to the SCARF as possible. However, only a few poles are located in or near the search area. Alternative poles were considered, as represented by the pins marking "Alternative 1" and "Alternative 2." Alternative 1 is a concrete street light pole located to the rear of a single family home. Alternative 2 is a concrete street light located on the corner of a park. However, Alternative 2 is located further outside the search area than the proposed project site. In addition, there is a large tree behind the pole that may negatively impact the radio frequency of the site. The proposed project pole is a street light pole located to the rear of a single family home. This pole was chosen over Alternative 1 as it is offset and at a less obtrusive location than Alternative 1.

Please make all amounts payable to: Telecom Law Firm, P.C.

Please remit your payment within 29 days.



**Attachment 9.01**

**9.00: Identification of Key Persons**

**9.01:** Name, title, company affiliation, work address, telephone number and extension, and email address of the key persons most knowledgeable regarding:

**(1)** the site selection for the proposed project, including alternatives:

Laura Castro, Site Acquisition & Zoning Specialist, J5 Infrastructure, 2030 Main St. Suite 200 Irvine, CA 92618, (714) 272-3702, [Lcastro@j5ip.com](mailto:Lcastro@j5ip.com)

**(2)** the radio frequency engineering of the proposed project:

Vinh Vuong, RF Design Engineer, Verizon Wireless, 15505 Sand Canyon Rd. Bldg. D-1 Irvine, CA 92618, (949) 379-9198, [vinh.vuong@verizonwireless.com](mailto:vinh.vuong@verizonwireless.com)

**(3)** rejection of other candidate sites evaluated, if any:

Vinh Vuong, RF Design Engineer, Verizon Wireless, 15505 Sand Canyon Rd. Bldg. D-1 Irvine, CA 92618, (949) 379-9198, [vinh.vuong@verizonwireless.com](mailto:vinh.vuong@verizonwireless.com)

**(4)** approval of the selection of the proposed site identified in this project:

Vinh Vuong, RF Design Engineer, Verizon Wireless, 15505 Sand Canyon Rd. Bldg. D-1 Irvine, CA 92618, (949) 379-9198, [vinh.vuong@verizonwireless.com](mailto:vinh.vuong@verizonwireless.com)

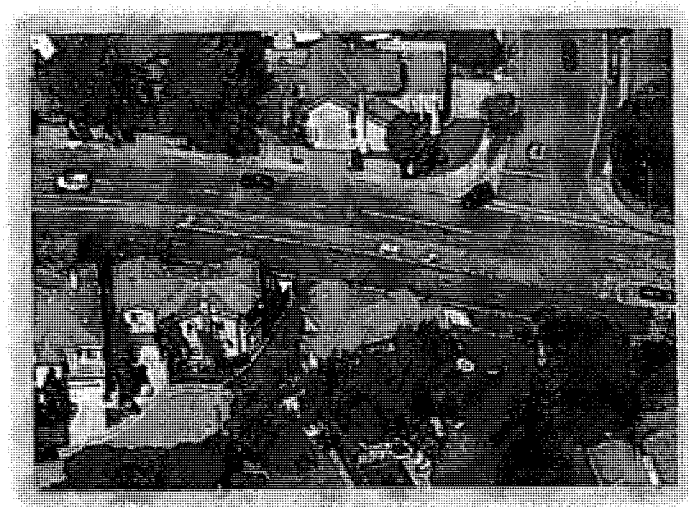


# Radio Frequency - Electromagnetic Energy (RF-EME) Jurisdictional Report

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Site No. 432405  
SCL Torrance 6  
S/O 20121 Redbeam Avenue at Del Amo Boulevard  
Torrance, California 90503  
Los Angeles County  
33° 50' 55.17" N, -118° 22' 31.11" W NAD83

EBI Project No. 6217004272  
October 9, 2017



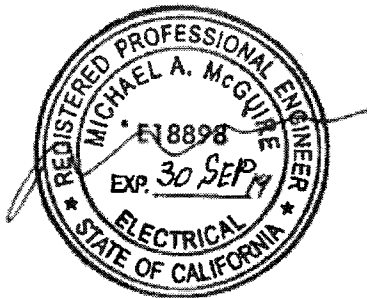
Prepared for:

Verizon Wireless  
c/o J5 Infrastructure Partners  
2030 Main Street, Suite 1300  
Irvine, California 92614

Prepared by:

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

Reviewed and Approved by:



sealed 10oct2017

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Michael McGuire  
Electrical 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.

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- APPENDIX B RADIO FREQUENCY ELECTROMAGNETIC ENERGY SAFETY / SIGNAGE PLANS**
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## **EXECUTIVE SUMMARY**

### **Purpose of Report**

EnviroBusiness Inc. (dba EBI Consulting) has been contracted by Verizon Wireless to conduct radio frequency electromagnetic (RF-EME) modeling for Verizon Site 432405 to be located on a light pole south of 20121 Redbeam Avenue at Del Amo Boulevard in Torrance, California to determine RF-EME exposure levels from proposed Verizon wireless communications equipment at this site. As described in greater detail in Section 2.0 of this report, the Federal Communications Commission (FCC) has developed Maximum Permissible Exposure (MPE) Limits for general public exposures and occupational exposures. This report summarizes the results of RF-EME modeling in relation to relevant FCC RF-EME compliance standards for limiting human exposure to RF-EME fields.

### **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.

As presented in the sections below, based on worst-case predictive modeling, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed antenna that exceed the FCC's occupational or general public exposure limits at this site. Additionally, there are areas where workers who may be elevated above the ground may be exposed to power densities greater than the occupational limits. Therefore, workers should be informed about the presence and locations of antennas and their associated fields.

At the nearest walking/working surfaces to the Verizon antenna, the maximum power density generated by the Verizon antenna is approximately **9.50** percent of the FCC's general public limit (**1.90** percent of the FCC's occupational limit).

The composite exposure level from all carriers on this site is approximately **9.50** percent of the FCC's general public limit (**1.90** percent of the FCC's occupational limit) at the nearest walking/working surface to each antenna.

Recommended control measures are outlined in Section 5.0 and within a Site Safety Plan (attached); this plan includes instructions to shut down and lockout/tagout this wireless equipment in accordance with Verizon's standard operating protocol.

**1.0 INTRODUCTION**

Radio frequency waves are electromagnetic waves from the portion of the electromagnetic spectrum at frequencies lower than visible light and microwaves. The wavelengths of radio waves range from thousands of meters to around 30 centimeters. These wavelengths correspond to frequencies as low as 3 cycles per seconds (or hertz [Hz]) to as high as one gigahertz (one billion cycles per second).

Personal Communication (PCS) facilities used by Verizon in this area operate within a frequency range of 1900-2100 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 a distance 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 in areas in the immediate vicinity of the antennas.

MPE limits do not represent levels where a health risk exists, since they 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.

**2.0 SITE DESCRIPTION**

This project site includes one (1) wireless telecommunication antenna on a light pole located south of 20121 Redbeam Avenue at Del Amo Boulevard in Torrance, California.

Verizon Antenna Information (proposed Configuration)									
Antenna# and Model	Frequency (MHz)	# of Transmitters	Transmit Power (Watts)	Azimuth	Gain (dBd)	Feet above Ground (CL)	X	Y	Z
A1 Amphenol CUUT360X06Fx0z0	1900	4	40	Omni	4.15	31.4	30	30	30.4
	2100	4	40		7.35				

The FCC guidelines incorporate two separate tiers of exposure limits that are based upon occupational/controlled exposure limits (for workers) and general population/uncontrolled exposure limits for members of the general public that may be exposed to antenna fields. While access to this site is considered uncontrolled, the analysis has considered exposures with respect to both controlled and uncontrolled limits as an untrained worker may access adjacent rooftop locations. Additional information regarding controlled/uncontrolled exposure limits is provided in Section 3.0. Appendix B presents a site safety plan that provides a plan view of the light pole with antenna locations.

### 3.0 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 1 and Figure 1 (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.

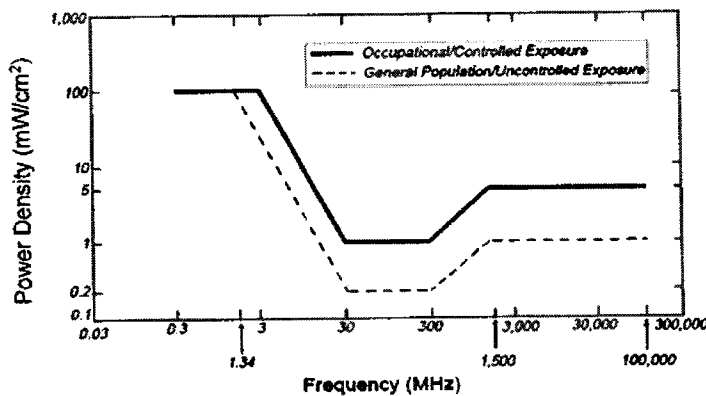
The FCC's MPEs are measured in terms of power (mW) over a unit surface area (cm<sup>2</sup>). Known as the power density, the FCC has established an occupational MPE of 5 milliwatts per square centimeter (mW/cm<sup>2</sup>) and an uncontrolled MPE of 1 mW/cm<sup>2</sup> for equipment operating in the 1900 MHz frequency range. For the Verizon equipment operating at 700 MHz or 850 MHz, the FCC's occupational MPE is 2.83 mW/cm<sup>2</sup> and an uncontrolled MPE of 0.57 mW/cm<sup>2</sup>. These limits are considered protective of these populations.

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

f = Frequency in (MHz)

\* Plane-wave equivalent power density

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



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

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

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

Personal Communication (PCS) facilities used by Verizon in this area operate within a frequency range of 1900-2100 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.

#### **4.0 WORST-CASE PREDICTIVE MODELING**

EBI has performed theoretical modeling using RoofView® software to estimate the worst-case power density at the site ground-level and nearby rooftops resulting from operation of the antenna. RoofView® is a widely-used predictive modeling program that has been developed by Richard Tell Associates to predict both near field and far field RF power density values for roof-top and tower telecommunications sites produced by vertical collinear antennas that are typically used in the cellular, PCS, paging and other communications services. The models utilize several operational specifications for different types of antennas to produce a plot of spatially-averaged power densities that can be expressed as a percentage of the applicable exposure limit.

The modeling is based on worst-case assumptions for the number of antennas and transmitter power. The modeling assumes a maximum 8 radio configuration for Sector A, with a power level of 46 dBm (40 watts) per transmitter for 1900 and 2100 frequencies, in order to provide a worst-case evaluation of predicted MPE levels. The assumptions used in the modeling are based upon information provided by Verizon, and information gathered from other sources. The parameters used for the modeling are summarized in the RoofView® export files presented in Appendix C.

There are no other wireless carriers with equipment installed at this site.

Based on worst-case predictive modeling, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed Verizon antenna that exceed the FCC's occupational or general public exposure limits at this site. At the nearest walking/working surfaces to the Verizon antenna, the maximum power density generated by the Verizon antenna is approximately 9.50 percent of the FCC's general public limit (1.90 percent of the FCC's occupational limit). The composite exposure level from all carriers on this site is approximately 9.50 percent of the FCC's general public limit (1.90 percent of the FCC's occupational limit) at the nearest walking/working surface to each antenna.

The Site Safety Plan also presents areas where the Verizon Wireless antenna contributes greater than 5% of the applicable MPE limit for a site. 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.



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

## 5.0 MITIGATION/SITE CONTROL OPTIONS

EBI's modeling indicates that there are no areas in front of the Verizon antenna that exceed the FCC standards for occupational or general public exposure. All exposures above the FCC's safe limits require that individuals be elevated above the ground. In order to alert people accessing the light pole, yellow caution signs are recommended for installation on opposite sides of the pole 9 feet below the antenna (21.4 feet above ground level).

There are no barriers recommended at this site.

These protocols and recommended control measures have been summarized and included with a graphic representation of the antenna and associated signage and control areas in a RF-EME Site Safety Plan, which is included as Appendix B. Individuals and workers accessing the light pole should be provided with a copy of the attached Site Safety Plan, made aware of the posted signage, and signify their understanding of the Site Safety Plan.

Implementation of the signage recommended in the Site Safety Plan and in this report will bring this site into compliance with the FCC's rules and regulations.

## 6.0 SUMMARY AND CONCLUSIONS

EBI has prepared a Radiofrequency – Electromagnetic Energy (RF-EME) Compliance Report for telecommunications equipment installed by Verizon Site Number 432405 to be located on a light pole south of 20121 Redbeam Avenue at Del Amo Boulevard in Torrance, California to determine worst-case predicted RF-EME exposure levels from wireless communications equipment installed at this site. This report summarizes the results of RF-EME modeling in relation to relevant Federal Communications Commission (FCC) RF-EME compliance standards for limiting human exposure to RF-EME fields.

As presented in the sections above, based on the FCC criteria, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed antenna that exceed the FCC's occupational or general public exposure limits at this site. Workers should be informed about the presence and locations of antennas and their associated fields. Recommended control measures are outlined in Section 5.0 and within a Site Safety Plan (attached); this plan includes procedures to shut down and lockout/tagout this wireless equipment in accordance with Verizon's standard operating protocol.

## 7.0 LIMITATIONS

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

RF-EME Compliance Report  
EBI Project No. 6217004272

Site No. 432405  
S/O 20121 Redbeam Avenue at Del Amo Boulevard, Torrance, California

## **Appendix A**

### **Certifications**

## Preparer Certification

I, Jonathan Ilgenfritz, 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.







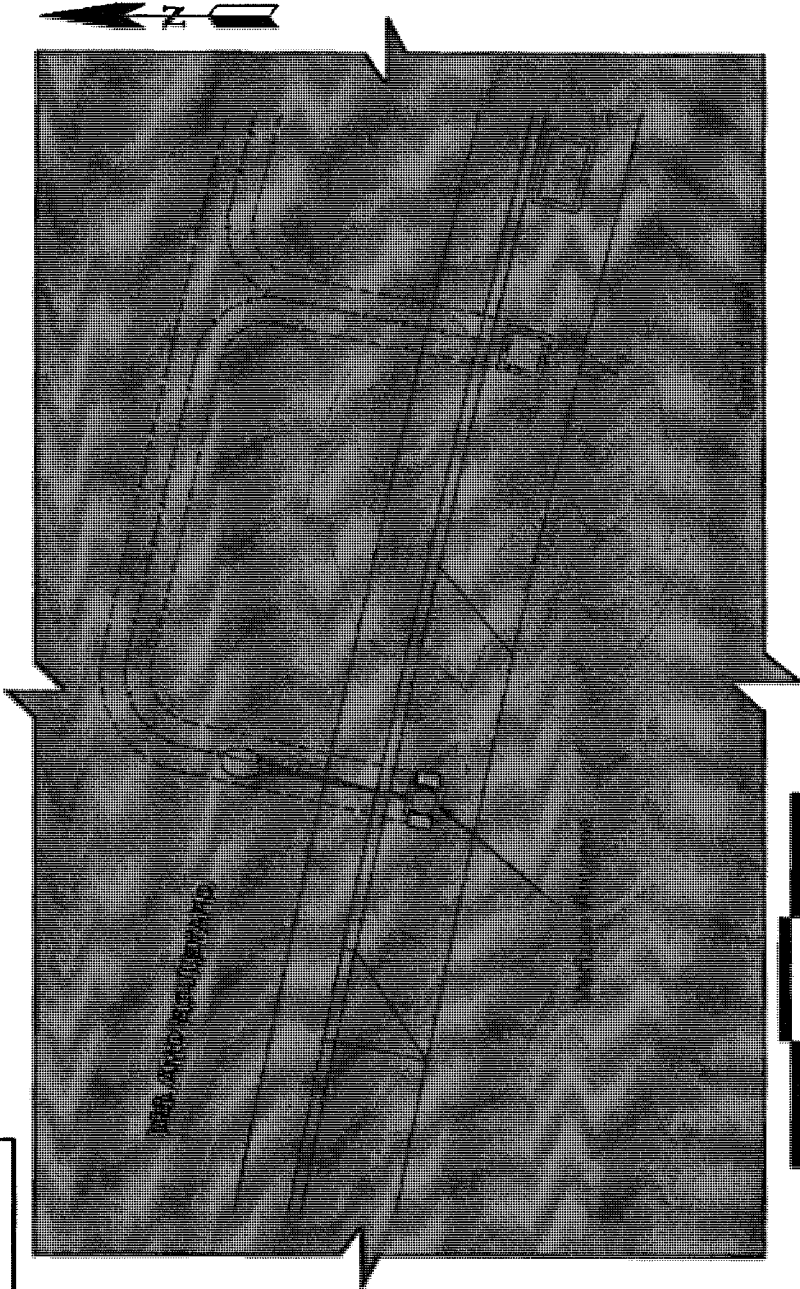
RF-EME Compliance Report  
EBI Project No. 6217004272

Site No. 432405  
S/O 20121 Redbeam Avenue at Del Amo Boulevard, Torrance, California

**Appendix B**  
**Radio Frequency Electromagnetic Energy**  
**Safety / Signage Plans**

**% FCC Public Exposure Limit**

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



 Verizon Antennas

**Roofview: Composite Exposure Levels**

Facility Operator: Verizon Wireless



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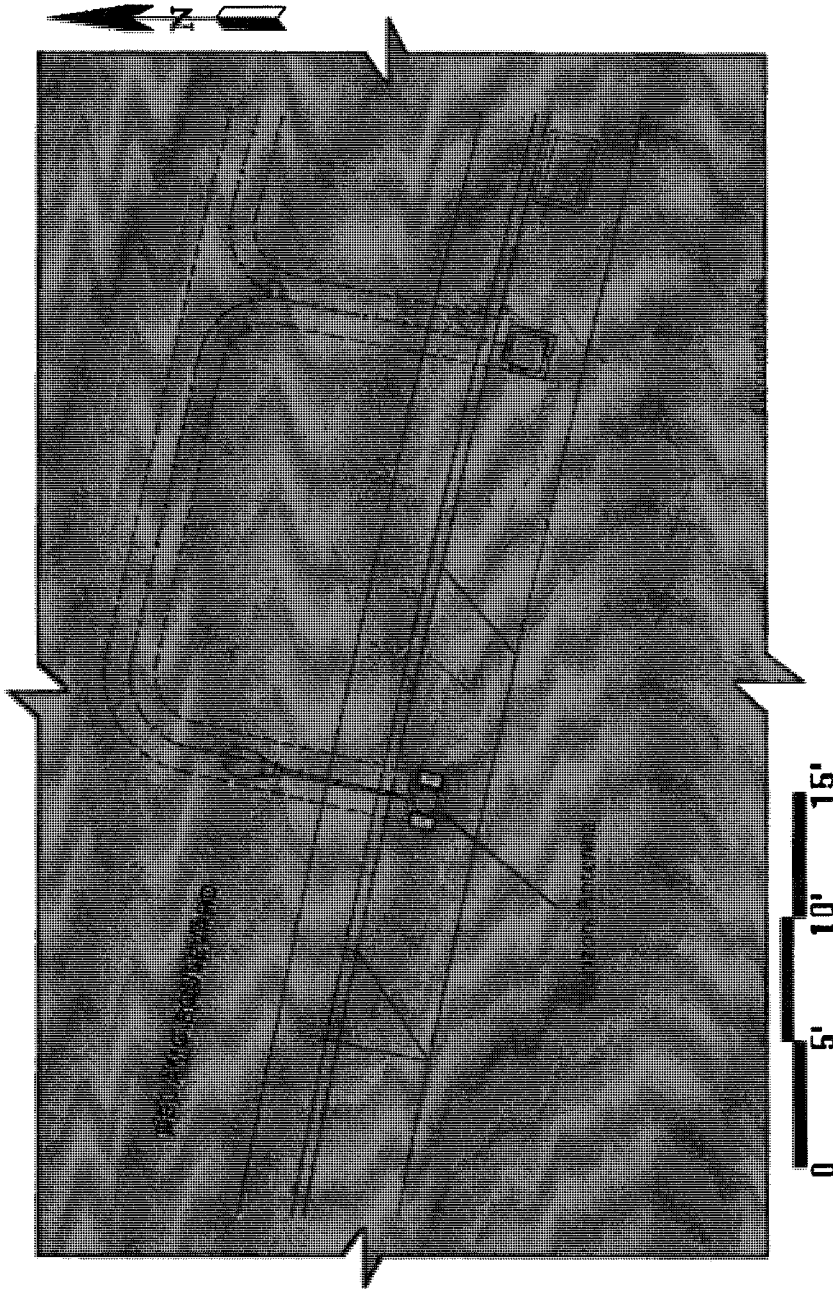
Verizon Site Number: 432405

Report Date: 10-09-17



**% FCC Public Exposure Limit**

	Exposure Level > 5
	Exposure Level ≤ 5



 Verizon Antennas

**Roofview: Verizon Exposure Levels**

Facility Operator: Verizon Wireless

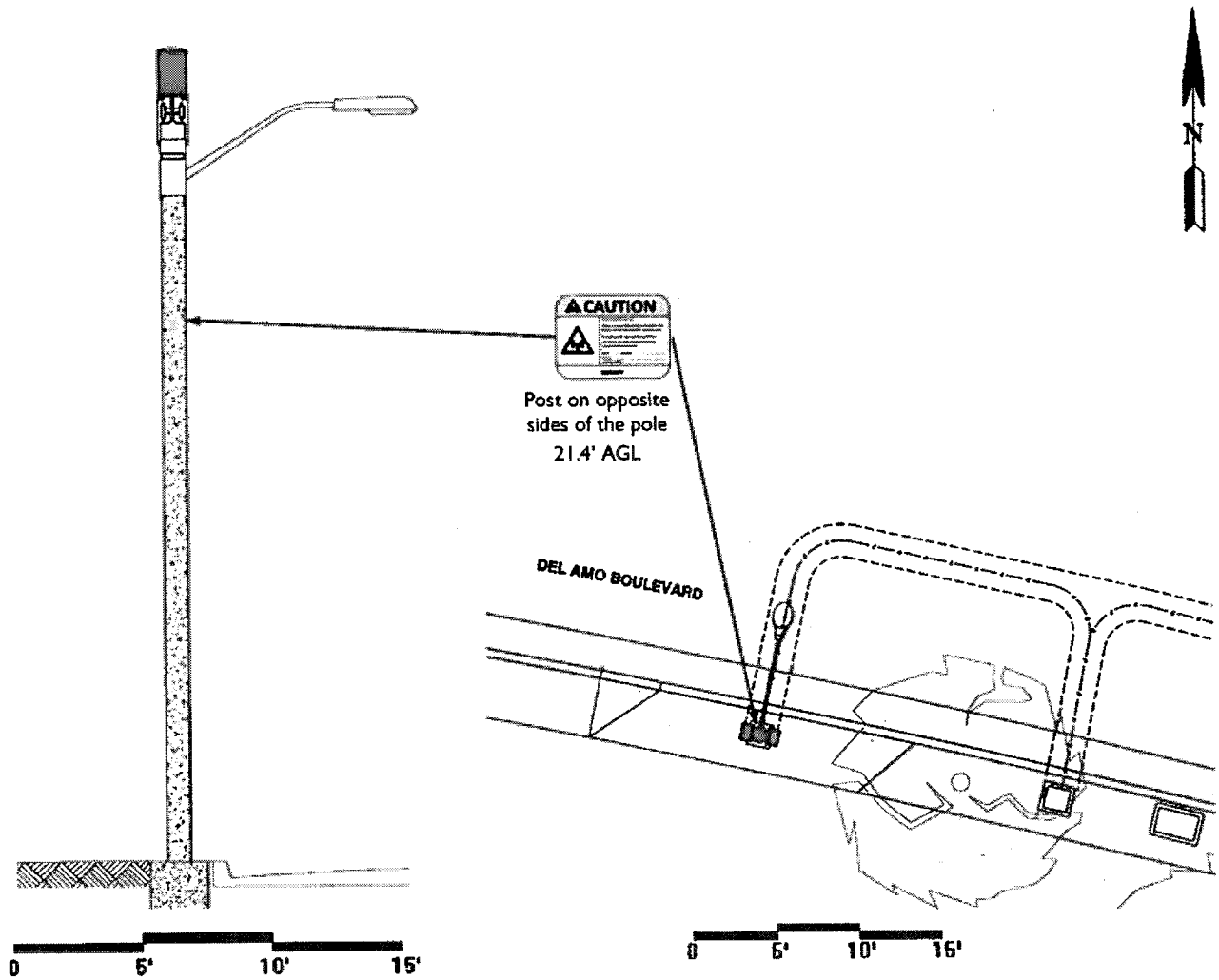
Site Name: SCL Torrance 6

Verizon Site Number: 432405


Report Date: 10-09-17



# Verizon Signage Plan



## Verizon Antennas

Sign Image	Description	Posting Instructions	Required Signage
	<b>Yellow Caution Sign</b> Used to alert individuals that they are entering an area where the power density emitted from transmitting antennas may exceed the FCC's maximum permissible exposure limit for the general public and the occupational exposure limit.	Securely post on opposite sides of the light pole 9 feet below the antenna (21.4 feet above ground level).	2 signs posted below the antenna.



**Appendix C**  
**Roofview® Export File**

List Of Areas  
SAES81:SETS200

Roof Max: Map Max: Y Offset X Offset Number of envelope  
170 140 140 20 20 1 SAES81:SETS200

Standard Method Uptime Scale Fact: Low Thr Low Color Mid Thr Mid Color Hi Thr Hi Color Over Color Ap Hi Mult Ap Hi Method

ID	Name	Freq	Power	Count	Len	Type	Other	Input	Calc	Power	Mfg	Model	(ft)	(ft)	(ft)	(ft)	Type	Aper	dBd	Gain	6Wdth	Pt Dir	Uptime	Profile	flag	ON*
VZW A1	LTE PCS	1900	40	4.0	0	0	0.5	0.5	142.6002	Amphenol	CUUT360006FK00	CUUT360006FK00	30	30	30	30	30.42	2	2	2	4.15	Omnid			ON*	
VZW A1	LTE AWS	2100	40	4.0	0	0	0.5	0.5	142.6002	Amphenol	CUUT360006FK00	CUUT360006FK00	30	30	30	30	30.42	2	2	2	7.35	Omnid			ON*	

Map Mark Roof X Roof Y Map Label Description ( notes for this table only )

Sym	Map Mark Roof X	Roof Y	Map Label Description
Sym	5	35	AC Unit
Sym	14	5	Roof Access
Sym	45	5	AC Unit
Sym	45	20	Ladder

It is advisable to provide an ID (int 1) for all antennas:

Code Requirements and Conditions, if approved:

The following Code Requirements are applicable to the project, if approved:

- A Construction and Excavation Permit (C&E Permit) is required from the Community Development Department, Engineering Permits and Records Division, for any work in the public right-of-way on Del Amo Boulevard
- The traffic control plan(s) shall comply with the MUTCD manual.
- Must comply with TMC Section 92.39.070 regarding submission of RF compliance report.
- Must comply with TMC Section 92.39.090 regarding discontinued use or abandonment of facility.

Recommended Conditions, if Approved:

1. That if this approval is not implemented within one year after the approval, it shall expire and become null and void unless extended by the Community Development Director for an additional period, as provided for in Section 92.27.1 of the Torrance Municipal Code; (Planning)
2. That all requirements provided under Ordinance No. 3058, Section 92.2.8, Satellite Antennas, of the Torrance Municipal Code, Division 9, shall be met prior to the issuance of building permits and/or encroachment permits; (Planning)
3. That the applicant shall paint, color or finish all the pole-mounted equipment to match the color of the underlying light pole. The color, texture and material of the replacement pole shall be consistent with the surrounding street light poles in nearby vicinity; (Planning)
4. That the applicant shall route all cables, wires, jumpers and connectors internally through the pole and or conceal them within the antenna or equipment shrouds. In addition, the applicant acknowledges and agrees that a material consideration of the City's approval of this permit is that the pole-top antenna and shroud are approximately the same width as the pole, which creates a streamlined design and concealment element that effectively blends the antenna with the underlying pole; (Planning)
5. That the applicant shall install, and at all times maintain in good condition, an "RF Notice" sign and network operations center sign adjacent to the bottom of the MMS shroud. The signs required in this condition must be placed in a location where they are clearly visible to a person when he or she approaches the shroud; (Planning)
6. That the applicant shall ensure that all RF signage complies with FCC OET Bulletin 65 or ANSI C95.2 for color, symbol and content conventions. All such signage shall provide a working local or toll-free telephone number to its network operations center that reaches a live person who can exert transmitter power-down control over this site as required by the FCC; (Planning)

7. That the proposed ground-mounted meter pedestal shall be eliminated and that the applicant shall inquire about a "Wireless Technology Rate" (WTR) service connection through SCE or relocate the meter pedestal to either below-grade or inside the pole; (Planning)
8. That if an octagonal pole design is approved by SCE prior to plan check submittal, that design shall be implemented at this location to the satisfaction of the Community Development Director; (Planning)
9. That if the temporary use of generators is required for the operation of the site, they must meet Torrance Municipal Code requirements for noise and placed on private property to the satisfaction of the Community Development Director; (Environmental)
10. That all proposed SCE power lines shall be installed underground; (Engineering)
11. That the proposed equipment shall receive electrical power from the SCE wires already attached to the utility pole on which the proposed equipment is to be mounted; (Engineering)
12. That all the signs mounted on existing light pole shall be transferred to the proposed light pole; (Engineering)
13. That SCE approval for conduit layout between the power manhole and the proposed light pole is required prior to the issuance of the Construction and Excavation Permit; (Engineering)
14. That the applicant shall obtain an Encroachment Permit from Caltrans (213-897-3631) for any work (proposed or required by the City) in the public right-of way on Hawthorne Blvd; (Engineering)
15. That the applicant shall remove, or cause to be removed, the existing street light pole within 60 days of commencing on-air operations. The applicant shall also restore, or cause to be restored, the foundation and ground space around the removed pole foundation to its original condition. Such removal and restoration work shall be subject to the satisfaction of the Engineering Division; (Engineering)
16. That at the time of plan check submittal the applicant shall provide an underground utility and infrastructure analysis to the satisfaction of the Engineering Division; (Engineering)
17. That the applicant shall remove the existing street light from existing street pole and return to SCE. If existing fixture is LED, applicant shall pay SCE the balance of Energy Efficiency Premium Charge per Section 4.2 of the Schedule LS-1 Option E Agreement such that ongoing street lighting costs paid by the City for the new street light are at the LS-1 Base LED rate and not at the LS-1 Option E rate; (Engineering)

18. That the existing light pole and entire footing of the existing light pole shall be removed; (Engineering)
19. That the contractor shall coordinate with SCE to replace the street light in the public right-of-way; and (Engineering)
20. That a minimum 10' vertical clearance above public sidewalk surface for proposed antenna and equipment mounted on existing utility pole and a minimum 16' vertical clearance above sidewalk surface for proposed antenna and equipment within 2' or less horizontally of the public street shall be maintained; (Engineering)

DATE: January 3, 2019  
TO: Telecommunications Committee  
FROM: Planning Division  
SUBJECT: **WIRELESS TELECOM FACILITY (WTC17-00027) – LAURA CASTRO (J5 INFRASTRUCTURE PARTNERS)**

A request for approval of a Telecom Permit to allow the installation of a new wireless small cell antenna and support equipment attached to a replacement concrete street light pole (Pole ID #4455983E) in the public right-of-way adjacent to the northwest corner of Artesia Boulevard and Glenburn Avenue in the R-1 Zone.

Applicant: Laura Castro (J5 Infrastructure Partners)  
Case No: WTC17-00027  
Location: N/W Corner of Artesia Boulevard and Glenburn Avenue  
Zoning: R-1: Single Family Residential

The subject request is for the installation of a wireless site in the public right-of-way adjacent to the northwest corner of Artesia Boulevard and Glenburn Avenue in the R-1 Zone. Per Torrance Municipal Code 92.39.060(1), such requests within the public right-of-way adjacent to residentially zoned properties are reviewed by the Telecommunications Committee and requires notification to property owners within 300 feet of the proposed location. In compliance with prior City Council directives, on December 28, 2018, staff mailed notices to property owners within 500' radius and posted a notification to the subject pole (Attachment #1).

The proposal involves the removal and replacement of an existing 29-foot SCE light pole with a 29-foot, 6-inches concrete light pole with a 2-foot tall antenna and shroud cap. Staff notes that the pole is proposed to be installed between a minimum of 3' and maximum of 4' away from the original existing light standard location. The new light pole will provide an omni-directional antenna mounted to an antenna standoff bracket at the top of the pole within a canister enclosure, 2 remote radio heads (RRH) and UE relay within an MMS shroud enclosure mounted to the sides of the pole like a backpack, and will be powered by a ground-mounted meter pedestal that is adjacent to the new pole with all cables to be inside the pole.

The overall height of the replacement pole and antenna is 31-feet 6-inches. The maximum overall diameter is 11.8-inches. The MMS shroud enclosures measure 2-feet 11-inches in height, 1-foot 3 ½ -inches in width, and 9-inches in depth and will be mounted starting at 26-feet 6-inches above the ground. Also, two radio frequency (RF) signage are proposed to be mounted on the pole starting at 21-feet, 6 inches above the ground.

The application was reviewed by the City's telecom consultant, Telecom Law Firm PC, for technical and regulatory issues and has included copies of the technical memorandums as Attachment #2. Staff notes that the consultant recommended an alternative site. The alternative site would be located on the opposite side of Artesia Boulevard to the east of the

existing street light pole, which appears to offer a better aesthetic alternative in comparison to the proposed location as the alternative site fronts the backside of a residence. The consultant recommended alternative still remains adjacent to a residential-zoned parcel. The consultant has also recommended that the proposed meter pedestal not be approved but have a wireless technology rate (“WTR”) power connection instead. Staff is in agreement with the power connection recommendation and has included a condition to that effect, if approved.

The purpose of the proposed site, according to the applicant, is to “increase capacity by increased usage and demand of wireless data and technology in the area surrounding the project site.” The target area described in the RF Coverage maps is the surrounding residential area along Artesia Boulevard. The submitted information indicates that the proposed antenna will be transmitting omnidirectionally in the 1900-2100 MHz Frequency range.

The applicant has submitted an RF compliance report (included as part of Attachment #3) that evaluates the proposed facility’s planned compliance with FCC Guidelines. Staff notes that the City cannot impose additional requirements with respect to FCC requirements with the exception of requesting verification that the site is operating in compliance. If approved, per TMC92.39.070 a radio frequency and compliance radiation report is required to be submitted within 30 days after installation of the facility.

The proposed facility utilizing an existing utility pole falls into a location that requires a special review by the Telecommunications Committee as it is in the right-of-way adjacent to a residential district. Per the Applicant’s submittals, the site identified will provide the coverage needed to fulfill the applicant’s objectives.

In order to recommend Approval of this Telecom Permit, the following findings must be made per 92.39.040(b)(3):

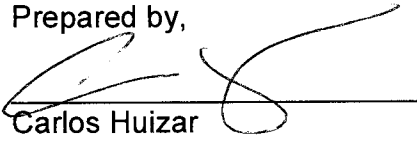
- i. Other locations that do not require special approval under this Section 92.39.040(B) are either not available or not feasible; and
- ii. Establishment of the facility at the requested location is necessary to provide service; and
- iii. Lack of such a facility would result in a prohibition of service; and

Staff notes that the proposal does meet the first finding as there is no other tall non-residential structures in the vicinity which may lend themselves to a small cell installation that is on the prioritized location per the City’s code. The applicant also did not provide alternative locations for this request. In the judgement of staff, however, not all of the necessary findings can be made. Per the applicant’s documentation and the City’s consultant confirmation, there currently is Verizon Wireless service within the coverage area and as such, establishment of the facility is not necessary to provide service and lack of this facility does not result in a prohibition of service.

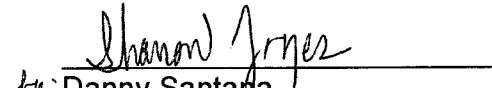
Although the proposed small cell facility has been designed to provide increased capacity while simultaneously providing the least visually intrusive structure, under the narrow purview of the code, staff cannot make the findings per TMC92.39.040(b)(3) and recommends denial of the request. Should the Committee wish to approve the facility, recommended conditions and code requirements have been attached for your review (Attachment #4).

**PROJECT RECOMMENDATION: DENIAL**

Prepared by,

  
\_\_\_\_\_  
Carlos Huizar  
Planning Assistant

Recommended by,

  
\_\_\_\_\_  
for: Danny Santana  
Planning Manager

Attachments:

1. Notification Map and Posting
2. Telecom Law Firm Memorandums
3. Supplemental Technical Information Report and Documentation
4. Recommended Conditions and Code Requirements, if approved
5. Plans/Photo Simulations (Limited Distribution)

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This request for a Telecom Permit (WTC17-00027) is \_\_\_APPROVED \_\_\_ DENIED per Ordinance No. 3561, Section 92.39.060, Satellite Antennas, of the Torrance Municipal Code, Division 9.

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DATE

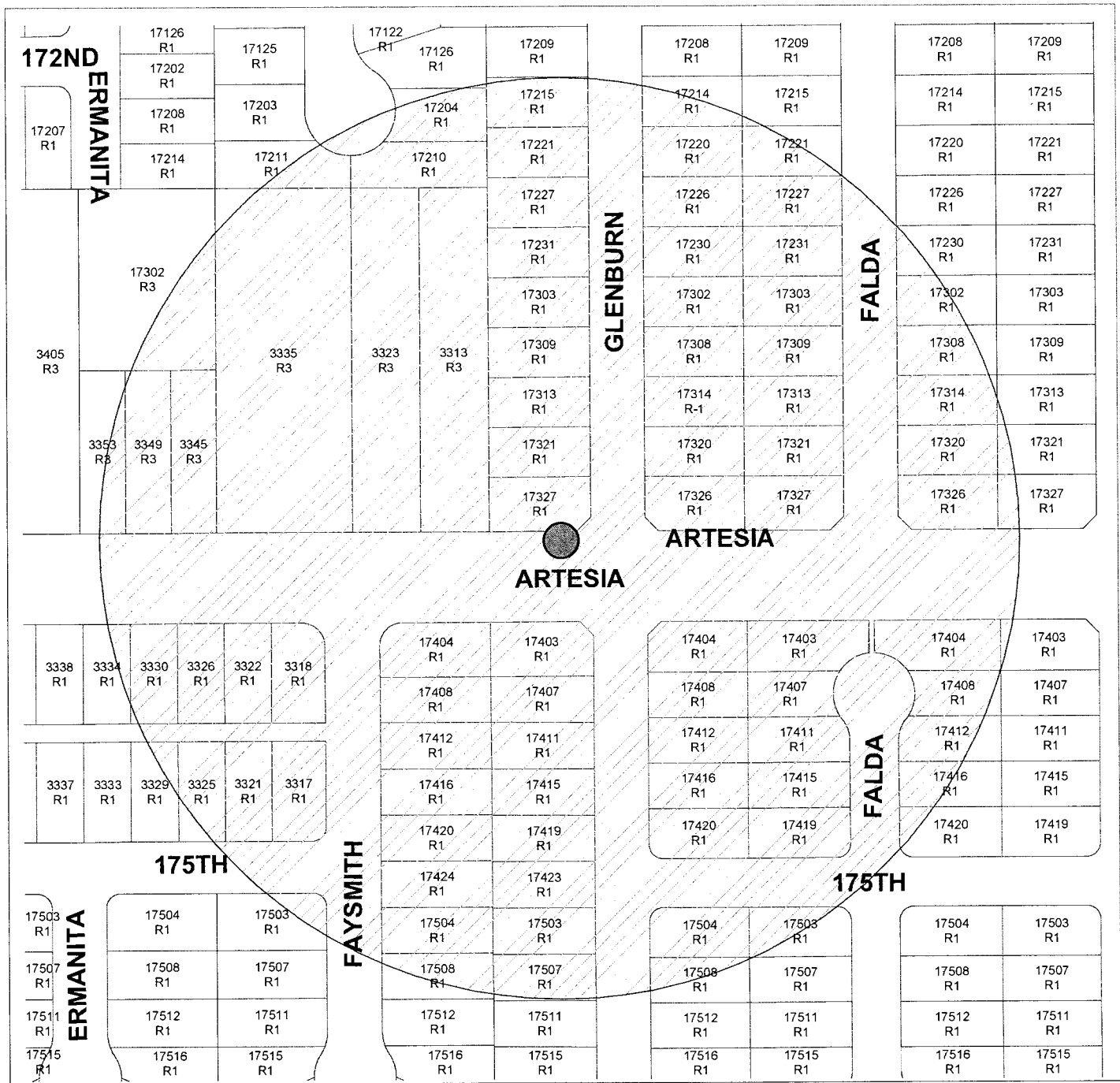
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Felipe Segovia

Telecommunications Committee Chair

Decisions made by the Telecommunications Committee are appealable to the Planning Commission within 15 calendar days following the above date of approval/denial.



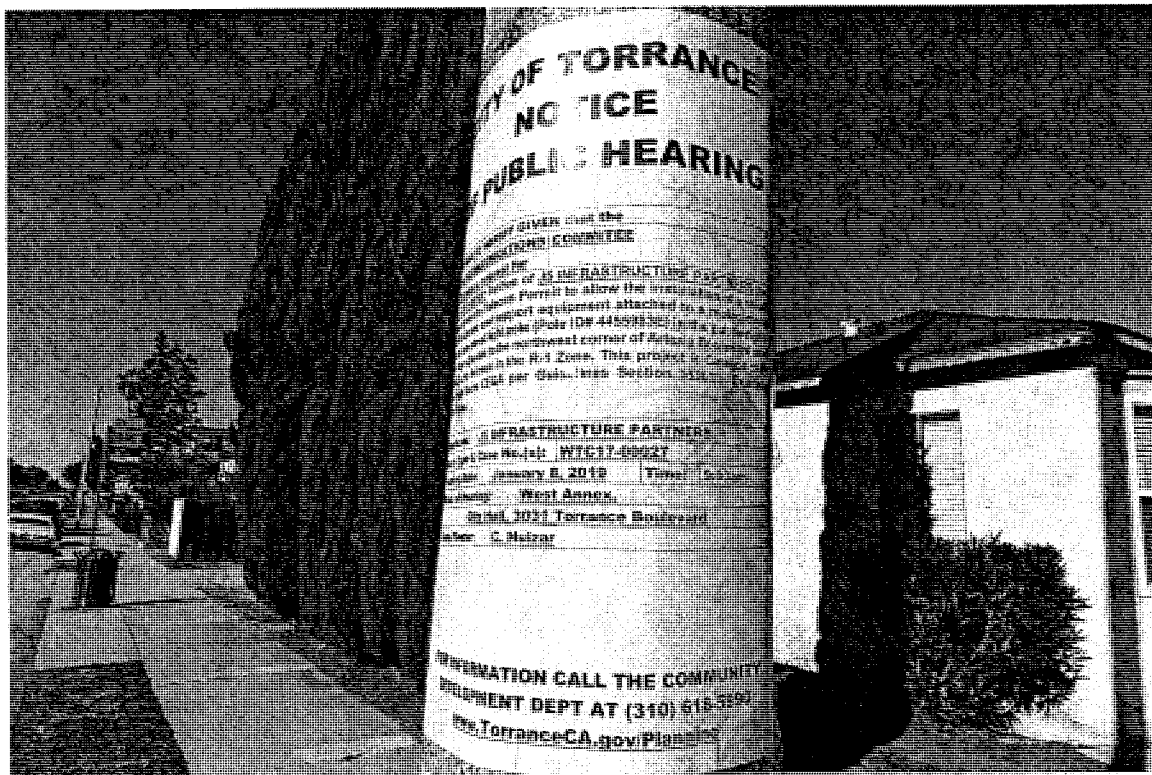
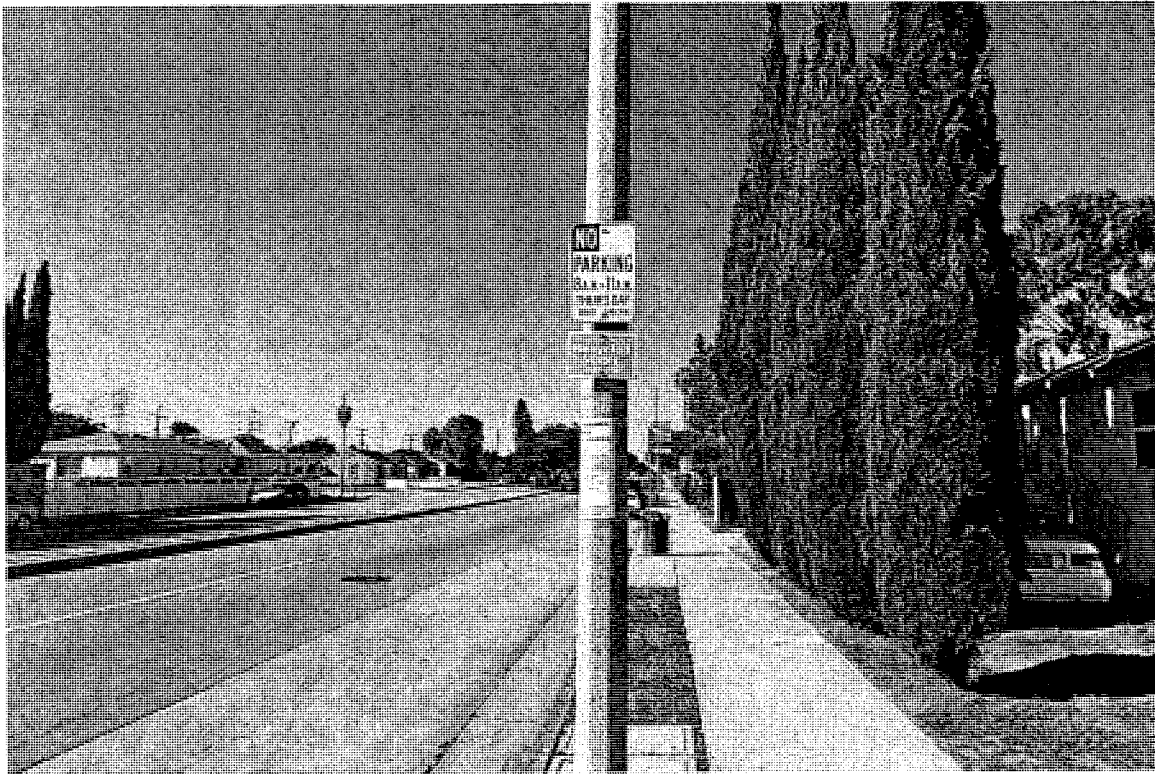



**LOCATION AND ZONING MAP**  
 IN THE PUBLIC RIGHT-OF-WAY  
 ADJACENT TO THE NORTHWEST CORNER  
 OF ARTESIA BLVD/GLENBURN AVENUE  
 WTC17-00027

**LEGEND**

- Notification Area
- Project Site

Feet  
 0 40 80 160



CITY OF TORRANCE  
POSTED BY  
  
DATE: 12/28/18

## WIRELESS PLANNING MEMORANDUM

**TO:** Mr. Oscar Martinez [REDACTED]  
**FROM:** Dr. Jonathan Kramer [REDACTED]  
**DATE:** December 3, 2018  
**RE:** Technical Review for New Pole-Mounted Wireless Facility in the Public Right-of-Way at F/O 17327 Glenburn Avenue

**APPLICANT:** J5 Infrastructure for Verizon Wireless  
**APPLICANT'S ID:** SCL Torrance 15 / VZW site 435843  
**UTILITY POLE ID:** 4455983E

On November 27, 2017, J5 Infrastructure (the “**Applicant**”) on behalf of Verizon Wireless (“**Verizon**”) submitted wireless site application materials to the City of Torrance (“**City**”) (the **November 27, 2017 Submission**”).

Per the City’s request, on December 19, 2017, Telecom Law Firm, PC (“**TLF**” or “**We**”) submitted an Application Incomplete Memorandum (the “**First Memorandum**”) to the City that evaluated the Applicant’s application to operate a new wireless site in the public right-of-way (“**PROW**”) on a replacement Southern California Edison (“**SCE**”) concrete street light pole (“**Pole**”) to be located near 17327 Glenburn Avenue (Coordinates 33.872967/-118.330497). TLF notes that the Pole is on Artesia Boulevard.

TLF’s First Memorandum concluded that the Applicant failed to submit a complete permit application that fully responded to the City’s publicly stated application requirements. TLF recommended that the City deem the Applicant’s application incomplete and issue a timely notice, which it did.

On February 6, 2018 the Applicant submitted additional materials (the “**February 6, 2018 Submission**”) which included a letter dated January 30, 2018 to the City from the Applicant (“**January 30, 2018 Applicant Letter**”) to address the deficiencies related to its initial submission.

On April 11, 2018 the Applicant submitted additional materials (the “**April 11, 2018 Submission**”). On April 18, 2018 TLF submitted another Application Incomplete Memorandum (the “**Third Memorandum**”). TLF’s Third Memorandum concluded that the Applicant again had failed to submit a complete permit application that fully responded to the City’s publicly stated application requirements. We recommended that the City deem the Applicant’s application incomplete and issue a timely notice, which it did.

On November 20, 2018 the Applicant responded with additional materials (the “**November 2018 Submission**”). Upon review, the application is now complete for the City to proceed with a substantive review of the Applicant’s proposal for compliance with applicable local, state and federal law.

Accordingly, this memorandum reviews (1) whether Section 6409(a) applies to the Applicant's project; (2) whether the project complies with the Torrance Municipal Code ("TMC"); and (3) whether the Applicant's project demonstrates planned compliance with the federal radio frequency ("RF") exposure guidelines.

Additionally, this memorandum reviews the application and related materials for technical and regulatory issues specific to wireless infrastructure. Although many technical issues implicate legal issues, the analysis and recommendations contained in this memorandum do not constitute legal advice.

## 1. Project Description

The project plans dated January 25, 2018 show that the Applicant proposes to remove the existing 29' tall light standard and install a Pole. Page A3, panels 1 and 2 of the Plans depict that the height of the Pole supporting this project is to increase to 29' 6" above ground level ("AGL"); furthermore, the total height of the vertical elevation will increase to 32' 6" AGL due to the proposed installation of the antenna and the associated equipment on the Pole (This increase in height is acceptable since the total height of the structure does not exceed 35' AGL per the City's Municipal Code).

Additionally, the center of the Antenna is at 31' 6" AGL, therefore the lowest point of the Antenna is at 30' 6" AGL. On the Pole, the Applicant proposes to install a 2' tall pole-top canister antenna ("Antenna") and a 1' 11" concealment skirt to enclose two diplexers below the Antenna. Also on the Pole, the Applicant proposes to mount two remote radio units ("RRUs") and two power supply units ("PSUs"). TLF notes that the Pole is proposed to be installed between a minimum of 3' and maximum of 4' away from the original existing light standard location. The top of the RRUs are separated by 20" from the lowest point of the Antenna and the bottom of the RRUs are at 26' 6" AGL. Also, two radio frequency ("RF") signage are proposed to be mounted on the Pole with the top of the signs at 21' 6" AGL. See Figure 1 and Figure 2 of the proposed Pole.

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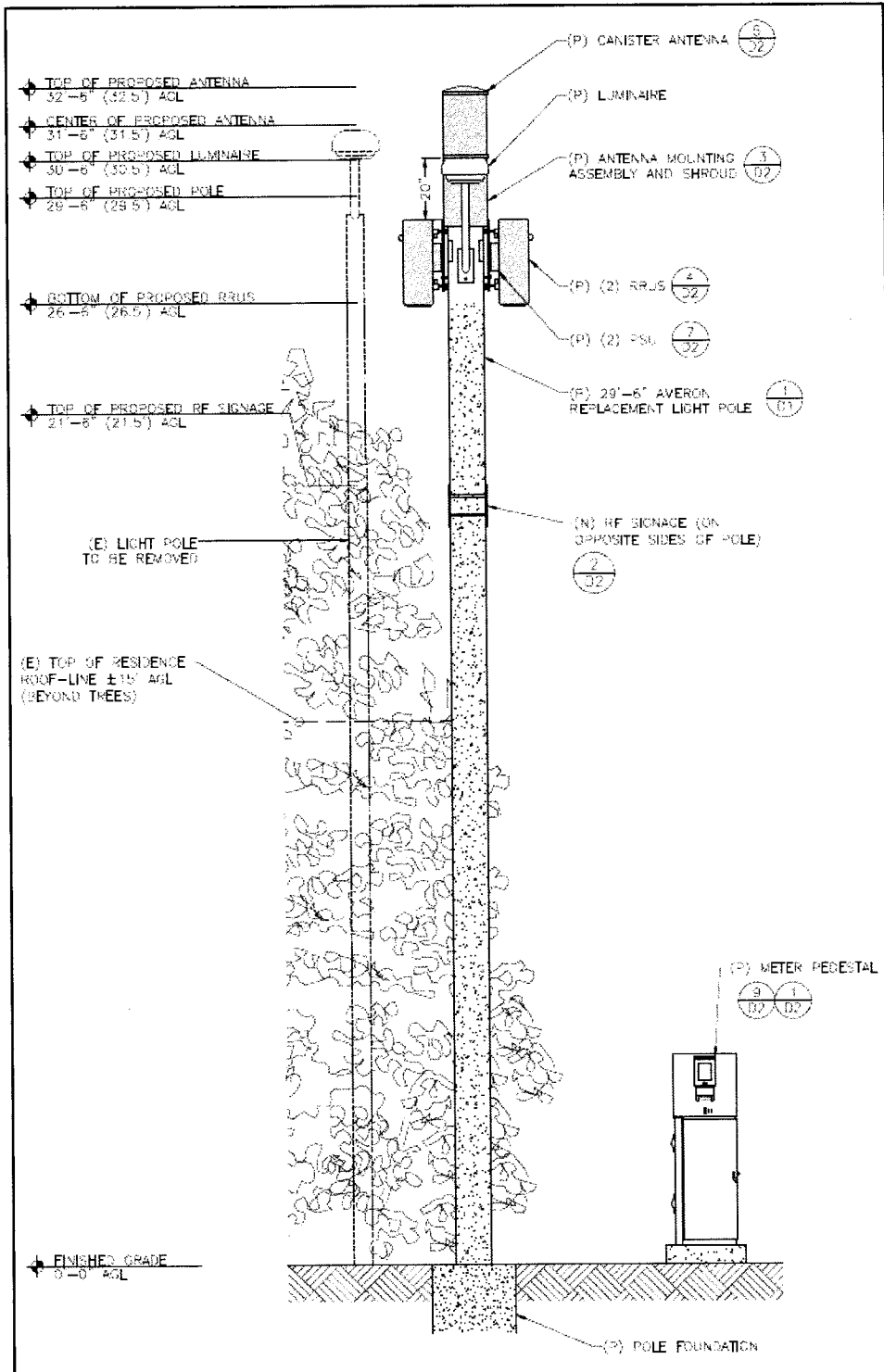
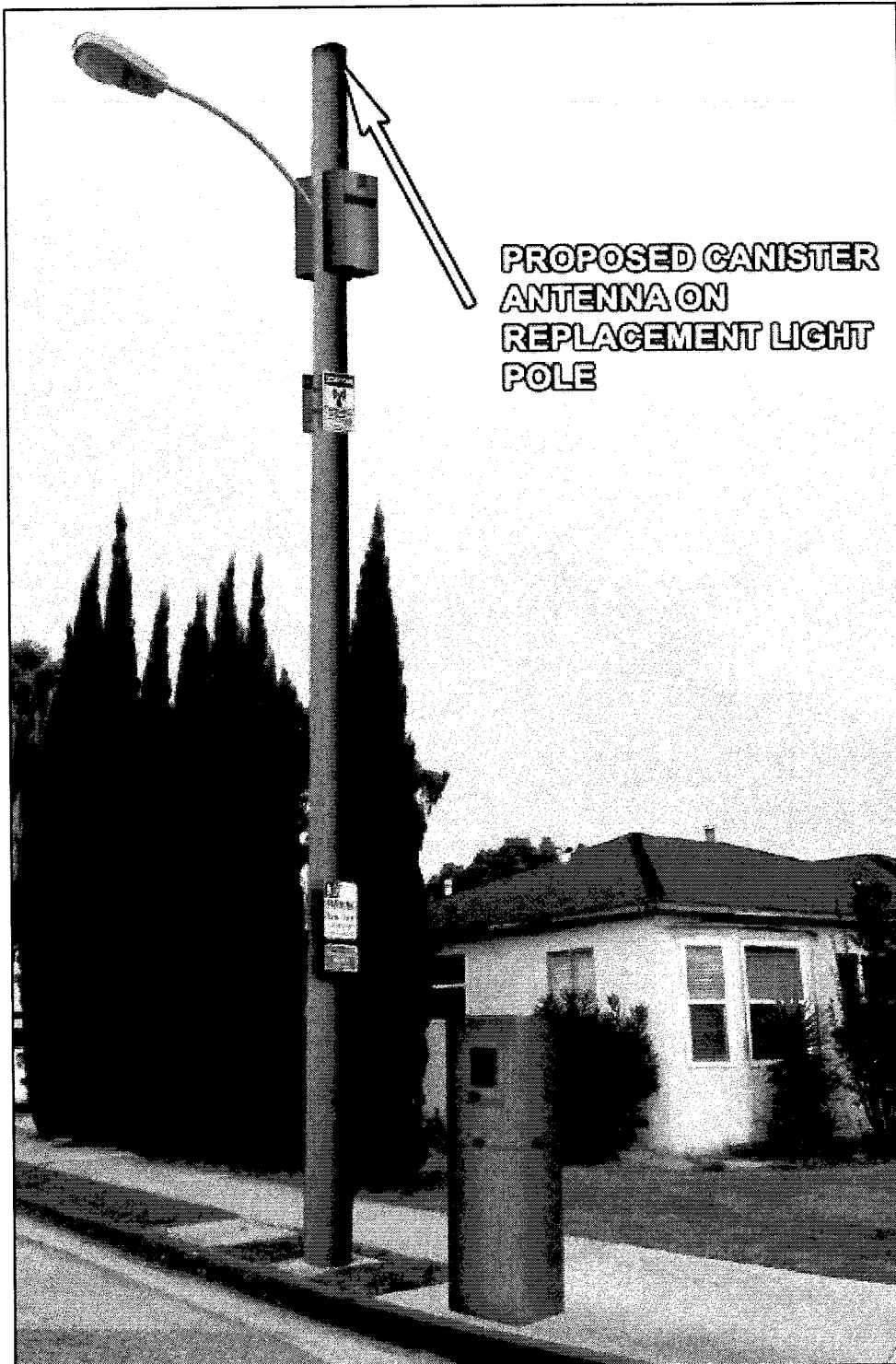


Figure 1: Proposed Antenna and associated equipment (Source: Plans Page A-3 Panel 2).





**Figure 2:** Proposed Antenna and Associated Equipment (Source: Photo Simulations). We note that this photo simulation is not proportionally correct.



The Plans depict a new underground power service run from an existing Edison manhole approximately 50' away to the Pole. See Figure 3. Additionally, a new meter pedestal (“**Meter Cabinet**”) with dimensions (50”H x 16”W x 16”D) will be installed on a concrete pad. The Meter Cabinet will contain the electrical disconnect switch. A new fiber pull box vault will be installed near the base of the Pole (dimensions: 17”H x 30”W x 18”D).

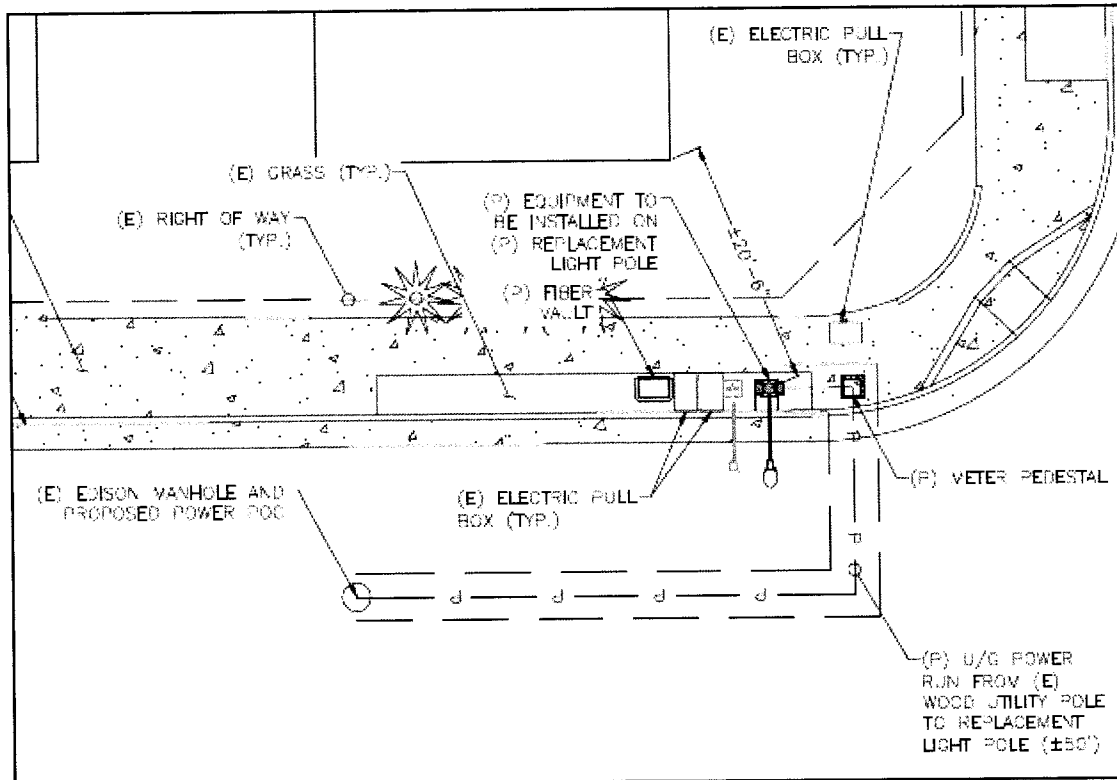


Figure 3: Underground power and fiber connections (Source: Plans Page A1 Panel 1).

TLF recommends that the City inquire from the Applicant about the feasibility of installing a wireless tariff rate (“**WTR**”) power connection rather than the proposed Meter Cabinet. If available, the use of a WTR power connection should be made a condition of approval.

## 2. Section 6409(a) Analysis

As a threshold matter, the City must determine whether federal law mandates approval for this permit application. Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012 requires that State and local governments “may not deny, and shall approve” any “eligible facilities request” for a wireless site collocation or modification so long as it does not cause a “substant[ial] change in [that site’s] physical dimensions.”<sup>1</sup> FCC regulations interpret key terms in this statute

<sup>1</sup> See Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, 126 Stat. 156. (Feb. 22, 2012) (codified as 47 U.S.C. § 1455(a)).



and impose certain substantive and procedural limitations on local review.<sup>2</sup> Localities must review applications submitted for approval pursuant to Section 6409(a), but the applicant bears the burden to show it qualifies for mandatory approval.

Section 6409(a)(2) defines an “eligible facilities request” as a request to collocate, remove or replace transmission equipment on an existing wireless tower or base station.<sup>3</sup> This definition necessarily excludes permit requests for new facilities. Thus, no matter how large or small, Section 6409(a) does not mandate approval for a permit to construct an entirely new wireless facility.

Here, the Applicant did not submit an eligible facilities request because rather than collocate on an existing facility, the Applicant proposes to construct a new wireless facility where none currently exists. Accordingly, Section 6409(a) does not require that the City approve the application and the City should review the Applicant’s proposal for compliance with the local values expressed in the TMC subject to certain federal limitations in Section 704 of the Telecommunications Act of 1996 (the “**Telecom Act**”).

### **3. Significant Gap and Least Intrusive Means Analysis**

Under the Telecom Act, State and local governments cannot prohibit or effectively prohibit personal wireless communication services.<sup>4</sup> The United States Court of Appeals for the Ninth Circuit holds that a single permit denial can violate the Telecom Act when the applicant demonstrates that (1) a “significant gap” in its own service coverage exists and (2) its proposed site constitutes the “least intrusive means” to mitigate that significant gap.<sup>5</sup> This section discusses both issues as related to the present application.

#### **3.1. Significant Gap**

The Ninth Circuit does not precisely define what a “significant gap” in service coverage means because this “extremely fact-specific [question] def[ies] any bright-line legal rule.”<sup>6</sup> Although sometimes courts find that weak service coverage constitutes a significant gap, the Ninth Circuit also holds that “the [Telecom Act] does not guarantee wireless service providers coverage free of small ‘dead spots’ . . . .”<sup>7</sup> Accordingly, whether a gap rises to a legally significant gap depends on the contextual factors in each individual application.<sup>8</sup>

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<sup>2</sup> See *In the Matter of Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies, Report and Order*, 29 FCC Rcd. 12864 (Oct. 17, 2014) (codified as 47 C.F.R. §§ 1.40001, *et seq.*).

<sup>3</sup> See 47 U.S.C. § 1455(a)(2).

<sup>4</sup> See Section 704 of the Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (codified as 47 U.S.C. § 332(c)(7)(B)(i)(II)).

<sup>5</sup> See *MetroPCS, Inc. v. City and County of San Francisco*, 400 F.3d 715, 733 (9th Cir. 2005).

<sup>6</sup> See *id.*

<sup>7</sup> See *id.*

<sup>8</sup> See *Sprint PCS Assets, LLC v. City of Palos Verdes Estates*, 583 F.3d 716, 727 (9th Cir. 2009) (citing *San Francisco*, 400 F.3d at 733).





To guide the analysis, the Ninth Circuit suggests that applicants and localities should focus on “context-specific factors” such as: (1) whether the gap affects a significant commuter thoroughfare; (2) how many users the alleged gap affects; (3) whether the proposed site will fill a complete void or merely improve weak signal; (4) whether the alleged gap affects a commercial area; (5) whether the alleged gap threatens public safety; and (6) whether the applicant presented empirical or merely predictive evidence.<sup>9</sup> The Ninth Circuit identifies these factors as relevant but does not explicitly limit the analysis to these factors or consider any particular factor more important than the others.

The Applicant provided propagation maps dated November 16, 2018 (“Maps”). The Maps show the existing coverage and proposed coverage in the area. See Figure 4 and Figure 5.

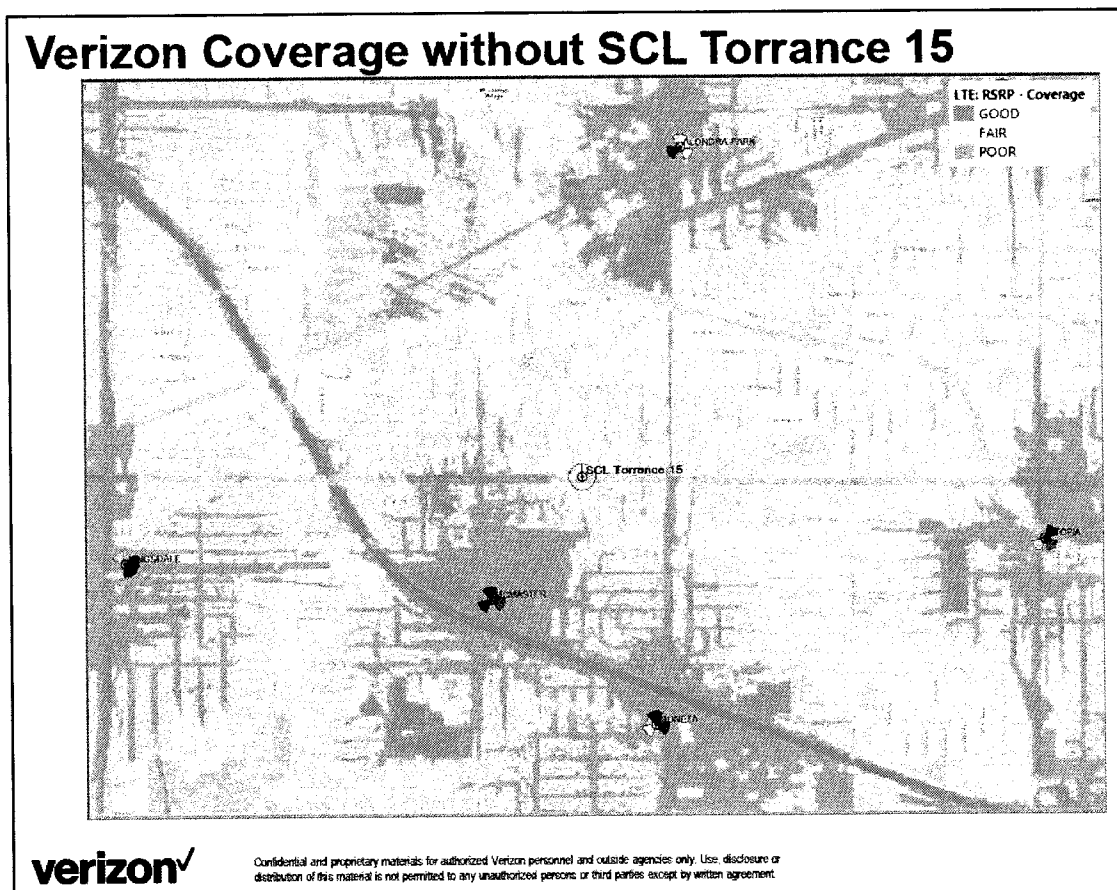


Figure 4: Existing Verizon Coverage without the proposed site (Source: Verizon Maps)

The propagation map reproduced in Figure 4 is a computer model of Verizon’s existing signal strength within the area based on a color-coded legend. Green indicates “Good” signal, yellow indicates “Fair” signal and purple indicates “Poor” signal. Without the proposed site, Verizon’s

<sup>9</sup> See *id.* (collecting cases that examine each enumerated factor).



Map shows that the area surrounding the proposed site suffers from primarily “Poor” signal levels with pockets of “Fair” signal levels. However, Verizon’s Maps contain subjective characterizations rather than empirical signal strength levels in dBm.

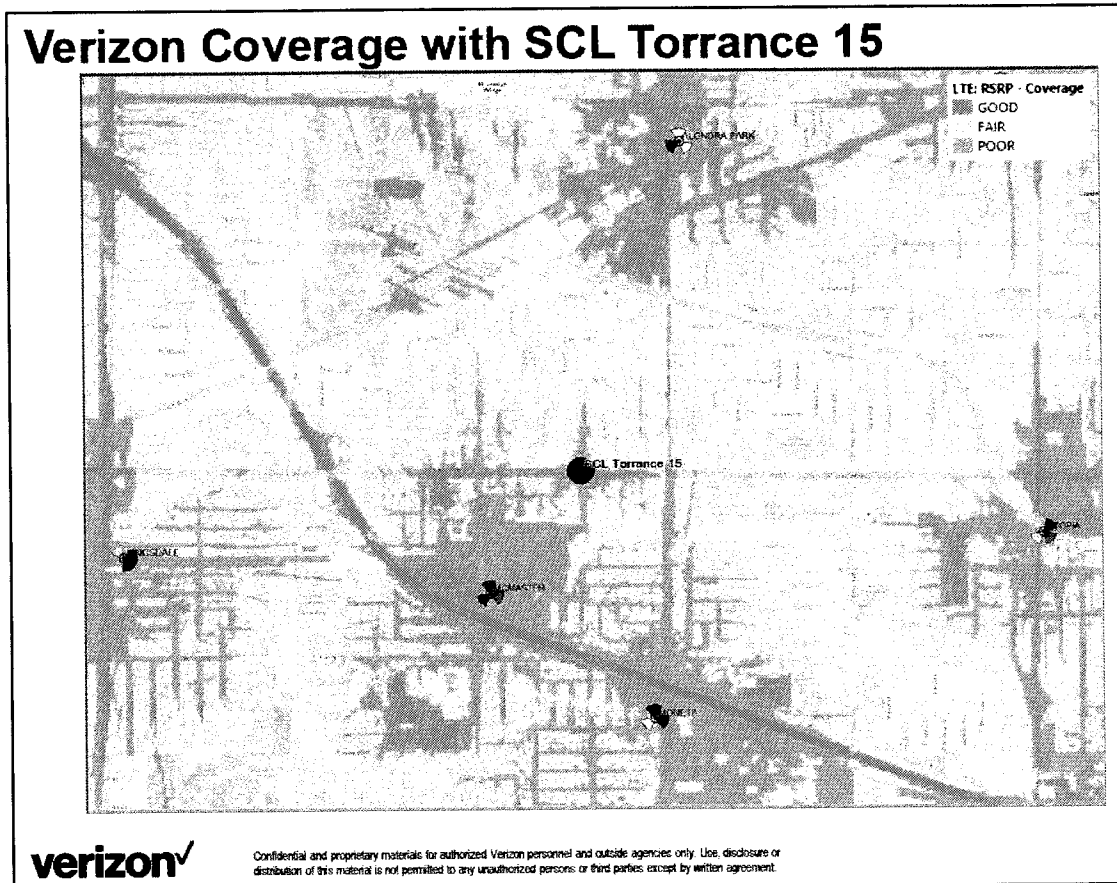


Figure 5: Proposed Verizon Coverage with the proposed site (Source: Verizon Maps).

The Map submitted with the application and reproduced in Figure 5 models Verizon’s service coverage with the combined signals from the proposed and surrounding sites. Verizon’s proposed coverage depicts “Green” in all directions immediately around the proposed site. However, Verizon’s propagation maps provide only limited objective signal measurements for the proposed coverage area and do not provide sufficient context for assessing how the signal measurements and the color-coding relate to an inability to provide wireless services. Moreover, the application does not contain any empirical data to suggest that users experience dropped calls.

Although Verizon has not established that a significant gap in coverage exists at this time. The City should not interpret Verizon’s failure to prove a significant gap as a reason to deny the project. Rather, the City simply possesses its traditional land-use discretion preserved in the Telecom Act and authorized under the TMC. Accordingly, the City should evaluate whether Verizon’s proposal is the least intrusive in light of the values embodied in the City’s wireless and land-use regulations.



### 3.2. Least Intrusive Means

The Telecom Act does not grant the applicant the right to build whatever site in whatever location it chooses. State and local jurisdictions may require wireless applicants to adopt the “least intrusive means” to achieve their technical objectives.<sup>10</sup> This balances the national interest in wireless services with the local interest in planned development.

In the Ninth Circuit, the least intrusive means refers to the technically feasible and potentially available alternative design and location that most closely conforms to the local values a permit denial would otherwise serve.<sup>11</sup> A “technically feasible and potentially available alternative” means that the applicants can reasonably (1) meet their demonstrated service needs and (2) obtain a lease or other legal right to construct the proposed site at the proposed location.<sup>12</sup>

The process to determine whether a proposal constitutes the least intrusive means involves a “burden-shifting” framework. First, the applicant establishes a presumption that it proposes the least intrusive means when it submits an alternative sites analysis. Localities can rebut the presumption when it proposes other alternatives. Applicants may then rule-out proposed alternatives when it provides a “meaningful comparative analysis” for why an alternative is not technically feasible or potentially available.<sup>13</sup> This back-and-forth continues until either the jurisdiction fails to propose a technically feasible or potentially available alternative, or the applicant fails to rule-out a proposed alternative.<sup>14</sup>

Applicants cannot rule-out potential alternatives on the grounds that it believes its preferred site is subjectively “better” than the jurisdiction’s preferred alternative.<sup>15</sup> Only the local government can decide which among several feasible and available alternatives constitutes the best option. Similarly, an applicant cannot rule-out a proposed alternative based on a bare conclusion that it is not technically feasible or potentially available—it must provide a meaningful comparative analysis that allows the jurisdiction to reach its own conclusions.<sup>16</sup>

#### 3.2.1. Alternative Sites Analysis

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<sup>10</sup> See, e.g., *American Tower Corp. v. City of San Diego*, 763 F.3d 1035, 1056 (9th Cir. 2014).

<sup>11</sup> See *id.*; see also *AT&T USA, Inc. v. City of Anacortes*, 572 F.3d 987, 995 (9th Cir. 2009).

<sup>12</sup> See *Anacortes*, 572 F.3d at 996–999.

<sup>13</sup> See *American Tower Corp.*, 763 F.3d at 1056.

<sup>14</sup> Compare *id.* (upholding a permit denial because the applicant failed to rule-out the technical feasibility or potential availability of proposed alternatives), with *Anacortes*, 572 F.3d at 999 (invalidating a permit denial because the city insisted on an unavailable location). These cases provide a guide for planners on how to evaluate alternative site analyses. Planners should also note that a strong administrative record is essential to this analysis.

<sup>15</sup> See *American Tower Corp.*, 763 F.3d at 1057 (finding that the applicant “did not adduce evidence allowing for a meaningful comparison of alternative designs or sites, and the [c]ity was not required to take [the applicant]’s word that these were the best options”).

<sup>16</sup> See *id.*



Based on a desktop review of the area surrounding the proposed location, TLF believes that the pole on the opposite side of the street to the East of the existing street light pole on Artesia Boulevard appears to offer a meaningfully better aesthetic alternative in comparison to the proposed location. See Figure 6. The recommended pole is at the back side of a residence.

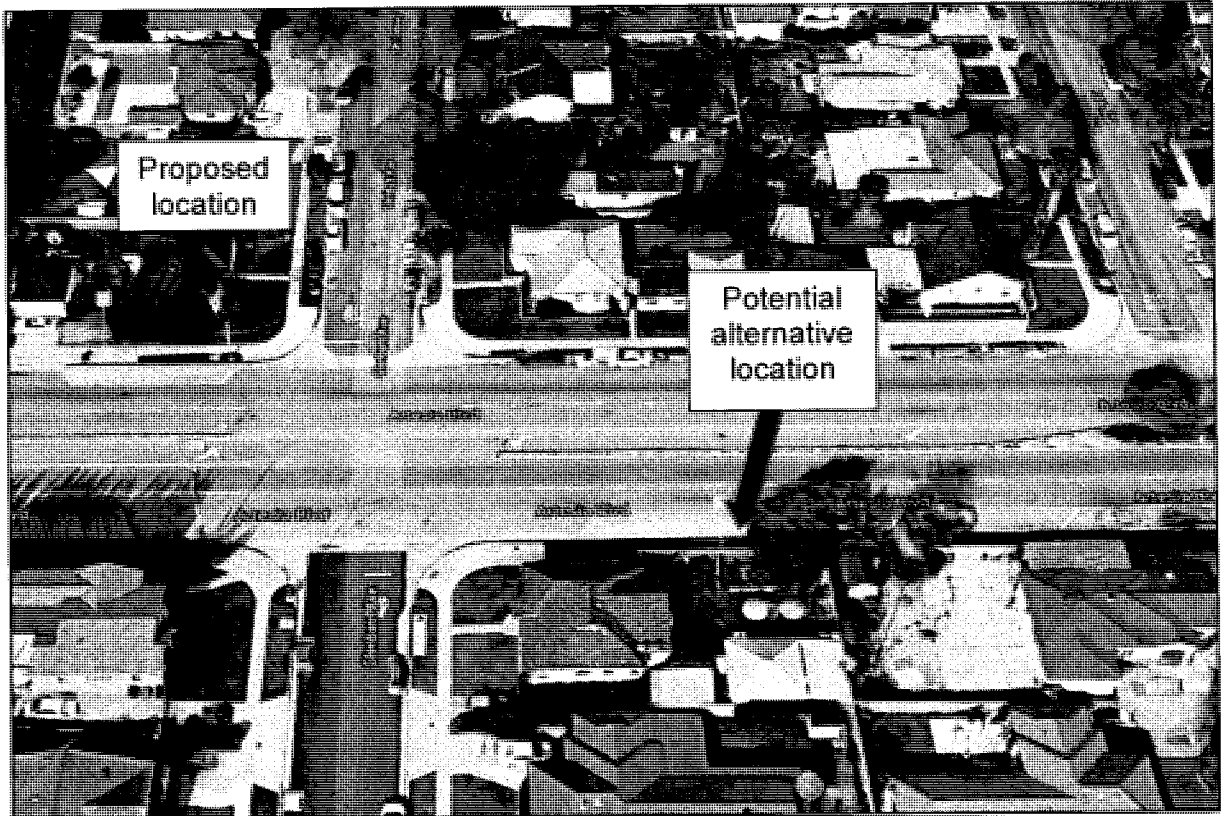


Figure 6: Proposed Pole and potential lesser intrusive pole location (Source: Google Maps, Annotated by Dr. Kramer).

Accordingly, the City should ask the Applicant whether this less intrusive alternative location is technically feasible or not. To the extent that this alternative is technically feasible, the Applicant should be required to use the alternative location.

### 3.2.2. Compliance with Torrance Municipal Code

The City's second most-preferred location for wireless facilities is existing street light poles.<sup>17</sup> The City must consider the following criteria in connection with its processing of any telecom permit: (1) the extent to which the proposed facility blends into the surrounding environment or is architecturally integrated into a structure;<sup>18</sup> (2) the extent to which the proposed facility is concealed, screened or camouflaged by existing or proposed new topography, vegetation,

<sup>17</sup> See TORRANCE, CAL., MUN. CODE § 92.39.040(b)(1)(B).

<sup>18</sup> See *id.* § 92.39.050(a)(1).



buildings, or other structures;<sup>19</sup> and (3) the total size of the proposed facility, particularly in relation to surrounding and supporting structures.<sup>20</sup> In addition, the maximum overall height cannot exceed 35' on street light poles.<sup>21</sup>

Here, the Applicant's application complies with the applicable standards in the TMC. The facility would be installed on a street light pole that replaces an existing pole in order to create a more streamlined design that blends with the underlying support structure. The antenna and radio equipment would be concealed within pole-mounted shrouds and all the electrical connections would be underground and fully concealed from public view. The replacement pole would be consistent with the surrounding support structures because the pole would be approximately the same size and material as the existing street lights. In addition, the overall height of the facility would be 32' 6" AGL, which is approximately 2' 6" below the City's overall height limit.

Accordingly, the Applicant's proposed facility complies with the TMC and the City may wish to approve the application subject to design conditions to promote compliance with the local standards:

1. The permittee shall remove, or cause to be removed, the existing street light pole within 60 days of commencing on-air operations. The permittee shall also restore, or cause to be restored, the foundation and ground space around the removed pole foundation to its original condition. Such removal and restoration work shall be subject to the planning director and/or public works director's review and approval.
2. The permittee shall paint, color or finish all the pole-mounted equipment to match the color of the underlying light pole. The color, texture and material of the replacement pole shall be consistent with the surrounding street light poles in nearby vicinity.
3. The permittee shall route all cables, wires, jumpers and connectors internally through the pole and/or conceal them within the antenna or equipment shrouds. In addition, the permittee acknowledges and agrees that a material consideration of the City's approval of this permit is that the pole-top antenna and shroud are approximately the same width as the pole, which creates a streamlined design and concealment element that effectively blends the antenna with the underlying pole.

These suggested conditions are not intended to be an exhaustive list of conditions to impose on the City's potential permit approval. The City should consider adopting any other standard conditions and/or design conditions that promote compliance with the City's public health and safety standards and any applicable wireless development standards.

#### **4. Planned Compliance with RF Exposure Regulations**

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<sup>19</sup> See *id.* § 92.39.050(a)(2).

<sup>20</sup> See *id.* § 92.39.050(a)(3).

<sup>21</sup> See *id.* § 92.39.040(a)(1)(A).



Under the Telecom Act, the FCC completely occupies the field with respect to RF emissions regulation. The FCC established comprehensive rules for human exposure to RF emissions (the “**FCC Guidelines**”).<sup>22</sup> State and local governments cannot regulate wireless facilities based on environmental effects from RF emissions to the extent that the emissions comply with the FCC Guidelines.<sup>23</sup>

Although localities cannot establish their own standards for RF exposure, local officials may require wireless applicants to demonstrate compliance with the FCC Guidelines.<sup>24</sup> Such demonstrations usually involve a predictive calculation because the site has not yet been built.

#### **4.1. FCC Guidelines, Categorical Exclusions and Exposure Mitigation Measures**

FCC Guidelines regulate *exposure* rather than *emissions*.<sup>25</sup> Although the FCC establishes a maximum permissible exposure (“**MPE**”) limit, it does not mandate any specific limitations on power levels applicable to all antennas and requires the antenna operator to adopt exposure-mitigation measures only to the extent that certain persons might become exposed to the emissions. Thus, a relatively low-powered site in proximity to the general population might require more comprehensive mitigation measures than a relatively high-powered site in a remote location accessible only to trained personnel.

The MPE limit also differentiates between “general population” and “occupational” people. Most people fall into the general population class, which includes anyone who either does not know about potential exposure or knows about the exposure but cannot exert control over the transmitters.<sup>26</sup> The narrower occupational class includes persons exposed through their employment and able to exert control over their exposure.<sup>27</sup> The MPE limit for the general population is five times lower than the MPE limit for the occupational class.

Lastly, the FCC “categorically excludes” certain antennas from routine environmental review when either (1) the antennas create exposures in areas virtually inaccessible to humans or (2) the antennas operate at extreme low power. As a general rule, a wireless site qualified for a categorical exclusion when mounted on a structure built solely or primarily to support FCC-licensed or

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<sup>22</sup> See 47 U.S.C. § 332(c)(7)(B)(iv); see also 47 C.F.R. § 1.1307 *et seq.*; FCC Office of Engineering and Technology, *Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields*, OET Bulletin 65, ed. 97-01 (1997).

<sup>23</sup> See 47 U.S.C. § 332(c)(7)(B)(iv).

<sup>24</sup> See *In re Procedures for Reviewing Requests for Relief from State and Local Regulations Pursuant to Section 332(c)(7)(B)(iv) of the Communications Act of 1934*, *Report and Order*, 15 FCC Rcd. 22821, 22828–22829 (Nov. 13, 2000) (declining to adopt rules that limit local authority to require compliance demonstrations).

<sup>25</sup> See generally *Human Exposure to Radio Frequency Fields: Guidelines for Cellular and PCS Sites*, *Consumer Guide*, FCC (Oct. 22, 2014), available at <https://www.fcc.gov/guides/human-exposure-rf-fields-guidelines-cellular-and-pcs-sites> (discussing in general terms how wireless sites transmit and how the FCC regulates the emissions).

<sup>26</sup> See 47 C.F.R. § 1.1310, Note 2.

<sup>27</sup> See *id.*



authorized equipment (*i.e.*, a tower) and such that the lowest point on the lowest transmitter is more than 10 meters (32.8 feet) above ground.<sup>28</sup>

Categorical exclusions establish a presumption that the emissions from the antennas will not significantly impact humans or the human environment. Such antennas are exempt from routine compliance evaluations but not exempt from actual compliance. Under some circumstances, such as a heavily collocated tower or when in close proximity to general population members, even a categorically excluded site will require additional analysis.

#### **4.2. Planned Compliance Evaluation and Recommendations**

The FCC Guidelines do **not** categorically exclude the Applicant's facility from routine compliance review. This is because the replacement street light's primary function is to provide street illumination, and the street light was not solely or primarily constructed to support wireless equipment. Therefore, an additional analysis for whether the facility will comply with the FCC Guidelines is appropriate.

To demonstrate planned compliance with the FCC Guidelines, the Applicant submitted a Radio Frequency-Electromagnetic Energy (RF-EME) Jurisdictional Report prepared by EBI Consulting Inc. dated October 9, 2017 (the "**EBI Report**"). The EBI Report, which contains the basic emissions information needed to independently evaluate the proposed facility's planned compliance with the FCC Guidelines, concludes that mitigation measures such as following routine signage protocols are sufficient to comply with the FCC Guidelines. We generally agree with the conclusion.

Based on the transmitter frequencies and power levels disclosed in the EBI Report for both the downlink and backhaul radio transmitters, the antenna will create a "controlled access zone" that extends approximately 3.4' from the face of the omni-directional antenna at approximately the same height as the emissions centers of that antenna. The controlled access zone extends horizontally from the antennas with very little emissions that stray upwards or downwards.

The fact that a site creates a controlled access zone does not necessarily mean that it violates the FCC Guidelines. Rather, a controlled access zone means that the carrier must affirmatively restrict public access to that area so that members of the general population (including trespassers) cannot unknowingly enter and be exposed to radio emissions in excess of limits prescribed by the FCC.

Here, the controlled access zone is inaccessible to members of the general population, except for potential trespassers and street light maintenance workers. Accordingly, the City may wish to consider the following conditions of approval before potentially issuing any permit approval for the subject facility:

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<sup>28</sup> See *id.* § 1.1307(b)(1).



1. The permittee shall install and at all times maintain in good condition an “RF Notice” sign and network operations center sign adjacent to the bottom of proposed site. The signs required in this condition must be placed in a location where they are clearly visible to a person when he or she approaches the shroud.
2. The permittee shall ensure that all RF signage complies with FCC OET Bulletin 65 or ANSI C95.2 for color, symbol and content conventions. All such signage shall provide a working local or toll-free telephone number to its network operations center that reaches a live person who can exert transmitter power-down control over this site as required by the FCC.

## **5. Conclusion**

The Applicant’s proposed project is not subject to mandatory approval under Section 6409(a).

Although the Applicant’s application complies with the development standards contained in the TMC, there appears to be at least one less intrusive alternative location in close proximity to the proposed pole, and the City may also wish to consider the recommended design conditions in this memorandum.

Lastly, subject to the conditions in this memorandum regarding RF emissions safety, the Applicant’s proposed facility will be in planned compliance with the FCC Guidelines. If the Applicant alters the equipment, site configuration or location, the City may wish to re-evaluate planned compliance with the FCC Guidelines based on those changed circumstances.

/JLK





## APPLICATION INCOMPLETE MEMORANDUM

**TO:** Mr. Oscar Martinez [REDACTED]  
**FROM:** Dr. Jonathan Kramer [REDACTED]  
**DATE:** April 18, 2018  
**RE:** Application Completeness Review – New Proposed Wireless Facility in the Public Right-of-Way at F/O 17327 Glenburn Avenue

**APPLICANT:** J5 Infrastructure for Verizon Wireless  
**APPLICANT'S ID:** SCL Torrance 15/ VZW site 435843  
**UTILITY POLE ID:** 4455983E

On November 27, 2017, J5 Infrastructure (the “**Applicant**”) on behalf of Verizon Wireless (“**Verizon**”) submitted wireless site application materials to the City of Torrance (“**City**”). Per the City’s request, on December 19, 2017, Telecom Law Firm, PC (“**TLF**” or “**We**”) submitted an Application Incomplete Memorandum (the “**First Memorandum**”) to the City that evaluated the Applicant’s application to operate a new wireless site in the public right-of-way (“**PROW**”) on a replacement Southern California Edison (“**SCE**”) concrete street light pole (“**Pole**”) to be located near 17327 Glenburn Avenue (Coordinates 33.872967/-118.330497).

TLF’s First Memorandum concluded that the Applicant failed to submit a complete permit application that fully responded to the City’s publicly stated application requirements. We recommended that the City deem the Applicant’s application incomplete and issue a timely notice, which it did.

On February 6, 2018 the Applicant submitted additional materials (the “**February 6, 2018 Submission**”) which included a letter dated January 30, 2018 to the City from the Applicant (“**January 30, 2018 Applicant Letter**”) to address the deficiencies related to its initial submission.

On February 12, 2018, we submitted another Application Incomplete Memorandum (the “**Second Memorandum**”). TLF’s Second Memorandum concluded that the Applicant again had failed to submit a complete permit application that fully responded to the City’s publicly stated application requirements. We recommended that the City deem the Applicant’s application incomplete and issue a timely notice, which it did.

On April 11, 2018 the Applicant submitted additional materials (the “**April 11, 2018 Submission**”) which included:

- A letter from Mackenzie and Albritton dated April 5, 2018 to the City the (“**April 5, 2018 Letter**”).
- A revised Supplemental Technical Information Report (“**STIR**”).
- A “Response to Notice of Incomplete (“**NOI**”)” dated April 10, 2018.

This memorandum reviews the April 11, 2018 Submission and provides the City further analysis on whether the Applicant submitted a complete and responsive application complying with the City's application requirements and complies with the Torrance Municipal Code ("TMC").

### **COMMENTS AND RECOMMENDATION**

The Applicant has failed to submit the required coverage maps per the STIR of the City. Specifically the map specified in 6.03 remains missing from the application.

TLF believes that the Applicant has not yet submitted a complete permit application. The City may have other items that remain incomplete.

We recommend that the City deem the Applicant's application incomplete and again issue a timely incomplete notice to the Applicant **no later April 20, 2018** (based on the application materials tender date of April 11, 2018). TLF recommends the City send the incomplete notice by email and on the same day also sends it by First Class or Certified U.S. Mail postage prepaid.

Once a reply to the City's incomplete notice is received back from Applicant, the City has only 10 calendar days to determine whether the reply is responsive to the incomplete notice, and each of the 10 days counts against the overall 150 day shot clock, thus immediate review upon resubmission should occur.

/JLK



## APPLICATION INCOMPLETE MEMORANDUM

**TO:** Mr. Oscar Martinez [REDACTED]  
**FROM:** Dr. Jonathan Kramer [REDACTED]  
**DATE:** February 12, 2018  
**RE:** Application Completeness Review – New Proposed Wireless Facility in the Public Right-of-Way at F/O 17327 Glenburn Avenue

**APPLICANT:** J5 Infrastructure for Verizon Wireless  
**APPLICANT'S ID:** SCL Torrance 15/ VZW site 435843  
**UTILITY POLE ID:** 4455983E

On November 27, 2017, J5 Infrastructure (the “**Applicant**”) on behalf of Verizon Wireless (“**Verizon**”) submitted wireless site application materials to the City of Torrance (“**City**”). Per the City’s request, on December 19, 2017, Telecom Law Firm, PC (“**TLF**” or “**We**”) submitted an Application Incomplete Memorandum (the “**First Memorandum**”) to the City that evaluated the Applicant’s application to operate a new wireless site in the public right-of-way (“**PROW**”) on a replacement Southern California Edison (“**SCE**”) concrete street light pole (“**Pole**”) to be located near 17327 Glenburn Avenue (Coordinates 33.872967/-118.330497).

TLF’s First Memorandum concluded that the Applicant failed to submit a complete permit application that fully responded to the City’s publicly stated application requirements. We recommended that the City deem the Applicant’s application incomplete and issue a timely notice, which it did.

On February 6, 2018 the Applicant submitted additional materials (the “**February 6, 2018 Submission**”) which included a letter dated January 30, 2018 to the City from the Applicant (“**January 30, 2018 Applicant Letter**”) to address the deficiencies related to its initial submission.

This memorandum reviews the February 6, 2018 Submission and provides the City further analysis on whether the Applicant submitted a complete and responsive application complying with the City’s application requirements and complies with the Torrance Municipal Code (“**TMC**”).

This memorandum reviews the application and related materials to determine whether the applicant submitted a complete and responsive application. The following review may also discuss regulatory and technical issues related to wireless infrastructure. Although many technical issues implicate legal issues, the analysis and recommendations contained in this memorandum do not constitute legal advice.

Through this round of material submission, the Applicant submitted a set of plans dated January 25, 2018 (“**Plans**”) which describe the following proposed project. On top of the Pole, the Applicant proposes to install a new 2-foot tall pole-top canister antenna (“**Antenna**”) and a 1’ 11” concealment skirt to enclose two diplexers below the Antenna. Also on the Pole, the Applicant proposes to mount a two remote radio units (“**RRUs**”) and two power supply units (“**PSUs**”). TLF

notes that the Pole is proposed to be installed between a minimum of three feet and maximum of four feet away from the original existing light standard location.

Page A3, panels 1 and 2 of the Plans depict that the height of the Pole supporting this project will remain the same at 29' 6" above ground level ("AGL"). In addition, the total height of the vertical elevation will increase to 32' 6" AGL due to the proposed installation of the antenna and the associated equipment on the Pole (This increase in height is acceptable since the total height of the structure does not exceed 35 feet AGL per the City's Municipal Code). Additionally, the center of the Antenna is at 31' 6" AGL, therefore the lowest point of the Antenna is at 30' 6" AGL. The top of the RRUs are separated by 1' 8" from the lowest point of the Antenna and the bottom of the RRUs are at 26' 6" AGL.

Also, two radio frequency ("RF") signs are proposed to be mounted on opposite sides of the pole. The top of both RF signs are at 21' 5" AGL.

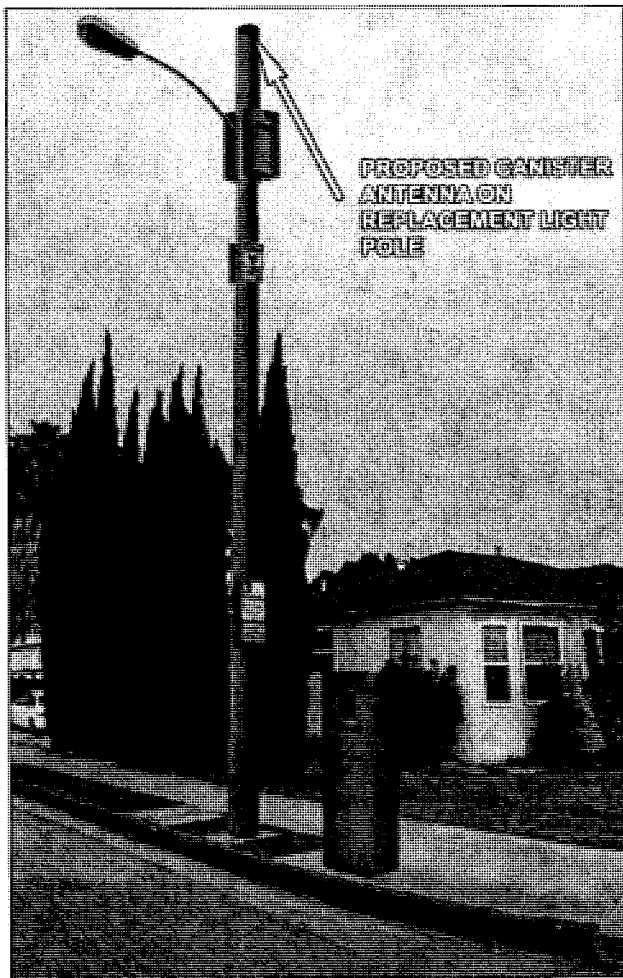
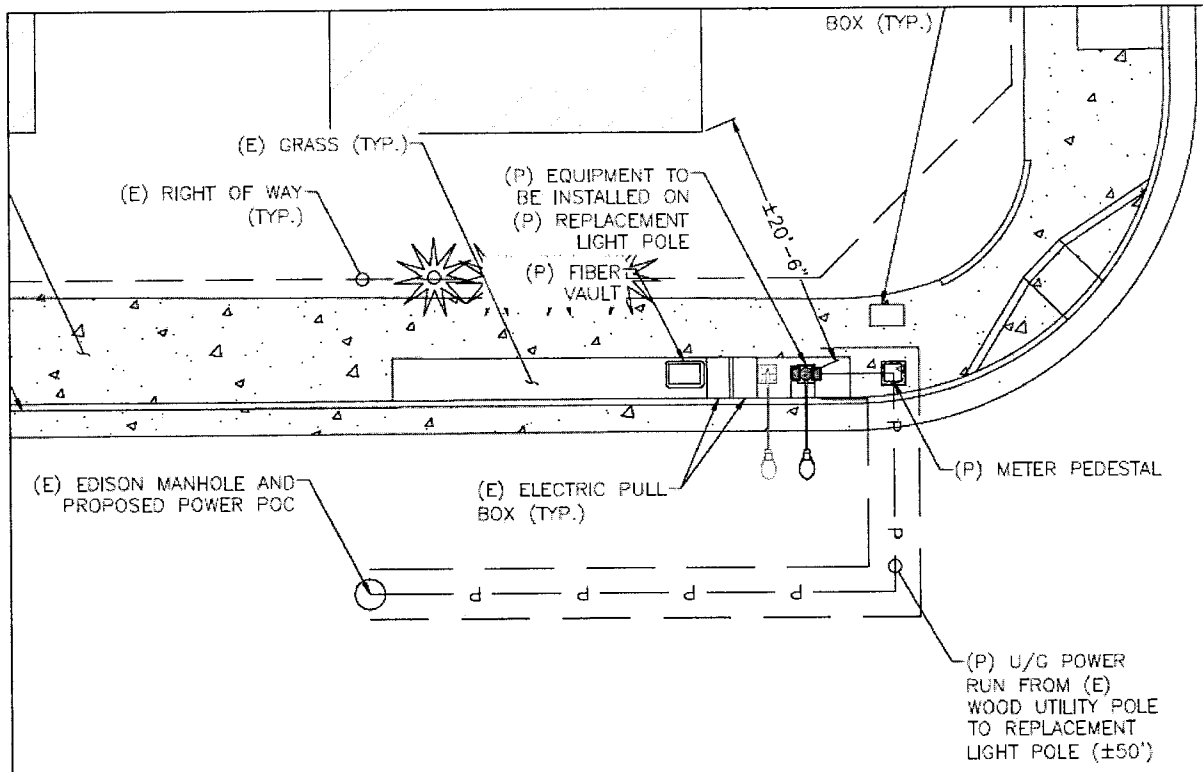


Figure 1: Antenna, Antenna skirt enclosing Diplexers, Fiber Node, 2 RRUs, RF signs, Meter etc. (Source: Photo Simulations provided by Applicant).



For its electrical connections, Page A1 of the Plans depict a new underground power service run from an existing Southern California Edison (“**Edison**”) manhole approximately 50 feet away to the Pole. Additionally, a new meter pedestal (“**Meter Cabinet**”) with dimensions (50”H x 16”W x 16”D) will be installed on a concrete pad. The Meter Cabinet will contain the electrical disconnect switch. For its fiber connections, a new fiber pull box vault will be installed near the base of the Pole (dimensions: 17”H x 30” W x 18” D). Figure 2 below demonstrates the electrical and fiber connections.



**Figure 2:** Underground electrical connections for the Applicant (Source: Plans page A-1, panel 1).

Verizon proposes to install a Meter Cabinet, whereas other wireless carriers in the City with similar equipment configurations are dispensing with the cabinet in favor of utilizing SCE’s wireless technology rate (“**WTR**”). The elimination of the Meter Cabinet is less intrusive than proposed by Verizon, thus they must either remove the Meter Cabinet and use the WTR, or factually demonstrate to the City why they cannot use SCE’s WTR.

#### **A. APPLICATION COMPLETENESS REVIEW**

Based on the City’s Submittal Requirements for Wireless Telecommunications Facility (“**Requirements Form**”), we recommend that the City deem Applicant’s application submittal **incomplete** and issue an incomplete notice on or before February 16, 2018 regarding the items more fully discussed in the next sections:



## REQUIREMENTS FORM

### I. APPLICATION FORM

The City requires an applicant to complete and submit a (1) Development Application and (2) a Supplemental Technical Information Report (“STIR”).

▪ **Supplemental Technical Information Report:**

- Sec. 3.10 – The January 30, 2018 Applicant Letter indicated the following content within Figure 3.

Please note, 3.10 was not changed to “Yes.” Upon discussion with Southern California Edison, only trained/qualified SCE personnel are allowed to work within close proximity to radio frequency energy that exceeds public exposure limits where telecommunication antennas have been installed. The SCE Radio Frequency Energy Safety Program (RFESP) - (SCE-CHS-SO-PG-20) is the program and respective guidance document that provides requirements for identifying, evaluating, and working near or around RF emitting antennas per FCC and Cal/OSHA requirements. As such, 3.12 remains unchanged also, and 3.13 will not be provided. Please contact Phil Hickerson from SCE at (626) 695-5888 should you have any questions regarding the program or guidance document.

**Figure 3:** Answer to Section 3.10 of the STIR through the January 30, 2018 Applicant Letter (Source: Applicant).

If the City wishes to accept Verizon’s representation in Figure 3 regarding SCE’s use of RF-qualified personnel, rather than having SCE make its own representation, then this element will no longer be incomplete.

- Sec. 3.12 **remains** incomplete-this proposed project is **not** categorically excluded since the SCE light standard was not originally constructed for wireless purposes. The primary reason this light standard was constructed was for street illumination. Additionally, the lowest point of the antenna is **less** than 10 meters AGL. The FCC “categorically excludes” wireless facilities from routine RF exposure analysis when antennas are mounted (1) to structure solely or primarily built to support wireless antennas and (2) more than 10 meters above ground level.<sup>1</sup>
- Sec. 3.13- The January 30, 2018 Applicant Letter indicated: “3.13 will not be provided”- As mentioned in Sec. 3.12, this project is not categorically excluded and the information must be provided. However, while technically incomplete, we are aware that the Applicant, through its November 27, 2017 submission, provided an Electromagnetic Energy (RF-EME) Jurisdictional Report by EBI Consulting dated October 9, 2017 (“**EBI RF Report**”).

<sup>1</sup> See 47 C.F.R. § 1.1307(b)(1).



Therefore, we recommend the City forego citing the Applicant remaining incomplete for this section.

- Sec. 6.01-Sec.6.04- the Applicant did not provide the required information through these Sections. The January 30, 2018 Applicant Letter indicated the following content within Figure 4.

We reiterate our position that the proposed installations do not require Verizon Wireless to provide coverage maps per 6.01-6.04, nor additional radio frequency data per 8.05. The proposed installations are in the public right-of-way for the purpose of increasing capacity (Public Utilities Code Section 7901 grants telephone corporations such as Verizon Wireless a statewide right to use the right-of-way, and as such there is no requirement to demonstrate the need for a facility). Further references can be made to California Court Rulings supporting this position and the lack of a response to further clarification on RF data (e.g. propagation maps, coverage/capacity data) at these locations.

Figure 4: Answer to Section 6.01-6.04 of the STIR through the January 30, 2018 Applicant Letter (Source: Applicant).

Given that this project is for the installation of a new site, rather than a collocation at an existing wireless site that would be subject to Section 6409(a), the Applicant is simply incorrect in asserting that it need not provide coverage maps per Application §§ 6.01-6.04. While a telephone corporation has compulsory access to the public right of way, PUC Section 7901.1, omitted by the Applicant, conditions that compulsory access, which states in its entirety:

7901.1.

(a) It is the intent of the Legislature, consistent with Section 7901, that *municipalities shall have the right to exercise reasonable control as to the time, place, and manner in which roads, highways, and waterways are accessed.*

(b) The control, to be reasonable, shall, at a minimum, be applied to all entities in an equivalent manner.

(c) Nothing in this section shall add to or subtract from any existing authority with respect to the imposition of fees by municipalities.

(Emphasis added.)

Were the City to take the Applicant's position and not require the propagation maps (which we strongly oppose), the City would be unable to



know whether any changes it might propose to the design or location of the proposed site would create a signal conflict. This lack of necessary information would effectively defeat the balancing control set out in Section 7901.1(a).

## II. PROPERTY OWNERSHIP

The Applicant did not provide any additional information on this section, we recommend the City proceed based on our First Memorandum suggestions.

## III. MAPS

As mentioned above, the maps for Section 6 are missing.

## B. OTHER PERMITS, APPLICATIONS REQUIRED AND PERMIT RECOMMENDATIONS

This project is likely to require an encroachment permit as a separate set of approvals including potentially an excavation permit and a building permit.

The City shall insure that when granting the excavation permit for the new light standard it also requires as a condition that the discontinued light standard's foundation is hammered out and the ground be restored and properly compacted.

The City should condition the project, if approved, to show that the replacement Pole is not a wireless tower for any purpose, but rather it is considered only a replacement light pole to be owned by the City. The primary purpose of this Pole is and shall remain for street illumination rather than for any primary use as a wireless tower and/or base station.

## C. CLOSING COMMENTS AND RECOMMENDATION

TLF believes that the Applicant has not yet submitted a complete permit application that complies with the City's Requirements Form. The list of incomplete items in this memo contains TLF's observations. The City may have other items for the incomplete notice. Under the FCC rules, there is only one incomplete notice, so it is imperative that all items which are incomplete are listed in the first notice.

We recommend that the City deem the Applicant's application incomplete and again issue a timely incomplete notice to the Applicant **no later February 16, 2018** (based on the application materials tender date of February 6, 2018). TLF recommends the City send the incomplete notice by email and on the same day also sends it by First Class or Certified U.S. Mail postage prepaid.

Once a reply to the City's incomplete notice is received back from Applicant, the City has only 10 calendar days to determine whether the reply is responsive to the incomplete notice, and each of





the 10 days counts against the overall 150 day shot clock, thus immediate review upon resubmission should occur.

/JLK



## APPLICATION INCOMPLETE MEMORANDUM

**TO:** Mr. Oscar Martinez [REDACTED]  
**FROM:** Dr. Jonathan Kramer [REDACTED]  
**DATE:** December 19, 2017  
**RE:** Application Completeness Review – New Proposed Wireless Facility in the Public Right-of-Way at F/O 17327 Glenburn Avenue

**APPLICANT:** J5 Infrastructure for Verizon Wireless  
**APPLICANT'S ID:** SCL Torrance 15 / Verizon Site 435843  
**UTILITY POLE ID:** 4455983E

The City of Torrance (the “City”) requested that Telecom Law Firm, PC (“TLF”) review the J5 Infrastructure’s (“Applicant”) application on behalf of Verizon Wireless (“Verizon”) to operate a new wireless site on a replacement light pole (“Pole”) in the public right-of-way (“ROW”) located at in front of 17327 Glenburn Avenue. The date the Applicant submitted this project to the City was on November 27, 2017.

This memorandum reviews the application and related materials to determine whether the applicant submitted a complete and responsive application. The following review may also discuss regulatory and technical issues related to wireless infrastructure. Although many technical issues implicate legal issues, the analysis and recommendations contained in this memorandum do not constitute legal advice.

The Applicant submitted a set of plans dated August 9, 2017 (“Plans”) which describe the following proposed project. On top of the Pole, the Applicant proposes to install a new 2-foot tall pole-top canister antenna (“Antenna”) and a 1’ 11” concealment skirt to enclose two diplexers below the Antenna. Also on the Pole, the Applicant proposes to mount a two remote radio units (“RRUs”) and two power supply units (“PSUs”). TLF notes that the Pole is proposed to be installed between a minimum of three feet and maximum of four feet away from the original existing light standard location.

Page A3, panels 1 and 2 of the Plans depict that the height of the Pole supporting this project will increase to 29’ 6” above ground level (“AGL”) from 29’ AGL for the existing light pole. In addition, the total height of the vertical elevation will increase to 32’ 6” AGL due to the proposed installation of the antenna and the associated equipment on the Pole (This increase in height is acceptable since the total height of the structure does not exceed 35 feet AGL per the City’s Municipal Code). Additionally, the center of the Antenna is at 31’ 6” AGL, therefore the lowest point of the Antenna is at 30’ 6” AGL. The top of the RRUs are separated by 1’ 8” from the lowest point of the Antenna and the bottom of the RRUs are at 26’ 6” AGL.

Also, two radio frequency (“RF”) signage are proposed to be mounted on the pole. The top of the upper RF signage is at 23’ 6” AGL and the bottom of the lower RF signage is situated at 8-foot AGL.

Page A1 of the Plans depict a new underground power service run from an existing Southern California Edison (“**Edison**”) manhole approximately 50 feet away to the Pole. Additionally, a new meter pedestal (“**Meter Cabinet**”) with dimensions (50”H x 16”W x 16”D) will be installed on a concrete pad. The Meter Cabinet will contain the electrical disconnect switch. A new fiber pull box vault will be installed near the base of the Pole (dimensions: 17”H x 30” W x 18” D).

#### **A. APPLICATION COMPLETENESS REVIEW**

Based on the City’s Submittal Requirements for Wireless Telecommunications Facility (“**Requirements Form**”), we recommend that the City deem Applicant’s application submittal **incomplete** and issue an incomplete notice on or before December 27, 2017 regarding the items more fully discussed below:

#### **REQUIREMENTS FORM**

##### **I. APPLICATION FORM**

The City requires an applicant to complete and submit a (1) Development Application and (2) a Supplemental Technical Information Report (“**STIR**”).

##### **Development Application:**

All information required on the Development Application checklist appears to be filled out by the Applicant.

##### **Supplemental Technical Information Report:**

- Sec 3.02 is incomplete – Attachment 3.02 includes only FCC licenses for the PCS frequencies; however, the Electromagnetic Energy (RF-EME) Jurisdictional Report by EBI Consulting dated October 9, 2017 (“**EBI RF Report**”) notes the additional use of AWS-1 frequencies.

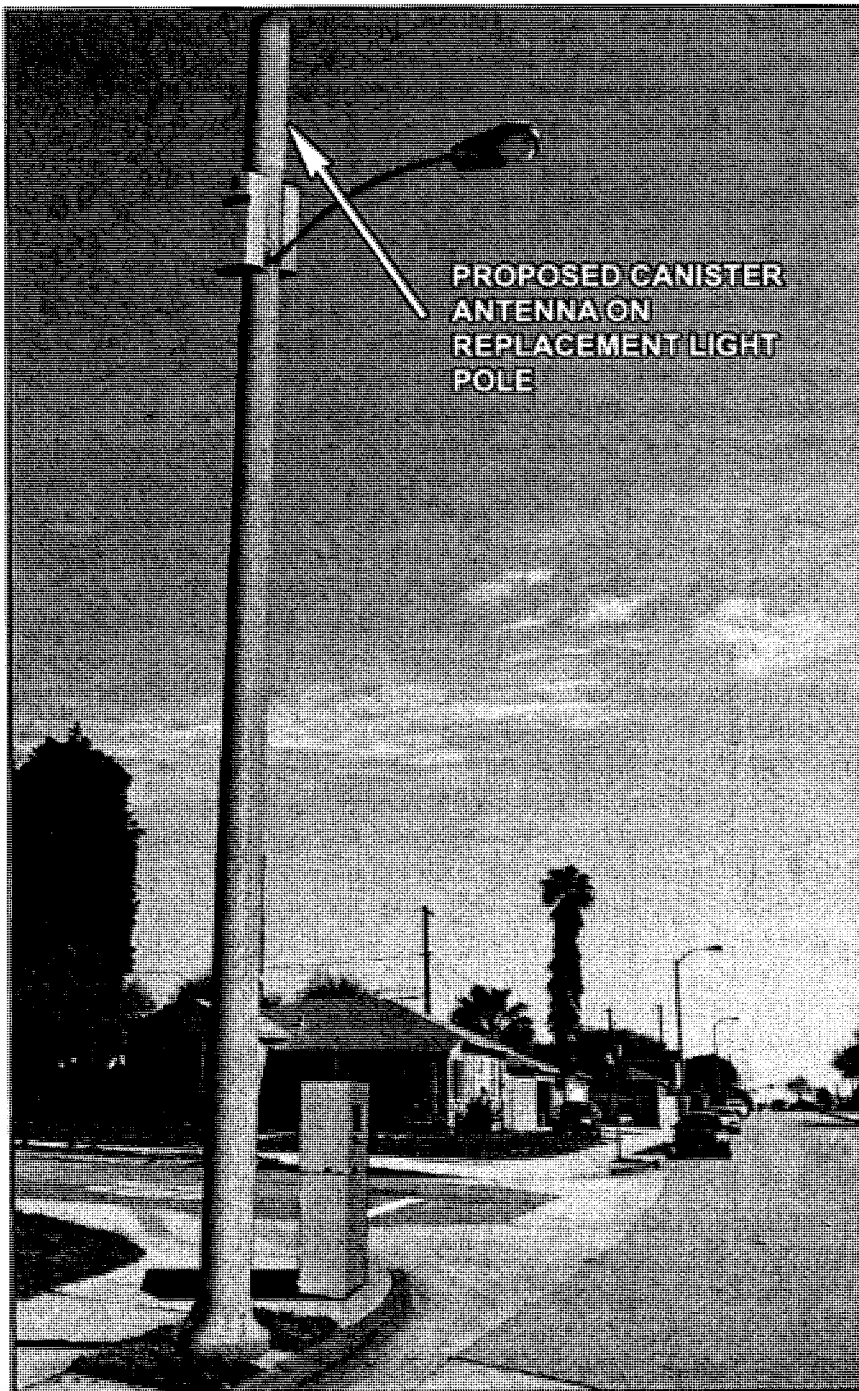
While technically incomplete, we are aware that AT&T hold an AWS license that covers the Torrance area, so the City may wish to forego citing AT&T as being incomplete on this item for this application, but requiring that AT&T submit complete applications in the future.

- Sec 3.03 is incorrect – The application checks “Cellular telephone”, but the EBI RF Report notes only “PCS telephone” services. Furthermore, “Other: [Miscellaneous Wireless Communications Services]” should be checked given use of AWS frequencies.



- Sec. 3.10 – The Applicant indicated that there are no general population areas accessible near the antenna. This may be incorrect unless SCE certifies that only RF-trained and qualified technicians maintain the Pole and the luminaire attached to the Pole.
- Sec. 3.11 is not provided, however the Applicant provided the EBI RF Report.
- Sec. 3.12 is incorrect – This proposed project is not categorically excluded.
- Sec. 3.13 must be provided - As mentioned in the prior bullet point for Sec. 3.12, this proposed project is not categorically excluded. The Applicant must provide the required information.
- Sec. 3.14 is left blank - Applicant must tick the “YES” line. TLF notes that even though this section is left blank, the Applicant provided the attachment as required in Sec. 3.15.
- Sec. 6.01-Sec. 6.04 – The Applicant did not provide the required information through these Sections. However, within an Attachment 6.00 the Applicant stated: “Please note, RF coverage maps will be provided with Attachment 8.05 to respond to the requested “technically expansive and detailed explanation supported as required by comprehensive radio frequency data fully describing why the proposed site is the one and only one location within or without the City of Torrance that can possibly meet the radio frequency objectives of the project.” The coverage maps provided in attachment 8.05 are non-responsive to Section 6.01-6.04. The required maps in the required formats specified in Section 6 must be provided to respond to Section 6 of the Application.
- Section 6.05 is not separately provided, however the Applicant provided an EBI RF Report. The EBI RF Report is a satisfactory substitute.
- Section 7.01 – subsection 2: Missing elements on the photo simulations (e.g., new Pole location, RF signage, fiber pull box, connecting cables, etc.) See Figure 1 below.
- Section 7.01 – subsection 3: The Applicant has satisfied the number of views of the photos of the existing site, however, the Applicant failed to provide five or more photo simulations of the proposed site as required in the STIR. This site is visible from residential properties, therefore additional photo simulations are required. TLF recommends the Applicant discuss the photo simulation requirements with the City.





**Figure 1:** Antenna, Antenna skirt enclosing Diplexers, Fiber Node, 2 RRUs (Missing visual elements, e.g. new Pole location, RF signage, fiber pull box, connecting cables, etc.) (Source: Photo Simulations provided by Applicant).

- Sec. 8.05: The maps provided in this Section are not consistent for the purposes of this section, nor are then sufficient for the Sec. 6.01-6.04



coverage maps. The Applicant provided the following coverage maps in connection with section 8 of the application:

- SCL Torrance 13, 14, 15– Without: The Applicant provided all existing coverage within the area without the proposed small cell nodes of 13-15 with “Good”, “Fair” and “Poor” with no numerical signal strength data.
- SCL Torrance 13, 14, 15– With: The Applicant provided neighbor sites coverage with “Good”, “Fair” and “Poor” with no numerical signal strength data.
- SCL Torrance 13, 14, 15– Only: The Applicant provided individual sites coverage with “Good”, “Fair” and “Poor” with no numerical signal strength data.

TLF notes that the Applicant has failed to provide empirical data. Also, it failed to provide node isolated coverage specific to this project as required in Section 6.

- Sec. 10.01: The Signature and Date Signed lines are left blank.

## **II. PROPERTY OWNERSHIP**

The Applicant provided the following letters:

1. Edison Carrier Solutions (“ECS”) letter from Brian P. Ryan dated September 6, 2017. The portion of this letter related to consent is not signed and filled out with the appropriate necessary information. (TLF notes that this letter, if executed, should be executed by the City Manager’s office, not Planning.)
2. Letter indicating: “PLEASE TRANSFER LETTER TO CITY LETTERHEAD” not sign nor dated. (TLF notes that this letter, if executed, should be executed by the City Manager’s office, not Planning.)
3. Letter of Authorization dated September 6, 2017 from ECS from Brian P. Ryan and signed by Brian P. Ryan.
4. SCE Streetlight Authorization form partially filled out. (TLF notes that this letter, if executed, should be executed by the City Manager’s office, not Planning.)

Prior to City Planning considering this project for completeness the four items above must be considered by the City Manager’s office or designee (not Planning) to determine if the project as described should proceed forward.



**III. PROJECT PLANS**

The Plans appear to be satisfactory for zoning processing purposes.

**IV. JUSTIFICATION**

The site justification contained in Section 4 of the application appears to be satisfactory for zoning processing purposes.

**V. MAPS**

As mentioned above, the maps are either missing (Section 6) or incomplete (Section 8).

**VI. VISUAL SIMULATIONS**

As mentioned above, the number of views of the photo simulations as required in the STIR are missing. Additionally, as already discussed, the photo simulations provided by the Applicant are incomplete.

**B. ADDITIONAL INCOMPLETE, INCONSISTENT ITEMS**

The EBI RF Report in Section 2 of that document discloses an antenna which is different from that specified in the Plans. Additionally, the EBI RF Report in Section Verizon Signage Plan discloses different signage locations from that specified in the Plans. The signage in the Verizon Signage Plan should be relied upon as Verizon is the FCC's licensee.

**C. OTHER PERMITS AND APPLICATIONS REQUIRED**

This project is likely to require an encroachment permit as a separate set of approvals including potentially an excavation permit, fiber installation permit, building permit, and electrical permit.

**D. CLOSING COMMENTS AND RECOMMENDATION**

We recommend that the City direct the application to relocate the proposed meter cabinet as its current proposed location will interfere with driver sight lines for vehicles turning right (west) from Glenburn Avenue on to Artesia Boulevard. A preferable location for the meter cabinet would be on Glenburn Avenue north of the intersection in a location where driver sight lines will not be impaired. This recommendation is not related to an incomplete item in the applicant's plans, but an initial comment that if adopted will speed the project to a decision.

TLF believes that the Applicant has failed to submit a complete permit application that complies with the City's Requirements Form. The list of incomplete items in this memo contains TLF's



observations. The City may have other items for the incomplete notice. Under the FCC rules, there is only one incomplete notice, so it is imperative that all items which are incomplete are listed in the first notice.

We recommend that the City deem the Applicant's application incomplete and issue a timely incomplete notice to the Applicant **no later than December 27, 2017** (based on the application materials tender date of November 27, 2017). TLF recommends the City send the incomplete notice by email and on the same day also sends it by First Class or Certified U.S. Mail postage prepaid.

Once a reply to the City's incomplete notice is received back from Applicant, the City has only 10 calendar days to determine whether the reply is responsive to the incomplete notice, and each of the 10 days counts against the overall 150 day shot clock, thus immediate review upon resubmission should occur.

/JLK







**SUPPLEMENTAL TECHNICAL INFORMATION REPORT  
 FOR WIRELESS TELECOMMUNICATION FACILITIES**

1.00: Project Address N/A - PROW (Closest address F/O 17327 Glenburn Ave.)

Assessor Parcel Number N/A

2.00: Disclose the Name and Address of all Project Owners, and attach a letter of agency appointing the Applicant as representative of the Project Owners in connection with this application. Designate the letter of agency as "Attachment 2.00".

**3.00: FCC Licensee/FAA Compliance Information**

3.01: Identify each person or legal entity that will be using the wireless site and contact information (Attach additional sheets if necessary)

Name: Verizon Wireless

Address: 15505 Sand Canyon Rd. Bldg. D-1

City, State, Zip: Irvine, CA 92618

Phone: (949) 286-7000 Fax: \_\_\_\_\_

Email: Please see Attachment 3.01 for second entity

3.02: Attach a complete copy of each FCC license or FCC Construction Permit for each person/legal entity that will be subject to the FCC license for the Project site. Designate the license(s)/Construction Permit(s) as "Attachment 3.02". If none of the proposed radio facilities require an FCC license so indicate on Attachment 3.02.

3.03: What is the intended use of the facility (check all that apply):

- Broadcast Radio
- Broadcast TV
- Cellular telephone
- Enhanced Specialized Mobile Radio
- Microwave
- PCS telephone
- Paging
- Specialized Mobile Radio
- Other: \_\_\_\_\_

3.04: Project latitude and longitude: N 33.872967 W -118.330497



**SUPPLEMENTAL TECHNICAL INFORMATION REPORT  
FOR WIRELESS TELECOMMUNICATION FACILITIES**

3.05: Specify DATUM use above: \_\_\_ WGS84 \_\_\_ NAD23  x  NAD83

3.06: Project Maximum height (ft):  32'-6"

3.07: Bottom of lowest antenna (ft):  30'-6"

3.08: Rad-center of the antennas (ft):  31'-6"

3.09: For each licensee, and for each radio service, complete and attach the two page "Appendix A" form from "A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance" available from the following website: <http://www.FCC.gov/oet/rfsafety>. Designate the completed two page form as "Attachment 3.09". Additional RF safety disclosure information may be required by the government to determine compliance with FCC OET 65 requirements if the site is not "categorically excluded" under OET 65.

3.10 Are any areas adjacent to the antennas subject to RF emissions that are in excess of the "General Public/uncontrolled" standard in FCC OET 65? For this purpose, assume that all persons other than the Carrier's technical staff are considered to be members of the General Public.

Yes  x  No

(If the answer to 3.10 is NO proceed to 3.12)

3.11 Provide a detailed RF analysis for each emitter and each band showing the distance, in feet, in all directions to the boundary of the General Public/uncontrolled boundary. Designate this attachment, "Attachment 3.11".

3.12 Considering your response to 3.10, above, and any other identifiable RF emitters that OET 65 requires be evaluated in connection with this project, are  all  portions of this project cumulatively "categorically excluded" under FCC OET 65 requirements?

x  Yes   No

(If the answer to 3.12 is YES proceed to 3.14.)

3.13 Describe in an attachment each and every RF emitter of the project that is not "categorically excluded" under the FCC OET 65 requirements. Designate this attachment, "Attachment 3.13".

3.14: Does this project require the Applicant to file an FAA Form 7460 or other documentation under Federal Aviation Regulation Part 77.13 et seq, or under the FCC rules?

Yes   No

(If the answer to 3.14 is NO proceed to 4.00.) Please see Attachment 3.15 for Airspace Report.



**SUPPLEMENTAL TECHNICAL INFORMATION REPORT  
FOR WIRELESS TELECOMMUNICATION FACILITIES**

3.15 Attach complete copies of all required FAA/FCC forms including all attachments and exhibits thereto, including without limitation FAA Form 7460. Designate this attachment, "Attachment 3.15".

**4.00: Project Purpose**

4.01: Justification. Provide a brief narrative, accompanied by written documentation where appropriate, which explains the purpose of the facility and validates the applicant's efforts to comply with the design, location, and co-location standards of Chapter 2, Division 9, Article 39 of the City's Municipal Code.

Please see Attachment 4.01

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4.02: Indicate whether the dominant purpose of the Project is to add additional network capacity, to increase existing signal level, or to provide new radio frequency coverage (check only one).  
 Add network capacity without adding substantial new RF coverage area (Proceed to 5.00)  
 Increase the existing RF signal level in an existing coverage area (Proceed to 5.00)  
 Provide new radio frequency coverage in a substantial area not already served by existing radio frequency coverage (Proceed to 5.00)  
 Other

4.03 Attach a statement fully and expansively describing the "Other" dominant purpose of this project. Designate this attachment, "Attachment 4.03".

**5.00: Build-Out Requirements**

5.01: Do any of radio services identified in 3.04 above require the licensee to provide specific radio frequency/population coverage pursuant to the underlying FCC license?  
     Yes      x   No  
(If the answer to 5.01 is NO proceed to 6.00.)

5.02: Have all of the FCC build-out requirements as required by all licenses covering all radio services proposed at this Project been met?  
  N/A   Yes      N/A   No  
(If the answer to 5.02 is YES proceed to 6.00.)



SCL Torrance 15

City of Torrance, Community Development Department Jeffery W. Gibson, Director  
3031 Torrance Blvd., Torrance, CA 90503, Phone (310) 618-5990 Fax (310) 618-5829

## SUPPLEMENTAL TECHNICAL INFORMATION REPORT FOR WIRELESS TELECOMMUNICATION FACILITIES

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5.03: State by licensee all remaining build-out requirements which have yet to be met, and the known or estimated date when the remaining build-out requirements will be met. Designate this attachment "Attachment 5.03".

### 6.00: Radio Frequency Coverage Maps

6.01: Where a licensee intends to provide radio frequency geographic coverage to a defined area from the Project (including applicants in the cellular, PCS, broadcast, ESMR/SMR categories, and others as requested by the City of Torrance), the coverage maps and information requested in Section 6 are required attachments. All others proceed to 7.00.

For the coverage maps required here, the following mandatory requirements apply. Failure to adhere to these requirements may delay your application processing.

1. The size of each submitted map must be no smaller than 11" by 8.5".
  2. If the FCC rules for any proposed radio service defines a minimum radio frequency signal level that level must be shown on the map in a color easily distinguishable from the base paper or transparency layer, and adequately identified by RF level and map color or gradient in the map legend. If no minimum signal level is defined by the FCC rules you must indicate that in the legend of each RF coverage map. You may show other RF signal level(s) on the map so long as they are adequately identified by objective RF level and map color or gradient in the map legend.
  3. Where the City of Torrance determines that one or more submitted maps are inadequate, it reserved the right to request that one or more supplemental maps with greater or different detail be submitted.
- 6.02: Existing RF coverage within the City of Torrance on the same network, if any (if none, so state). This map should not depict any RF coverage to be provided by the Project. Designate this attachment "Attachment 6.02".
- 6.03: RF coverage to be provided by the Project. This map should not depict any RF coverage provided any other existing or proposed wireless sites. Designate this attachment "Attachment 6.03".
- 6.04: RF coverage to be provided by the Project and by other wireless sites on the same network should the Project site be activated. Designate this attachment "Attachment 6.04".
- 6.05: Provide a written certification that the facility will continuously comply with FCC OET Bulletin 65 radio frequency emissions standards, and that use of the facility will not interfere with other communication, radio, or television transmission or reception.



**SUPPLEMENTAL TECHNICAL INFORMATION REPORT  
FOR WIRELESS TELECOMMUNICATION FACILITIES**

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**7.00: Project Photographs and Photo Simulations**

7.01: Where an Applicant proposes to construct or modify a wireless site, and the wireless site is visible from other residential properties, the Applicant shall submit pre-project photographs, and photo simulations showing the project after completion of construction, all consistent with the following standards:

1. Minimum size of each photo simulation must be 11 inches by 8.5 inches (portrait or landscape orientation);
2. All elements of the project as proposed by the Applicant must be shown in one or more close-in photo simulations.
3. The overall project as proposed by the Applicant must be shown in five or more area photos and photo simulations. Photos and photo simulation views must, at a minimum, be taken from widely scattered positions separated by an angle of no greater than 72 degrees from any other photo location.

The number of site photos, and photo simulations, and the actual or simulated camera location of these photos and photo simulations is subject to City of Torrance determination. The Applicant should submit photos and photo simulations consistent with these instructions, and be prepared to provide additional photos and photo simulations should they be requested by the City of Torrance.

**8.00: Candidate Sites**

8.01: For applicants in the cellular, PCS, broadcast, ESMR/SMR categories, and others as requested by the City of Torrance, the information requested in Section 8 is required. All others proceed to 9.00.

8.02: Has the Applicant or Owner or anyone working on behalf of the Applicant or Owner secured or attempted to secure any leases or lease-options or similar formal or informal agreements in connection with this project for any sites other than the candidate site identified at 1.00?  
     Yes       x   No  
(If the answer to 8.02 is NO, proceed to 8.05.)

8.03: Provide the physical address of each such other location, and provide an expansive technical explanation as to why each such other site was disfavored over the Project Site. Designate this attachment "Attachment 8.03".

8.04: Considering this proposed site, is it the one and only one location within or without the City of Torrance that can possibly meet the objectives of the project?  
  N/A   Yes       N/A   No  
(If the answer to 8.04 is NO, proceed to 9.00.)



**SUPPLEMENTAL TECHNICAL INFORMATION REPORT  
FOR WIRELESS TELECOMMUNICATION FACILITIES**

8.05: Provide a technically expansive and detailed explanation supported as required by comprehensive radio frequency data fully describing why the proposed site is the one and only one location within or without the City of Torrance that can possibly meet the radio frequency objectives of the project. Explain, in exact and expansive technical detail, all of the objectives of this project. Designate this attachment "Attachment 8.05".

**9.00: Identification of Key Persons**

9.01: Identify by name, title, company affiliation, work address, telephone number and extension, and email address the key person or persons most knowledgeable regarding:

- (1) the site selection for the proposed project, including alternatives;
  - (2) the radio frequency engineering of the proposed project;
  - (3) rejection of other candidate sites evaluated, if any;
  - (4) approval of the selection of the proposed site identified in this project.
- Designate this attachment "Attachment 9.01"

9.02 If more than one person is/was involved in any of the four functions identified in this section, attach a separate sheet providing the same information for each additional person, and identifying which function or functions are/were performed by each additional person. Designate this attachment "Attachment 9.02".

Initial here LC to indicate that the information above is complete and there is no Attachment 9.02, or initial here \_\_\_\_\_ to indicate that Attachment 9.02 is attached hereto.

**10.00: Technical Information Report Certification**

10.01: The undersigned certifies on behalf of itself and the Applicant that the answers provided here are true and complete to the best of the undersigned's knowledge.

	Site Acq. & Zoning Spec.
Signature	Title
Laura Castro	LCastro@J5IP.com
Print Name	Provide Email Address
J5 Infrastructure	
Print Company Name	Provide Telephone Number
10/18/17	
Date Signed	

Verizon Wireless  
SCL Torrance 15

**Attachment 2.00**

**2.00: Name and Address of all Project Owners**

Verizon Wireless  
15505 Sand Canyon, Bldg. D-1  
Irvine, CA 92618

Southern California Edison  
4900 Rivergrade Rd., Bldg. 2B-1, Suite 120C  
Irwindale, CA 91706

Letter(s) of Agency (attached)



Brian Ryan  
Principal Manager Telecom Sales  
Edison Carrier Solutions  
e-mail: Brian.Ryan@sce.com

September 6, 2017

Torrance Planning Department

To Whom It May Concern:

Re: Letter of Authorization

SCE streetlight identified as – SCE Streetlight Pole # **4455983E** located adjacent: F/O 17327 Glenburn Ave.. Verizon Site Name: **SCL Torrance 15**.

Southern California Edison Company (SCE) is the owner of the Light Pole, located in Torrance, CA. Verizon Wireless "Carrier" has requested that SCE replace the existing Light Pole so that it can be used for operating a wireless communications facility, ("Site").

SCE has reviewed Carrier's preliminary plans for this Site and believe these plans are compatible with SCE's use of this Light Pole. Thus, as a representative of SCE, I hereby authorize Carrier, and its representatives, to seek and secure all right(s), including any environmental review associated with granting such rights, that are needed from the Jurisdiction to use the Light Pole and other property for this purpose as long as there are no costs to SCE.

Notwithstanding this authorization, SCE reserves the right to reject Carrier's request for use of its Light Pole for any reason, including imposed conditions or required changes to the light pole by the Jurisdiction, are unacceptable to SCE.

All correspondence and/or notices regarding use of SCE's Light Pole by Carrier, or any later requests by the Carrier for authorizations or approvals needed for construction, operation or maintenance of an approved Site, should include a copy to SCE.

If you have any questions concerning this project, please contact Phil Hickerson @ 626-695-5888.

Sincerely,

A solid black rectangular box redacting the signature of Brian P. Ryan.

Brian P. Ryan



PLEASE TRANSFER LETTER TO CITY LETTERHEAD

Date

Brian Ryan  
Southern California Edison  
Carrier Solutions Division  
2 Innovation Way 1st Floor  
Pomona, Ca 91768

Dear Mr. Ryan:

This letter authorizes Southern California Edison (SCE) to disconnect the SCE streetlight identified as – SCE Streetlight Pole #4455983E located adjacent: F/O 17327 Glenburn Ave.. **Verizon Wireless** Site number: **SCL Torrance 15** So that work can be performed to replace the existing Streetlight.

Verizon Wireless (Wireless Carrier) has requested that SCE replace the Southern California Edison streetlight with a new streetlight that will be used for operating the wireless communications facility identified as SCE Light Pole #4455983E located adjacent to: F/O 17327 Glenburn Ave.. Verizon Wireless Site Reference: SCL Torrance 15.

Please coordinate the disconnecting of the streetlight directly with Torrance, (please provide County Contact, Name, Phone) so that the light will be out only for the above referenced work to be completed.

If you have any questions, please do not hesitate to call me.

Sincerely,

Name  
Public Agency



Brian P. Ryan  
Principle Manager  
Telephone: 909-274-1949  
Brian.Ryan@sce.com

September 6, 2017

To Whom It May Concern:

Since 1994, Southern California Edison (SCE) has assisted wireless service providers in expanding their networks to meet customers' needs for telecommunications service. SCE makes available existing structures that can be used to co-locate the wireless service providers' equipment, while lessening the visual impacts on the community and constituency that is served. This letter requests that you help us in this endeavor.

In an effort to minimize the potential clutter that new vertical structures would produce, many California cities have adopted ordinances and policies encouraging wireless facilities to be mounted on street light poles within the public rights of way.

As you are aware, SCE owns and maintains street light poles in your city pursuant to our LS-1 tariff. In order to accommodate the increasing demand for micro-cell site locations, SCE has agreed to allow wireless service providers to attach their antennas to some of these streetlight poles, and contractually requires the wireless service provider to comply with certain requirements, including a requirement that the facility will not impact SCE's ability to provide street lighting service.

**Torrance** has and retains full control over the entitlement and permitting process for these and future sites. The wireless service providers also pay for electrical usage resulting from their sites. This electrical service is metered and billed separately, and the City is not impacted.

While SCE believes this approach benefits local governments as well as their constituency, we would not engage in this solution if doing so resulted in extra costs to SCE. We would therefore appreciate you confirming that the **Torrance** consents to use of its public rights of way for the purpose of licensing space on an SCE Streetlight Pole # **4455983E** located at: F/O 17327 Glenbyrn Ave.. **Verizon Wireless** Site number: **SCL Torrance 15**.

Please sign this letter to indicate your consent and return it to me at the below address. If you have any questions, please feel free to call Phil Hickerson at (626) 695-5888.

Regards,  
  
Brian P. Ryan

Signature \_\_\_\_\_  
Name \_\_\_\_\_  
Title \_\_\_\_\_  
Date: \_\_\_\_\_

# SOUTHERN CALIFORNIA EDISON STREETLIGHT AUTHORIZATION

**DEVELOPER/APPLICANT MUST PROVIDE THIS FORM  
COMPLETED BY THE PUBLIC AUTHORITY  
FOR ANY SCE-OWNED STREETLIGHT INSTALLATION, REMOVAL OR CHANGE REQUESTS  
Incomplete forms will be returned and not processed**

**PUBLIC AUTHORITY NAME:** City of Torrance

<b>Builder/Developer Name:</b> <u>Verizon Wireless/ JS Infrastructure</u>	<b>Phone #:</b> <u>714-272-3702</u>
<b>Tract/Ref #</b> _____	<b>Streetlight Location</b> <u>4455983E/ F/O 17327 Glenburn Ave.</u>

**Please Check one:**     Installation     Removal     Change

Number of Lamp(s)	Lamp Size	Lamp Type
<u>1</u>	_____	_____
_____	_____	_____
_____	_____	_____

**New Installations**  
Public Authority Responsibility for Streetlight Monthly Billing  
*Please Check one and fill out applicable dates:*

**Upon Energizing**  
 If Public Authority is collecting Builder/Developer Advanced Energy Payment, indicate date collected. ( \_\_\_\_\_ )

Monthly Billing:     Establish new Service Account (SA)    Use existing SA # \_\_\_\_\_

**Commitment Date-**  
Date Agreed upon by SCE and Public Authority ( \_\_\_\_\_ ) or no later than 36 months from first streetlight energized whichever is earlier.

Monthly Billing:     Establish new Service Account (SA)    Use existing SA # \_\_\_\_\_

**Public Authority is not responsible**  
 HOA Area    Name \_\_\_\_\_    Other Entity (please define) Verizon Wireless

**Public Authority Notes:**  
 \_\_\_\_\_  
 \_\_\_\_\_

**Authorized Public Authority Agent**

_____	_____	_____
Print name	Date	Signature
Phone # _____	Title _____	

<b>TO BE COMPLETED BY SCE</b>		
ACTION: ENTER TRACT/REF# ON DM PROGRAM NAME FIELD.		
District _____	Planning AOR _____	PLANNER NAME (PRINT) _____

DM SR # \_\_\_\_\_ Product # \_\_\_\_\_ (one per SLA)

FORWARD COMPLETED COPIES OF THE SLA FORM, MAP AND CSD272 CONTRACT, IF APPLICABLE TO:  
"Street & Outdoor Lighting Organization" Santa Ana Bldg. D

Verizon Wireless  
SCL Torrance 15

**Attachment 3.01**

**3.01**- Additional contact information of legal entity that will be using the wireless site:

Name: Southern California Edison

Address: 4900 Rivergrade Rd. Bldg. 2B-1, Suite 120C Irwindale, CA 91706

Phone: 626-695-5888

Verizon Wireless  
SCL Torrance 15

**Attachment 3.02**

3.02: Complete copies of each FCC license (attached)



**Federal Communications Commission**  
**Wireless Telecommunications Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: AIRTOUCH CELLULAR

ATTN: REGULATORY  
 AIRTOUCH CELLULAR  
 5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING  
 ALPHARETTA, GA 30022

<b>Call Sign</b> KNLF889	<b>File Number</b> 0007638414
<b>Radio Service</b> CW - PCS Broadband	

FCC Registration Number (FRN): 0006146468

<b>Grant Date</b> 03-30-2017	<b>Effective Date</b> 03-30-2017	<b>Expiration Date</b> 04-28-2027	<b>Print Date</b> 03-31-2017
<b>Market Number</b> BTA262	<b>Channel Block</b> F	<b>Sub-Market Designator</b> 0	
<b>Market Name</b> Los Angeles, CA			
<b>1st Build-out Date</b> 04-28-2002	<b>2nd Build-out Date</b>	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

**Waivers/Conditions:**

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

This authorization is conditioned upon the full and timely payment of all monies due pursuant to Sections 1.2110 and 24.716 of the Commission's Rules and the terms of the Commission's installment plan as set forth in the Note and Security Agreement executed by the licensee. Failure to comply with this condition will result in the automatic cancellation of this authorization.

**Conditions:**  
 Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

**Licensee Name:** AIRTOUCH CELLULAR

**Call Sign:** KNLF889

**File Number:** 0007638414

**Print Date:** 03-31-2017

Grant of the request to update licensee name is conditioned on it not reflecting an assignment or transfer of control (see Rule 1.948); if an assignment or transfer occurred without proper notification or FCC approval, the grant is void and the station is licensed under the prior name.

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

Original Copy



**Federal Communications Commission**  
**Wireless Telecommunications Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: LOS ANGELES SMSA LIMITED PARTNERSHIP

ATTN: REGULATORY  
 LOS ANGELES SMSA LIMITED PARTNERSHIP  
 5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING  
 ALPHARETTA, GA 30022

<b>Call Sign</b> WPWH653	<b>File Number</b> 0007638763
<b>Radio Service</b> CW - PCS Broadband	

FCC Registration Number (FRN): 0002963817

<b>Grant Date</b> 03-31-2017	<b>Effective Date</b> 03-31-2017	<b>Expiration Date</b> 04-28-2027	<b>Print Date</b> 04-01-2017
<b>Market Number</b> BTA262	<b>Channel Block</b> E	<b>Sub-Market Designator</b> 2	
<b>Market Name</b> Los Angeles, CA			
<b>1st Build-out Date</b> 04-28-2002	<b>2nd Build-out Date</b>	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

**Waivers/Conditions:**

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.



**Licensee Name:** LOS ANGELES SMSA LIMITED PARTNERSHIP

**Call Sign:** WPWH653

**File Number:** 0007638763

**Print Date:** 04-01-2017

This authorization is subject to the condition that the remaining balance of the winning bid amount will be paid in accordance with Part 1 of the Commission's rules, 47 C.F.R. Part 1.

Original Order

Verizon Wireless  
SCL Torrance 15

**Attachment 3.09**

**3.09** Appendix A from "A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance." (See attached)

**Optional Checklist for Local Government  
To Determine Whether a Facility is Categorically Excluded**

Purpose: The FCC has determined that many wireless facilities are unlikely to cause human exposures in excess of RF exposure guidelines. Operators of those facilities are exempt from routinely having to determine their compliance. These facilities are termed "categorically excluded." Section 1.1307(b)(1) of the Commission's rules defines those categorically excluded facilities. This checklist will assist state and local government agencies in identifying those wireless facilities that are categorically excluded, and thus are highly unlikely to cause exposure in excess of the FCC's guidelines. Provision of the information identified on this checklist may also assist FCC staff in evaluating any inquiry regarding a facility's compliance with the RF exposure guidelines.

**BACKGROUND INFORMATION**

1. Facility Operator's Legal Name: Verizon Wireless
2. Facility Operator's Mailing Address: 15505 Sand Canyon Blvd. Bldg. D-1, Irvine, CA 92618
3. Facility Operator's Contact Name/Title: Vinh Vuong
4. Facility Operator's Office Telephone: 949-379-9198
5. Facility Operator's Fax: \_\_\_\_\_
6. Facility Name: SCL Torrance 15
7. Facility Address: N/A - PROW
8. Facility City/Community: City of Torrance
9. Facility State and Zip Code: CA
10. Latitude: 33.872967
11. Longitude: -118.330497

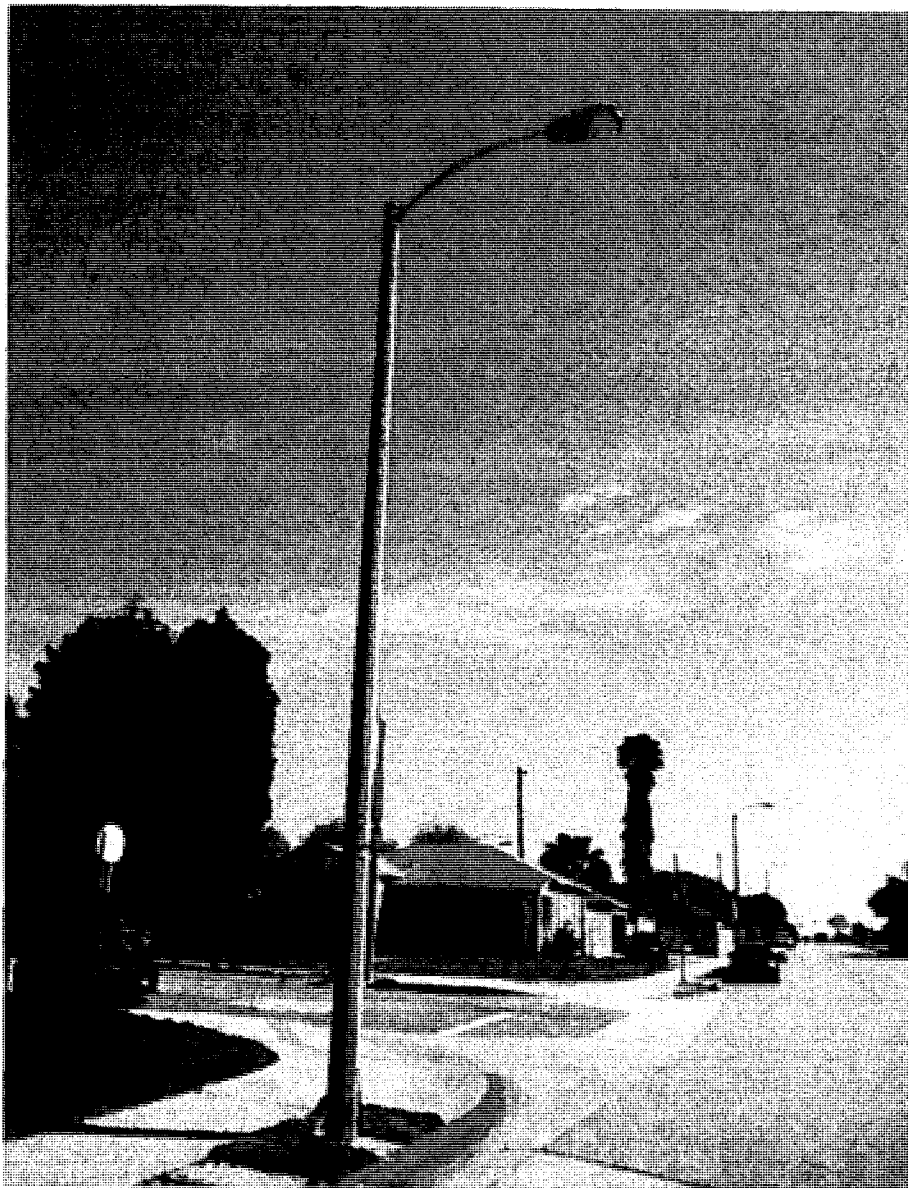
continue  
→

**Attachment 4.01**

The purpose of installing SCL Torrance 15 is to increase capacity caused by increased usage and demand of wireless data and technology in the area surrounding the project site.

Pursuant to the City of Torrance's Municipal Code, Verizon Wireless proposes to attach small cell wireless equipment to a street light pole located within the City of Torrance's public right of way.

Site ID	Latitude	Longitude	Zone	Pole Type	Pole Owner
SCL Torrance 15	33.872967	-118.330497	R1	Concrete	SCE



Verizon Wireless  
SCL Torrance 15

**Facility Type**

This is a “wireless telecommunications facility” per the definition in Torrance Municipal Code Section 92.39.030 (u) as it is an antenna attachment to a street light pole in the public right of way.

**Zoning**

The proposed facility is located in the Single Family Residential zone (R1).

**Height** (92.39.040 (a)(1)(A))

The antenna will be attached to a street light pole with a height of 29.5 feet. The height of the structure after attachment will be 32.5 feet, which does not exceed the maximum 35 feet for antennas on street lights within the public right of way, as called out by the Code.

**Location** (92.39.040 (b))

The project meets location priority (B) as an existing light pole under Section 92.39.040 (b)(1) of the Code. The project requires special approval by the Telecommunications Committee under Section 92.39.040 (b)(3)(A) as it is located within the public right of way within a residential district.

**Co-Location** (92.39.040 (d))

This is not a feasible co-location project.

**Design Standards** (92.39.050)

Attach 2'-0" omnidirectional antenna and associated auxiliary equipment to a concrete street light pole within the right of way of the City.

This project consists of the installation of an antenna and associated equipment for Verizon Wireless' wireless telecommunications network.

Verizon Wireless contractor to install:

- (1) Canister antenna; and
- (2) RRUs onto pole.

Verizon Wireless contractor to place:

- (1) 17" x 30" x 18" (Fiber) pull box; and
- (1) Concrete pad mounted meter pedestal.

Southern California Edison is responsible for replacing the existing street light pole with the street light pole shown on the elevation sheet in the zoning drawing. No cost will be borne by the City of Torrance for the pole replacement. Southern California Edison has provided a Letter of Authorization for Verizon Wireless's subsequent installation of wireless equipment on the pole, which is included in our application package under **Attachment 2.00**.

Verizon Wireless  
SCL Torrance 15

The volumetric total of the antenna for this project equals approximately 2.42 cubic feet. The volumetric total of all equipment associated with this project totals approximately 16.36 cubic feet. Please see calculations below.

EQUIPMENT	L	W	H	CU.IN.	CU.FT.	QUANTITY	TOTAL CU.FT.
METER PEDESTAL	50.00	16.00	16.00	12800.00	7.41	1.00	7.41
PSU	2.68	12.99	7.04	245.08	0.14	2.00	0.28
RRU	18.50	10.00	28.00	5180.00	3.00	2.00	6.00
DIPLEXER	5.90	1.90	5.90	66.14	0.04	4.00	0.15
2' ANTENNA	$\pi(7.45)^2(24)$			4184.79	2.42	1.00	2.42
DISCONNECT SWITCH	7.84	5.11	4.13	165.46	0.10	1.00	0.10
						<b>TOTAL</b>	<b>16.36</b>

**Painting** (92.39.050 (2)(e))

The equipment is painted a neutral gray color to blend with the concrete surface of the street light pole and to minimize its appearance against the surrounding environment.

**Lighting & Signage** (92.39.050 (f & g))

The equipment will not have any lighting or signage other than that required for public safety and identification, such as is mandated by the FCC and FAA.

**Maintenance** (92.39.020 (g))

The installed equipment will be routinely maintained by Verizon Wireless in accordance with the Site License Agreement language that will be executed with Southern California Edison. The equipment will be labeled with signage indicating its ownership by Verizon Wireless with identifying equipment tags and a phone number to contact Verizon in the event of an emergency.

The installed replacement pole will be maintained by the original pole owner as identified above.

**Street Access and Parking** (92.39.020 (h))

Verizon will have a traffic control plan in place during placement of the equipment. As the equipment will be placed on a pole in the public right of way, Verizon does not anticipate an effect on traffic or parking beyond the construction stage and any scheduled maintenance.

**Radio Frequency** (92.39.060 (b)(5))

The Federal Communications Commission (FCC) requires compliance with its Radio Frequency (RF) emissions safety limits to ensure the safe operation of cellular facilities. Verizon Wireless fully complies with all standards and operates well within the safety guidelines set by the FCC. Additionally, we work with local jurisdictions to ensure all applicable federal, state and local regulations are followed. In general, due to their small size, low wattage and limited coverage,

emissions from small cells are a small fraction of FCC-permitted levels in any publicly accessible area.

The proposed facility will be designed and constructed to meet all applicable government and industry standards for radio frequency emissions. An RF emissions report signed by a radio frequency engineer and prepared pursuant to FCC, Office of Engineering and Technology, Bulletin 65 is attached under **Attachment 6.05**.

### **Site Justification**

Small cells augment Verizon Wireless's capacity in a given area. They consist of a radio, antenna, power and a fiber connection. Small cells are short range mobile cell sites used to complement larger macro cells (or cell towers). Small cells enable the Verizon Wireless network team to strategically add capacity to high traffic areas. Small cell networks add capacity in small, specific areas to improve in-building coverage, voice quality, reliability, and data speeds for local residents, businesses, first responders and visitors using the Verizon Wireless network.

U.S. mobile data usage is projected to grow nearly seven-fold from 2014 through 2019.<sup>1</sup> It's part of Verizon Wireless's network strategy to provide reliable service and to stay ahead of this booming demand for wireless data. For Verizon Wireless, small cells are part of a balanced approach to network capacity. Verizon Wireless will continue to add traditional macro cell sites and expand its 4G LTE footprint for bandwidth and capacity. Verizon Wireless looks to add small cells in areas ranging from urban centers to residential communities where there is a need for extra capacity to serve customers to stay ahead of the demand for wireless data.

A small cell uses small radios and a single antenna placed on existing utility poles, transit poles, street lights, signs and signal light poles. The coverage area can range from a few hundred feet to upwards of 1,000 ft. depending on topography, capacity needs, and more. This small focused footprint supports 4G LTE-enabled devices, allowing individuals and businesses within the City of Torrance to do things like stream video or share photos on social media during events.

When selecting a small cell attachment site, there are many considerations including the identified coverage area, availability of existing infrastructure within the right of way, height of existing infrastructure, feasibility of using existing infrastructure, and the surrounding zoning district (industrial and commercial prioritized, if possible).

Choosing an effective project site required looking for potential candidates within a small area provided by our radio frequency engineers to identify the coverage area they wish to address. This search area is quite small due to the nature of the project, consisting of the area within approximately 250 feet of a provided coordinate location. With the search area identified, the next step was to determine what types of existing infrastructure were available in this area. The search area was in a residential area, with concrete street lights as the only available attachment

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<sup>1</sup> Cisco VNI Mobile Forecast Highlights, 2014 – 2019, October 2015

Verizon Wireless  
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options. The project site chosen was an unencumbered pole, nearest to the ideal coordinates provided by the RF engineers, with a low risk of RF interference.

Verizon Wireless's RF engineers have identified this location as necessary and appropriate to provide network densification. When selecting this location, Verizon Wireless's RF engineers looked at traffic patterns, geographic topography of the surrounding area, and population density when determining that this location was necessary to provide adequate network coverage to serve the City of Torrance's residents and businesses. The proposed site was chosen because of the coverage afforded by its strategic location and the lack of obstructions in the area to allow a signal to penetrate the geographical service area. The project will be able to provide connectivity to neighboring sites within the local network.



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**Attachment 6.00**

6.01-6.04: Where a licensee intends to provide radio frequency geographic coverage to a defined area from the Project, the coverage maps and information requested in Section 6 are required attachments. All others proceed to 7.00.

Please see attached maps as well as letter from Verizon Wireless legal counsel entitled "Verizon Wireless Statement Regarding Coverage Maps Wireless Facilities in the Right-of-Way" dated November 19, 2018.

**Attachment 6.00**

**6.01:** Where a licensee intends to provide radio frequency geographic coverage to a defined area from the Project, the coverage maps and information requested in Section 6 are required attachments. All others proceed to 7.00.

This project is focused on providing increased capacity to the project area. The dominant purpose, as described in Question 4.02, is to “Add network capacity without adding substantial new RF coverage area.” As such, the licensee (Verizon Wireless) does not intend to “provide radio frequency geographic coverage to a defined area from the Project.” Therefore, no RF coverage maps are provided in response to this question.

Please note, RF coverage maps will be provided with Attachment 8.05 to respond to the requested “technically expansive and detailed explanation supported as required by comprehensive radio frequency data fully describing why the proposed site is the one and only one location within or without the City of Torrance that can possibly meet the radio frequency objectives of the project.”

**Attachment 6.05**

**6.05**: Written certification that the facility will continuously comply with FCC OET Bulletin 65 radio frequency emissions standards, and that use of the facility will not interfere with other communication, radio, or television transmission or reception.

Please see the attached site-specific Radio Frequency - Electromagnetic Energy (RF-EM E) Jurisdictional Report.

**Verizon Wireless  
Statement Regarding Coverage Maps  
Wireless Facilities in the Right-of-Way**

**City of Torrance Applications  
WTC17-00026, WTC17-00027, WTC17-00028, WTC17-00031,  
WTC17-00032, WTC17-00033, WTC17-00034 and WTC18-00014**

**November 19, 2018**

Verizon Wireless is providing coverage maps to the City of Torrance, under protest, to complete its applications for eight small cell wireless facilities in the right-of-way (the "Applications"). The coverage maps depict the predicted coverage of individual small cell facilities, absent the coverage of existing Verizon Wireless facilities in the vicinity, as requested in Item 6.03 of the City's *Supplemental Technical Information Report for Wireless Telecommunication Facilities*. Attachments 6.02 and 6.04 are also included for the Applications.

As explained in our letter to City Attorney Patrick Sullivan of April 5, 2018, the City cannot require Verizon Wireless to provide individual coverage maps to process and approve applications for wireless facilities in the right-of-way. This is because California Public Utilities Code Section 7901 provides a statewide franchise for telephone companies to place their equipment in the public rights-of-way. Because of this statewide right, the City cannot require a demonstration of need for right-of-way facilities. We also explained that the scope of "time, place, and manner" regulation under Public Utilities Code Section 7901.1 is limited. To that end, we expect that the City will rely on coverage maps for the Applications only if the City has identified an aesthetically-preferred alternative in the right-of-way.

Verizon Wireless provides the coverage maps for the Applications as a courtesy due to the extended period of time that the Applications have been pending before the City. However, Verizon Wireless will decline to provide coverage maps for future applications for wireless facilities in the right-of-way. Not only does Public Utilities Code Section 7901 preempt the requirement to provide coverage maps or demonstrate the need for right-of-way facilities, but the Federal Communications Commission (the "FCC") has determined that coverage maps cannot be required for approval of small cells.

In an order to be effective January 14, 2019, the FCC found that local regulations prohibit or have the effect of prohibiting service under the federal Telecommunications Act if they materially inhibit "densifying a wireless network, introducing new services, or otherwise improving service capabilities." See 47 U.S.C. § 253; see also *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*, Declaratory Ruling and Third Report and Order, FCC 18-133 ¶ 37 (September 27, 2018). This includes placement of small cells that provide expanded and new services. The FCC disagreed that the Telecommunications Act limits the prohibition standard to "protecting

only against coverage gaps or the like.” *Id.*, ¶ 38. The FCC also determined that the appropriate criteria for approving qualifying small cells are reasonable, non-discriminatory and objective aesthetic standards that are published in advance. *Id.*, ¶ 86. Such aesthetic criteria do not involve demonstration of need for a small cell. Specifically, the FCC rejected any “coverage gap-based analytical approaches” to the review of small cell applications. *Id.*, ¶ 40.

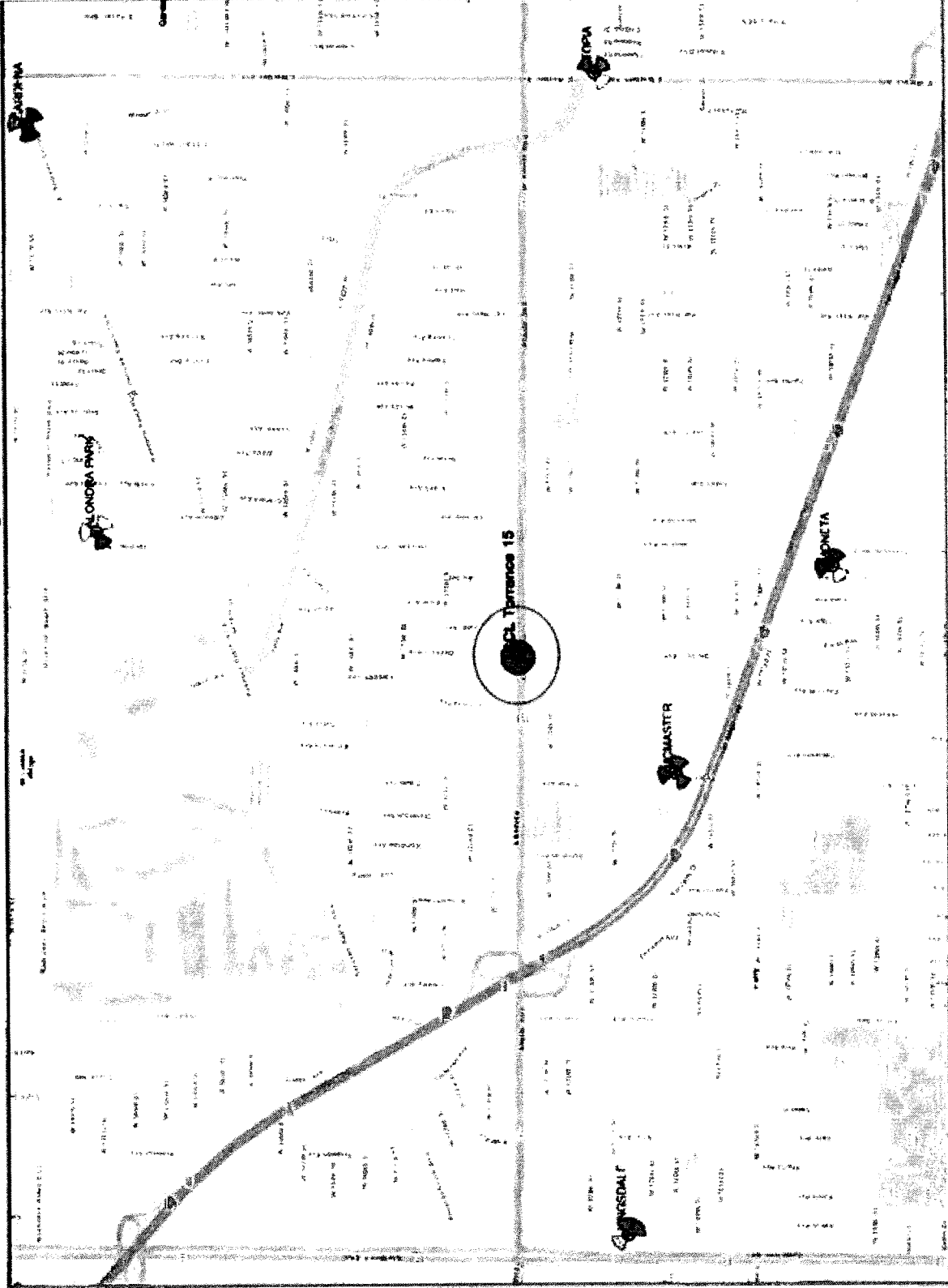
The submitted coverage maps fulfill all application requirements requested to be submitted by Notices Of Incomplete received from the City for the Applications. Verizon Wireless will not submit further information with respect to these Applications, and requests that all Applications be processed and final action taken by the expiration of the FCC Shot Clock time period calculated for each Application to be no later than March 4, 2019. *See In Re: Petition for Declaratory Ruling to Clarify Provisions of Section 332(c)(7)(B) to Ensure Timely Siting Review, Etc.*, FCC 09-99 (FCC November 18, 2009)

# **SCL Torrance 15 Propagation Maps**

**November 16, 2018**

**verizon**

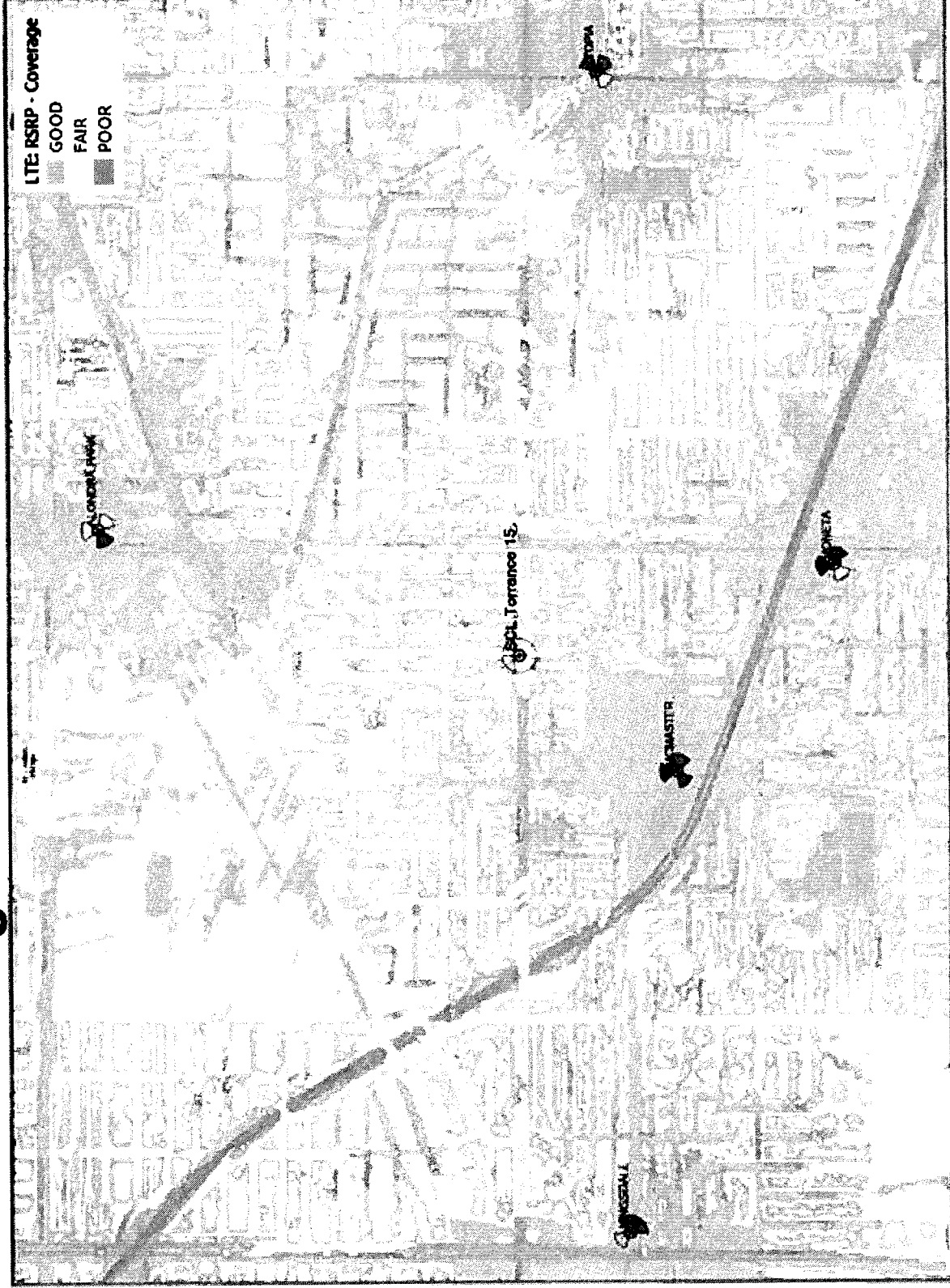
# SCL Torrance 15 – General Map



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# Verizon Coverage without SCL Torrance 15

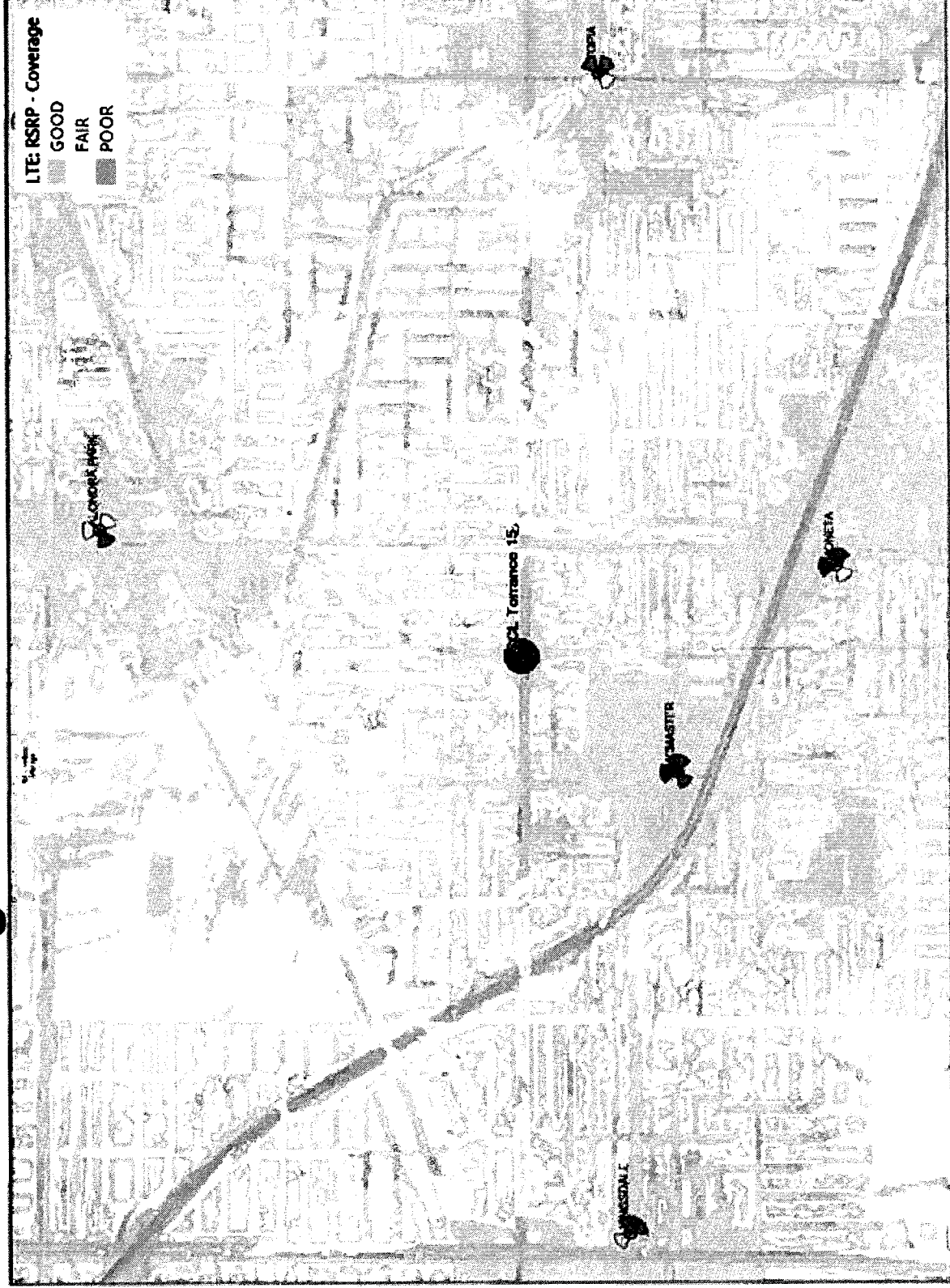


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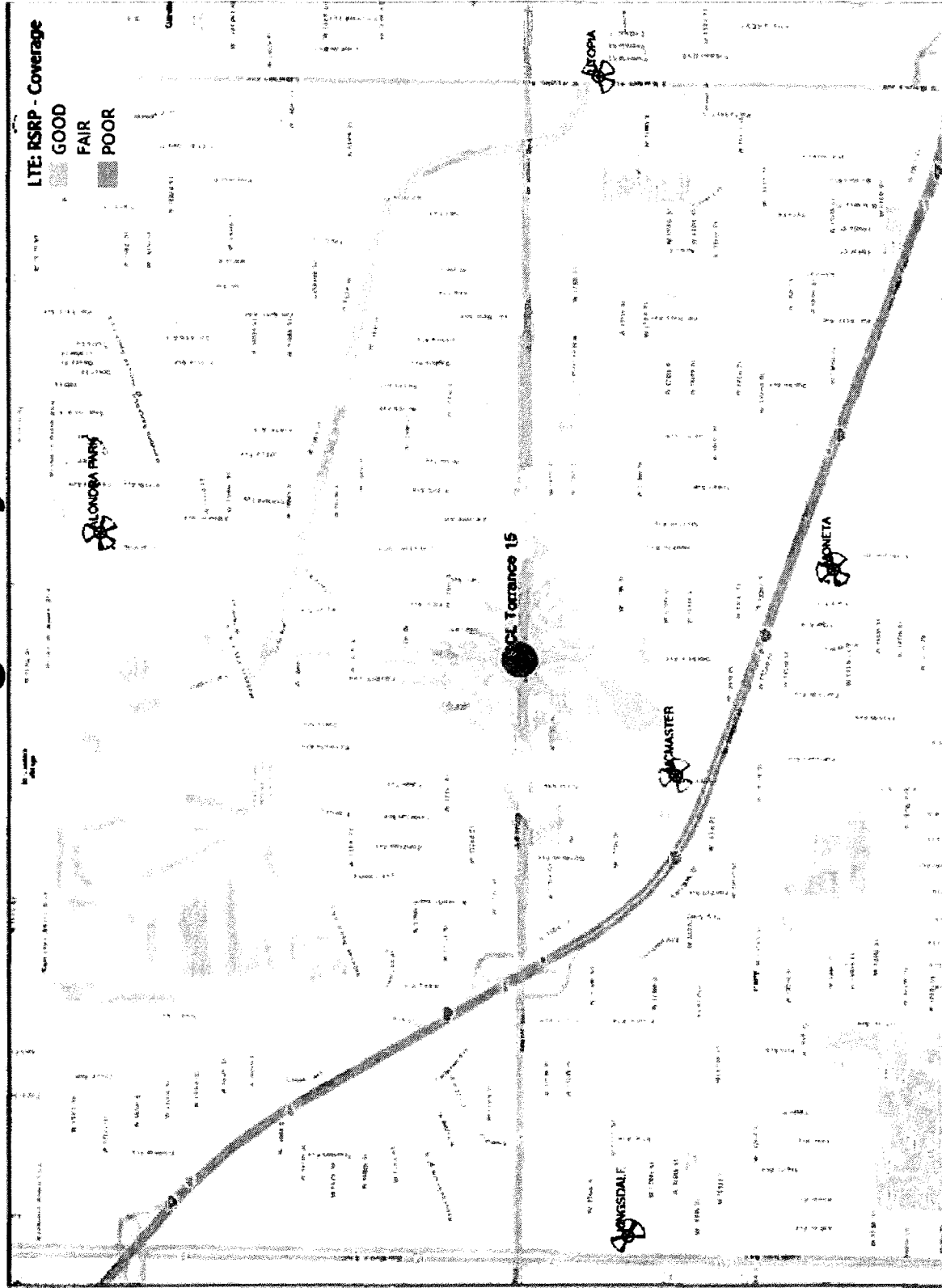


# Verizon Coverage with SCL Torrance 15



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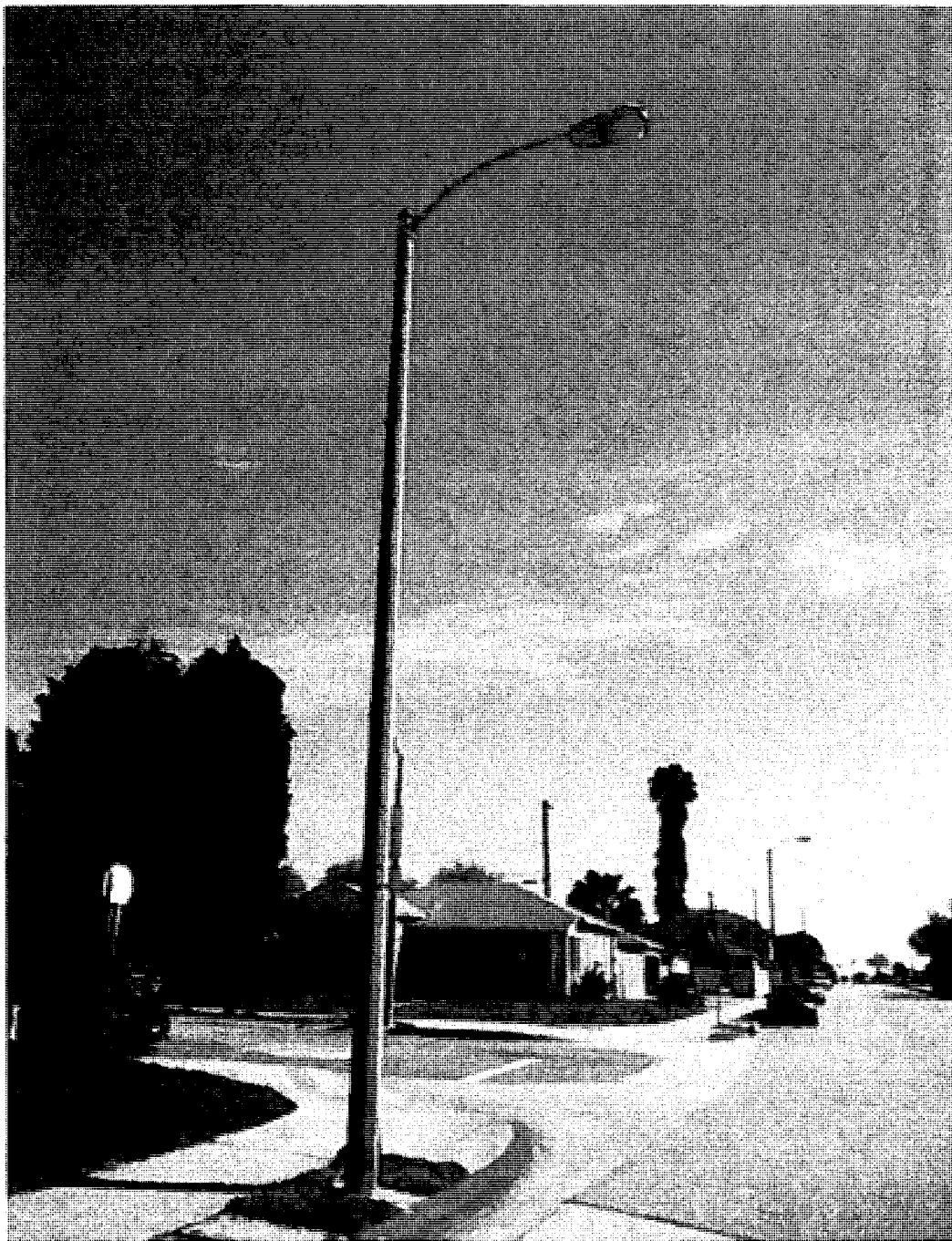
# SCL Torrance 15 Coverage Only



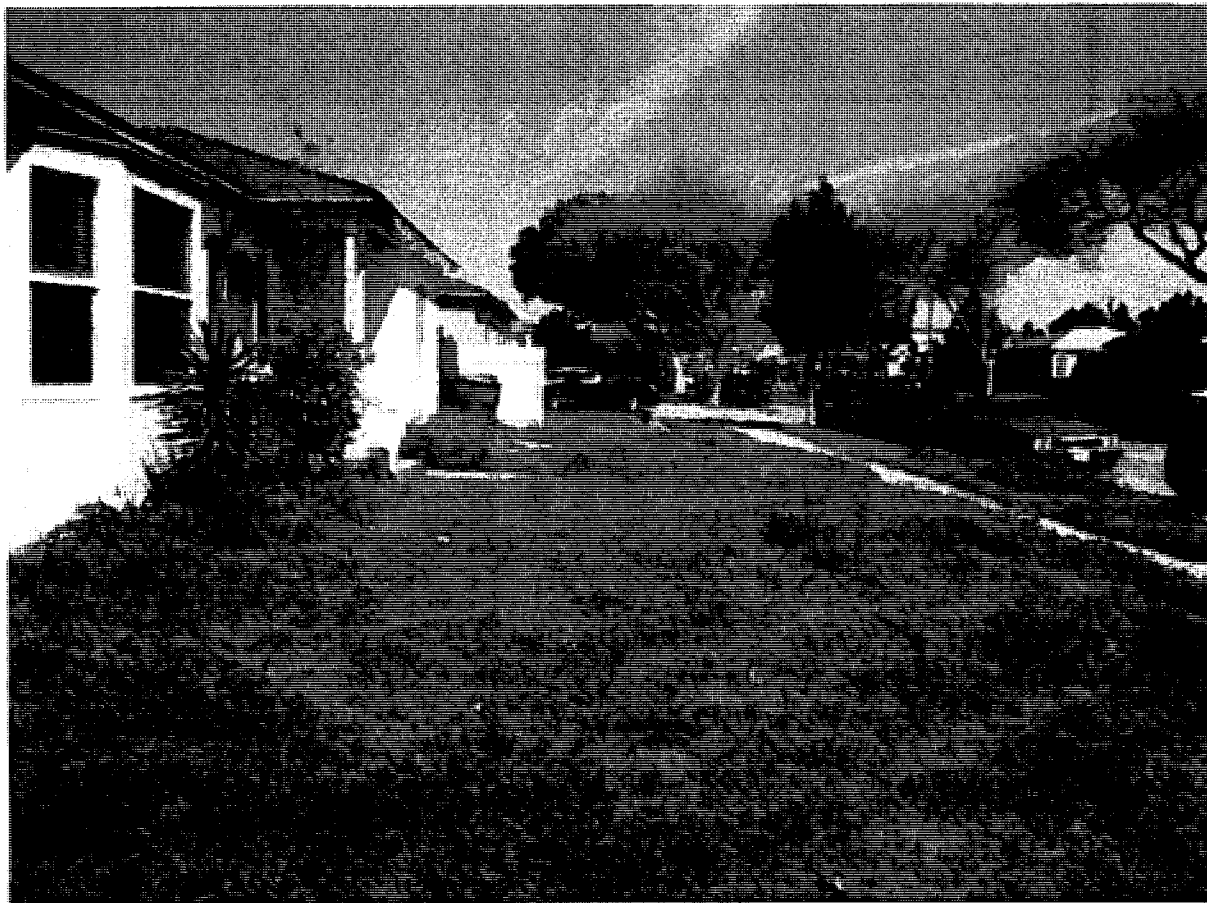
Confidential and proprietary materials for authorized Verizon personnel and outside agencies only. Use, disclosure or distribution of this material is not permitted to any unauthorized persons or third parties except by written agreement.

**Attachment 7.00**

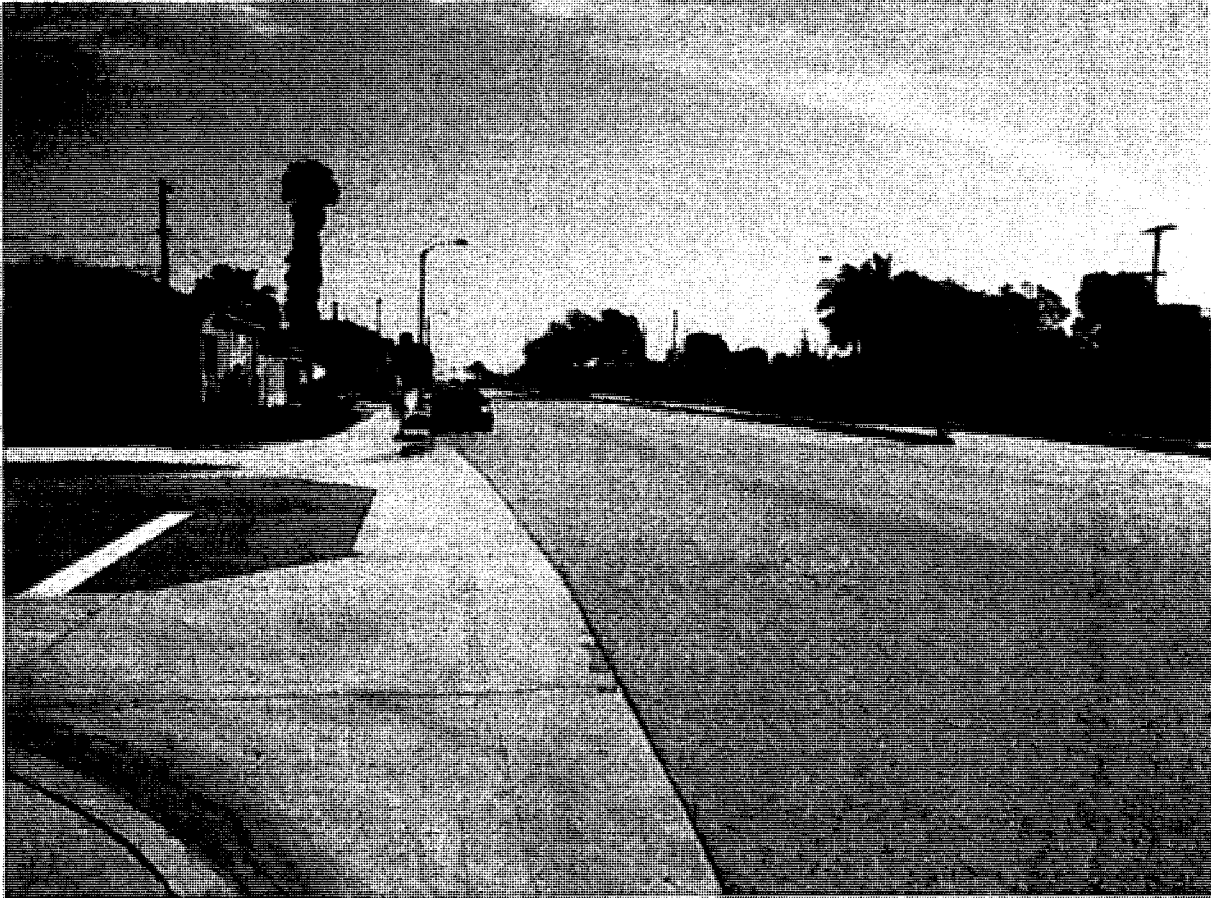
**7.01: Pre-project Photographs (below) and Photo Simulations (attached)**



**View 1**



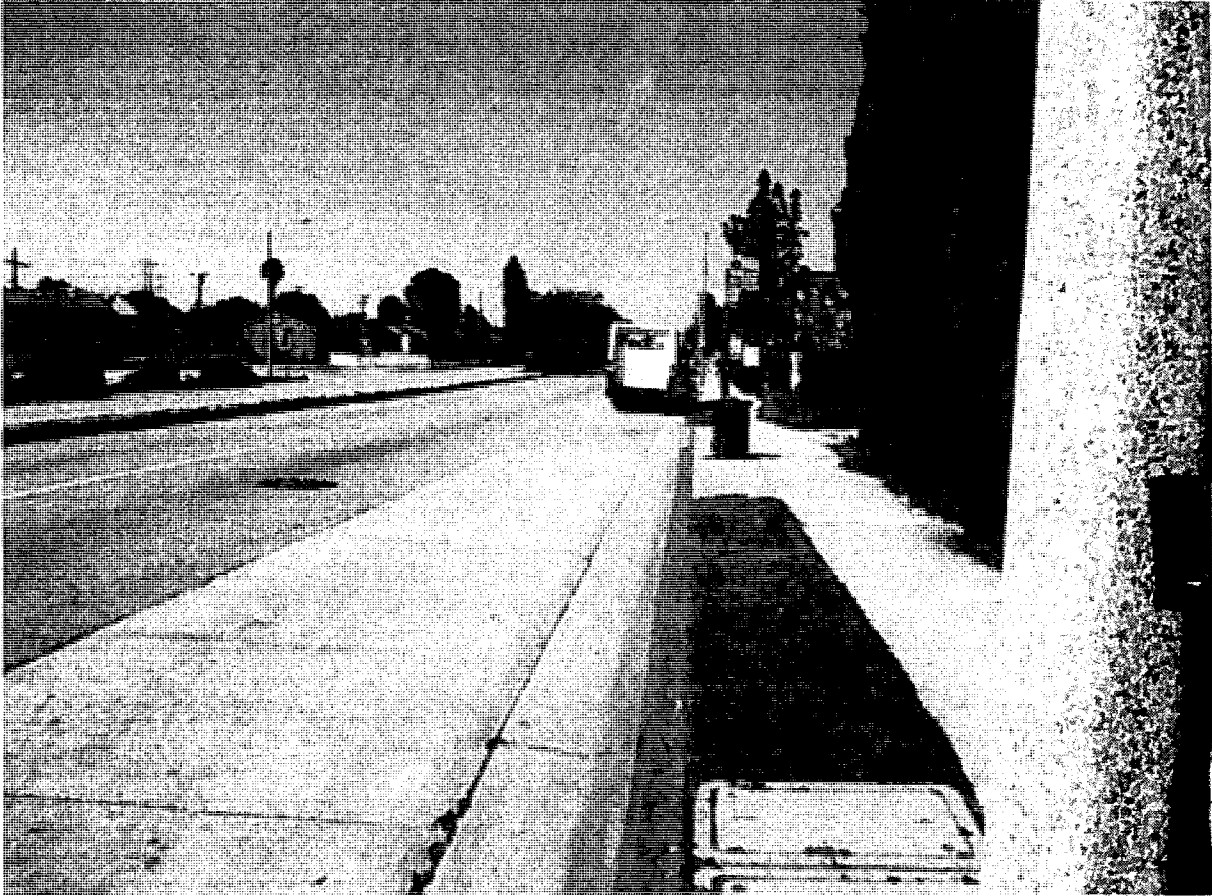
**View 2**



**View 3**



View 4



**View 5**

**Attachment 9.01**

**9.00: Identification of Key Persons**

**9.01:** Name, title, company affiliation, work address, telephone number and extension, and email address of the key persons most knowledgeable regarding:

**(1)** the site selection for the proposed project, including alternatives:

Laura Castro, Site Acquisition & Zoning Specialist, J5 Infrastructure, 2030 Main St. Suite 200 Irvine, CA 92618, (714) 272-3702, [Lcastro@j5ip.com](mailto:Lcastro@j5ip.com)

**(2)** the radio frequency engineering of the proposed project:

Vinh Vuong, RF Design Engineer, Verizon Wireless, 15505 Sand Canyon Rd. Bldg. D-1 Irvine, CA 92618, (949) 379-9198, [vinh.vuong@verizonwireless.com](mailto:vinh.vuong@verizonwireless.com)

**(3)** rejection of other candidate sites evaluated, if any:

Vinh Vuong, RF Design Engineer, Verizon Wireless, 15505 Sand Canyon Rd. Bldg. D-1 Irvine, CA 92618, (949) 379-9198, [vinh.vuong@verizonwireless.com](mailto:vinh.vuong@verizonwireless.com)

**(4)** approval of the selection of the proposed site identified in this project:

Vinh Vuong, RF Design Engineer, Verizon Wireless, 15505 Sand Canyon Rd. Bldg. D-1 Irvine, CA 92618, (949) 379-9198, [vinh.vuong@verizonwireless.com](mailto:vinh.vuong@verizonwireless.com)

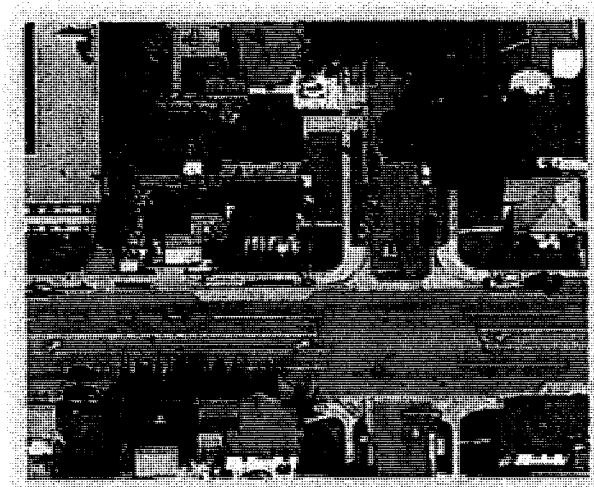


# Radio Frequency - Electromagnetic Energy (RF-EME) Jurisdictional Report

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Site No. 435843  
SCL Torrance 15  
F/O 17327 Glenburn Avenue  
Torrance, California 90504  
Los Angeles County  
33° 52' 22.68" N, -118° 19' 49.79" W NAD83

EBI Project No. 6217004278  
October 9, 2017



Prepared for:

Verizon Wireless  
c/o J5 Infrastructure Partners  
2030 Main Street, Suite 1300  
Irvine, California 92614

Prepared by:

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

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## **EXECUTIVE SUMMARY**

### **Purpose of Report**

EnviroBusiness Inc. (dba EBI Consulting) has been contracted by Verizon Wireless to conduct radio frequency electromagnetic (RF-EME) modeling for Verizon Site 435843 to be located on a light pole in front of 17327 Glenburn Avenue in Torrance, California to determine RF-EME exposure levels from proposed Verizon wireless communications equipment at this site. As described in greater detail in Section 2.0 of this report, the Federal Communications Commission (FCC) has developed Maximum Permissible Exposure (MPE) Limits for general public exposures and occupational exposures. This report summarizes the results of RF-EME modeling in relation to relevant FCC RF-EME compliance standards for limiting human exposure to RF-EME fields.

### **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.

As presented in the sections below, based on worst-case predictive modeling, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed antenna that exceed the FCC's occupational or general public exposure limits at this site. Additionally, there are areas where workers who may be elevated above the ground may be exposed to power densities greater than the occupational limits. Therefore, workers should be informed about the presence and locations of antennas and their associated fields.

At the nearest walking/working surfaces to the Verizon antenna, the maximum power density generated by the Verizon antenna is approximately **9.50** percent of the FCC's general public limit (**1.90** percent of the FCC's occupational limit).

The composite exposure level from all carriers on this site is approximately **9.50** percent of the FCC's general public limit (**1.90** percent of the FCC's occupational limit) at the nearest walking/working surface to each antenna.

Recommended control measures are outlined in Section 5.0 and within a Site Safety Plan (attached); this plan includes instructions to shut down and lockout/tagout this wireless equipment in accordance with Verizon's standard operating protocol.

**1.0 INTRODUCTION**

Radio frequency waves are electromagnetic waves from the portion of the electromagnetic spectrum at frequencies lower than visible light and microwaves. The wavelengths of radio waves range from thousands of meters to around 30 centimeters. These wavelengths correspond to frequencies as low as 3 cycles per seconds (or hertz [Hz]) to as high as one gigahertz (one billion cycles per second).

Personal Communication (PCS) facilities used by Verizon in this area operate within a frequency range of 1900-2100 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 a distance 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 in areas in the immediate vicinity of the antennas.

MPE limits do not represent levels where a health risk exists, since they 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.

**2.0 SITE DESCRIPTION**

This project site includes one (1) wireless telecommunication antenna on a light pole located in front of 17327 Glenburn Avenue in Torrance, California.

<b>Verizon Antenna Information (proposed Configuration)</b>									
Antenna# and Model	Frequency (MHz)	# of Transmitters	Transmit Power (Watts)	Azimuth	Gain (dBd)	Feet above Ground (CL)	X	Y	Z
A1	1900	4	40	Omni	4.15	31.5	30	30	30.5
Amphenol CUUT360X06Fx0z0	2100	4	40						

The FCC guidelines incorporate two separate tiers of exposure limits that are based upon occupational/controlled exposure limits (for workers) and general population/uncontrolled exposure limits for members of the general public that may be exposed to antenna fields. While access to this site is considered uncontrolled, the analysis has considered exposures with respect to both controlled and uncontrolled limits as an untrained worker may access adjacent rooftop locations. Additional information regarding controlled/uncontrolled exposure limits is provided in Section 3.0. Appendix B presents a site safety plan that provides a plan view of the light pole with antenna locations.

### 3.0 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.

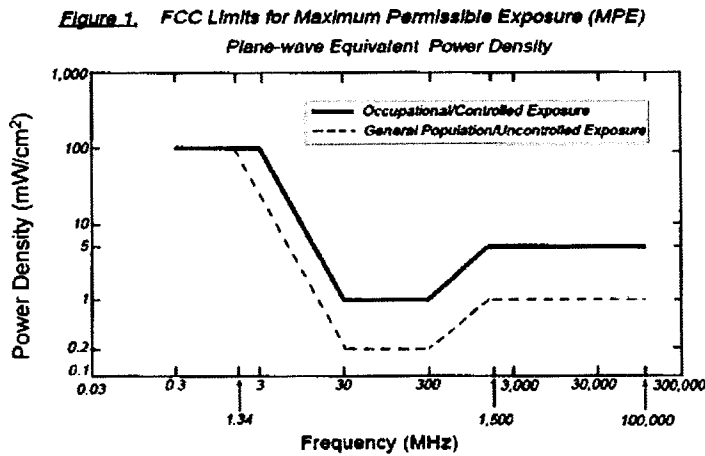
Table I and Figure I (below), which are included within the FCC's OET Bulletin 65, summarize the MPE limits for RF emissions. These limits are designed to provide a substantial margin of safety. They vary by frequency to take into account the different types of equipment that may be in operation at a 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 Verizon equipment operating at 700 MHz or 850 MHz, the FCC's occupational MPE is 2.83 mW/cm<sup>2</sup> and an uncontrolled MPE of 0.57 mW/cm<sup>2</sup>. These limits are considered protective of these populations.

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

f = Frequency in (MHz)

\* Plane-wave equivalent power density



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 Verizon in this area operate within a frequency range of 1900-2100 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.

#### **4.0 WORST-CASE PREDICTIVE MODELING**

EBI has performed theoretical modeling using RoofView® software to estimate the worst-case power density at the site ground-level and nearby rooftops resulting from operation of the antenna. RoofView® is a widely-used predictive modeling program that has been developed by Richard Tell Associates to predict both near field and far field RF power density values for roof-top and tower telecommunications sites produced by vertical collinear antennas that are typically used in the cellular, PCS, paging and other communications services. The models utilize several operational specifications for different types of antennas to produce a plot of spatially-averaged power densities that can be expressed as a percentage of the applicable exposure limit.

The modeling is based on worst-case assumptions for the number of antennas and transmitter power. The modeling assumes a maximum 8 radio configuration for Sector A, with a power level of 46 dBm (40 watts) per transmitter for 1900 and 2100 frequencies, in order to provide a worst-case evaluation of predicted MPE levels. The assumptions used in the modeling are based upon information provided by Verizon, and information gathered from other sources. The parameters used for the modeling are summarized in the RoofView® export files presented in Appendix C.

There are no other wireless carriers with equipment installed at this site.

Based on worst-case predictive modeling, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed Verizon antenna that exceed the FCC's occupational or general public exposure limits at this site. At the nearest walking/working surfaces to the Verizon antenna, the maximum power density generated by the Verizon antenna is approximately 9.50 percent of the FCC's general public limit (1.90 percent of the FCC's occupational limit). The composite exposure level from all carriers on this site is approximately 9.50 percent of the FCC's general public limit (1.90 percent of the FCC's occupational limit) at the nearest walking/working surface to each antenna.

The Site Safety Plan also presents areas where the Verizon Wireless antenna contributes greater than 5% of the applicable MPE limit for a site. 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.

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



## **5.0 MITIGATION/SITE CONTROL OPTIONS**

EBI's modeling indicates that there are no areas in front of the Verizon antenna that exceed the FCC standards for occupational or general public exposure. All exposures above the FCC's safe limits require that individuals be elevated above the ground. In order to alert people accessing the light pole, yellow caution signs are recommended for installation on opposite sides of the pole 9 feet below the antenna (21.5 feet above ground level).

There are no barriers recommended at this site.

These protocols and recommended control measures have been summarized and included with a graphic representation of the antenna and associated signage and control areas in a RF-EME Site Safety Plan, which is included as Appendix B. Individuals and workers accessing the light pole should be provided with a copy of the attached Site Safety Plan, made aware of the posted signage, and signify their understanding of the Site Safety Plan.

Implementation of the signage recommended in the Site Safety Plan and in this report will bring this site into compliance with the FCC's rules and regulations.

## **6.0 SUMMARY AND CONCLUSIONS**

EBI has prepared a Radiofrequency – Electromagnetic Energy (RF-EME) Compliance Report for telecommunications equipment installed by Verizon Site Number 435843 to be located on a light pole in front of 17327 Glenburn Avenue in Torrance, California to determine worst-case predicted RF-EME exposure levels from wireless communications equipment installed at this site. This report summarizes the results of RF-EME modeling in relation to relevant Federal Communications Commission (FCC) RF-EME compliance standards for limiting human exposure to RF-EME fields.

As presented in the sections above, based on the FCC criteria, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed antenna that exceed the FCC's occupational or general public exposure limits at this site. Workers should be informed about the presence and locations of antennas and their associated fields. Recommended control measures are outlined in Section 5.0 and within a Site Safety Plan (attached); this plan includes procedures to shut down and lockout/tagout this wireless equipment in accordance with Verizon's standard operating protocol.

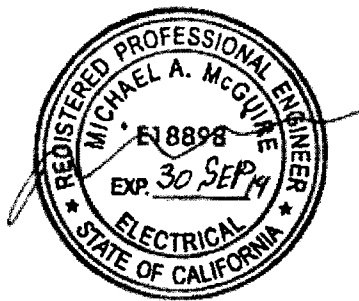
## **7.0 LIMITATIONS**

This report was prepared for the use of Verizon Wireless. 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.

## **Appendix A**

### **Certifications**

Reviewed and Approved by:



sealed 10oct2017

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Michael McGuire  
Electrical 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, Jonathan Ilgenfritz, 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.



**Appendix B**  
**Radio Frequency Electromagnetic Energy**  
**Safety / Signage Plans**

**% FCC Public Exposure Limit**

- Exposure Level  $\geq 5,000$
- $500 < \text{Exposure Level} \leq 5,000$
- $100 < \text{Exposure Level} \leq 500$
- Exposure Level  $\leq 100$



Verizon Antennas

**Roofview: Composite Exposure Levels**  
Facility Operator: Verizon Wireless  
Site Name: SCL Torrance 15  
Verizon Site Number: 435843  
Report Date: 10-09-17

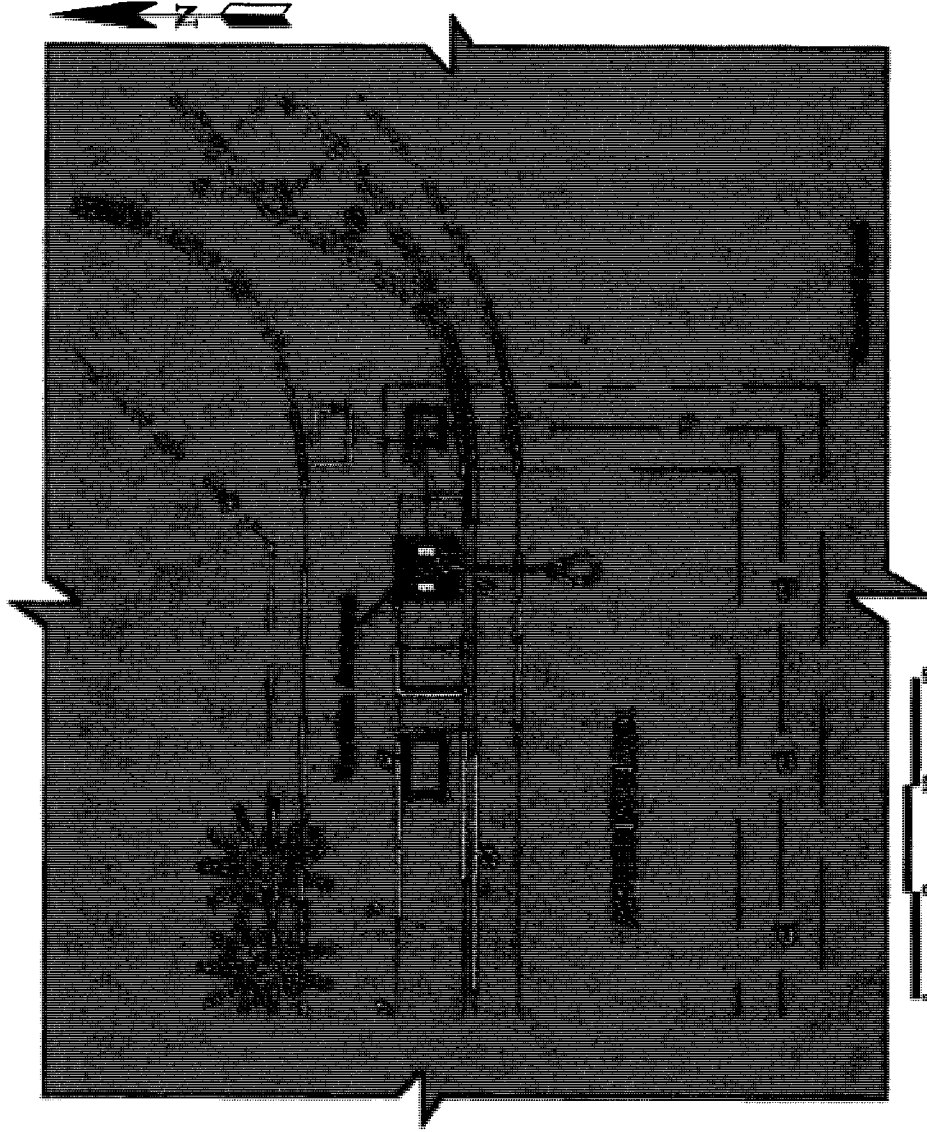
**% FCC Public Exposure Limit**



Exposure Level > 5



Exposure Level ≤ 5



Verizon Antennas

**Roofview: Verizon Exposure Levels**

Facility Operator: Verizon Wireless

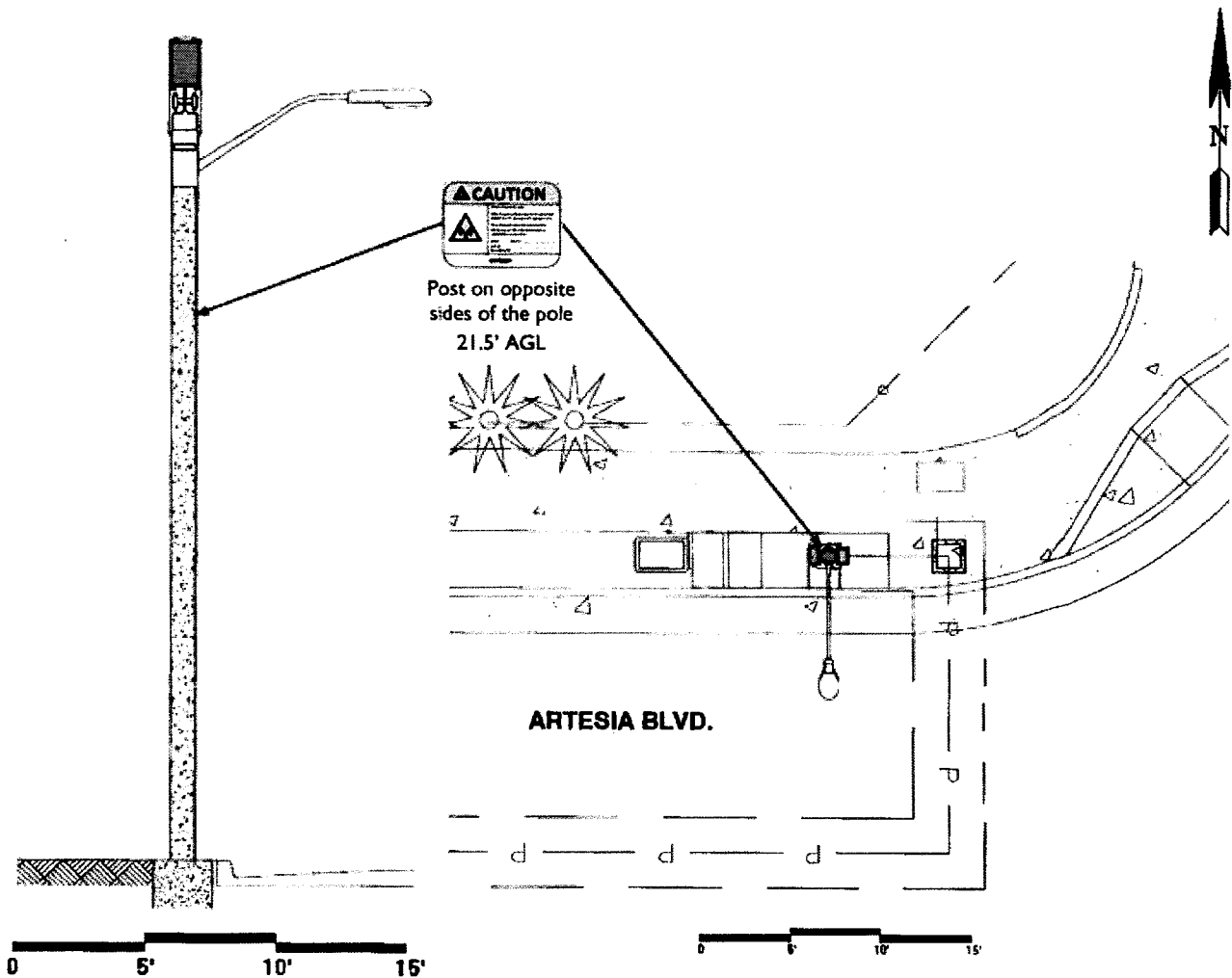
Site Name: SCL Torrance 15

Verizon Site Number: 435843


Report Date: 10-09-17



# Verizon Signage Plan



 **Verizon Antennas**

Sign Image	Description	Posting Instructions	Required Signage
	<p><b>Yellow Caution Sign</b> Used to alert individuals that they are entering an area where the power density emitted from transmitting antennas may exceed the FCC's maximum permissible exposure limit for the general public and the occupational exposure limit.</p>	<p>Securely post on opposite sides of the light pole 9 feet below the antenna (21.5 feet above ground level).</p>	<p>2 signs posted below the antenna.</p>



**Appendix C**  
**Roofview® Export File**

List Of Areas  
SAES81:SETS200

Definition	Roof Max	Roof Max	Map Max	Y Offset	X Offset	Number of envelope	Standard	Method	Uptime	Scale Factor	Low Thr	Mid Color	Mid Thr	Hi Color	Over Color	Ap Ht Mult	Ap Ht Method					
120	120	140	140	20	20	20	1	SAES81:SE	SAES81:SETS200													
4	2	1	1	100	1	500	1	500	5000	2	3	1.5	1									
It is advisable to provide an ID (ant 1) for all antennas:																						
ID	Name	Freq	Power	Trans	Count	Coax	Len	Type	Other	Loss	Power	Calc	Model	Mfg	Gain	dBA	Apert	Type	Width	Profile	Uptime	Flag
VZW A1	LTE PCS	1900	40	4	0	0	0.5	142.6002	Amphenol	CUUT36006F060	30	30	30	30	30.5	2	4.15	OMNIGO	2	7.35	OMNIGO	ON*
VZW A1	LTE AWS	2100	40	4	0	0	0.5	142.6002	Amphenol	CUUT36006F060	30	30	30	30.5	2	7.35	OMNIGO	2	7.35	OMNIGO	ON*	
Sym	Map Mark	Roof X	Roof Y	Map Label	Description	(notes for this cable only)																
Sym	5	35	AC Unit	Sample	symbols																	
Sym	34	5	Roof Access																			
Sym	45	5	AC Unit																			
Sym	45	20	Ladder																			

Code Requirements and Conditions, if approved:

The following Code Requirements are applicable to the project, if approved:

- A Construction and Excavation Permit (C&E Permit) is required from the Community Development Department, Engineering Permits and Records Division, for any work in the public right-of-way on Artesia Boulevard.
- The traffic control plan(s) shall comply with the MUTCD manual.
- Must comply with TMC Section 92.39.070 regarding submission of RF compliance report.
- Must comply with TMC Section 92.39.090 regarding discontinued use or abandonment of facility.

Recommended Conditions, if Approved:

1. That if this approval is not implemented within one year after the approval, it shall expire and become null and void unless extended by the Community Development Director for an additional period, as provided for in Section 92.27.1 of the Torrance Municipal Code; (Planning)
2. That all requirements provided under Ordinance No. 3058, Section 92.2.8, Satellite Antennas, of the Torrance Municipal Code, Division 9, shall be met prior to the issuance of building permits and/or encroachment permits; (Planning)
3. That the applicant shall paint, color or finish all the pole-mounted equipment to match the color of the underlying light pole. The color, texture and material of the replacement pole shall be consistent with the surrounding street light poles in nearby vicinity; (Planning)
4. That the applicant shall route all cables, wires, jumpers and connectors internally through the pole and or conceal them within the antenna or equipment shrouds. In addition, the applicant acknowledges and agrees that a material consideration of the City's approval of this permit is that the pole-top antenna and shroud are approximately the same width as the pole, which creates a streamlined design and concealment element that effectively blends the antenna with the underlying pole; (Planning)
5. That the applicant shall install, and at all times maintain in good condition, an "RF Notice" sign and network operations center sign adjacent to the bottom of the MMS shroud. The signs required in this condition must be placed in a location where they are clearly visible to a person when he or she approaches the shroud; (Planning)
6. That the applicant shall ensure that all RF signage complies with FCC OET Bulletin 65 or ANSI C95.2 for color, symbol and content conventions. All such signage shall provide a working local or toll-free telephone number to its network operations center that reaches a live person who can exert transmitter power-down control over this site as required by the FCC; (Planning)

7. That the proposed ground-mounted meter pedestal shall be eliminated and that the applicant shall inquire about a "Wireless Technology Rate" (WTR) service connection through SCE or relocate the meter pedestal to either below-grade or inside the pole; (Planning)
8. That if an octagonal pole design is approved by SCE prior to plan check submittal, that design shall be implemented at this location to the satisfaction of the Community Development Director; (Planning)
9. That if the temporary use of generators is required for the operation of the site, they must meet Torrance Municipal Code requirements for noise and placed on private property to the satisfaction of the Community Development Director; (Environmental)
10. That all proposed SCE power lines shall be installed underground; (Engineering)
11. That the proposed equipment shall receive electrical power from the SCE wires already attached to the utility pole on which the proposed equipment is to be mounted; (Engineering)
12. That all the signs mounted on existing light pole shall be transferred to the proposed light pole; (Engineering)
13. That SCE approval for conduit layout between the power manhole and the proposed light pole is required prior to the issuance of the Construction and Excavation Permit; (Engineering)
14. That the applicant shall obtain an Encroachment Permit from Caltrans (213-897-3631) for any work (proposed or required by the City) in the public right-of way on Artesia Boulevard; (Engineering)
15. That the applicant shall remove, or cause to be removed, the existing street light pole within 60 days of commencing on-air operations. The applicant shall also restore, or cause to be restored, the foundation and ground space around the removed pole foundation to its original condition. Such removal and restoration work shall be subject to the satisfaction of the Engineering Division; (Engineering)
16. That at the time of plan check submittal the applicant shall provide an underground utility and infrastructure analysis to the satisfaction of the Engineering Division; (Engineering)
17. That the applicant shall remove the existing street light from existing street pole and return to SCE. If existing fixture is LED, applicant shall pay SCE the balance of Energy Efficiency Premium Charge per Section 4.2 of the Schedule LS-1 Option E Agreement such that ongoing street lighting costs paid by the City for the new street light are at the LS-1 Base LED rate and not at the LS-1 Option E rate; (Engineering)

18. That the existing light pole and entire footing of the existing light pole shall be removed; (Engineering)
19. That the contractor shall coordinate with SCE to replace the street light in the public right-of-way; and (Engineering)
20. That a minimum 10' vertical clearance above public sidewalk surface for proposed antenna and equipment mounted on existing utility pole and a minimum 16' vertical clearance above sidewalk surface for proposed antenna and equipment within 2' or less horizontally of the public street shall be maintained; (Engineering)

DATE: January 3, 2019  
TO: Telecommunications Committee  
FROM: Planning Division  
SUBJECT: **WIRELESS TELECOM FACILITY (WTC17-00034) – LAURA CASTRO (J5 INFRASTRUCTURE PARTNERS)**

A request for approval of a Telecom Permit to allow the installation of a new wireless small cell antenna and support equipment attached to a replacement concrete street light pole (Pole ID #1300370E) in the public right-of-way adjacent to 18514 Prairie Avenue in the R-1 Zone.

Applicant: Laura Castro (J5 Infrastructure Partners)  
Case No: WTC17-00034  
Location: 18514 Prairie Avenue  
Zoning: R-1: Single Family Residential

The subject request is for the installation of a wireless site in the public right-of-way, located in front of a property located in the R-1 Zone at 18514 Prairie Avenue. Per Torrance Municipal Code 92.39.060(1), such requests within the public right-of-way adjacent to residentially zoned properties are reviewed by the Telecommunications Committee and requires notification to property owners within 300 feet of the proposed location. In compliance with prior City Council directives, on December 28, 2018, staff mailed notices to property owners within 500' radius and posted a notification to the subject pole. (Attachment #1).

The proposal involves the removal and replacement of an existing 28-foot, 9.6-inch SCE light pole with a 29-foot, 6-inch concrete light pole with a 2-foot tall antenna and shroud cap. Staff notes that the pole is proposed to be installed between a minimum of 3 feet and a maximum of 4 feet away from the original existing light standard location. The new light pole will provide an omni-directional antenna mounted to an antenna standoff bracket at the top of the pole within a canister enclosure, 2 remote radio heads (RRH) and UE relay within an MMS shroud enclosure mounted to the sides of the pole like a backpack, and will be powered by a ground-mounted meter pedestal that is adjacent to the new pole with all cables to be inside the pole.

The overall height of the replacement pole and antenna is 32-feet 6-inches. The maximum overall diameter is 11.8-inches. The MMS shroud enclosures measure 2-feet 11-inches in height, 1-foot 3 ½ -inches in width, and 9-inches in depth and will be mounted starting at 26-feet 6-inches above the ground.

The application was reviewed by the City's telecom consultant, Telecom Law Firm PC, for technical and regulatory issues and has included copies of the technical memorandums as Attachment #2. Staff notes that the consultant is recommending an

alternative site. The alternative site would be located relocated on the opposite site of the street on 186<sup>th</sup> Street at Prairie Avenue. The alternative site is located within the A-1 Zone, which the site would be able to be processed administratively. The applicant has shared with staff that the recommended alternative location is not technically feasible. The consultant also recommended that the proposed meter pedestal not be approved but have a wireless technology rate ("WTR") power connection instead. Staff is in agreement with the power connection recommendation and has included a condition to that effect, if approved.

The purpose of the proposed site, according to the applicant, is to "Increase capacity by increased usage and demand of wireless data and technology in the area surrounding the project site." The target area described in the RF Coverage maps is the surrounding residential area along Prairie Avenue and 186<sup>th</sup> Street. The submitted information indicates that the proposed antenna will be transmitting omnidirectionally in the 1900-2100 MHz Frequency range.

The applicant has submitted an RF compliance report (included as part of Attachment #3) that evaluates the proposed facility's planned compliance with FCC Guidelines. Staff notes that the City cannot impose additional requirements with respect to FCC requirements with the exception of requesting verification that the site is operating in compliance. If approved, per TMC92.39.070 a radio frequency and compliance radiation report is required to be submitted within 30 days after installation of the facility.

The proposed facility utilizing an existing utility pole falls into a location that requires a special review by the Telecommunications Committee as it is in the right-of-way adjacent to a residential district. Per the Applicant's submittals, the site identified will provide the coverage needed to fulfill the applicant's objectives.

In order to recommend Approval of this Telecom Permit, the following findings must be made per 92.39.040(b)(3):

- i. Other locations that do not require special approval under this Section 92.39.040(B) are either not available or not feasible; and
- ii. Establishment of the facility at the requested location is necessary to provide service; and
- iii. Lack of such a facility would result in a prohibition of service; and

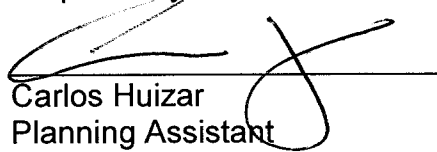
Staff notes that the proposal meets the first finding as there are no other tall non-residential structures in the vicinity which may lend themselves to a small cell installation that is on the prioritized location per the City's code. The applicant did not provide alternative locations for this request. In the judgement of staff, however, not all of the necessary findings can be made. Per the applicant's documentation and the City's consultant confirmation, there currently is Verizon Wireless service within the coverage

area and as such, establishment of the facility is not necessary to provide service and lack of this facility does not result in a prohibition of service.

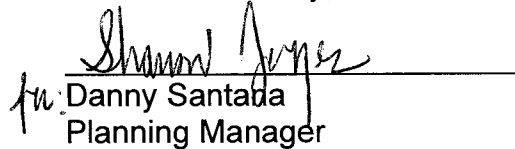
Although the proposed small cell facility has been designed to provide increased capacity while simultaneously providing the least visually intrusive structure, under the narrow purview of the code, staff cannot make the findings per TMC92.39.040(b)(3) and recommends denial of the request. Should the Committee wish to approve the facility, recommended conditions and code requirements have been attached for your review (Attachment #4).

**PROJECT RECOMMENDATION: DENIAL**

Prepared by,

  
Carlos Huizar  
Planning Assistant

Recommended by,

  
for Danny Santada  
Planning Manager

Attachments:

1. Notification Map and Posting
2. Telecom Law Firm Memorandums
3. Supplemental Technical Information Report and Documentation
4. Recommended Conditions and Code Requirements, if approved
5. Plans/Photo Simulations (Limited Distribution)

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This request for a Telecom Permit (WTC17-00034) is      APPROVED      DENIED per Ordinance No. 3561, Section 92.39.060, Satellite Antennas, of the Torrance Municipal Code, Division 9.

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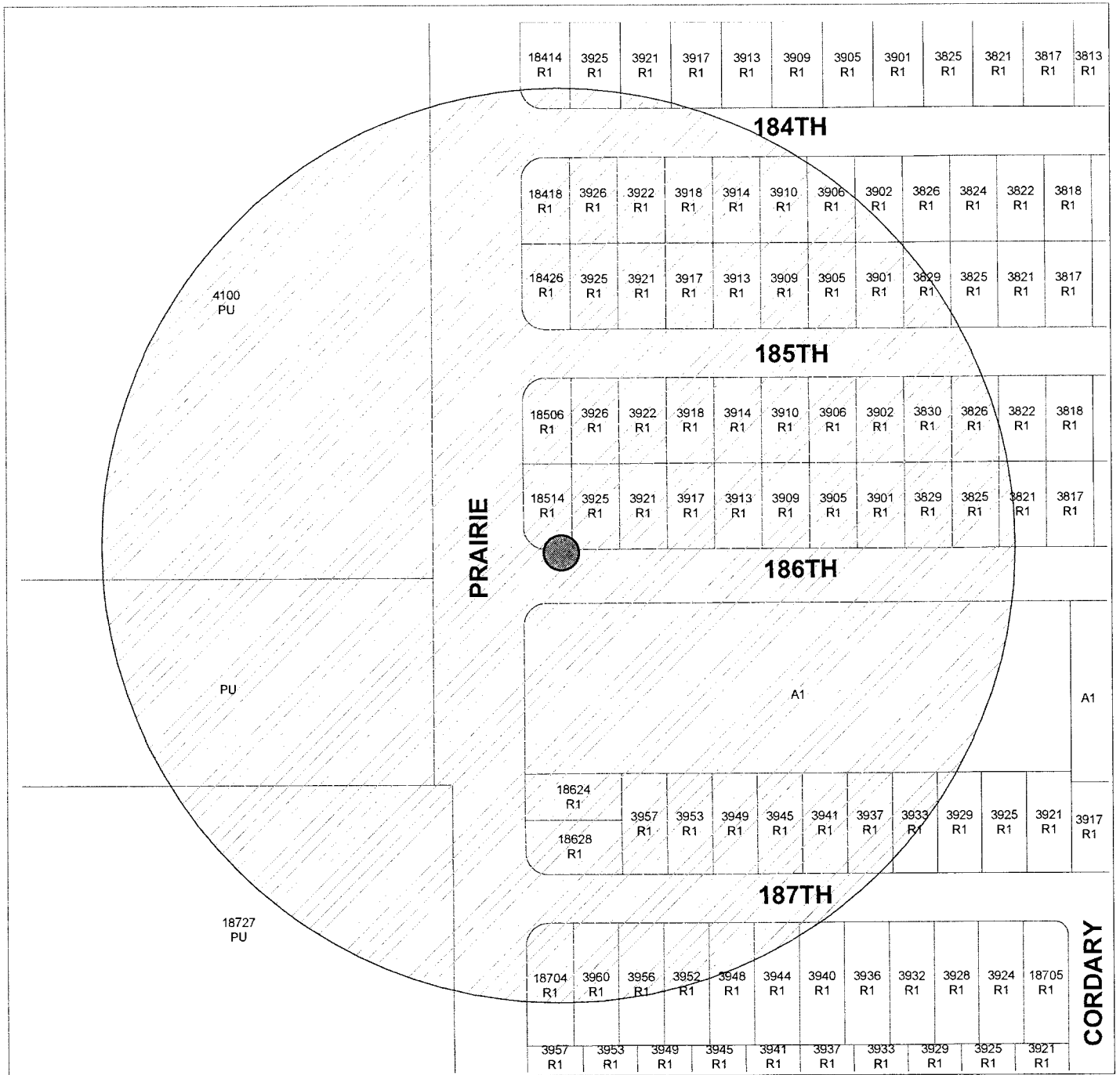
DATE

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Felipe Segovia  
Telecommunications Committee Chair


Decisions made by the Telecommunications Committee are appealable to the Planning Commission within 15 calendar days following the above date of approval/denial.







## LOCATION AND ZONING MAP

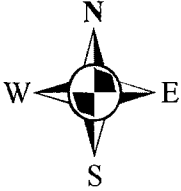
In the Public Right-of-Way  
adjacent to 18514 Prairie Avenue  
WTC17-00034

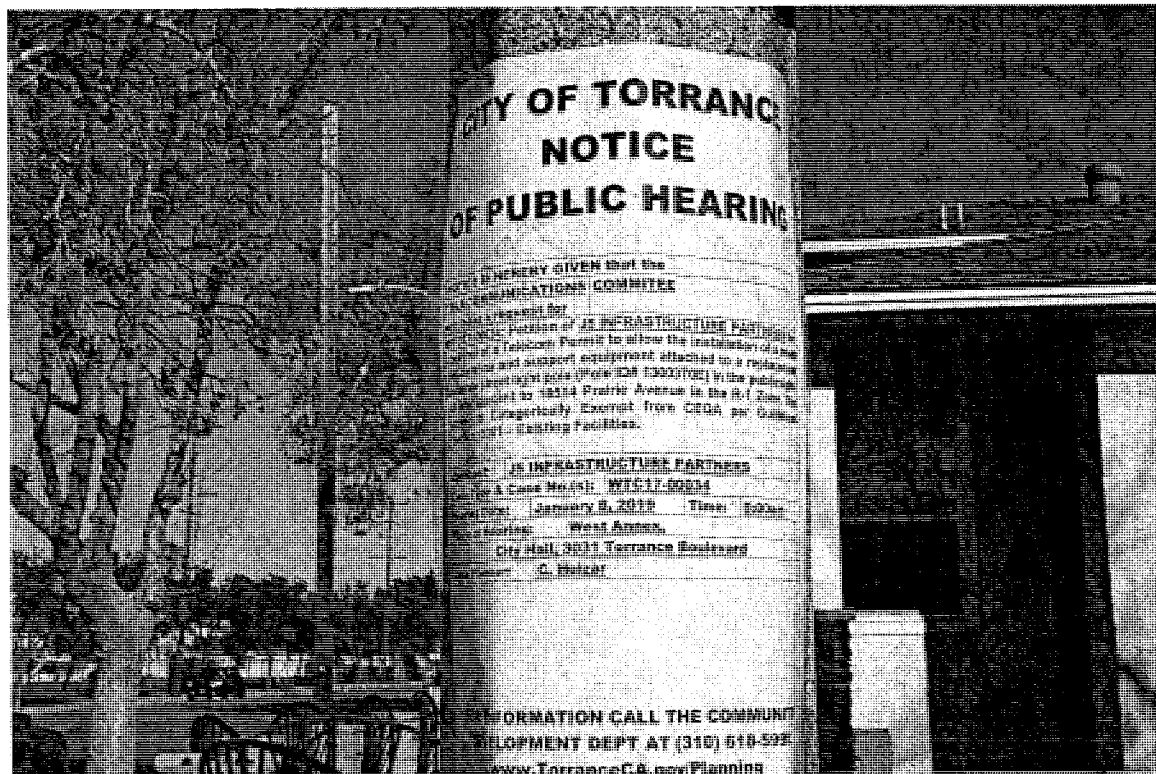
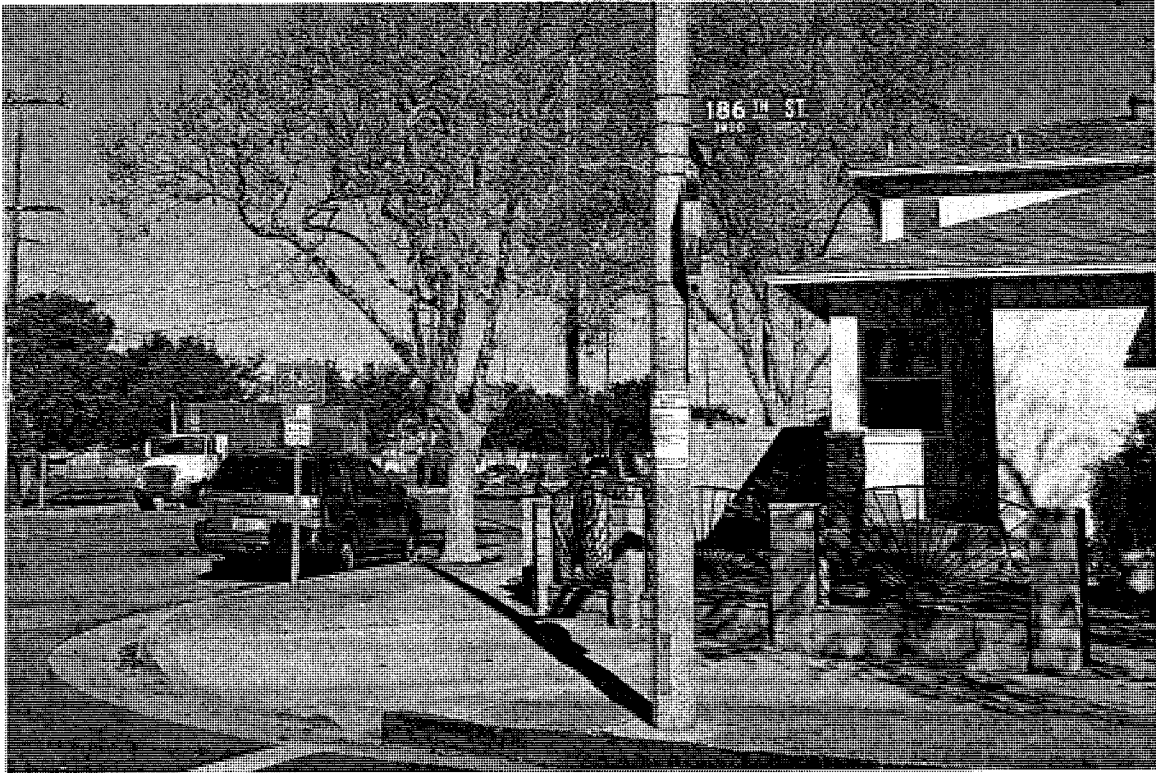


## LEGEND

-  Project Site
-  Notification Area

0 40 80 160 Feet





CITY OF TORRANCE  
POSTED BY  
*[Signature]*  
DATE: 1/22/18

## WIRELESS PLANNING MEMORANDUM

**TO:** Mr. Oscar Martinez [REDACTED]  
**FROM:** Dr. Jonathan Kramer [REDACTED]  
**DATE:** December 3, 2018  
**RE:** Technical Review for New Pole-Mounted Wireless Facility in the Public Right-of-Way at F/O 18514 Prairie Avenue

**APPLICANT:** J5 Infrastructure for Verizon Wireless  
**APPLICANT'S ID:** SCL Torrance 7 / VZW site 432406  
**UTILITY POLE ID:** 1300370E

On November 27, 2017, J5 Infrastructure (the “**Applicant**”) on behalf of Verizon Wireless (“**Verizon**”) submitted wireless site application materials to the City of Torrance (“**City**”) (the **November 27, 2017 Submission**”).

Per the City’s request, on December 19, 2017, Telecom Law Firm, PC (“**TLF**” or “**We**”) submitted an Application Incomplete Memorandum (the “**First Memorandum**”) to the City that evaluated the Applicant’s application to operate a new wireless site in the public right-of-way (“**PROW**”) on a replacement Southern California Edison (“**SCE**”) concrete street light pole (“**Pole**”) to be located near 18514 Prairie Avenue (Coordinates 33.862003/-118.343597). TLF notes that the Pole is on 186<sup>th</sup> Street.

TLF’s First Memorandum concluded that the Applicant failed to submit a complete permit application that fully responded to the City’s publicly stated application requirements. TLF recommended that the City deem the Applicant’s application incomplete and issue a timely notice, which it did.

On February 6, 2018 the Applicant submitted additional materials (the “**February 6, 2018 Submission**”) which included a letter dated January 30, 2018 to the City from the Applicant (“**January 30, 2018 Applicant Letter**”) to address the deficiencies related to its initial submission.

On April 11, 2018 the Applicant submitted additional materials (the “**April 11, 2018 Submission**”). On April 18, 2018 TLF submitted another Application Incomplete Memorandum (the “**Third Memorandum**”). TLF’s Third Memorandum concluded that the Applicant again had failed to submit a complete permit application that fully responded to the City’s publicly stated application requirements. We recommended that the City deem the Applicant’s application incomplete and issue a timely notice, which it did.

On November 20, 2018 the Applicant responded with additional materials (the “**November 2018 Submission**”). Upon review, the application is now complete for the City to proceed with a substantive review of the Applicant’s proposal for compliance with applicable local, state and federal law.

Accordingly, this memorandum reviews (1) whether Section 6409(a) applies to the Applicant's project; (2) whether the project complies with the Torrance Municipal Code ("TMC"); and (3) whether the Applicant's project demonstrates planned compliance with the federal radio frequency ("RF") exposure guidelines.

Additionally, this memorandum reviews the application and related materials for technical and regulatory issues specific to wireless infrastructure. Although many technical issues implicate legal issues, the analysis and recommendations contained in this memorandum do not constitute legal advice.

## 1. Project Description

The project plans dated January 25, 2018 show that the Applicant proposes to remove the existing 28' 9.6" tall light standard and install a Pole. Page A3, panels 1 and 2 of the Plans depict that the height of the Pole supporting this project is to increase to 29' 6" above ground level ("AGL"); however, the total height of the vertical elevation will increase to 32' 6"AGL due to the proposed installation of the antenna and the associated equipment on the Pole (This increase in height is acceptable since the total height of the structure does not exceed 35' AGL per the City's Municipal Code).

Additionally, the center of the Antenna is at 31' 6" AGL, therefore the lowest point of the Antenna is at 30' 6" AGL. On the Pole, the Applicant proposes to install a 2' tall pole-top canister antenna ("Antenna") and a 1' 11" concealment skirt to enclose two diplexers below the Antenna. Also on the Pole, the Applicant proposes to mount two remote radio units ("RRUs") and two power supply units ("PSUs"). TLF notes that the Pole is proposed to be installed between a minimum of 3' and a maximum of 4' away from the original existing light standard location. The top of the RRUs are separated by 20" from the lowest point of the Antenna and the bottom of the RRUs are at 26' 6" AGL. Also, two radio frequency ("RF") signage are proposed to be mounted on the Pole at 21' 6" AGL. See Figure 1 and Figure 2 of the proposed Pole.

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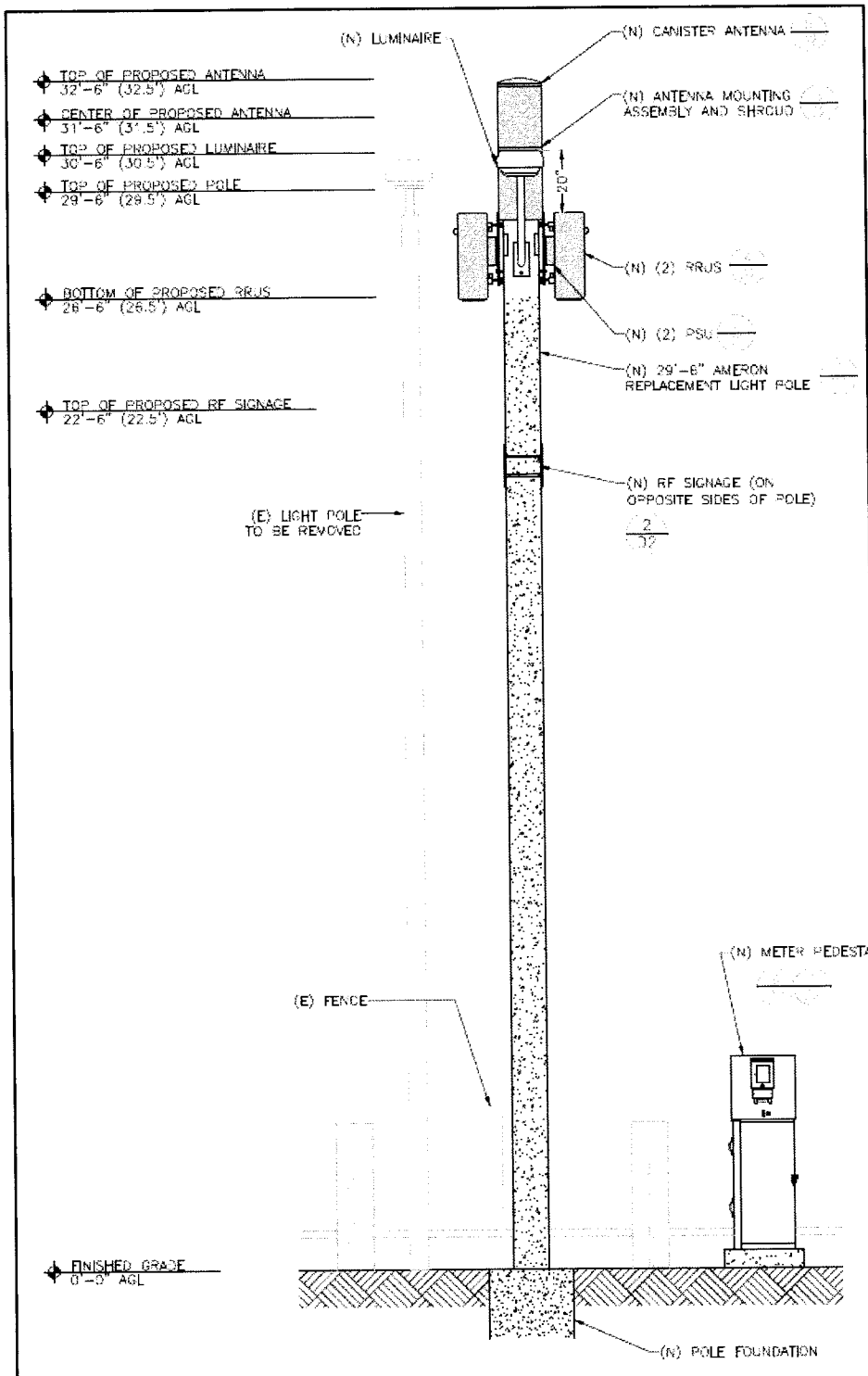
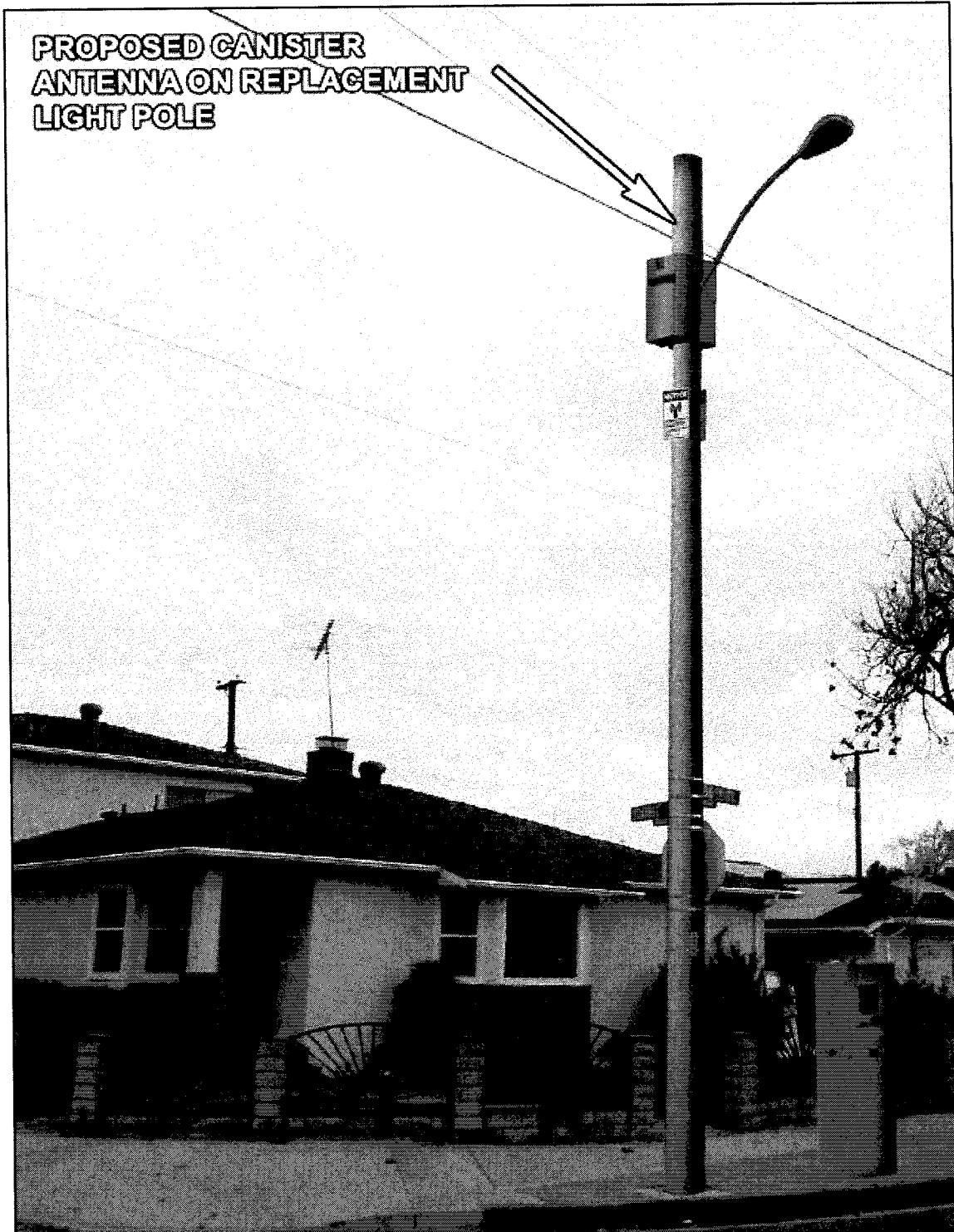


Figure 1: Proposed Antenna and associated equipment (Source: Plans Page A-3 Panel 2).





**Figure 2:** Proposed Antenna and Associated Equipment (Source: Photo Simulations). This photo simulation is unrealistic and unreliable as to proportions.



The Plans depict a new underground power service run from an existing wood utility pole approximately 180' away to the Pole. See Figure 3. Additionally, a new meter pedestal (“**Meter Cabinet**”) with dimensions (50"H x 16"W x 16"D) will be installed on a concrete pad. The Meter Cabinet will contain the electrical disconnect switch. A new fiber pull box vault will be installed near the base of the Pole (dimensions: 17"H x 30"W x 18"D).

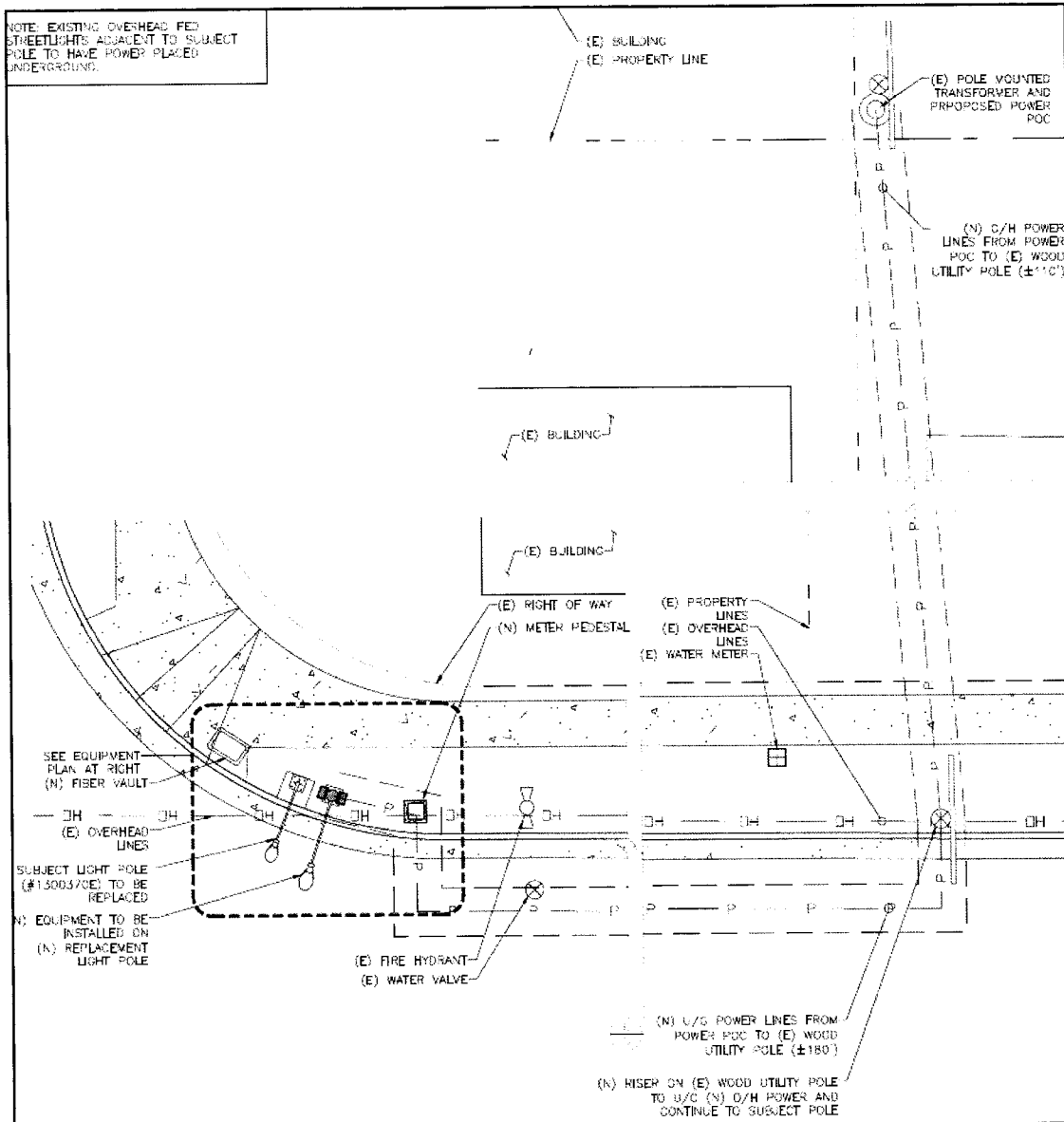


Figure 3: Underground power and fiber connections (Source: Plans Page A2 Panel 1).

TLF recommends that the City inquire from the Applicant about the feasibility of installing a wireless tariff rate (“**WTR**”) power connection rather than the proposed Meter Cabinet. If available, a condition requiring WTR powering should be included with this project.



## 2. Section 6409(a) Analysis

As a threshold matter, the City must determine whether federal law mandates approval for this permit application. Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012 requires that State and local governments “may not deny, and shall approve” any “eligible facilities request” for a wireless site collocation or modification so long as it does not cause a “substant[ial] change in [that site’s] physical dimensions.”<sup>1</sup> FCC regulations interpret key terms in this statute and impose certain substantive and procedural limitations on local review.<sup>2</sup> Localities must review applications submitted for approval pursuant to Section 6409(a), but the applicant bears the burden to show it qualifies for mandatory approval.

Section 6409(a)(2) defines an “eligible facilities request” as a request to collocate, remove or replace transmission equipment on an existing wireless tower or base station.<sup>3</sup> This definition necessarily excludes permit requests for new facilities. Thus, no matter how large or small, Section 6409(a) does not mandate approval for a permit to construct an entirely new wireless facility.

Here, the Applicant did not submit an eligible facilities request because rather than collocate on an existing facility, the Applicant proposes to construct a new wireless facility where none currently exists. Accordingly, Section 6409(a) does not require that the City approve the application and the City should review the Applicant’s proposal for compliance with the local values expressed in the TMC subject to certain federal limitations in Section 704 of the Telecommunications Act of 1996 (the “**Telecom Act**”).

## 3. Significant Gap and Least Intrusive Means Analysis

Under the Telecom Act, State and local governments cannot prohibit or effectively prohibit personal wireless communication services.<sup>4</sup> The United States Court of Appeals for the Ninth Circuit holds that a single permit denial can violate the Telecom Act when the applicant demonstrates that (1) a “significant gap” in its own service coverage exists and (2) its proposed site constitutes the “least intrusive means” to mitigate that significant gap.<sup>5</sup> This section discusses both issues as related to the present application.

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<sup>1</sup> See Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, 126 Stat. 156. (Feb. 22, 2012) (codified as 47 U.S.C. § 1455(a)).

<sup>2</sup> See In the Matter of Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies, *Report and Order*, 29 FCC Rcd. 12864 (Oct. 17, 2014) (codified as 47 C.F.R. §§ 1.40001, *et seq.*).

<sup>3</sup> See 47 U.S.C. § 1455(a)(2).

<sup>4</sup> See Section 704 of the Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (codified as 47 U.S.C. § 332(c)(7)(B)(i)(II)).

<sup>5</sup> See *MetroPCS, Inc. v. City and County of San Francisco*, 400 F.3d 715, 733 (9th Cir. 2005).





### 3.1. Significant Gap

The Ninth Circuit does not precisely define what a “significant gap” in service coverage means because this “extremely fact-specific [question] def[ies] any bright-line legal rule.”<sup>6</sup> Although sometimes courts find that weak service coverage constitutes a significant gap, the Ninth Circuit also holds that “the [Telecom Act] does not guarantee wireless service providers coverage free of small ‘dead spots’ . . . .”<sup>7</sup> Accordingly, whether a gap rises to a legally significant gap depends on the contextual factors in each individual application.<sup>8</sup>

To guide the analysis, the Ninth Circuit suggests that applicants and localities should focus on “context-specific factors” such as: (1) whether the gap affects a significant commuter thoroughfare; (2) how many users the alleged gap affects; (3) whether the proposed site will fill a complete void or merely improve weak signal; (4) whether the alleged gap affects a commercial area; (5) whether the alleged gap threatens public safety; and (6) whether the applicant presented empirical or merely predictive evidence.<sup>9</sup> The Ninth Circuit identifies these factors as relevant but does not explicitly limit the analysis to these factors or consider any particular factor more important than the others.

The Applicant provided propagation maps dated November 16, 2018 (“**Maps**”). The Maps show the existing coverage and proposed coverage in the area. See Figure 4 and Figure 5.

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<sup>6</sup> See *id.*

<sup>7</sup> See *id.*

<sup>8</sup> See *Sprint PCS Assets, LLC v. City of Palos Verdes Estates*, 583 F.3d 716, 727 (9th Cir. 2009) (citing *San Francisco*, 400 F.3d at 733).

<sup>9</sup> See *id.* (collecting cases that examine each enumerated factor).



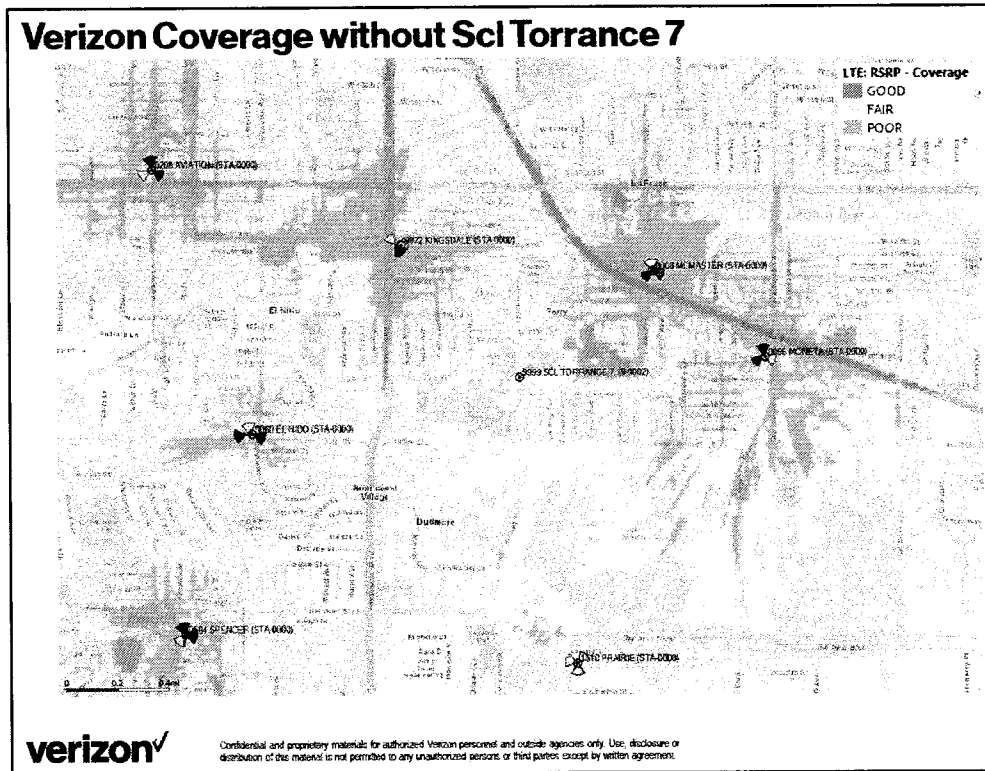


Figure 4: Existing Verizon Coverage without the proposed site (Source: Verizon Maps)

The propagation map reproduced in Figure 4 is a computer model of Verizon’s existing signal strength within the area based on a color-coded legend. Green indicates “Good” signal, yellow indicates “Fair” signal and purple indicates “Poor” signal. Without the proposed site, Verizon’s Map shows that the area surrounding the proposed site suffers from primarily “Poor” signal levels with pockets of “Fair” signal levels. However, Verizon’s Maps contain subjective characterizations rather than empirical signal strength levels in -dBm.

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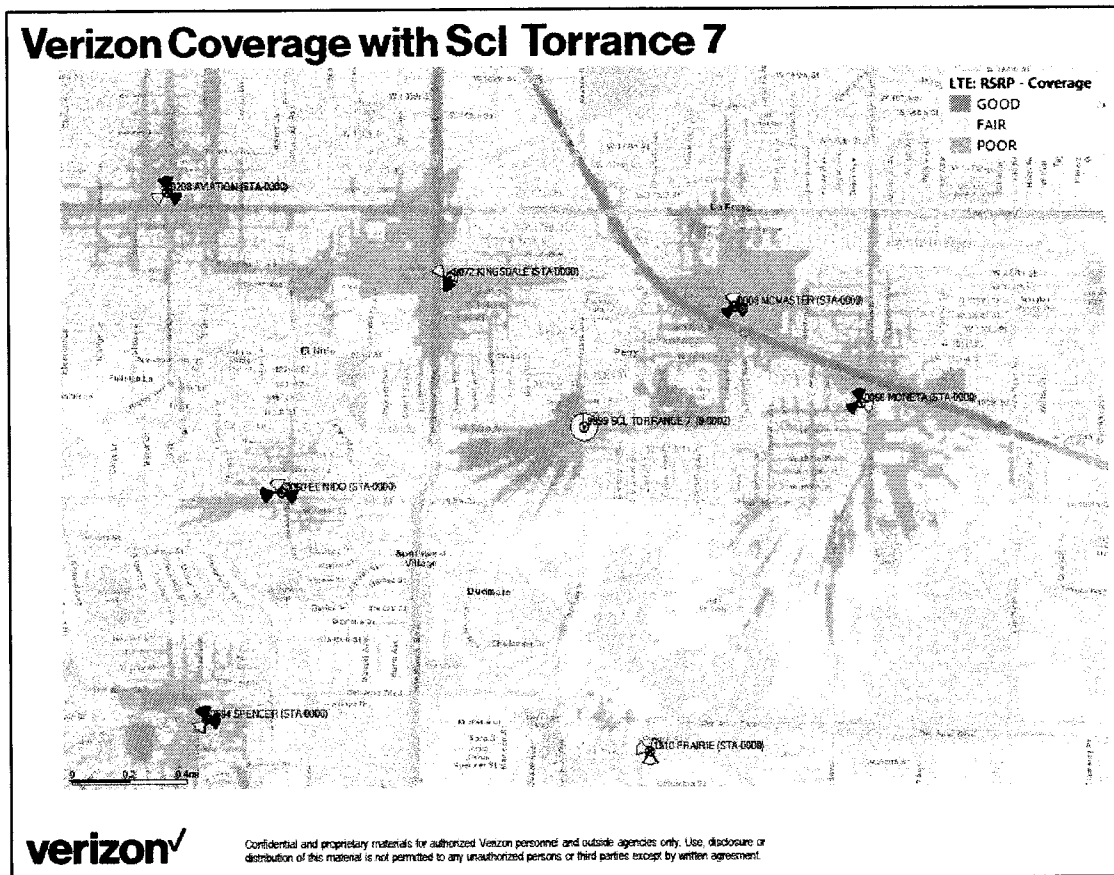


Figure 5: Proposed Verizon Coverage with the proposed site (Source: Verizon Maps).

The Map submitted with the application and reproduced in Figure 5 models Verizon’s service coverage with the combined signals from the proposed and surrounding sites. Verizon’s proposed coverage depicts “Green” in all directions immediately around the proposed site. However, Verizon’s propagation maps provide only limited objective signal measurements for the proposed coverage area and do not provide sufficient context for assessing how the signal measurements and the color-coding relate to an inability to provide wireless services. Moreover, the application does not contain any empirical data to suggest that users experience dropped calls.

Verizon has yet to establish that a significant gap in coverage exists at this time. That being the case, however, the City should not interpret Verizon’s failure to prove a significant gap as a reason to deny the project. Rather, the City simply possesses its traditional land-use discretion preserved in the Telecom Act and authorized under the TMC. Accordingly, the City should evaluate whether Verizon’s proposal is the least intrusive in light of the values embodied in the City’s wireless and land-use regulations.

### 3.2. Least Intrusive Means



The Telecom Act does not grant the applicant the right to build whatever site in whatever location it chooses. State and local jurisdictions may require wireless applicants to adopt the “least intrusive means” to achieve their technical objectives.<sup>10</sup> This balances the national interest in wireless services with the local interest in planned development.

In the Ninth Circuit, the least intrusive means refers to the technically feasible and potentially available alternative design and location that most closely conforms to the local values a permit denial would otherwise serve.<sup>11</sup> A “technically feasible and potentially available alternative” means that the applicants can reasonably (1) meet their demonstrated service needs and (2) obtain a lease or other legal right to construct the proposed site at the proposed location.<sup>12</sup>

The process to determine whether a proposal constitutes the least intrusive means involves a “burden-shifting” framework. First, the applicant establishes a presumption that it proposes the least intrusive means when it submits an alternative sites analysis. Localities can rebut the presumption when it proposes other alternatives. Applicants may then rule-out proposed alternatives when it provides a “meaningful comparative analysis” for why an alternative is not technically feasible or potentially available.<sup>13</sup> This back-and-forth continues until either the jurisdiction fails to propose a technically feasible or potentially available alternative, or the applicant fails to rule-out a proposed alternative.<sup>14</sup>

Applicants cannot rule-out potential alternatives on the grounds that it believes its preferred site is subjectively “better” than the jurisdiction’s preferred alternative.<sup>15</sup> Only the local government can decide which among several feasible and available alternatives constitutes the best option. Similarly, an applicant cannot rule-out a proposed alternative based on a bare conclusion that it is not technically feasible or potentially available—it must provide a meaningful comparative analysis that allows the jurisdiction to reach its own conclusions.<sup>16</sup>

### 3.2.1. Alternative Sites Analysis

In this case, Verizon did submit an alternative sites analysis.

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<sup>10</sup> See, e.g., *American Tower Corp. v. City of San Diego*, 763 F.3d 1035, 1056 (9th Cir. 2014).

<sup>11</sup> See *id.*; see also *AT&T USA, Inc. v. City of Anacortes*, 572 F.3d 987, 995 (9th Cir. 2009).

<sup>12</sup> See *Anacortes*, 572 F.3d at 996–999.

<sup>13</sup> See *American Tower Corp.*, 763 F.3d at 1056.

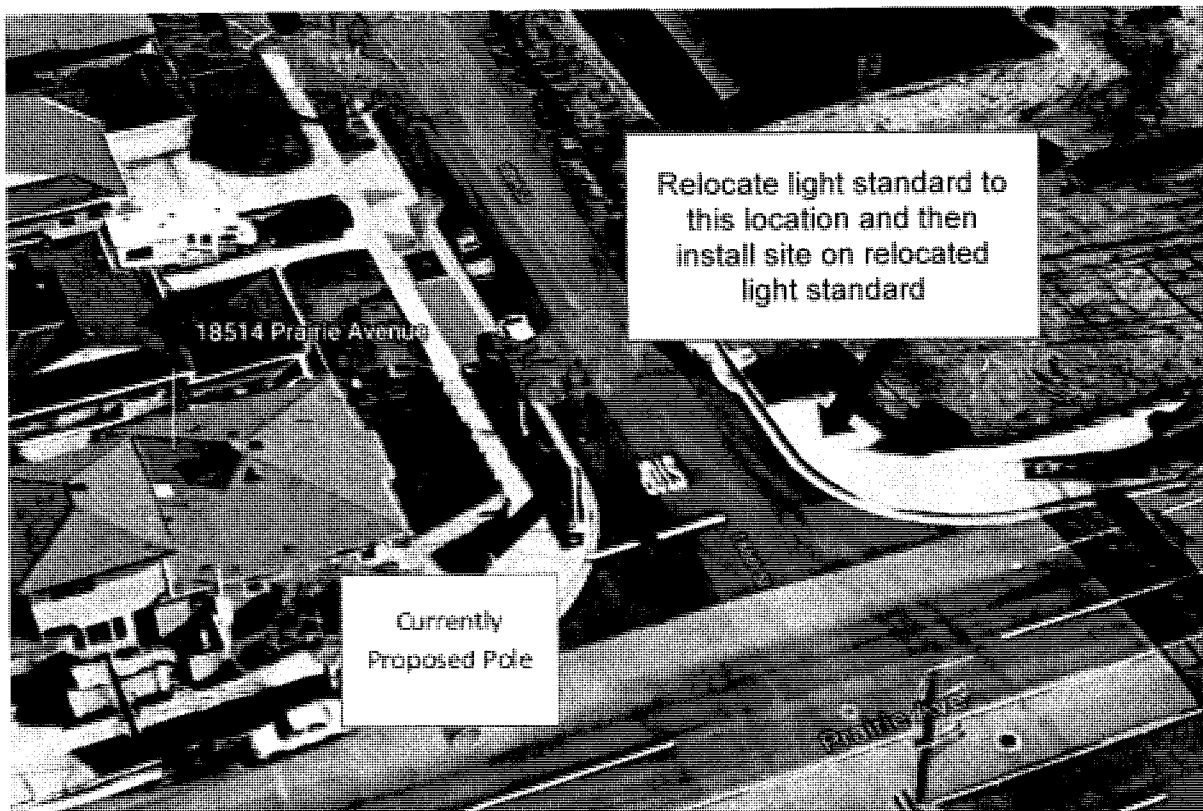
<sup>14</sup> Compare *id.* (upholding a permit denial because the applicant failed to rule-out the technical feasibility or potential availability of proposed alternatives), with *Anacortes*, 572 F.3d at 999 (invalidating a permit denial because the city insisted on an unavailable location). These cases provide a guide for planners on how to evaluate alternative site analyses. Planners should also note that a strong administrative record is essential to this analysis.

<sup>15</sup> See *American Tower Corp.*, 763 F.3d at 1057 (finding that the applicant “did not adduce evidence allowing for a meaningful comparison of alternative designs or sites, and the [c]ity was not required to take [the applicant]’s word that these were the best options”).

<sup>16</sup> See *id.*



Based on a desktop review of the area surrounding the proposed location, TLF believes that relocating the existing light standard to the opposite side of the street on 186<sup>th</sup> at Prairie Street appears to offer a meaningfully better aesthetic alternative in comparison to the proposed location. See Figure 6.



**Figure 6:** Proposed Pole and Recommended Lesser Intrusive Pole (Source: Google Maps, Annotated by Dr. Kramer).

Accordingly, the City should ask the Applicant whether this less intrusive alternative location is technically feasible or not. To the extent that this alternative is technically feasible, the Applicant should be required to use the alternative location.

### **3.2.2. Compliance with Torrance Municipal Code**

The City's second most-preferred location for wireless facilities is existing street light poles.<sup>17</sup> The City must consider the following criteria in connection with its processing of any telecom permit: (1) the extent to which the proposed facility blends into the surrounding environment or is architecturally integrated into a structure;<sup>18</sup> (2) the extent to which the proposed facility is concealed, screened or camouflaged by existing or proposed new topography, vegetation,

<sup>17</sup> See TORRANCE, CAL., MUN. CODE § 92.39.040(b)(1)(B).

<sup>18</sup> See *id.* § 92.39.050(a)(1).



buildings, or other structures;<sup>19</sup> and (3) the total size of the proposed facility, particularly in relation to surrounding and supporting structures.<sup>20</sup> In addition, the maximum overall height cannot exceed 35' on street light poles.<sup>21</sup>

Here, the Applicant's application complies with the applicable standards in the TMC. The facility would be installed on a street light pole that replaces an existing pole in order to create a more streamlined design that blends with the underlying support structure. The antenna and radio equipment would be concealed within pole-mounted shrouds and all the electrical connections would be underground and fully concealed from public view. The replacement pole would be consistent with the surrounding support structures because the pole would be approximately the same size and material as the existing street lights. In addition, the overall height of the facility would be 32' 6" AGL, which is approximately 2' 6" below the City's overall height limit.

Accordingly, the Applicant's proposed facility complies with the TMC and the City may wish to approve the application subject to design conditions to promote compliance with the local standards:

1. The permittee shall remove, or cause to be removed, the existing street light pole within 60 days of commencing on-air operations. The permittee shall also restore, or cause to be restored, the foundation and ground space around the removed pole foundation to its original condition. Such removal and restoration work shall be subject to the planning director and/or public works director's review and approval.
2. The permittee shall paint, color or finish all the pole-mounted equipment to match the color of the underlying light pole. The color, texture and material of the replacement pole shall be consistent with the surrounding street light poles in nearby vicinity.
3. The permittee shall route all cables, wires, jumpers and connectors internally through the pole and/or conceal them within the antenna or equipment shrouds. In addition, the permittee acknowledges and agrees that a material consideration of the City's approval of this permit is that the pole-top antenna and shroud are approximately the same width as the pole, which creates a streamlined design and concealment element that effectively blends the antenna with the underlying pole.

These suggested conditions are not intended to be an exhaustive list of conditions to impose on the City's potential permit approval. The City should consider adopting any other standard conditions and/or design conditions that promote compliance with the City's public health and safety standards and any applicable wireless development standards.

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<sup>19</sup> See *id.* § 92.39.050(a)(2).

<sup>20</sup> See *id.* § 92.39.050(a)(3).

<sup>21</sup> See *id.* § 92.39.040(a)(1)(A).



#### 4. Planned Compliance with RF Exposure Regulations

Under the Telecom Act, the FCC completely occupies the field with respect to RF emissions regulation. The FCC established comprehensive rules for human exposure to RF emissions (the “FCC Guidelines”).<sup>22</sup> State and local governments cannot regulate wireless facilities based on environmental effects from RF emissions to the extent that the emissions comply with the FCC Guidelines.<sup>23</sup>

Although localities cannot establish their own standards for RF exposure, local officials may require wireless applicants to demonstrate compliance with the FCC Guidelines.<sup>24</sup> Such demonstrations usually involve a predictive calculation because the site has not yet been built.

##### 4.1. FCC Guidelines, Categorical Exclusions and Exposure Mitigation Measures

FCC Guidelines regulate *exposure* rather than *emissions*.<sup>25</sup> Although the FCC establishes a maximum permissible exposure (“MPE”) limit, it does not mandate any specific limitations on power levels applicable to all antennas and requires the antenna operator to adopt exposure-mitigation measures only to the extent that certain persons might become exposed to the emissions. Thus, a relatively low-powered site in proximity to the general population might require more comprehensive mitigation measures than a relatively high-powered site in a remote location accessible only to trained personnel.

The MPE limit also differentiates between “general population” and “occupational” people. Most people fall into the general population class, which includes anyone who either does not know about potential exposure or knows about the exposure but cannot exert control over the transmitters.<sup>26</sup> The narrower occupational class includes persons exposed through their employment and able to exert control over their exposure.<sup>27</sup> The MPE limit for the general population is five times lower than the MPE limit for the occupational class.

Lastly, the FCC “categorically excludes” certain antennas from routine environmental review when either (1) the antennas create exposures in areas virtually inaccessible to humans or (2) the antennas operate at extreme low power. As a general rule, a wireless site qualified for a categorical exclusion when mounted on a structure built solely or primarily to support FCC-licensed or

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<sup>22</sup> See 47 U.S.C. § 332(c)(7)(B)(iv); see also 47 C.F.R. § 1.1307 *et seq.*; FCC Office of Engineering and Technology, *Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields*, OET Bulletin 65, ed. 97-01 (1997).

<sup>23</sup> See 47 U.S.C. § 332(c)(7)(B)(iv).

<sup>24</sup> See *In re Procedures for Reviewing Requests for Relief from State and Local Regulations Pursuant to Section 332(c)(7)(B)(iv) of the Communications Act of 1934*, *Report and Order*, 15 FCC Rcd. 22821, 22828–22829 (Nov. 13, 2000) (declining to adopt rules that limit local authority to require compliance demonstrations).

<sup>25</sup> See generally *Human Exposure to Radio Frequency Fields: Guidelines for Cellular and PCS Sites*, *Consumer Guide*, FCC (Oct. 22, 2014), available at <https://www.fcc.gov/guides/human-exposure-rf-fields-guidelines-cellular-and-pcs-sites> (discussing in general terms how wireless sites transmit and how the FCC regulates the emissions).

<sup>26</sup> See 47 C.F.R. § 1.1310, Note 2.

<sup>27</sup> See *id.*



authorized equipment (*i.e.*, a tower) and such that the lowest point on the lowest transmitter is more than 10 meters (32.8 feet) above ground.<sup>28</sup>

Categorical exclusions establish a presumption that the emissions from the antennas will not significantly impact humans or the human environment. Such antennas are exempt from routine compliance evaluations but not exempt from actual compliance. Under some circumstances, such as a heavily collocated tower or when in close proximity to general population members, even a categorically excluded site will require additional analysis.

#### **4.2. Planned Compliance Evaluation and Recommendations**

The FCC Guidelines do **not** categorically exclude the Applicant's facility from routine compliance review. This is because the replacement street light's primary function is to provide street illumination, and the street light was not solely or primarily constructed to support wireless equipment. Therefore, an additional analysis for whether the facility will comply with the FCC Guidelines is appropriate.

To demonstrate planned compliance with the FCC Guidelines, the Applicant submitted a Radio Frequency-Electromagnetic Energy (RF-EME) Jurisdictional Report prepared by EBI Consulting Inc. dated October 9, 2017 (the "**EBI Report**"). The EBI Report, which contains the basic emissions information needed to independently evaluate the proposed facility's planned compliance with the FCC Guidelines, concludes that mitigation measures such as following routine signage protocols are sufficient to comply with the FCC Guidelines. We generally agree with the conclusion.

Based on the transmitter frequencies and power levels disclosed in the EBI Report for both the downlink and backhaul radio transmitters, the antenna will create a "controlled access zone" that extends approximately 3.4' from the face of the omni-directional antenna at approximately the same height as the emissions centers of that antenna. The controlled access zone extends horizontally from the antennas with very little emissions that stray upwards or downwards.

The fact that a site creates a controlled access zone does not necessarily mean that it violates the FCC Guidelines. Rather, a controlled access zone means that the carrier must affirmatively restrict public access to that area so that members of the general population (including trespassers) cannot unknowingly enter and be exposed to radio emissions in excess of limits prescribed by the FCC.

Here, the controlled access zone is inaccessible to members of the general population, except for potential trespassers and street light maintenance workers. Accordingly, the City may wish to consider the following conditions of approval before potentially issuing any permit approval for the subject facility:

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<sup>28</sup> See *id.* § 1.1307(b)(1).





1. The permittee shall install and at all times maintain in good condition an “RF Notice” sign and network operations center sign adjacent to the bottom of proposed site. The signs required in this condition must be placed in a location where they are clearly visible to a person when he or she approaches the shroud.
2. The permittee shall ensure that all RF signage complies with FCC OET Bulletin 65 or ANSI C95.2 for color, symbol and content conventions. All such signage shall provide a working local or toll-free telephone number to its network operations center that reaches a live person who can exert transmitter power-down control over this site as required by the FCC.

## **5. Conclusion**

The Applicant’s proposed project is not subject to mandatory approval under Section 6409(a).

Although the Applicant’s application complies with the development standards contained in the TMC, there appears to be at least one less intrusive alternative location in close proximity to the proposed pole, and the City may also wish to consider the recommended design conditions in this memorandum.

There appears to be a substantially less intrusive site for this project across the street from where currently proposed.

Lastly, subject to the conditions in this memorandum regarding RF emissions safety, the Applicant’s proposed facility will be in planned compliance with the FCC Guidelines. If the Applicant alters the equipment, site configuration or location, the City may wish to re-evaluate planned compliance with the FCC Guidelines based on those changed circumstances.

/JLK



## APPLICATION INCOMPLETE MEMORANDUM

**TO:** Mr. Oscar Martinez [REDACTED]  
**FROM:** Dr. Jonathan Kramer [REDACTED]  
**DATE:** April 18, 2018  
**RE:** Application Completeness Review – New Proposed Wireless Facility in the Public Right-of-Way at F/O 18514 Prairie Avenue

**APPLICANT:** J5 Infrastructure for Verizon Wireless  
**APPLICANT'S ID:** SCL Torrance 7 / VZW site 432406  
**UTILITY POLE ID:** 1300370E

On November 27, 2017, J5 Infrastructure (the “**Applicant**”) on behalf of Verizon Wireless (“**Verizon**”) submitted wireless site application materials to the City of Torrance (“**City**”). Per the City’s request, on December 19, 2017, Telecom Law Firm, PC (“**TLF**” or “**We**”) submitted an Application Incomplete Memorandum (the “**First Memorandum**”) to the City that evaluated the Applicant’s application to operate a new wireless site in the public right-of-way (“**PROW**”) on a replacement Southern California Edison (“**SCE**”) concrete street light pole (“**Pole**”) to be located near 18514 Prairie Avenue (Coordinates 33.862003, -118.343597).

TLF’s First Memorandum concluded that the Applicant failed to submit a complete permit application that fully responded to the City’s publicly stated application requirements. We recommended that the City deem the Applicant’s application incomplete and issue a timely notice, which it did.

On February 6, 2018 the Applicant submitted additional materials (the “**February 6, 2018 Submission**”) which included a letter dated January 30, 2018 to the City from the Applicant (“**January 30, 2018 Applicant Letter**”) to address the deficiencies related to its initial submission.

On February 12, 2018, we submitted another Application Incomplete Memorandum (the “**Second Memorandum**”). TLF’s Second Memorandum concluded that the Applicant again had failed to submit a complete permit application that fully responded to the City’s publicly stated application requirements. We recommended that the City deem the Applicant’s application incomplete and issue a timely notice, which it did.

On April 11, 2018 the Applicant submitted additional materials (the “**April 11, 2018 Submission**”) which included:

- A letter from Mackenzie and Albritton dated April 5, 2018 to the City the (“**April 5, 2018 Letter**”).
- A revised Supplemental Technical Information Report (“**STIR**”).
- A “Response to Notice of Incomplete (“**NOI**”)” dated April 10, 2018.

This memorandum reviews the April 11, 2018 Submission and provides the City further analysis on whether the Applicant submitted a complete and responsive application complying with the City's application requirements and complies with the Torrance Municipal Code ("TMC").

### **COMMENTS AND RECOMMENDATION**

The Applicant has failed to submit the required coverage maps per the STIR of the City. Specifically the map specified in 6.03 remains missing from the application.

TLF believes that the Applicant has not yet submitted a complete permit application. The City may have other items that remain incomplete.

We recommend that the City deem the Applicant's application incomplete and again issue a timely incomplete notice to the Applicant **no later April 20, 2018** (based on the application materials tender date of April 11, 2018). TLF recommends the City send the incomplete notice by email and on the same day also sends it by First Class or Certified U.S. Mail postage prepaid.

Once a reply to the City's incomplete notice is received back from Applicant, the City has only 10 calendar days to determine whether the reply is responsive to the incomplete notice, and each of the 10 days counts against the overall 150 day shot clock, thus immediate review upon resubmission should occur.

/JLK



## APPLICATION INCOMPLETE MEMORANDUM

**TO:** Mr. Oscar Martinez [REDACTED]  
**FROM:** Dr. Jonathan Kramer [REDACTED]  
**DATE:** February 12, 2018  
**RE:** Application Completeness Review – New Proposed Wireless Facility in the Public Right-of-Way at F/O 18514 Prairie Avenue

**APPLICANT:** J5 Infrastructure for Verizon Wireless  
**APPLICANT'S ID:** SCL Torrance 7 / VZW site 432406  
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TLF’s First Memorandum concluded that the Applicant failed to submit a complete permit application that fully responded to the City’s publicly stated application requirements. We recommended that the City deem the Applicant’s application incomplete and issue a timely notice, which it did.

On February 6, 2018 the Applicant submitted additional materials (the “**February 6, 2018 Submission**”) which included a letter dated January 30, 2018 to the City from the Applicant (“**January 30, 2018 Applicant Letter**”) to address the deficiencies related to its initial submission.

This memorandum reviews the February 6, 2018 Submission and provides the City further analysis on whether the Applicant submitted a complete and responsive application complying with the City’s application requirements and complies with the Torrance Municipal Code (“**TMC**”).

This memorandum reviews the application and related materials to determine whether the applicant submitted a complete and responsive application. The following review may also discuss regulatory and technical issues related to wireless infrastructure. Although many technical issues implicate legal issues, the analysis and recommendations contained in this memorandum do not constitute legal advice.

Through this round of material submission, the Applicant submitted a set of plans dated January 25, 2018 (“**Plans**”) which describe the following proposed project. On top of the Pole, the Applicant proposes to install a new 2-foot tall pole-top canister antenna (“**Antenna**”) and a 1’11” concealment skirt to enclose two diplexers below the Antenna. Also on the Pole, the Applicant proposes to mount a two remote radio units (“**RRUs**”) and two power supply units (“**PSUs**”).

TLF notes that the Pole is proposed to be installed between a minimum of three feet and maximum of four feet away from the original existing light standard location. See Figure 1 for proposed design and antenna and all associated equipment.

Page A3, panels 1 and 2 of the Plans depict that the height of the Pole supporting this project is to increase to 29' 6" above ground level ("AGL") from 28' 9.6". In addition, the total height of the vertical elevation will increase to 32' 6" AGL due to the proposed installation of the antenna and the associated equipment on the Pole (This increase in height is acceptable since the total height of the structure does not exceed 35 feet AGL per the City's Municipal Code). Additionally, the center of the Antenna is at 31' 6" AGL, therefore the lowest point of the Antenna is at 30' 6" AGL. The top of the RRUs are separated by 1' 8" from the lowest point of the Antenna and the bottom of the RRUs are at 26' 6" AGL.

Also, two radio frequency ("RF") signs are proposed to be mounted on opposite sides of the pole. The top of both RF signs are at 22' 6" AGL.

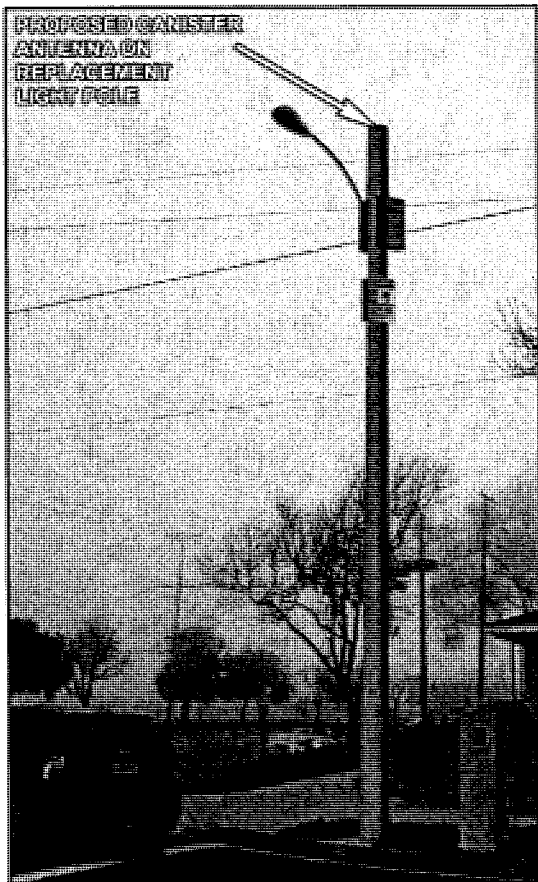


Figure 1: Antenna, Antenna skirt enclosing Diplexers, Fiber Node, 2 RRUs, RF signage, Meter etc. (Source: Photo Simulations provided by Applicant).



For its electrical connections, the Plans depict that the Applicant proposes a new underground power service run from an existing wood utility pole approximately 180 feet away to the Pole. Additionally, a new meter pedestal (“Meter Cabinet”) with dimensions (50”H x 16”W x 16”D) will be installed on a concrete pad. The Meter Cabinet will contain the electrical disconnect switch. For its fiber connections, a new fiber pull box vault will be installed near the base of the Pole (dimensions: 17”H x 30” W x 18” D). Figure 2 below demonstrates the electrical and fiber connections.

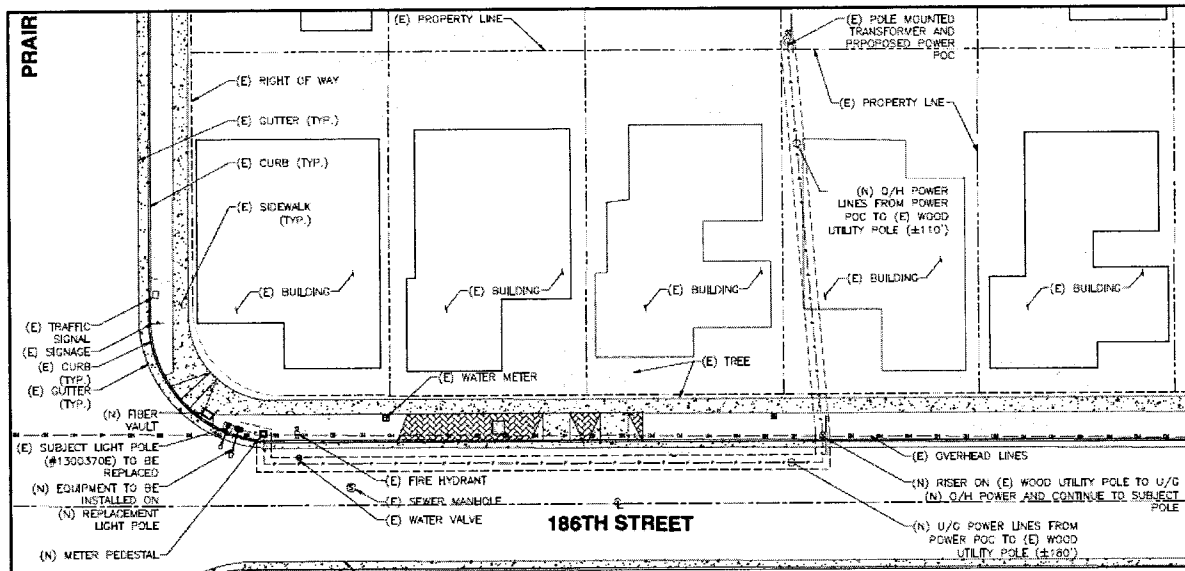


Figure 2: Underground electrical connections for the Applicant (Source: Plans page A-1, panel 1).

Verizon proposes to install a Meter Cabinet, whereas other wireless carriers in the City with similar equipment configurations are dispensing with the cabinet in favor of utilizing SCE’s wireless technology rate (“WTR”). The elimination of the Meter Cabinet is less intrusive than proposed by Verizon, thus they must either remove the Meter Cabinet and use the WTR, or factually demonstrate to the City why they cannot use SCE’s WTR.

**A. APPLICATION COMPLETENESS REVIEW**

Based on the City’s Submittal Requirements for Wireless Telecommunications Facility (“Requirements Form”), we recommend that the City deem Applicant’s application submittal **incomplete** and issue an incomplete notice on or before February 16, 2018 regarding the items more fully discussed in the next sections:



## REQUIREMENTS FORM

### I. APPLICATION FORM

The City requires an applicant to complete and submit a (1) Development Application and (2) a Supplemental Technical Information Report (“STIR”).

#### ▪ Supplemental Technical Information Report:

- Sec 3.03 remains partially incomplete as “PCS telephone” is still unchecked even though PCS spectrum licensees were included in the original submission. Furthermore, AWS-3 spectrum licenses are still missing even though previously mentioned in the original submission.
- Sec. 3.10 – The January 30, 2018 Applicant Letter indicated the following content within Figure 3.

• Please note, 3.10 was not changed to “Yes.” Upon discussion with Southern California Edison, only trained/qualified SCE personnel are allowed to work within close proximity to radio frequency energy that exceeds public exposure limits where telecommunication antennas have been installed. The SCE Radio Frequency Energy Safety Program (RFESP) - (SCE-CHS-SO-PG-20) is the program and respective guidance document that provides requirements for identifying, evaluating, and working near or around RF emitting antennas per FCC and Cal/OSHA requirements. As such, 3.12 remains unchanged also, and 3.13 will not be provided. Please contact Phil Hickerson from SCE at (626) 695-5888 should you have any questions regarding the program or guidance document.

**Figure 3:** Answer to Section 3.10 of the STIR through the January 30, 2018 Applicant Letter (Source: Applicant).

If the City wishes to accept Verizon’s representation in Figure 3 regarding SCE’s use of RF-qualified personnel, rather than having SCE make its own representation, then this element will no longer be incomplete.

- Sec. 3.12 **remains** incomplete-this proposed project is **not** categorically excluded since the SCE light standard was not originally constructed for wireless purposes. The primary reason this light standard was constructed was for street illumination. Additionally, the lowest point of the antenna is **less** than 10 meters AGL. The FCC “categorically excludes” wireless facilities from routine RF exposure analysis when antennas are mounted (1) to structure solely or primarily built to support wireless antennas and (2) more than 10 meters above ground level.<sup>1</sup>
- Sec. 3.13 – The January 30, 2018 Applicant Letter indicated: “3.13 will not be provided”- As mentioned in Sec. 3.12, this project is not categorically excluded and the information must be provided. However,

<sup>1</sup> See 47 C.F.R. § 1.1307(b)(1).



while technically incomplete, we are aware that the Applicant, through its November 27, 2017 submission, provided an Electromagnetic Energy (RF-EME) Jurisdictional Report by EBI Consulting dated October 9, 2017 (“**EBI RF Report**”). Therefore, we recommend the City forego citing the Applicant remaining incomplete for this section.

- Sec. 6.01-Sec.6.04 – the Applicant did not provide the required information through these Sections. The January 30, 2018 Applicant Letter indicated the following content within Figure 4.

• We reiterate our position that the proposed installations do not require Verizon Wireless to provide coverage maps per 6.01-6.04, nor additional radio frequency data per 8.05. The proposed installations are in the public right-of-way for the purpose of increasing capacity (Public Utilities Code Section 7901 grants telephone corporations such as Verizon Wireless a statewide right to use the right-of-way, and as such there is no requirement to demonstrate the need for a facility). Further references can be made to California Court Rulings supporting this position and the lack of a response to further clarification on RF data (e.g. propagation maps, coverage/capacity data) at these locations.

**Figure 4:** Answer to Section 6.01-6.04 of the STIR through the January 30, 2018 Applicant Letter (Source: Applicant).

Given that this project is for the installation of a new site, rather than a collocation at an existing wireless site that would be subject to Section 6409(a), the Applicant is simply incorrect in asserting that it need not provide coverage maps per Application §§ 6.01-6.04. While a telephone corporation has compulsory access to the public right of way, PUC Section 7901.1, omitted by the Applicant, conditions that compulsory access, which states in its entirety:

7901.1.

(a) It is the intent of the Legislature, consistent with Section 7901, that *municipalities shall have the right to exercise reasonable control as to the time, place, and manner in which roads, highways, and waterways are accessed.*

(b) The control, to be reasonable, shall, at a minimum, be applied to all entities in an equivalent manner.

(c) Nothing in this section shall add to or subtract from any existing authority with respect to the imposition of fees by municipalities.

(Emphasis added.)

Were the City to take the Applicant’s position and not require the propagation maps (which we strongly oppose), the City would be unable to know whether any changes it might propose to the design or location of





the proposed site would create a signal conflict. This lack of necessary information would effectively defeat the balancing control set out in Section 7901.1(a).

## II. PROPERTY OWNERSHIP

The Applicant did not provide any additional information on this section, we recommend the City proceed based on our First Memorandum suggestions.

## III. MAPS

As mentioned above, the maps for Section 6 are missing.

## B. OTHER PERMITS, APPLICATIONS REQUIRED AND PERMIT RECOMMENDATIONS

This project is likely to require an encroachment permit as a separate set of approvals including potentially an excavation permit and a building permit.

The City shall insure that when granting the excavation permit for the new light standard it also requires as a condition that the discontinued light standard's foundation is hammered out and the ground be restored and properly compacted.

The City should condition the project, if approved, to show that the replacement Pole is not a wireless tower for any purpose, but rather it is considered only a replacement light pole to be owned by the City. The primary purpose of this Pole is and shall remain for street illumination rather than for any primary use as a wireless tower and/or base station.

## C. CLOSING COMMENTS AND RECOMMENDATION

TLF believes that the Applicant has not yet submitted a complete permit application that complies with the City's Requirements Form. The list of incomplete items in this memo contains TLF's observations. The City may have other items for the incomplete notice. Under the FCC rules, there is only one incomplete notice, so it is imperative that all items which are incomplete are listed in the first notice.

We recommend that the City deem the Applicant's application incomplete and again issue a timely incomplete notice to the Applicant **no later February 16, 2018** (based on the application materials tender date of February 6, 2018). TLF recommends the City send the incomplete notice by email and on the same day also sends it by First Class or Certified U.S. Mail postage prepaid.

Once a reply to the City's incomplete notice is received back from Applicant, the City has only 10 calendar days to determine whether the reply is responsive to the incomplete notice, and each



of the 10 days counts against the overall 150 day shot clock, thus immediate review upon resubmission should occur.

/JLK



## APPLICATION INCOMPLETE MEMORANDUM

**TO:** Mr. Oscar Martinez [REDACTED]  
**FROM:** Dr. Jonathan Kramer [REDACTED]  
**DATE:** December 19, 2017  
**RE:** Application Completeness Review – New Proposed Wireless Facility in the Public Right-of-Way at F/O 18514 Prairie Avenue

**APPLICANT:** J5 Infrastructure for Verizon Wireless  
**APPLICANT'S ID:** SCL Torrance 7 / Verizon Site 432406  
**UTILITY POLE ID:** 1300370E

The City of Torrance (the “City”) requested that Telecom Law Firm, PC (“TLF”) review the J5 Infrastructure’s (“Applicant”) application on behalf of Verizon Wireless (“Verizon”) to operate a new wireless site on a replacement light pole (“Pole”) in the public right-of-way (“ROW”) located at in front of 18514 Prairie Avenue. The date the Applicant submitted this project to the City was on November 27, 2017.

This memorandum reviews the application and related materials to determine whether the applicant submitted a complete and responsive application. The following review may also discuss regulatory and technical issues related to wireless infrastructure. Although many technical issues implicate legal issues, the analysis and recommendations contained in this memorandum do not constitute legal advice.

The Applicant submitted a set of plans dated August 11, 2017 (“Plans”) which describe the following proposed project. On top of the Pole, the Applicant proposes to install a new 2-foot tall pole-top canister antenna (“Antenna”) and a 1’ 11” concealment skirt to enclose two diplexers below the Antenna. Also on the Pole, the Applicant proposes to mount a two remote radio units (“RRUs”) and two power supply units (“PSUs”). TLF notes that the Pole is proposed to be installed between a minimum of three feet and a maximum of four feet away from the original existing light standard location.

Page A3, panels 1 and 2 of the Plans depict that the height of the Pole supporting this project is to increase to 29’ 6” above ground level (“AGL”) from 28’ 8”. In addition, the total height of the vertical elevation will increase to 32’ 6” AGL due to the proposed installation of the antenna and the associated equipment on the Pole (This increase in height is acceptable since the total height of the structure does not exceed 35 feet AGL per the City’s Municipal Code). Additionally, the center of the Antenna is at 31’ 6” AGL, therefore the lowest point of the Antenna is at 30’ 6” AGL. The top of the RRUs are separated by 1’ 8” from the lowest point of the Antenna and the bottom of the RRUs are at 26’ 6” AGL.

Also, two radio frequency (“RF”) signage are proposed to be mounted on the pole. The top of the upper RF signage is at 23’ 6” AGL and the bottom of the lower RF signage is situated at 8-feet AGL.

Page A1 of the Plans depict a new underground power service run from an existing wood utility pole approximately 180 feet away to the Pole. Additionally, a new meter pedestal (“**Meter Cabinet**”) with dimensions (50”H x 16”W x 16”D) will be installed on a concrete pad. The Meter Cabinet will contain the electrical disconnect switch. A new fiber pull box vault will be installed near the base of the Pole (dimensions: 17”H x 30” W x 18” D).

#### A. APPLICATION COMPLETENESS REVIEW

Based on the City’s Submittal Requirements for Wireless Telecommunications Facility (“**Requirements Form**”), we recommend that the City deem Applicant’s application submittal **incomplete** and issue an incomplete notice on or before December 27, 2017 regarding the items more fully discussed below:

#### REQUIREMENTS FORM

##### I. APPLICATION FORM

The City requires an applicant to complete and submit a (1) Development Application and (2) a Supplemental Technical Information Report (“**STIR**”).

▪ **Development Application:**

All information required on the Development Application checklist appears to be filled out by the Applicant.

▪ **Supplemental Technical Information Report:**

- Sec 3.02 is incomplete – Attachment 3.02 includes only FCC licenses for the PCS frequencies; however, the Electromagnetic Energy (RF-EME) Jurisdictional Report by EBI Consulting dated October 9, 2017 (“**EBI RF Report**”) notes the additional use of AWS-1 and AWS-3 frequencies.

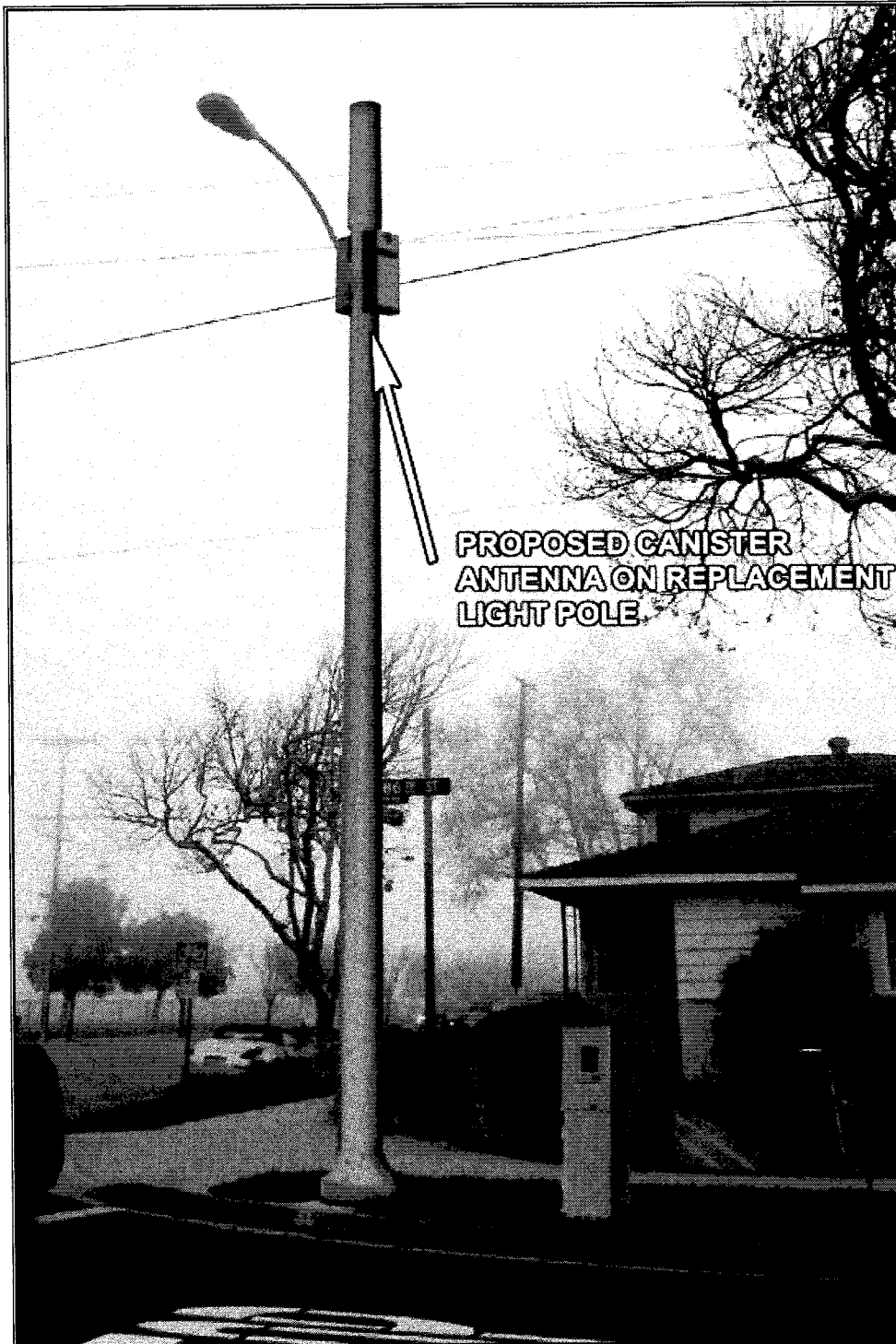
While technically incomplete, we are aware that AT&T hold an AWS license that covers the Torrance area, so the City may wish to forego citing AT&T as being incomplete on this item for this application, but requiring that AT&T submit complete applications in the future.

- Sec 3.03 is incorrect – The application checks “Cellular telephone”, but the EBI RF Report notes only “PCS telephone” services. Furthermore, “Other: [Miscellaneous Wireless Communications Services]” should be checked given use of AWS frequencies.



- Sec. 3.10 – The Applicant indicated that there are no general population areas accessible near the antenna. This may be incorrect unless Southern California Edison (“SCE”) certifies that only RF-trained and qualified technicians maintain the Pole and the luminaire attached to the Pole.
- Sec. 3.11 is not provided, however the Applicant provided the EBI RF Report.
- Sec. 3.12 is incorrect – This proposed project is not categorically excluded.
- Sec. 3.13 must be provided - As mentioned in the prior bullet point for Sec. 3.12, this proposed project is not categorically excluded. The Applicant must provide the required information.
- Sec. 3.14 is left blank - Applicant must tick the “YES” line. TLF notes that even though this section is left blank, the Applicant provided the attachment as required in Sec. 3.15.
- Sec. 6.01-Sec. 6.04 – The Applicant did not provide the required information through these Sections. However, within an Attachment 6.00 the Applicant stated: “Please note, RF coverage maps will be provided with Attachment 8.05 to respond to the requested “technically expansive and detailed explanation supported as required by comprehensive radio frequency data fully describing why the proposed site is the one and only one location within or without the City of Torrance that can possibly meet the radio frequency objectives of the project.” The coverage maps provided in attachment 8.05 are non-responsive to Section 6.01-6.04. The required maps in the required formats specified in Section 6 must be provided to respond to Section 6 of the Application.
- Section 6.05 is not separately provided, however the Applicant provided an EBI RF Report.
- Section 7.01–subsection 2: Missing elements on the photo simulations (e.g., new Pole location, RF signage, fiber pull box, connecting cables, etc.) See Figure 1 below.
- Section 7.01 – subsection 3: The Applicant has satisfied the number of views of the photos of the existing site, however, the Applicant failed to provide five or more photo simulations of the proposed site as required in the STIR. This site is visible from residential properties, therefore additional photo simulations are required. TLF recommends the Applicant discuss the photo simulation requirements with the City.





**Figure 1:** Antenna, Antenna skirt enclosing Diplexers, Fiber Node, 2 RRUs (Missing visual elements, e.g. new Pole location, RF signage, fiber pull box, connecting cables etc.) (Source: Photo Simulations provided by Applicant).



- Sec. 8.05: The maps provided in this Section are not consistent for the purposes of this section, nor are then sufficient for the Sec. 6.01-6.04 coverage maps. The Applicant provided the following coverage maps in connection with section 8 of the application:
  - SCL Torrance 1-10 Area Map without any coverage, just node locations. This map is helpful.
  - Without SCL Torrance 1-10: The Applicant provided all existing coverage within the area without the proposed small cell nodes of 1-10 with “Good”, “Fair” and “Poor” with no numerical signal strength data.
  - SCL Torrance 1-10 Individual Coverage with “Good”, “Fair” and “Poor” with no numerical signal strength data.
  - SCL Torrance 1-10 with neighbors Coverage with “Good”, “Fair” and “Poor” with no numerical signal strength data.

TLF notes that the Applicant has failed to provide empirical data. Also, it failed to provide node isolated coverage specific to this project as required in Section 6.

- Sec. 10.01: The Signature and Date Signed lines are left blank.

## II. PROPERTY OWNERSHIP

The Applicant provided the following letters:

1. Edison Carrier Solutions (“ECS”) letter from Brian P. Ryan dated August 10, 2017. The portion of this letter related to consent is not signed and filled out with the appropriate necessary information. (TLF notes that this letter, if executed, should be executed by the City Manager’s office, not Planning.)
2. Letter indicating: “PLEASE TRANSFER LETTER TO CITY LETTERHEAD” not sign nor dated. (TLF notes that this letter, if executed, should be executed by the City Manager’s office, not Planning.)
3. Letter of Authorization dated August 10, 2017 from ECS from Brian P. Ryan and signed by Brian P. Ryan.
4. SCE Streetlight Authorization form partially filled out. (TLF notes that this letter, if executed, should be executed by the City Manager’s office, not Planning.)

Prior to City Planning considering this project for completeness the four items above must be considered by the City Manager’s office or designee (not Planning) to determine if the project as described should proceed forward.



**III. PROJECT PLANS**

The Plans appear to be satisfactory for zoning processing purposes.

**IV. JUSTIFICATION**

The site justification contained in Section 4 of the application appears to be satisfactory for zoning processing purposes.

**V. MAPS**

As mentioned above, the maps are either missing (Section 6) or incomplete (Section 8).

**VI. VISUAL SIMULATIONS**

As mentioned above, the number of views of the photo simulations as required in the STIR are missing. Additionally, as already discussed, the photo simulations provided by the Applicant are incomplete.

**B. ADDITIONAL INCOMPLETE, INCONSISTENT ITEMS**

The EBI RF Report in Section 2 of that document discloses an antenna which is different from that specified in the Plans. Additionally, the EBI RF Report in Section Verizon Signage Plan discloses different signage locations from that specified in the Plans. The signage in the Verizon Signage Plan should be relied upon as Verizon is the FCC's licensee.

**C. OTHER PERMITS AND APPLICATIONS REQUIRED**

This project is likely to require an encroachment permit as a separate set of approvals including potentially an excavation permit, fiber installation permit, building permit, and electrical permit.

**D. CLOSING COMMENTS AND RECOMMENDATION**

TLF believes that the Applicant has failed to submit a complete permit application that complies with the City's Requirements Form. The list of incomplete items in this memo contains TLF's observations. The City may have other items for the incomplete notice. Under the FCC rules, there is only one incomplete notice, so it is imperative that all items which are incomplete are listed in the first notice.

We recommend that the City deem the Applicant's application incomplete and issue a timely incomplete notice to the Applicant **no later than December 27, 2017** (based on the application materials tender date of November 27, 2017). TLF recommends the City send the incomplete



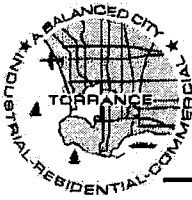


notice by email and on the same day also sends it by First Class or Certified U.S. Mail postage prepaid.

Once a reply to the City's incomplete notice is received back from Applicant, the City has only 10 calendar days to determine whether the reply is responsive to the incomplete notice, and each of the 10 days counts against the overall 150 day shot clock, thus immediate review upon resubmission should occur.

/JLK





# SUPPLEMENTAL TECHNICAL INFORMATION REPORT FOR WIRELESS TELECOMMUNICATION FACILITIES

1.00: Project Address N/A - PROW (Closest address F/O 18514 Prairie Ave.)

Assessor Parcel Number N/A

2.00: Disclose the Name and Address of all Project Owners, and attach a letter of agency appointing the Applicant as representative of the Project Owners in connection with this application. Designate the letter of agency as "Attachment 2.00".

### 3.00: FCC Licensee/FAA Compliance Information

3.01: Identify each person or legal entity that will be using the wireless site and contact information (Attach additional sheets if necessary)

Name: Verizon Wireless

Address: 15505 Sand Canyon Rd. Bldg. D-1

City, State, Zip: Irvine, CA 92618

Phone: (949) 286-7000 Fax: \_\_\_\_\_

Email: Please see Attachment 3.01 for second entity

3.02: Attach a complete copy of each FCC license or FCC Construction Permit for each person/legal entity that will be subject to the FCC license for the Project site. Designate the license(s)/Construction Permit(s) as "Attachment 3.02". If none of the proposed radio facilities require an FCC license so indicate on Attachment 3.02.

3.03: What is the intended use of the facility (check all that apply):

- Broadcast Radio
- Broadcast TV
- Cellular telephone
- Enhanced Specialized Mobile Radio
- Microwave
- PCS telephone
- Paging
- Specialized Mobile Radio
- Other: \_\_\_\_\_

3.04: Project latitude and longitude: N 33.862003 W -118.343597



## SUPPLEMENTAL TECHNICAL INFORMATION REPORT FOR WIRELESS TELECOMMUNICATION FACILITIES

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3.05: Specify DATUM use above:  WGS84  NAD23  NAD83

3.06: Project Maximum height (ft): 32'-6"

3.07: Bottom of lowest antenna (ft): 30'-6"

3.08: Rad-center of the antennas (ft): 31'-6"

3.09: For each licensee, and for each radio service, complete and attach the two page "Appendix A" form from "A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance" available from the following website: <http://www.FCC.gov/oet/rfsafety>. Designate the completed two page form as "Attachment 3.09". Additional RF safety disclosure information may be required by the government to determine compliance with FCC OET 65 requirements if the site is not "categorically excluded" under OET 65.

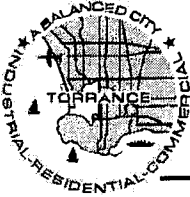
3.10 Are any areas adjacent to the antennas subject to RF emissions that are in excess of the "General Public/uncontrolled" standard in FCC OET 65? For this purpose, assume that all persons other than the Carrier's technical staff are considered to be members of the General Public.  
 Yes  No  
(If the answer to 3.10 is NO proceed to 3.12)

3.11 Provide a detailed RF analysis for each emitter and each band showing the distance, in feet, in all directions to the boundary of the General Public/uncontrolled boundary. Designate this attachment, "Attachment 3.11".

3.12 Considering your response to 3.10, above, and any other identifiable RF emitters that OET 65 requires be evaluated in connection with this project, are all portions of this project cumulatively "categorically excluded" under FCC OET 65 requirements?  
 Yes  No  
(If the answer to 3.12 is YES proceed to 3.14.)

3.13 Describe in an attachment each and every RF emitter of the project that is not "categorically excluded" under the FCC OET 65 requirements. Designate this attachment, "Attachment 3.13".

3.14: Does this project require the Applicant to file an FAA Form 7460 or other documentation under Federal Aviation Regulation Part 77.13 et seq, or under the FCC rules?  
 Yes  No  
(If the answer to 3.14 is NO proceed to 4.00.) Please see Attachment 3.15 for Airspace Report.



# SUPPLEMENTAL TECHNICAL INFORMATION REPORT FOR WIRELESS TELECOMMUNICATION FACILITIES

3.15 Attach complete copies of all required FAA/FCC forms including all attachments and exhibits thereto, including without limitation FAA Form 7460. Designate this attachment, "Attachment 3.15".

## 4.00: Project Purpose

4.01: Justification. Provide a brief narrative, accompanied by written documentation where appropriate, which explains the purpose of the facility and validates the applicant's efforts to comply with the design, location, and co-location standards of Chapter 2, Division 9, Article 39 of the City's Municipal Code.

Please see Attachment 4.01

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4.02: Indicate whether the dominant purpose of the Project is to add additional network capacity, to increase existing signal level, or to provide new radio frequency coverage (check only one).  
 Add network capacity without adding substantial new RF coverage area (Proceed to 5.00)  
 Increase the existing RF signal level in an existing coverage area (Proceed to 5.00)  
 Provide new radio frequency coverage in a substantial area not already served by existing radio frequency coverage (Proceed to 5.00)  
 Other

4.03 Attach a statement fully and expansively describing the "Other" dominant purpose of this project. Designate this attachment, "Attachment 4.03".

## 5.00: Build-Out Requirements

5.01: Do any of radio services identified in 3.04 above require the licensee to provide specific radio frequency/population coverage pursuant to the underlying FCC license?

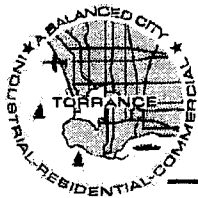
     Yes        x   No

(If the answer to 5.01 is NO proceed to 6.00.)

5.02: Have all of the FCC build-out requirements as required by all licenses covering all radio services proposed at this Project been met?

  N/A   Yes        N/A   No

(If the answer to 5.02 is YES proceed to 6.00.)



## SUPPLEMENTAL TECHNICAL INFORMATION REPORT FOR WIRELESS TELECOMMUNICATION FACILITIES

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5.03: State by licensee all remaining build-out requirements which have yet to be met, and the known or estimated date when the remaining build-out requirements will be met. Designate this attachment "Attachment 5.03".

### 6.00: Radio Frequency Coverage Maps

6.01: Where a licensee intends to provide radio frequency geographic coverage to a defined area from the Project (including applicants in the cellular, PCS, broadcast, ESMR/SMR categories, and others as requested by the City of Torrance), the coverage maps and information requested in Section 6 are required attachments. All others proceed to 7.00.

For the coverage maps required here, the following mandatory requirements apply. Failure to adhere to these requirements may delay your application processing.

1. The size of each submitted map must be no smaller than 11" by 8.5".
2. If the FCC rules for any proposed radio service defines a minimum radio frequency signal level that level must be shown on the map in a color easily distinguishable from the base paper or transparency layer, and adequately identified by RF level and map color or gradient in the map legend. If no minimum signal level is defined by the FCC rules you must indicate that in the legend of each RF coverage map. You may show other RF signal level(s) on the map so long as they are adequately identified by objective RF level and map color or gradient in the map legend.
3. Where the City of Torrance determines that one or more submitted maps are inadequate, it reserved the right to request that one or more supplemental maps with greater or different detail be submitted.

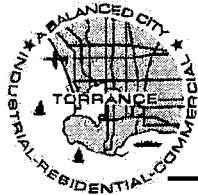
6.02: Existing RF coverage within the City of Torrance on the same network, if any (if none, so state). This map should not depict any RF coverage to be provided by the Project. Designate this attachment "Attachment 6.02".

6.03: RF coverage to be provided by the Project. This map should not depict any RF coverage provided any other existing or proposed wireless sites. Designate this attachment "Attachment 6.03".

6.04: RF coverage to be provided by the Project and by other wireless sites on the same network should the Project site be activated. Designate this attachment "Attachment 6.04".

6.05: Provide a written certification that the facility will continuously comply with FCC OET Bulletin 65 radio frequency emissions standards, and that use of the facility will not interfere with other communication, radio, or television transmission or reception.

## SUPPLEMENTAL TECHNICAL INFORMATION REPORT FOR WIRELESS TELECOMMUNICATION FACILITIES



### 7.00: Project Photographs and Photo Simulations

7.01: Where an Applicant proposes to construct or modify a wireless site, and the wireless site is visible from other residential properties, the Applicant shall submit pre-project photographs, and photo simulations showing the project after completion of construction, all consistent with the following standards:

1. Minimum size of each photo simulation must be 11 inches by 8.5 inches (portrait or landscape orientation);
2. All elements of the project as proposed by the Applicant must be shown in one or more close-in photo simulations.
3. The overall project as proposed by the Applicant must be shown in five or more area photos and photo simulations. Photos and photo simulation views must, at a minimum, be taken from widely scattered positions separated by an angle of no greater than 72 degrees from any other photo location.

The number of site photos, and photo simulations, and the actual or simulated camera location of these photos and photo simulations is subject to City of Torrance determination. The Applicant should submit photos and photo simulations consistent with these instructions, and be prepared to provide additional photos and photo simulations should they be requested by the City of Torrance.

### 8.00: Candidate Sites

8.01: For applicants in the cellular, PCS, broadcast, ESMR/SMR categories, and others as requested by the City of Torrance, the information requested in Section 8 is required. All others proceed to 9.00.

8.02: Has the Applicant or Owner or anyone working on behalf of the Applicant or Owner secured or attempted to secure any leases or lease-options or similar formal or informal agreements in connection with this project for any sites other than the candidate site identified at 1.00?

Yes      No

(If the answer to 8.02 is NO, proceed to 8.05.)

8.03: Provide the physical address of each such other location, and provide an expansive technical explanation as to why each such other site was disfavored over the Project Site. Designate this attachment "Attachment 8.03".

8.04: Considering this proposed site, is it the one and only one location within or without the City of Torrance that can possibly meet the objectives of the project?

Yes      No

(If the answer to 8.04 is NO, proceed to 9.00.)



## SUPPLEMENTAL TECHNICAL INFORMATION REPORT FOR WIRELESS TELECOMMUNICATION FACILITIES

8.05: Provide a technically expansive and detailed explanation supported as required by comprehensive radio frequency data fully describing why the proposed site is the one and only one location within or without the City of Torrance that can possibly meet the radio frequency objectives of the project. Explain, in exact and expansive technical detail, all of the objectives of this project. Designate this attachment "Attachment 8.05".

### 9.00: Identification of Key Persons

9.01: Identify by name, title, company affiliation, work address, telephone number and extension, and email address the key person or persons most knowledgeable regarding:

- (1) the site selection for the proposed project, including alternatives;
  - (2) the radio frequency engineering of the proposed project;
  - (3) rejection of other candidate sites evaluated, if any;
  - (4) approval of the selection of the proposed site identified in this project.
- Designate this attachment "Attachment 9.01"

9.02 If more than one person is/was involved in any of the four functions identified in this section, attach a separate sheet providing the same information for each additional person, and identifying which function or functions are/were performed by each additional person. Designate this attachment "Attachment 9.02".

Initial here LC to indicate that the information above is complete and there is no Attachment 9.02, or initial here \_\_\_\_\_ to indicate that Attachment 9.02 is attached hereto.

### 10.00: Technical Information Report Certification

10.01: The undersigned certifies on behalf of itself and the Applicant that the answers provided here are true and complete to the best of the undersigned's knowledge.

[Redacted]	Site Acq. & Zoning Spec.
Signature	Title
Laura Castro	LCastro@J5IP.com
Print Name	Provide Email Address
J5 Infrastructure	[Redacted]
Print Company Name	Provide Telephone Number
10/18/17	
Date Signed	

Verizon Wireless  
SCL Torrance 7

**Attachment 2.00**

2.00: Name and Address of all Project Owners

Verizon Wireless  
15505 Sand Canyon, Bldg. D-1  
Irvine, CA 92618

Southern California Edison  
4900 Rivergrade Rd., Bldg. 2B-1, Suite 120C  
Irwindale, CA 91706

Letter(s) of Agency (attached)





Brian P. Ryan  
Principle Manager  
Telephone: 909-274-1949  
Brian.Ryan@sce.com

August 10, 2017

To Whom It May Concern:

Since 1994, Southern California Edison (SCE) has assisted wireless service providers in expanding their networks to meet customers' needs for telecommunications service. SCE makes available existing structures that can be used to co-locate the wireless service providers' equipment, while lessening the visual impacts on the community and constituency that is served. This letter requests that you help us in this endeavor.

In an effort to minimize the potential clutter that new vertical structures would produce, many California cities have adopted ordinances and policies encouraging wireless facilities to be mounted on street light poles within the public rights of way.

As you are aware, SCE owns and maintains street light poles in your city pursuant to our LS-1 tariff. In order to accommodate the increasing demand for micro-cell site locations, SCE has agreed to allow wireless service providers to attach their antennas to some of these streetlight poles, and contractually requires the wireless service provider to comply with certain requirements, including a requirement that the facility will not impact SCE's ability to provide street lighting service.

Torrance has and retains full control over the entitlement and permitting process for these and future sites. The wireless service providers also pay for electrical usage resulting from their sites. This electrical service is metered and billed separately, and the City is not impacted.

While SCE believes this approach benefits local governments as well as their constituency, we would not engage in this solution if doing so resulted in extra costs to SCE. We would therefore appreciate you confirming that the Torrance consents to use of its public rights of way for the purpose of licensing space on an SCE Streetlight Pole # 1300370E located at: S/O 3999 186th St.. Verizon Wireless Site number: SCL Torrance 7.

Please sign this letter to indicate your consent and return it to me at the below address. If you have any questions, please feel free to call Phil Hickerson at (626) 695-5888.

Regards,

A black rectangular box redacting the signature of Brian P. Ryan.

Brian P. Ryan

Signature \_\_\_\_\_  
Name \_\_\_\_\_  
Title \_\_\_\_\_  
Date: \_\_\_\_\_

SCE Edison Carrier Solutions  
2 Innovation Way 1<sup>st</sup> Floor  
Pomona, CA 91768

# SOUTHERN CALIFORNIA EDISON STREETLIGHT AUTHORIZATION

DEVELOPER/APPLICANT MUST PROVIDE THIS FORM  
*COMPLETED BY THE PUBLIC AUTHORITY*  
FOR ANY SCE-OWNED STREETLIGHT INSTALLATION, REMOVAL OR CHANGE REQUESTS  
*Incomplete forms will be returned and not processed*

PUBLIC AUTHORITY NAME: City of Torrance

Builder/Developer Name: Verizon Wireless/ J5 Infrastructure Phone #: 714-272-3702

Tract/Ref # \_\_\_\_\_ Streetlight Location 1300370E/ F/O 18514 Prairie Ave.

Please Check one:  Installation  Removal  Change

Number of Lamp(s)	Lamp Size	Lamp Type
<u>1</u>	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

### New Installations

#### Public Authority Responsibility for Streetlight Monthly Billing

Please Check one and fill out applicable dates:

\_\_\_ Upon Energizing

If Public Authority is collecting Builder/Developer Advanced Energy Payment, indicate date collected. (\_\_\_\_\_)

Monthly Billing: \_\_\_ Establish new Service Account (SA) Use existing SA # \_\_\_\_\_

\_\_\_ Commitment Date-

Date Agreed upon by SCE and Public Authority (\_\_\_\_\_) or no later than 36 months from first streetlight energized whichever is earlier.

Monthly Billing: \_\_\_ Establish new Service Account (SA) Use existing SA # \_\_\_\_\_

Public Authority is not responsible

HOA Area Name \_\_\_\_\_ Other Entity (please define) Verizon Wireless

Public Authority Notes:

Authorized Public Authority Agent

\_\_\_\_\_ Print name \_\_\_\_\_ Date \_\_\_\_\_ Signature \_\_\_\_\_

Phone # \_\_\_\_\_ Title \_\_\_\_\_

### TO BE COMPLETED BY SCE

ACTION: ENTER TRACT/REF# ON DM PROGRAM NAME FIELD.

District \_\_\_\_\_ Planning AOR \_\_\_\_\_ PLANNER NAME (PRINT) \_\_\_\_\_

DM SR # \_\_\_\_\_ Product # \_\_\_\_\_ (one per SLA)

FORWARD COMPLETED COPIES OF THE SLA FORM, MAP AND CSD272 CONTRACT, IF APPLICABLE TO:  
"Street & Outdoor Lighting Organization" Santa Ana Bldg. D

Verizon Wireless  
SCL Torrance 7

**Attachment 3.01**

**3.01**- Additional contact information of legal entity that will be using the wireless site:

Name: Southern California Edison

Address: 4900 Rivergrade Rd. Bldg. 2B-1, Suite 120C Irwindale, CA 91706

Phone: 626-695-5888

Verizon Wireless  
SCL Torrance 7

**Attachment 3.02**

3.02: Complete copies of each FCC license (attached)



# Federal Communications Commission

Wireless Telecommunications Bureau

## RADIO STATION AUTHORIZATION

LICENSEE: AIRTOUCH CELLULAR

ATTN: REGULATORY  
AIRTOUCH CELLULAR  
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING  
ALPHARETTA, GA 30022

<b>Call Sign</b> KNLF889	<b>File Number</b> 0007638414
<b>Radio Service</b> CW - PCS Broadband	

FCC Registration Number (FRN): 0006146468

<b>Grant Date</b> 03-30-2017	<b>Effective Date</b> 03-30-2017	<b>Expiration Date</b> 04-28-2027	<b>Print Date</b> 03-31-2017
<b>Market Number</b> BTA262	<b>Channel Block</b> F	<b>Sub-Market Designator</b> 0	
<b>Market Name</b> Los Angeles, CA			
<b>1st Build-out Date</b> 04-28-2002	<b>2nd Build-out Date</b>	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

### Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

This authorization is conditioned upon the full and timely payment of all monies due pursuant to Sections 1.2110 and 24.716 of the Commission's Rules and the terms of the Commission's installment plan as set forth in the Note and Security Agreement executed by the licensee. Failure to comply with this condition will result in the automatic cancellation of this authorization.

### Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

**Licensee Name:** AIRTOUCH CELLULAR

**Call Sign:** KNLF889

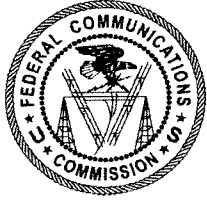
**File Number:** 0007638414

**Print Date:** 03-31-2017

Grant of the request to update licensee name is conditioned on it not reflecting an assignment or transfer of control (see Rule 1.948); if an assignment or transfer occurred without proper notification or FCC approval, the grant is void and the station is licensed under the prior name.

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

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**Federal Communications Commission**  
**Wireless Telecommunications Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: LOS ANGELES SMSA LIMITED PARTNERSHIP

ATTN: REGULATORY  
 LOS ANGELES SMSA LIMITED PARTNERSHIP  
 5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING  
 ALPHARETTA, GA 30022

<b>Call Sign</b> WPWH653	<b>File Number</b> 0007638763
<b>Radio Service</b> CW - PCS Broadband	

FCC Registration Number (FRN): 0002963817

<b>Grant Date</b> 03-31-2017	<b>Effective Date</b> 03-31-2017	<b>Expiration Date</b> 04-28-2027	<b>Print Date</b> 04-01-2017
<b>Market Number</b> BTA262	<b>Channel Block</b> E	<b>Sub-Market Designator</b> 2	
<b>Market Name</b> Los Angeles, CA			
<b>1st Build-out Date</b> 04-28-2002	<b>2nd Build-out Date</b>	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

**Waivers/Conditions:**

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

**Conditions:**  
 Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

**Licensee Name:** LOS ANGELES SMSA LIMITED PARTNERSHIP

**Call Sign:** WPWH653

**File Number:** 0007638763

**Print Date:** 04-01-2017

This authorization is subject to the condition that the remaining balance of the winning bid amount will be paid in accordance with Part 1 of the Commission's rules, 47 C.F.R. Part 1.

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SCL Torrance 7

**Attachment 3.09**

3.09 Appendix A from "A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance." (See attached)

**Optional Checklist for Local Government  
To Determine Whether a Facility is Categorically Excluded**

Purpose: The FCC has determined that many wireless facilities are unlikely to cause human exposures in excess of RF exposure guidelines. Operators of those facilities are exempt from routinely having to determine their compliance. These facilities are termed "categorically excluded." Section 1.1307(b)(1) of the Commission's rules defines those categorically excluded facilities. This checklist will assist state and local government agencies in identifying those wireless facilities that are categorically excluded, and thus are highly unlikely to cause exposure in excess of the FCC's guidelines. Provision of the information identified on this checklist may also assist FCC staff in evaluating any inquiry regarding a facility's compliance with the RF exposure guidelines.

**BACKGROUND INFORMATION**

- 1. Facility Operator's Legal Name: Verizon Wireless
- 2. Facility Operator's Mailing Address: 15505 Sand Canyon Blvd. Bldg. D-1, Irvine, CA 92618
- 3. Facility Operator's Contact Name/Title: Vinh Vuong
- 4. Facility Operator's Office Telephone: 949-379-9198
- 5. Facility Operator's Fax: \_\_\_\_\_
- 6. Facility Name: SCL Torrance 7
- 7. Facility Address: N/A - PROW
- 8. Facility City/Community: City of Torrance
- 9. Facility State and Zip Code: CA
- 10. Latitude: 33.862003
- 11. Longitude: -118.343597

continue  
→

## Optional Local Government Checklist (page 2)

**EVALUATION OF CATEGORICAL EXCLUSION**

12. Licensed Radio Service (see attached Table 1): Personal Communication Services
13. Structure Type (free-standing or building/roof-mounted): Free-Standing
14. Antenna Type [omnidirectional or directional (includes sectored)]: Omni-directional
15. Height above ground of the lowest point of the antenna (in meters): 9.3m
16.  Check if all of the following are true:
- (a) This facility will be operated in the Multipoint Distribution Service, Paging and Radiotelephone Service, Cellular Radiotelephone Service, Narrowband or Broadband Personal Communications Service, Private Land Mobile Radio Services Paging Operations, Private Land Mobile Radio Service Specialized Mobile Radio, Local Multipoint Distribution Service, or service regulated under Part 74, Subpart I (see question 12).
  - (b) This facility will not be mounted on a building (see question 13).
  - (c) The lowest point of the antenna will be at least 10 meters above the ground (see question 15).

If box 16 is checked, this facility is categorically excluded and is unlikely to cause exposure in excess of the FCC's guidelines. The remainder of the checklist need not be completed. If box 16 is not checked, continue to question 17.

17. Enter the power threshold for categorical exclusion for this service from the attached Table 1 in watts ERP or EIRP\* (note:  $EIRP = (1.64) \times ERP$ ): 3280 W EIRP
18. Enter the total number of channels if this will be an omnidirectional antenna, or the maximum number of channels in any sector if this will be a sectored antenna: 2 & 3
19. Enter the ERP or EIRP per channel (using the same units as in question 17): 123.61 & 166.75 Max ERP
20. Multiply answer 18 by answer 19:  $[(2 \times 123.61) + (3 \times 166.75)] \times 1.64 = 1226$  watts EIRP
21. Is the answer to question 20 less than or equal to the value from question 17 (yes or no)? Yes

If the answer to question 21 is YES, this facility is categorically excluded. It is unlikely to cause exposure in excess of the FCC's guidelines.

If the answer to question 21 is NO, this facility is not categorically excluded. Further investigation may be appropriate to verify whether the facility may cause exposure in excess of the FCC's guidelines.

\*"ERP" means "effective radiated power" and "EIRP" means "effective isotropic radiated power"

**TABLE 1: TRANSMITTERS, FACILITIES AND OPERATIONS SUBJECT TO ROUTINE ENVIRONMENTAL EVALUATION**

SERVICE (TITLE 47 CFR RULE PART)	EVALUATION REQUIRED IF:
Experimental Radio Services (part 5)	power > 100 W ERP (164 W EIRP)
Multipoint Distribution Service (subpart K of part 21)	<u>non-building-mounted antennas</u> : height above ground level to lowest point of antenna < 10 m <u>and</u> power > 1640 W EIRP <u>building-mounted antennas</u> : power > 1640 W EIRP
Paging and Radiotelephone Service (subpart E of part 22)	<u>non-building-mounted antennas</u> : height above ground level to lowest point of antenna < 10 m <u>and</u> power > 1000 W ERP (1640 W EIRP) <u>building-mounted antennas</u> : power > 1000 W ERP (1640 W EIRP)
Cellular Radiotelephone Service (subpart H of part 22)	<u>non-building-mounted antennas</u> : height above ground level to lowest point of antenna < 10 m <u>and</u> total power of all channels > 1000 W ERP (1640 W EIRP) <u>building-mounted antennas</u> : total power of all channels > 1000 W ERP (1640 W EIRP)

TABLE 1 (cont.)

SERVICE (TITLE 47 CFR RULE PART)	EVALUATION REQUIRED IF:
<p>Personal Communications Services (part 24)</p>	<p>(1) Narrowband PCS (subpart D):  <u>non-building-mounted antennas</u>: height above ground level to lowest point of antenna &lt; 10 m <u>and</u> total power of all channels &gt; 1000 W ERP (1640 W EIRP)  <u>building-mounted antennas</u>: total power of all channels &gt; 1000 W ERP (1640 W EIRP)</p> <p>(2) Broadband PCS (subpart E):  <u>non-building-mounted antennas</u>: height above ground level to lowest point of antenna &lt; 10 m <u>and</u> total power of all channels &gt; 2000 W ERP (3280 W EIRP)  <u>building-mounted antennas</u>: total power of all channels &gt; 2000 W ERP (3280 W EIRP)</p>
<p>Satellite Communications (part 25)</p>	<p>all included</p>
<p>General Wireless Communications Service (part 26)</p>	<p>total power of all channels &gt; 1640 W EIRP</p>
<p>Wireless Communications Service (part 27)</p>	<p>total power of all channels &gt; 1640 W EIRP</p>
<p>Radio Broadcast Services (part 73)</p>	<p>all included</p>

**Attachment 3.15**

3.15 Please see attached site-specific Airspace Report in response to FAA requirements addressed under Section 3.14

\*\*\*\*\*  
 \* Federal Airways & Airspace  
 \*  
 \* Summary Report: New Construction  
 \*  
 \* Non-Antenna Structure  
 \*

\*\*\*\*\*  
 Airspace User: Wendy Salazar  
 File: SCL\_TORRANCE\_7  
 Location: TORRANCE, CA  
 Latitude: 33°-51'-43.21" Longitude:  
 118°-20'-36.95"

SITE ELEVATION AMSL.....78 ft.  
 STRUCTURE HEIGHT.....33 ft.  
 OVERALL HEIGHT AMSL.....111 ft.  
 SURVEY HEIGHT AMSL.....111 ft.

NOTICE CRITERIA  
 FAR 77.9(a): NNR (DNE 200 ft AGL)  
 FAR 77.9(b): NNR (DNE Notice Slope)  
 FAR 77.9(c): NNR (Not a Traverse Way)  
 FAR 77.9: NNR FAR 77.9 IFR Straight-In Notice Criteria  
 for 64CL  
 FAR 77.9: NNR FAR 77.9 IFR Straight-In Notice Criteria  
 for TOA  
 FAR 77.9(d): NNR (Off Airport Construction)

NR = Notice Required  
 NNR = Notice Not Required  
 PNR = Possible Notice Required (depends upon actual IFR  
 procedure)  
 For new construction review Air Navigation  
 Facilities at bottom  
 of this report.

Notice to the FAA is not required at the analyzed location  
 and height for  
 slope, height or Straight-In procedures. Please review the  
 'Air Navigation'  
 section for notice requirements for offset IFR procedures  
 and EMI.

OBSTRUCTION STANDARDS

FAR 77.17(a)(1): DNE 499 ft AGL  
 FAR 77.17(a)(2): DNE - Airport Surface  
 FAR 77.19(a): DNE - Horizontal Surface  
 FAR 77.19(b): DNE - Conical Surface  
 FAR 77.19(c): DNE - Primary Surface  
 FAR 77.19(d): DNE - Approach Surface  
 FAR 77.19(e): DNE - Approach Transitional Surface  
 FAR 77.19(e): DNE - Abeam Transitional Surface

VFR TRAFFIC PATTERN AIRSPACE FOR: 64CL: GOODYEAR BLIMP BASE

Type: A RD: 20406.47 RE: 27.5  
 FAR 77.17(a)(1): DNE  
 FAR 77.17(a)(2): Does Not Apply.  
 VFR Horizontal Surface: DNE  
 VFR Conical Surface: DNE  
 VFR Primary Surface: DNE  
 VFR Approach Surface: DNE  
 VFR Transitional Surface: DNE

VFR TRAFFIC PATTERN AIRSPACE FOR: TOA: ZAMPERINI FIELD

Type: A RD: 19636.5 RE: 83  
 FAR 77.17(a)(1): DNE  
 FAR 77.17(a)(2): DNE - Height No Greater Than 200  
 feet AGL.  
 VFR Horizontal Surface: DNE  
 VFR Conical Surface: DNE  
 VFR Primary Surface: DNE  
 VFR Approach Surface: DNE  
 VFR Transitional Surface: DNE

The structure is within VFR - Traffic Pattern Airspace  
 Climb/Descent Area.  
 Structures exceeding the greater of 350' AAE, 77.17(a)(2),  
 or VFR horizontal  
 and conical surfaces will receive a hazard determination  
 from the FAA.  
 Maximum AMSL of Climb/Descent Area is 453 feet.

TERPS DEPARTURE PROCEDURE (FAA Order 8260.3, Volume 4)

FAR 77.17(a)(3) Departure Surface Criteria (40:1)  
 DNE Departure Surface

MINIMUM OBSTACLE CLEARANCE ALTITUDE (MOCA)

FAR 77.17(a)(4) MOCA Altitude Enroute Criteria  
 The Maximum Height Permitted is 500 ft AMSL

PRIVATE LANDING FACILITIES

FACIL	BEARING	RANGE
DELTA ARP FAA		
IDENT TYP NAME	To FACIL	IN NM
ELEVATION IFR		
-----	-----	-----



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+51      3CL8  HEL TOYOTA HELISTOP                101.73    1.57
        No Impact to Private Landing Facility
        Structure is beyond notice limit by 4539 feet.

-293     CL03  HEL AIRPORT TOWERS NR 1          322.05    4.17
        No Impact to Private Landing Facility
        Structure 293 ft below heliport.

+94      7L1   HEL CARSON SHERIFF STATION        112.11    4.39
        No Impact to Private Landing Facility
        Structure is beyond notice limit by 21674 feet.

-98      32CN  HEL PACIFIC BELL-2300 IMPERIAL H  334.68    4.54
        No Impact to Private Landing Facility
        Structure 98 ft below heliport.

-98      3CN5  HEL LOS ANGELES COUNTY SHERIFFS      29.23    4.57
        No Impact to Private Landing Facility
        Structure 98 ft below heliport.

-144     CL02  HEL KILROY AIRPORT CENTER           333.09    4.57
        No Impact to Private Landing Facility
        Structure 144 ft below heliport.

-127     CN33  HEL AIRPORT IMPERIAL BLDG HELIST    326.93    4.88
        No Impact to Private Landing Facility
        Structure 127 ft below heliport.

+82      4CA6  HEL CHEVRON REFINERY                    306.96    5.23
        No Impact to Private Landing Facility
        Structure is beyond notice limit by 26778 feet.

```

```

AIR NAVIGATION ELECTRONIC FACILITIES
FAC          ST          DIST  DELTA
GRND APCH
IDNT  TYPE  AT  FREQ  VECTOR  (ft)  ELEVA ST LOCATION
ANGLE BEAR
-----
        TOA  LOCALIZER  I   111.9 182.96 19363  +32 CA RWY 29R
ZAMPERINI .09 294
        TOA  ATCT      ON  A/G   178.19 21987  -68 CA
ZAMPERINI FIELD -.18

```

	HHR	LOCALIZER	I	109.1	.19	21994	+45	CA	RWY 25
JACK NORTH		.12	253						
	HHR	ATCT	Y	A/G	5.07	22436	-24	CA	JACK
NORTHROP FIE		-.06							
	MKZ	LOCALIZER	I	109.9	338.59	29599	+18	CA	RWY 07R
LOS ANGEL		.03	71						
	IAS	LOCALIZER	I	111.1	340.68	30164	-1	CA	RWY 07L
LOS ANGEL		0.00	71						
	CPM	NDB	D	37	71.37	30858	+14	CA	COMPTON
.03									
	LAXA	RADAR	Y	2705.	323.06	32055	-63	CA	LAX ASR
#1		-.11							
	No Impact. This structure does not require Notice based upon EMI.								
	The studied location is within 20 NM of a Radar facility. The calculated Radar Line-Of-Sight (LOS) distance is: 29 NM.								
	This location and height is within the Radar Line-Of-Sight.								
	LAX	VORTAC	R	113.6	314.00	37280	-74	CA	LOS
ANGELES		-.11							
	LAXB	RADAR	Y	2855.	329.67	38663	-45	CA	LAX ASR
#2		-.07							
	No Impact. This structure does not require Notice based upon EMI.								
	The studied location is within 20 NM of a Radar facility. The calculated Radar Line-Of-Sight (LOS) distance is: 28 NM.								
	This location and height is within the Radar Line-Of-Sight.								
	QLA	RADAR ARSR	Y	1277.4	176.99	42301	-1436	CA	Los Angeles San P
		-1.94							
	No Impact. This structure does not require Notice based upon EMI.								
	The studied location is within 20 NM of a Radar facility. The calculated Radar Line-Of-Sight (LOS) distance is: 61 NM.								
	This location and height is within the Radar Line-Of-Sight.								
	SMO	VOR/DME	R	110.8	327.57	63923	-3	CA	SANTA MONICA
		0.00							
	LGB	LOM	I		115.43	89493	+102	CA	RWY 30
LONG BEACH		.07							
	LG	NDB	I	23	115.44	89525	+103	CA	BECCA
.07									
	SLI	VORTAC	R	115.7	108.16	92291	+89	CA	SEAL BEACH
		.06							
	LGB	RADAR	ON	2730.	103.94	106776	-1	CA	LONG BEACH /DAUGH
BEACH		0.00							

BUR	RADAR	Y	2810.	357.41	124623	-711	CA BURBANK-
GLENDAL-	-.33						
VNY	VOR/DME	R	113.1	341.21	138971	-701	CA VAN NUYS
-.29							
SXC	VORTAC	I	111.4	187.45	178708	-1979	CA SANTA
CATALINA	-.63						
POM	VORTAC	R	110.4	64.83	186213	-1155	CA POMONA
-.36							
ELB	VOR/DME	R	117.2	110.15	198076	-225	CA EL TORO
-.07							
KSOX	RADAR WXL	Y		94.49	215482	-2995	CA SANTA
ANA MOUNTAI	-.8						
ONT	RADAR	Y	2717.	72.82	237558	-863	CA ONTARIO
INTL	-.21						

CFR Title 47, §1.30000-§1.30004

AM STUDY NOT REQUIRED: Structure is not near a FCC licensed AM station.

Movement Method Proof as specified in §73.151(c) is not required.

Please review 'AM Station Report' for details.

Nearest AM Station: KNX @ 621 meters.

Airspace® Summary Version 17.9.479

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10-19-2017  
 15:51:49

**Attachment 4.01**

The purpose of installing SCL Torrance 7 is to increase capacity caused by increased usage and demand of wireless data and technology in the area surrounding the project site.

Pursuant to the City of Torrance's Municipal Code, Verizon Wireless proposes to attach small cell wireless equipment to a street light pole located within the City of Torrance's public right of way.

Site ID	Latitude	Longitude	Zone	Pole Type	Pole Owner
SCL Torrance 7	33.862003	-118.343597	R1	Concrete	SCE



Verizon Wireless  
SCL Torrance 7

**Facility Type**

This is a “wireless telecommunications facility” per the definition in Torrance Municipal Code Section 92.39.030 (u) as it is an antenna attachment to a street light pole in the public right of way.

**Zoning**

The proposed facility is located in the Single Family Residential zone (R1).

**Height** (92.39.040 (a)(1)(A))

The antenna will be attached to a street light pole with a height of 29.5 feet. The height of the structure after attachment will be 32.5 feet, which does not exceed the maximum 35 feet for antennas on street lights within the public right of way, as called out by the Code.

**Location** (92.39.040 (b))

The project meets location priority (B) as an existing light pole under Section 92.39.040 (b)(1) of the Code. The project requires special approval by the Telecommunications Committee under Section 92.39.040 (b)(3)(A) as it is located within the public right of way within a residential district.

**Co-Location** (92.39.040 (d))

This is not a feasible co-location project.

**Design Standards** (92.39.050)

Attach 2’-0” omnidirectional antenna and associated auxiliary equipment to a concrete street light pole within the right of way of the City.

This project consists of the installation of an antenna and associated equipment for Verizon Wireless’ wireless telecommunications network.

Verizon Wireless contractor to install:

- (1) Canister antenna; and
- (2) RRUs onto pole.

Verizon Wireless contractor to place:

- (1) 17" x 30" x 18" (Fiber) pull box; and
- (1) Concrete pad mounted meter pedestal.

Southern California Edison is responsible for replacing the existing street light pole with the street light pole shown on the elevation sheet in the zoning drawing. No cost will be borne by the City of Torrance for the pole replacement. Southern California Edison has provided a Letter of Authorization for Verizon Wireless’s subsequent installation of wireless equipment on the pole, which is included in our application package under **Attachment 2.00**.

The volumetric total of the antenna for this project equals approximately 2.42 cubic feet. The volumetric total of all equipment associated with this project totals approximately 16.36 cubic feet. Please see calculations below.

EQUIPMENT	L	W	H	CU.IN.	CU.FT.	QUANTITY	TOTAL CU.FT.
METER PEDESTAL	50.00	16.00	16.00	12800.00	7.41	1.00	7.41
PSU	2.68	12.99	7.04	245.08	0.14	2.00	0.28
RRU	18.50	10.00	28.00	5180.00	3.00	2.00	6.00
DIPLEXER	5.90	1.90	5.90	66.14	0.04	4.00	0.15
2' ANTENNA	$\pi(7.45)^2(24)$			4184.79	2.42	1.00	2.42
DISCONNECT SWITCH	7.84	5.11	4.13	165.46	0.10	1.00	0.10
						<b>TOTAL</b>	<b>16.36</b>

**Painting** (92.39.050 (2)(e))

The equipment is painted a neutral gray color to blend with the concrete surface of the street light pole and to minimize its appearance against the surrounding environment.

**Lighting & Signage** (92.39.050 (f & g))

The equipment will not have any lighting or signage other than that required for public safety and identification, such as is mandated by the FCC and FAA.

**Maintenance** (92.39.020 (g))

The installed equipment will be routinely maintained by Verizon Wireless in accordance with the Site License Agreement language that will be executed with Southern California Edison. The equipment will be labeled with signage indicating its ownership by Verizon Wireless with identifying equipment tags and a phone number to contact Verizon in the event of an emergency.

The installed replacement pole will be maintained by the original pole owner as identified above.

**Street Access and Parking** (92.39.020 (h))

Verizon will have a traffic control plan in place during placement of the equipment. As the equipment will be placed on a pole in the public right of way, Verizon does not anticipate an effect on traffic or parking beyond the construction stage and any scheduled maintenance.

**Radio Frequency** (92.39.060 (b)(5))

The Federal Communications Commission (FCC) requires compliance with its Radio Frequency (RF) emissions safety limits to ensure the safe operation of cellular facilities. Verizon Wireless fully complies with all standards and operates well within the safety guidelines set by the FCC. Additionally, we work with local jurisdictions to ensure all applicable federal, state and local regulations are followed. In general, due to their small size, low wattage and limited coverage,

emissions from small cells are a small fraction of FCC-permitted levels in any publicly accessible area.

The proposed facility will be designed and constructed to meet all applicable government and industry standards for radio frequency emissions. An RF emissions report signed by a radio frequency engineer and prepared pursuant to FCC, Office of Engineering and Technology, Bulletin 65 is attached under **Attachment 6.05**.

### **Site Justification**

Small cells augment Verizon Wireless's capacity in a given area. They consist of a radio, antenna, power and a fiber connection. Small cells are short range mobile cell sites used to complement larger macro cells (or cell towers). Small cells enable the Verizon Wireless network team to strategically add capacity to high traffic areas. Small cell networks add capacity in small, specific areas to improve in-building coverage, voice quality, reliability, and data speeds for local residents, businesses, first responders and visitors using the Verizon Wireless network.

U.S. mobile data usage is projected to grow nearly seven-fold from 2014 through 2019.<sup>1</sup> It's part of Verizon Wireless's network strategy to provide reliable service and to stay ahead of this booming demand for wireless data. For Verizon Wireless, small cells are part of a balanced approach to network capacity. Verizon Wireless will continue to add traditional macro cell sites and expand its 4G XLTE footprint for bandwidth and capacity. Verizon Wireless looks to add small cells in areas ranging from urban centers to residential communities where there is a need for extra capacity to serve customers to stay ahead of the demand for wireless data.

A small cell uses small radios and a single antenna placed on existing utility poles, transit poles, street lights, signs and signal light poles. The coverage area can range from a few hundred feet to upwards of 1,000 ft. depending on topography, capacity needs, and more. This small focused footprint supports 4G LTE-enabled devices, allowing individuals and businesses within the City of Torrance to do things like stream video or share photos on social media during events.

When selecting a small cell attachment site, there are many considerations including the identified coverage area, availability of existing infrastructure within the right of way, height of existing infrastructure, feasibility of using existing infrastructure, and the surrounding zoning district (industrial and commercial prioritized, if possible).

Choosing an effective project site required looking for potential candidates within a small area provided by our radio frequency engineers to identify the coverage area they wish to address. This search area is quite small due to the nature of the project, consisting of the area within approximately 250 feet of a provided coordinate location. With the search area identified, the next step was to determine what types of existing infrastructure were available in this area. The search area was in a residential area, with concrete street lights as the only available attachment

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<sup>1</sup> Cisco VNI Mobile Forecast Highlights, 2014 – 2019, October 2015

Verizon Wireless  
SCL Torrance 7

options. The project site chosen was an unencumbered pole, nearest to the ideal coordinates provided by the RF engineers, with a low risk of RF interference.

Verizon Wireless's RF engineers have identified this location as necessary and appropriate to provide network densification. When selecting this location, Verizon Wireless's RF engineers looked at traffic patterns, geographic topography of the surrounding area, and population density when determining that this location was necessary to provide adequate network coverage to serve the City of Torrance's residents and businesses. The proposed site was chosen because of the coverage afforded by its strategic location and the lack of obstructions in the area to allow a signal to penetrate the geographical service area. The project will be able to provide connectivity to neighboring sites within the local network.



Verizon Wireless  
SCL Torrance 7

**Attachment 6.00**

6.01-6.04: Where a licensee intends to provide radio frequency geographic coverage to a defined area from the Project, the coverage maps and information requested in Section 6 are required attachments. All others proceed to 7.00.

Please see attached maps as well as letter from Verizon Wireless legal counsel entitled “Verizon Wireless Statement Regarding Coverage Maps Wireless Facilities in the Right-of-Way” dated November 19, 2018.

**Verizon Wireless  
Statement Regarding Coverage Maps  
Wireless Facilities in the Right-of-Way**

**City of Torrance Applications  
WTC17-00026, WTC17-00027, WTC17-00028, WTC17-00031,  
WTC17-00032, WTC17-00033, WTC17-00034 and WTC18-00014**

**November 19, 2018**

Verizon Wireless is providing coverage maps to the City of Torrance, under protest, to complete its applications for eight small cell wireless facilities in the right-of-way (the “Applications”). The coverage maps depict the predicted coverage of individual small cell facilities, absent the coverage of existing Verizon Wireless facilities in the vicinity, as requested in Item 6.03 of the City’s *Supplemental Technical Information Report for Wireless Telecommunication Facilities*. Attachments 6.02 and 6.04 are also included for the Applications.

As explained in our letter to City Attorney Patrick Sullivan of April 5, 2018, the City cannot require Verizon Wireless to provide individual coverage maps to process and approve applications for wireless facilities in the right-of-way. This is because California Public Utilities Code Section 7901 provides a statewide franchise for telephone companies to place their equipment in the public rights-of-way. Because of this statewide right, the City cannot require a demonstration of need for right-of-way facilities. We also explained that the scope of “time, place, and manner” regulation under Public Utilities Code Section 7901.1 is limited. To that end, we expect that the City will rely on coverage maps for the Applications only if the City has identified an aesthetically-preferred alternative in the right-of-way.

Verizon Wireless provides the coverage maps for the Applications as a courtesy due to the extended period of time that the Applications have been pending before the City. However, Verizon Wireless will decline to provide coverage maps for future applications for wireless facilities in the right-of-way. Not only does Public Utilities Code Section 7901 preempt the requirement to provide coverage maps or demonstrate the need for right-of-way facilities, but the Federal Communications Commission (the “FCC”) has determined that coverage maps cannot be required for approval of small cells.

In an order to be effective January 14, 2019, the FCC found that local regulations prohibit or have the effect of prohibiting service under the federal Telecommunications Act if they materially inhibit “densifying a wireless network, introducing new services, or otherwise improving service capabilities.” *See* 47 U.S.C. § 253; *see also Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, Declaratory Ruling and Third Report and Order, FCC 18-133 ¶ 37* (September 27, 2018). This includes placement of small cells that provide expanded and new services. The FCC disagreed that the Telecommunications Act limits the prohibition standard to “protecting

only against coverage gaps or the like.” *Id.*, ¶ 38. The FCC also determined that the appropriate criteria for approving qualifying small cells are reasonable, non-discriminatory and objective aesthetic standards that are published in advance. *Id.*, ¶ 86. Such aesthetic criteria do not involve demonstration of need for a small cell. Specifically, the FCC rejected any “coverage gap-based analytical approaches” to the review of small cell applications. *Id.*, ¶ 40.

The submitted coverage maps fulfill all application requirements requested to be submitted by Notices Of Incomplete received from the City for the Applications. Verizon Wireless will not submit further information with respect to these Applications, and requests that all Applications be processed and final action taken by the expiration of the FCC Shot Clock time period calculated for each Application to be no later than March 4, 2019. *See In Re: Petition for Declaratory Ruling to Clarify Provisions of Section 332(c)(7)(B) to Ensure Timely Siting Review, Etc.*, FCC 09-99 (FCC November 18, 2009)

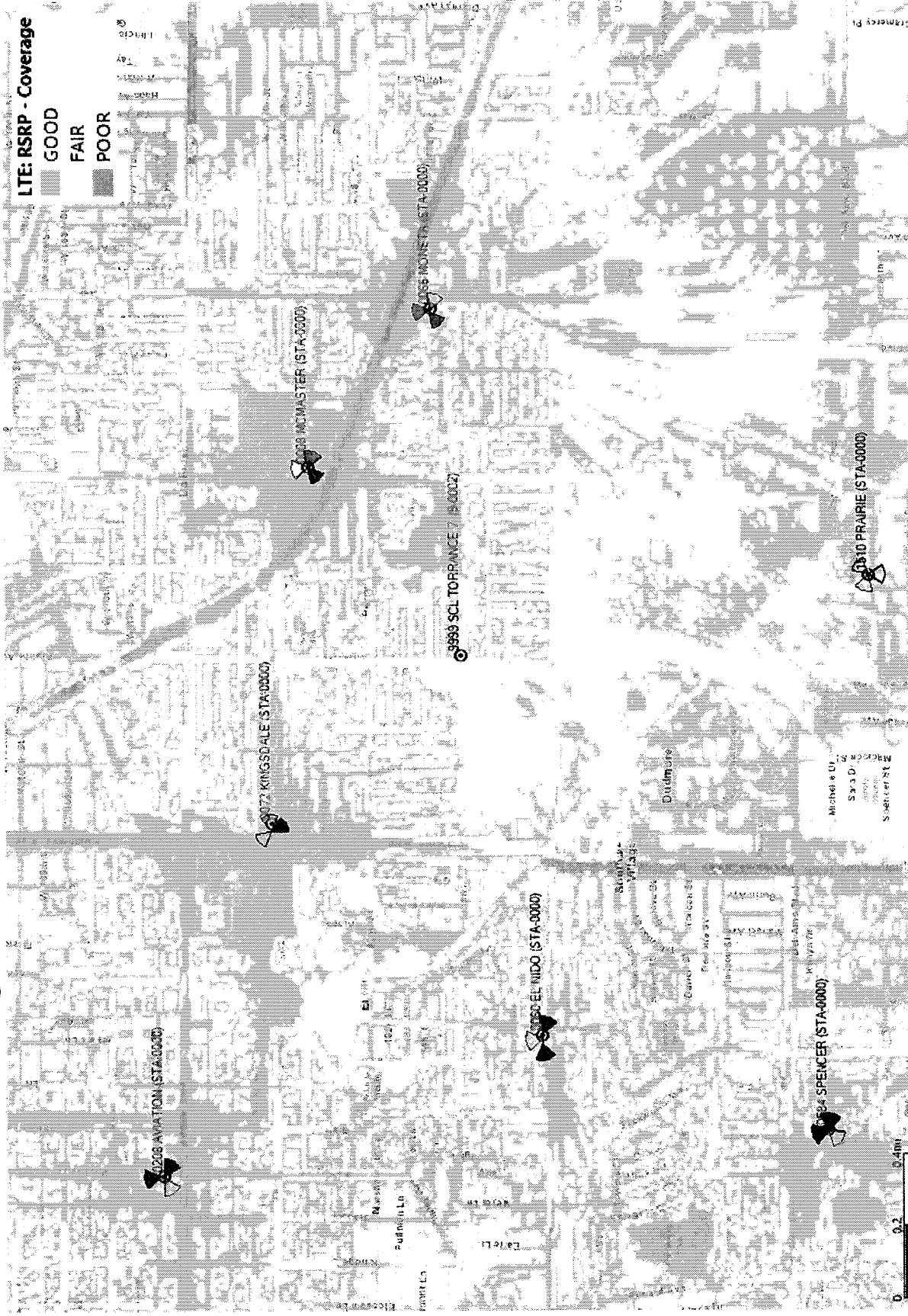
# **Sci Torrance 7 Propagation Maps**

**November 16, 2018**

**verizon**<sup>✓</sup>



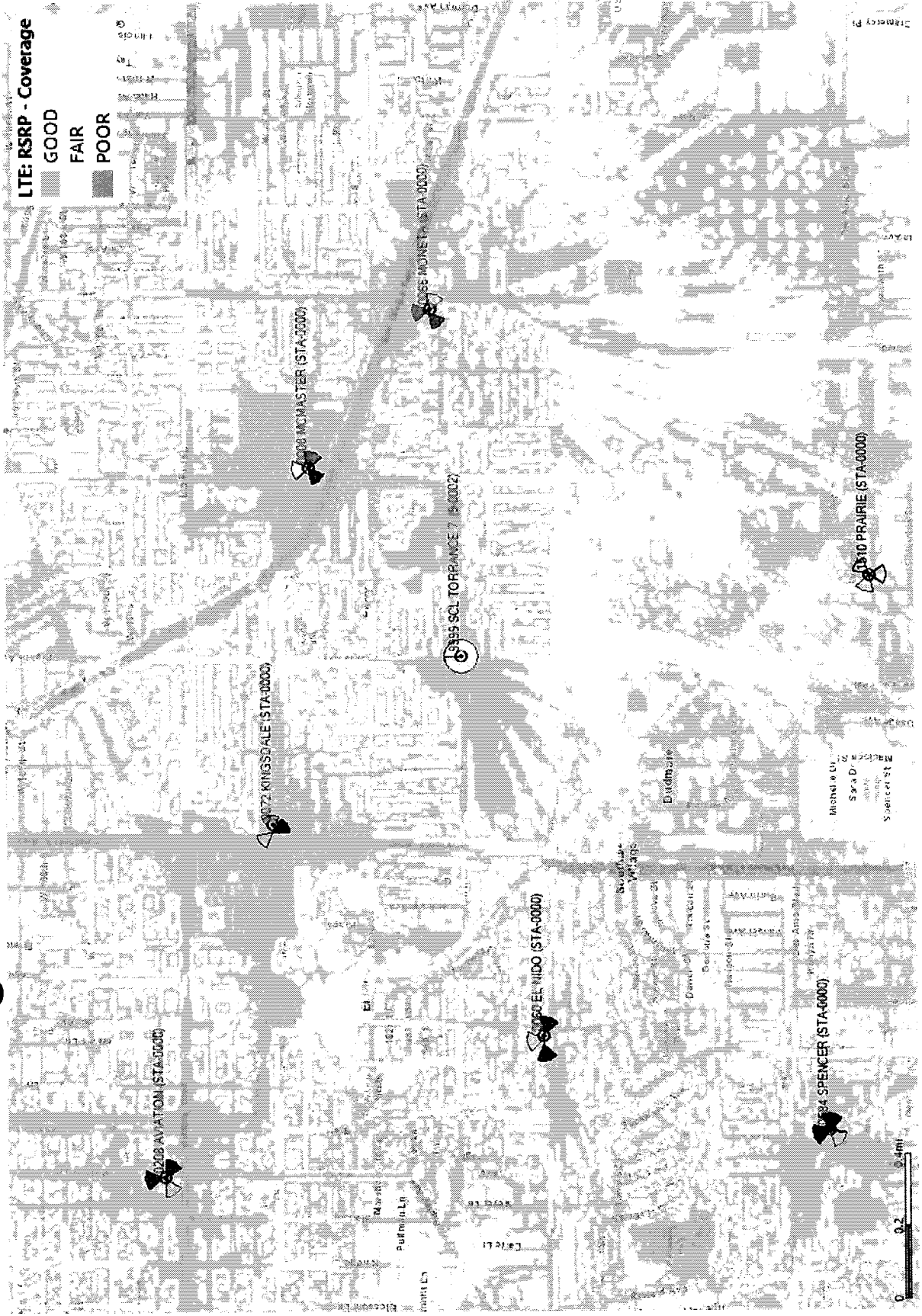
# Verizon Coverage without Scl Torrance 7



Confidential and proprietary materials for authorized Verizon personnel and outside agencies only. Use, disclosure or distribution of this material is not permitted to any unauthorized persons or third parties except by written agreement.



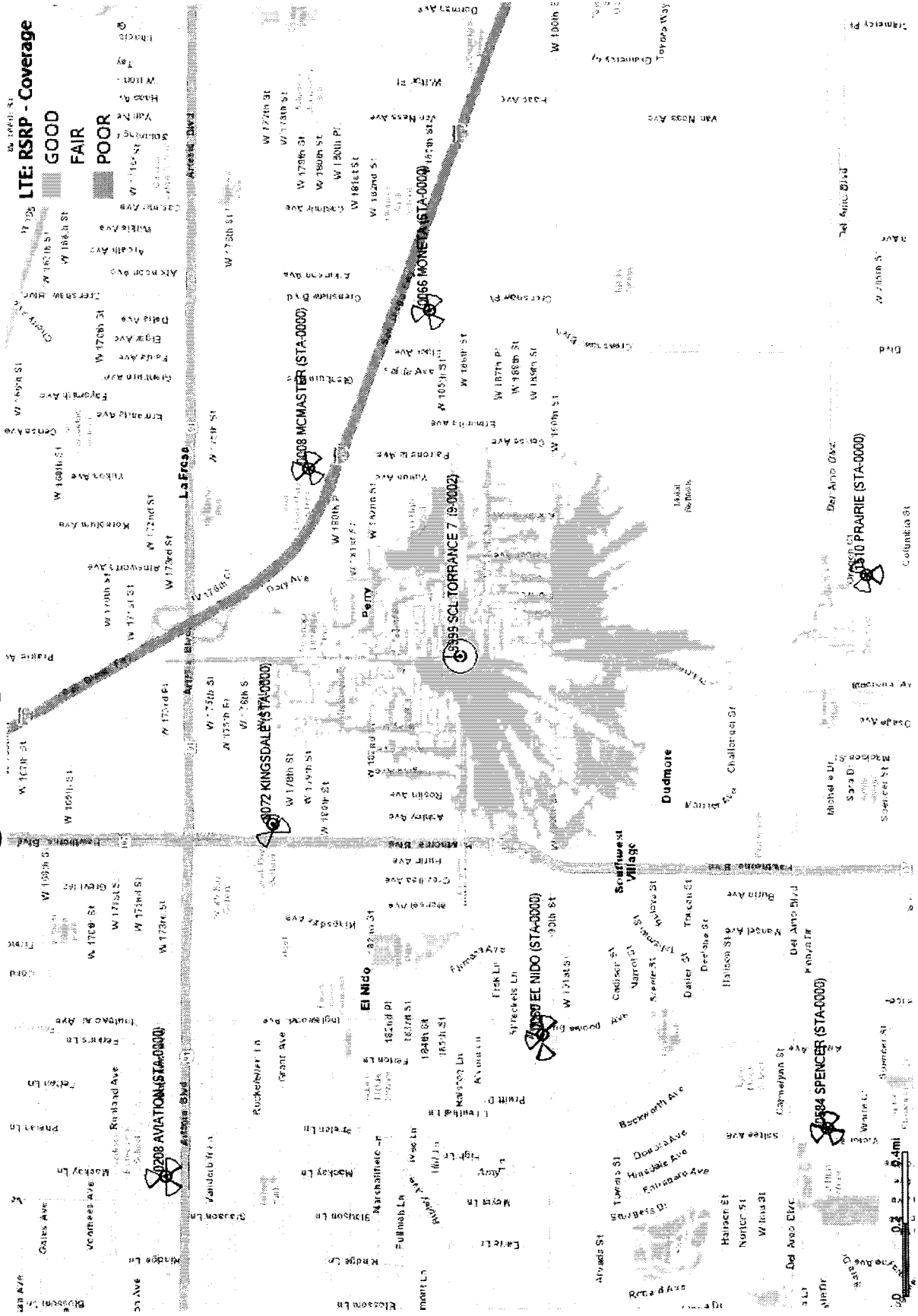
# Verizon Coverage with Scl Torrance 7



Confidential and proprietary materials for authorized Verizon personnel and outside agencies only. Use, disclosure or distribution of this material is not permitted to any unauthorized persons or third parties except by written agreement.



# Scl Torrance 7 Coverage Only



Confidential and proprietary materials for authorized Verizon personnel and outside agencies only. Use, disclosure or distribution of this material is not permitted to any unauthorized persons or third parties except by written agreement.



**Attachment 7.00**

7.01: Pre-project Photographs (below) and Photo Simulations (attached)



**View 1**



**View 2**



**View 3**



**View 4**



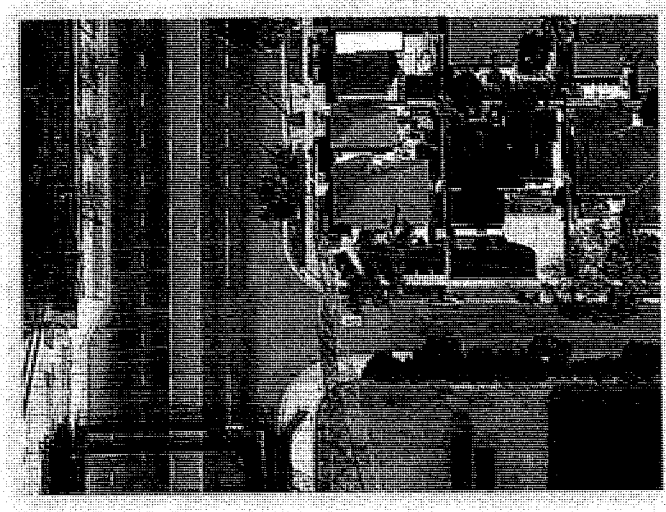
**View 5**

# Radio Frequency - Electromagnetic Energy (RF-EME) Jurisdictional Report

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Site No. 432406  
SCL Torrance 7  
F/O 18514 Prairie Avenue  
Torrance, California 90504  
Los Angeles County  
33° 51' 43.21" N, -118° 20' 36.95" W NAD83

EBI Project No. 6217004273  
October 9, 2017



Prepared for:

Verizon Wireless  
c/o J5 Infrastructure Partners  
2030 Main Street, Suite 1300  
Irvine, California 92614

Prepared by:

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

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## EXECUTIVE SUMMARY

### Purpose of Report

EnviroBusiness Inc. (dba EBI Consulting) has been contracted by Verizon Wireless to conduct radio frequency electromagnetic (RF-EME) modeling for Verizon Site 432406 to be located on a light pole in front of 18514 Prairie Avenue in Torrance, California to determine RF-EME exposure levels from proposed Verizon wireless communications equipment at this site. As described in greater detail in Section 2.0 of this report, the Federal Communications Commission (FCC) has developed Maximum Permissible Exposure (MPE) Limits for general public exposures and occupational exposures. This report summarizes the results of RF-EME modeling in relation to relevant FCC RF-EME compliance standards for limiting human exposure to RF-EME fields.

### 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.

As presented in the sections below, based on worst-case predictive modeling, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed antenna that exceed the FCC's occupational or general public exposure limits at this site. Additionally, there are areas where workers who may be elevated above the ground may be exposed to power densities greater than the occupational limits. Therefore, workers should be informed about the presence and locations of antennas and their associated fields.

At the nearest walking/working surfaces to the Verizon antenna, the maximum power density generated by the Verizon antenna is approximately **7.10** percent of the FCC's general public limit (**1.42** percent of the FCC's occupational limit).

The composite exposure level from all carriers on this site is approximately **7.10** percent of the FCC's general public limit (**1.42** percent of the FCC's occupational limit) at the nearest walking/working surface to each antenna.

Recommended control measures are outlined in Section 5.0 and within a Site Safety Plan (attached); this plan includes instructions to shut down and lockout/tagout this wireless equipment in accordance with Verizon's standard operating protocol.



## 1.0 INTRODUCTION

Radio frequency waves are electromagnetic waves from the portion of the electromagnetic spectrum at frequencies lower than visible light and microwaves. The wavelengths of radio waves range from thousands of meters to around 30 centimeters. These wavelengths correspond to frequencies as low as 3 cycles per seconds (or hertz [Hz]) to as high as one gigahertz (one billion cycles per second).

Personal Communication (PCS) facilities used by Verizon in this area operate within a frequency range of 1900-2100 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 a distance 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 in areas in the immediate vicinity of the antennas.

MPE limits do not represent levels where a health risk exists, since they 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.

## 2.0 SITE DESCRIPTION

This project site includes one (1) wireless telecommunication antenna on a light pole located in front of 18514 Prairie Avenue in Torrance, California.

Verizon Antenna Information (proposed Configuration)									
Antenna# and Model	Frequency (MHz)	# of Transmitters	Transmit Power (Watts)	Azimuth	Gain (dBd)	Feet above Ground (CL)	X	Y	Z
A1 Amphenol CUUT360X06Fx0z0	1900	2	40	Omni	4.15	31.5	30	30	30.5
	2100	2	40		7.35				
	2100	2	40		7.35				

The FCC guidelines incorporate two separate tiers of exposure limits that are based upon occupational/controlled exposure limits (for workers) and general population/uncontrolled exposure limits for members of the general public that may be exposed to antenna fields. While access to this site is considered uncontrolled, the analysis has considered exposures with respect to both controlled and uncontrolled limits as an untrained worker may access adjacent rooftop locations. Additional information regarding controlled/uncontrolled exposure limits is provided in Section 3.0. Appendix B presents a site safety plan that provides a plan view of the light pole with antenna locations.

### 3.0 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.

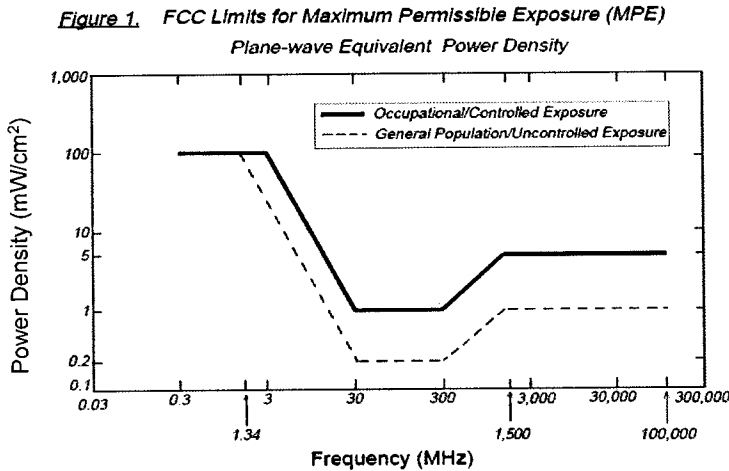
Table I and Figure I (below), which are included within the FCC's OET Bulletin 65, summarize the MPE limits for RF emissions. These limits are designed to provide a substantial margin of safety. They vary by frequency to take into account the different types of equipment that may be in operation at a 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 Verizon equipment operating at 700 MHz or 850 MHz, the FCC's occupational MPE is 2.83 mW/cm<sup>2</sup> and an uncontrolled MPE of 0.57 mW/cm<sup>2</sup>. These limits are considered protective of these populations.

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

f = Frequency in (MHz)

\* Plane-wave equivalent power density



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 Verizon in this area operate within a frequency range of 1900-2100 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.

#### **4.0 WORST-CASE PREDICTIVE MODELING**

EBI has performed theoretical modeling using RoofView® software to estimate the worst-case power density at the site ground-level and nearby rooftops resulting from operation of the antenna. RoofView® is a widely-used predictive modeling program that has been developed by Richard Tell Associates to predict both near field and far field RF power density values for roof-top and tower telecommunications sites produced by vertical collinear antennas that are typically used in the cellular, PCS, paging and other communications services. The models utilize several operational specifications for different types of antennas to produce a plot of spatially-averaged power densities that can be expressed as a percentage of the applicable exposure limit.

The modeling is based on worst-case assumptions for the number of antennas and transmitter power. The modeling assumes a maximum 6 radio configuration for Sector A, with a power level of 46 dBm (40 watts) per transmitter for 1900 and 2100 frequencies, in order to provide a worst-case evaluation of predicted MPE levels. The assumptions used in the modeling are based upon information provided by Verizon, and information gathered from other sources. The parameters used for the modeling are summarized in the RoofView® export files presented in Appendix C.

There are no other wireless carriers with equipment installed at this site.

Based on worst-case predictive modeling, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed Verizon antenna that exceed the FCC's occupational or general public exposure limits at this site. At the nearest walking/working surfaces to the Verizon antenna, the maximum power density generated by the Verizon antenna is approximately 7.10 percent of the FCC's general public limit (1.42 percent of the FCC's occupational limit). The composite exposure level from all carriers on this site is approximately 7.10 percent of the FCC's general public limit (1.42 percent of the FCC's occupational limit) at the nearest walking/working surface to each antenna.

The Site Safety Plan also presents areas where the Verizon Wireless antenna contributes greater than 5% of the applicable MPE limit for a site. 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.

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

## **5.0 MITIGATION/SITE CONTROL OPTIONS**

EBI's modeling indicates that there are no areas in front of the Verizon antenna that exceed the FCC standards for occupational or general public exposure. All exposures above the FCC's safe limits require that individuals be elevated above the ground. In order to alert people accessing the light pole, yellow caution signs are recommended for installation on opposite sides of the pole 8 feet below the antenna (22.5 feet above ground level).

There are no barriers recommended at this site.

These protocols and recommended control measures have been summarized and included with a graphic representation of the antenna and associated signage and control areas in a RF-EME Site Safety Plan, which is included as Appendix B. Individuals and workers accessing the light pole should be provided with a copy of the attached Site Safety Plan, made aware of the posted signage, and signify their understanding of the Site Safety Plan.

Implementation of the signage recommended in the Site Safety Plan and in this report will bring this site into compliance with the FCC's rules and regulations.

## **6.0 SUMMARY AND CONCLUSIONS**

EBI has prepared a Radiofrequency – Electromagnetic Energy (RF-EME) Compliance Report for telecommunications equipment installed by Verizon Site Number 432406 to be located on a light pole in front of 18514 Prairie Avenue in Torrance, California to determine worst-case predicted RF-EME exposure levels from wireless communications equipment installed at this site. This report summarizes the results of RF-EME modeling in relation to relevant Federal Communications Commission (FCC) RF-EME compliance standards for limiting human exposure to RF-EME fields.

As presented in the sections above, based on the FCC criteria, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed antenna that exceed the FCC's occupational or general public exposure limits at this site. Workers should be informed about the presence and locations of antennas and their associated fields. Recommended control measures are outlined in Section 5.0 and within a Site Safety Plan (attached); this plan includes procedures to shut down and lockout/tagout this wireless equipment in accordance with Verizon's standard operating protocol.

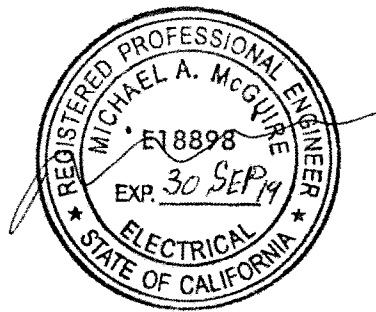
## **7.0 LIMITATIONS**

This report was prepared for the use of Verizon Wireless. 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.

# **Appendix A**

## **Certifications**

Reviewed and Approved by:



sealed 10oct2017

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Michael McGuire  
Electrical 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, Jonathan Ilgenfritz, state that:

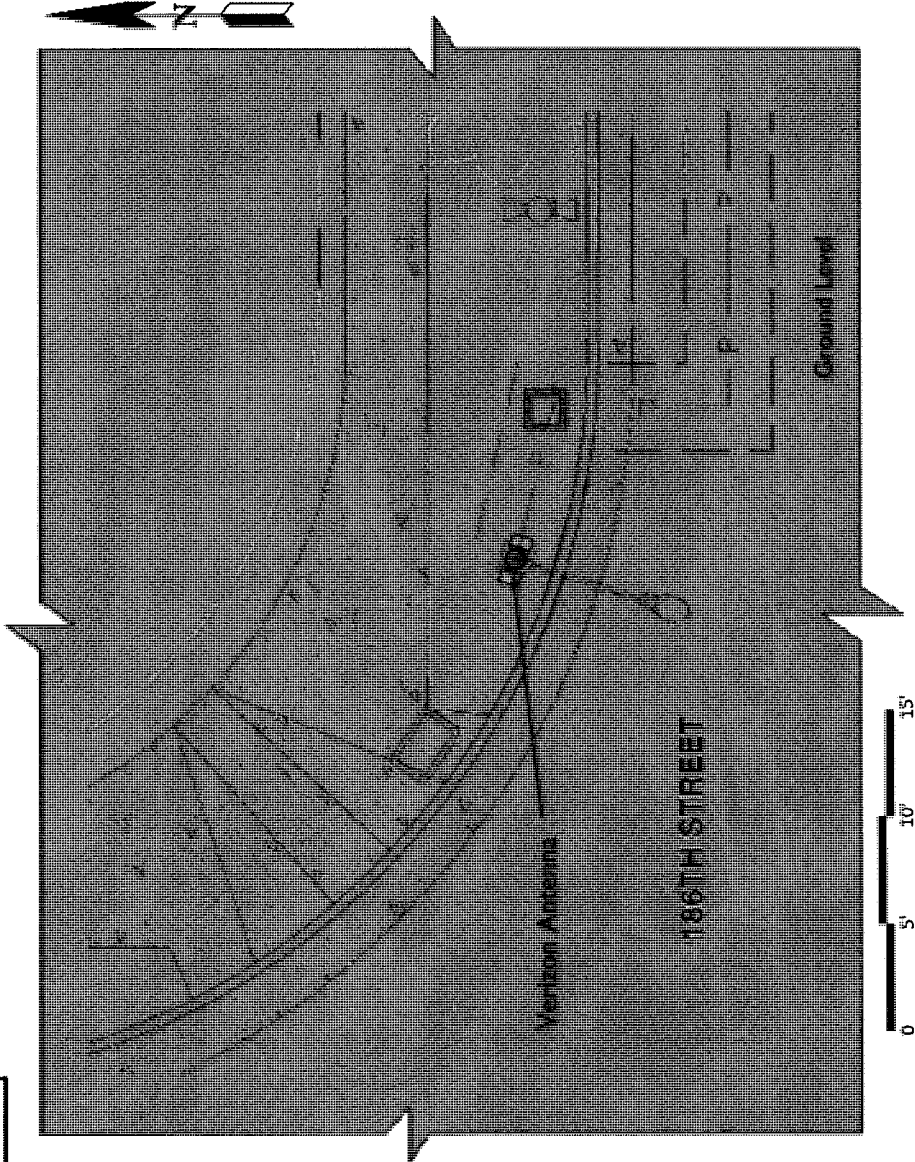
- I am an employee of EnviroBusiness Inc. (d/b/a EBI Consulting), which provides RF-EME safety and compliance services to the wireless communications industry.
- I have successfully completed RF-EME safety training, and I am aware of the potential hazards from RF-EME and would be classified "occupational" 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.



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**Appendix B**  
**Radio Frequency Electromagnetic Energy**  
**Safety / Signage Plans**

% FCC Public Exposure Limit	
	Exposure Level $\geq$ 5,000
	500 < Exposure Level $\leq$ 5,000
	100 < Exposure Level $\leq$ 500
	Exposure Level $\leq$ 100



Verizon Antennas

**Roofview: Composite Exposure Levels**  
 Facility Operator: Verizon Wireless  
 Site Name: SCL Torrance 7  
 Verizon Site Number: 432406  
 Report Date: 10-09-17



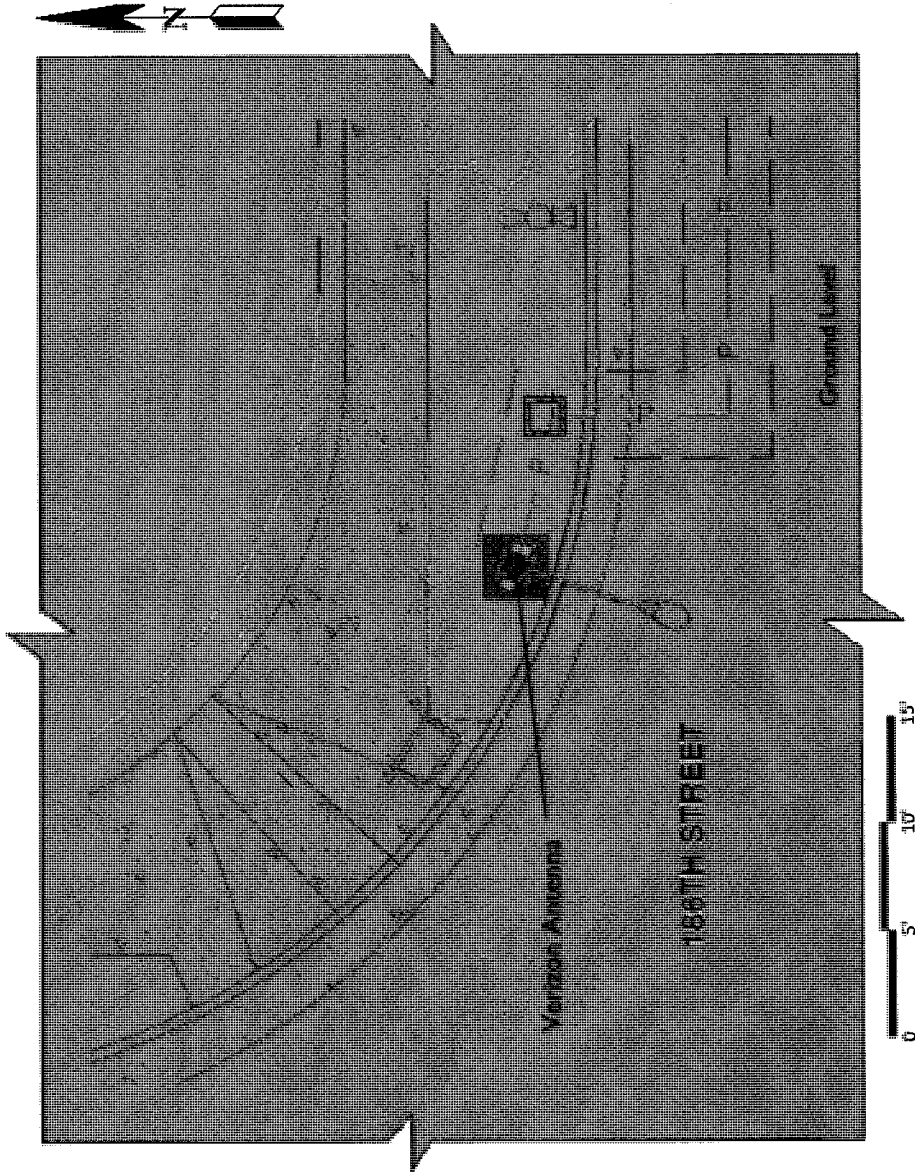
**% FCC Public Exposure Limit**



Exposure Level > 5



Exposure Level ≤ 5



 Verizon Antennas

**Roofview: Verizon Exposure Levels**

Facility Operator: Verizon Wireless

Site Name: SCL Torrance 7

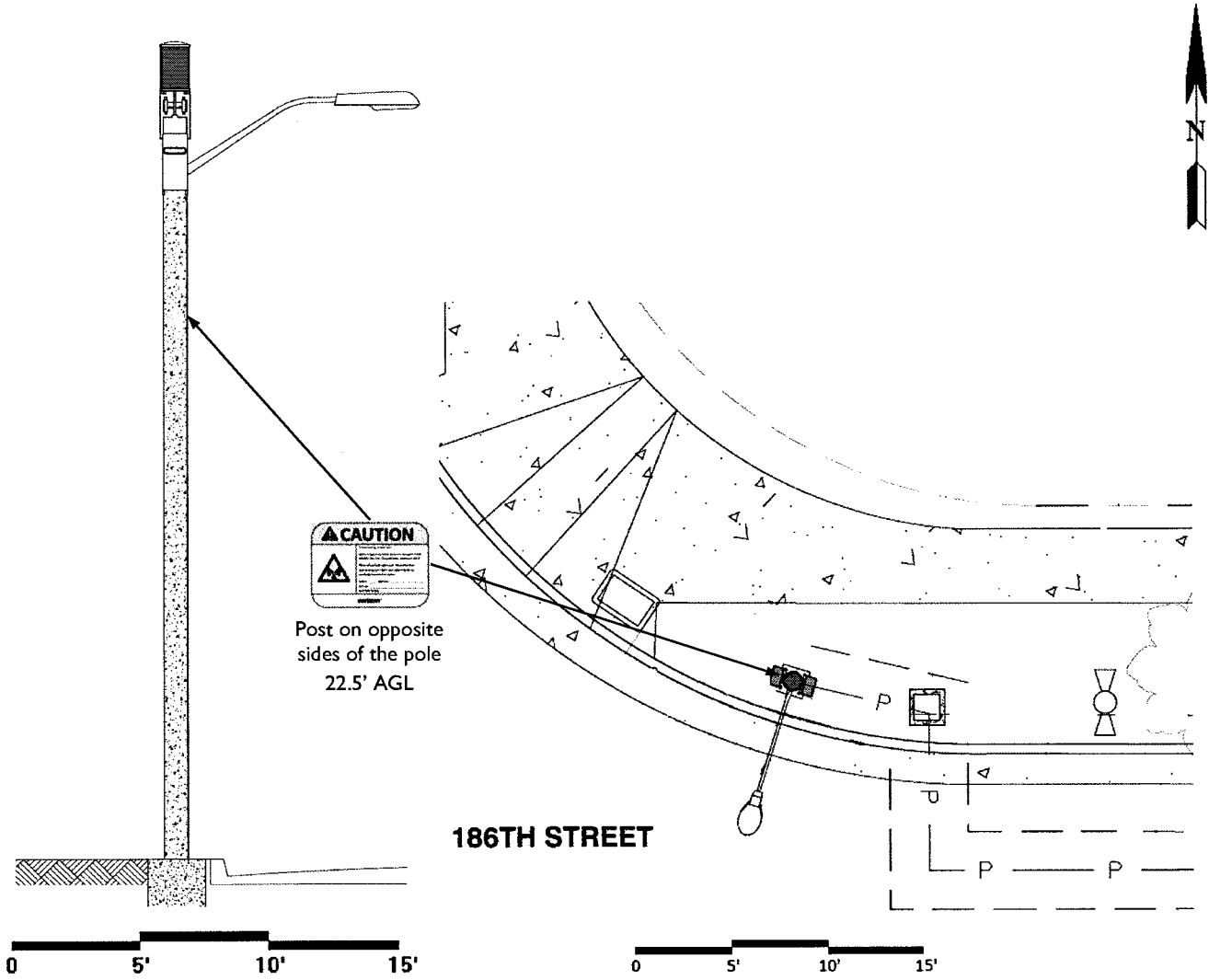
Verizon Site Number: 432406

Report Date: 10-09-17




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

# Verizon Signage Plan



## Verizon Antennas

Sign Image	Description	Posting Instructions	Required Signage
	<b>Yellow Caution Sign</b> Used to alert individuals that they are entering an area where the power density emitted from transmitting antennas may exceed the FCC's maximum permissible exposure limit for the general public and the occupational exposure limit.	Securely post on opposite sides of the light pole 8 feet below the antenna (22.5 feet above ground level).	2 signs posted below the antenna.

**Appendix C**  
**Roofview® Export File**

List Of Areas  
SAE581:SETS200

Definition		Roof Max X	Roof Max Y	Map Max X	Map Max Y	Offset X	Offset Y	Number of envelope													
120	120	140	140	20	20	1	1	SAE581:SETS200													
Site Data		Standard Method	Uptime (Mhz)	Scale	Fact	Low Thr	Mid Thr	High Thr	Hi Color	Over Color	Ap Ht	Method									
4	4	2	1	100	100	1	500	5000	2	3	1.5	1									
Antenna Data		It is advisable to provide an ID (ant 1) for all antennas																			
ID	Name	Freq (MHz)	Trans Power	Trans Count	Coax Len	Coax Type	Other Loss	Input Power	Calc Power	Mfg	Model	X (ft)	Y (ft)	Z (ft)	Type	Aper (ft)	dBd Gain	BWdth Pt.Dir	Uptime Profile	ON flag	
VZW A1	LTE PCS	1900	40	2	0	0	0.5	71.30008	71.30008	Amphenol	CUUT360X06Fx0z0	30	30	30	30.5	2	4.15	Ommi	0	ON*	
VZW A1	LTE AWS	2100	40	2	0	0	0.5	71.30008	71.30008	Amphenol	CUUT360X06Fx0z0	30	30	30	30.5	2	7.35	Ommi	0	ON*	
VZW A1	LTE AWS3	2100	40	2	0	0	0.5	71.30008	71.30008	Amphenol	CUUT360X06Fx0z0	30	30	30	30.5	2	7.35	Ommi	0	ON*	
Site Data																					
Sym	Map Mark	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																		

Code Requirements and Conditions, if approved:

The following Code Requirements are applicable to the project, if approved:

- A Construction and Excavation Permit (C&E Permit) is required from the Community Development Department, Engineering Permits and Records Division, for any work in the public right-of-way on Delos Drive.
- The traffic control plan(s) shall comply with the MUTCD manual.
- Must comply with TMC Section 92.39.070 regarding submission of RF compliance report.
- Must comply with TMC Section 92.39.090 regarding discontinued use or abandonment of facility.

Recommended Conditions, if Approved:

1. That if this approval is not implemented within one year after the approval, it shall expire and become null and void unless extended by the Community Development Director for an additional period, as provided for in Section 92.27.1 of the Torrance Municipal Code; (Planning)
2. That all requirements provided under Ordinance No. 3058, Section 92.2.8, Satellite Antennas, of the Torrance Municipal Code, Division 9, shall be met prior to the issuance of building permits and/or encroachment permits; (Planning)
3. That the applicant shall paint, color or finish all the pole-mounted equipment to match the color of the underlying light pole. The color, texture and material of the replacement pole shall be consistent with the surrounding street light poles in nearby vicinity; (Planning)
4. That the applicant shall route all cables, wires, jumpers and connectors internally through the pole and or conceal them within the antenna or equipment shrouds. In addition, the applicant acknowledges and agrees that a material consideration of the City's approval of this permit is that the pole-top antenna and shroud are approximately the same width as the pole, which creates a streamlined design and concealment element that effectively blends the antenna with the underlying pole; (Planning)
5. That the applicant shall install, and at all times maintain in good condition, an "RF Notice" sign and network operations center sign adjacent to the bottom of the MMS shroud. The signs required in this condition must be placed in a location where they are clearly visible to a person when he or she approaches the shroud; (Planning)
6. That the applicant shall ensure that all RF signage complies with FCC OET Bulletin 65 or ANSI C95.2 for color, symbol and content conventions. All such signage shall provide a working local or toll-free telephone number to its network operations center that reaches a live person who can exert transmitter power-down control over this site as required by the FCC; (Planning)



7. That the proposed ground-mounted meter pedestal shall be eliminated and that the applicant shall inquire about a "Wireless Technology Rate" (WTR) service connection through SCE or relocate the meter pedestal to either below-grade or inside the pole; (Planning)
8. That if an octagonal pole design is approved by SCE prior to plan check submittal, that design shall be implemented at this location to the satisfaction of the Community Development Director; (Planning)
9. That if the temporary use of generators is required for the operation of the site, they must meet Torrance Municipal Code requirements for noise and placed on private property to the satisfaction of the Community Development Director; (Environmental)
10. That all proposed SCE power lines shall be installed underground; (Engineering)
11. That the proposed equipment shall receive electrical power from the SCE wires already attached to the utility pole on which the proposed equipment is to be mounted; (Engineering)
12. That all the signs mounted on existing light pole shall be transferred to the proposed light pole; (Engineering)
13. That SCE approval for conduit layout between the power manhole and the proposed light pole is required prior to the issuance of the Construction and Excavation Permit; (Engineering)
14. That the applicant shall obtain an Encroachment Permit from the Engineering Division for any work (proposed or required by the City) in the public right-of way on Prairie Avenue and 186<sup>th</sup> Street; (Engineering)
15. That the applicant shall remove, or cause to be removed, the existing street light pole within 60 days of commencing on-air operations. The applicant shall also restore, or cause to be restored, the foundation and ground space around the removed pole foundation to its original condition. Such removal and restoration work shall be subject to the satisfaction of the Engineering Division; (Engineering)
16. That at the time of plan check submittal the applicant shall provide an underground utility and infrastructure analysis to the satisfaction of the Engineering Division; (Engineering)
17. That the applicant shall remove the existing street light from existing street pole and return to SCE. If existing fixture is LED, applicant shall pay SCE the balance of Energy Efficiency Premium Charge per Section 4.2 of the Schedule LS-1 Option E Agreement such that ongoing street lighting costs paid by the City for the new street light are at the LS-1 Base LED rate and not at the LS-1 Option E rate; (Engineering)

18. That the existing light pole and entire footing of the existing light pole shall be removed; (Engineering)
19. That the contractor shall coordinate with SCE to replace the street light in the public right-of-way; and (Engineering)
20. That a minimum 10' vertical clearance above public sidewalk surface for proposed antenna and equipment mounted on existing utility pole and a minimum 16' vertical clearance above sidewalk surface for proposed antenna and equipment within 2' or less horizontally of the public street shall be maintained; (Engineering)

DATE: January 3, 2019  
TO: Telecommunications Committee  
FROM: Planning Division  
SUBJECT: **WIRELESS TELECOM FACILITY (WTC18-00005) – CROWN CASTLE  
NG WEST LLC**

A request for approval of a Telecom Permit to allow the installation of a small cell antenna and support equipment attached to a replacement concrete street light pole (Pole ID #4171527E) in the public right-of-way adjacent to 2720 W. Carson Street in the R-2 Zone. This project is Categorically Exempt from CEQA per Guidelines Section 15301 – Existing Facilities.

Applicant: Crown Castle NG West LLC  
Case No: WTC18-00005  
Location: 2720 Carson Street (ROW)  
Zoning: R-2: Two Family Residential

The subject request is for the installation of a wireless site in the public right-of-way adjacent to 2720 W. Carson Street. Per Torrance Municipal Code 92.39.060(1), such requests within the public right-of-way adjacent to residentially zoned properties are reviewed by the Telecommunications Committee and requires notification to property owners within 300 feet of the proposed location. In compliance with prior City Council directives, on December 28, 2018, staff mailed notices to property owners within 500' radius and posted a notification to the subject pole (Attachment #1).

The proposal involves the installation of an omni-directional antenna and three remote radio units (RRU) within a radome on a new 29.25' street light pole and the removal of an existing 29.25' street light pole. The radome is designed to attach to the top of the new street light pole.

The proposed radome is 5.5' in height and 2.3' in diameter. The radome is proposed to be mounted at 29.25' above ground level with a maximum height of 34.75'. A 6' aluminum elliptical luminaire is proposed to be mounted at 27.25' with an overall height of 30'. The submitted plans indicate the facility will receive fiber and power underground. Two 2'x3' hand vaults are proposed within the sidewalk at approximately 3' away from the base of the street light pole and 2' setback from the curb. No additional cabinets are required as this configuration eliminates the need for above ground appurtenances.

The purpose of the proposed site, according to the applicant, is to "Increase the existing RF signal level in an existing coverage area" for AT&Ts network. The target area described in the RF Coverage maps is the surrounding residential area along Carson Street, between Sonoma Street to the north and Monterey Street to the south and

between Greenwood Avenue to the east and Juniper Avenue to the west. The proposed antenna would propagate signal omni-directionally. The application was reviewed by the City's telecom consultant, Telecom Law Firm PC, multiple times for technical and regulatory issues. Staff notes that the applicant has submitted the remaining documentation that is mentioned in the last memo dated October 31, 2018.

The applicant has submitted an RF compliance report (included as part of Attachment #3) that evaluates the proposed facility's planned compliance with FCC Guidelines. Staff notes that the City cannot impose additional requirements with respect to FCC requirements with the exception of requesting verification that the site is operating in compliance. If approved, per TMC92.39.070 a radio frequency and compliance radiation report is required to be submitted within 30 days after installation of the facility.

The proposed facility utilizing a new concrete street light pole falls into a location that requires a special review by the Telecommunications Committee as it is in the right-of-way adjacent to a residential district. Per the Applicant's submittals, the site identified will provide the coverage needed to fulfill the applicant's objectives.

In order to recommend Approval of this Telecom Permit, the following findings must be made per 92.39.040(b)(3):

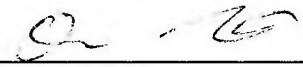
- i. Other locations that do not require special approval under this Section 92.39.040(B) are either not available or not feasible; and
- ii. Establishment of the facility at the requested location is necessary to provide service; and
- iii. Lack of such a facility would result in a prohibition of service;

Staff notes that the proposal meets the first finding as there are no other tall non-residential structures in the vicinity which may lend themselves to a small cell installation that is on the prioritized location per the City's code. The applicant proposed three alternate locations that met coverage objectives; however, they require the placement of or removal of landscaping within the public right of way, or are no less intrusive than the proposed location. In the judgement of staff, however, not all of the necessary findings can be made. Per the applicant's documentation and the City's consultant confirmation, there currently is AT&T service within the coverage area and as such, establishment of the facility is not necessary to provide service and lack of this facility does not result in a prohibition of service.

Although the proposed small cell facility has been designed to provide increased capacity while simultaneously providing a less visually intrusive structure, under the narrow purview of the code, staff cannot make the findings per TMC92.39.040(b)(3) and recommends denial of the request. Should the Committee wish to approve the facility, recommended conditions and code requirements have been attached for your review (Attachment #4).

**PROJECT RECOMMENDATION:** Denial

Prepared by,

  
\_\_\_\_\_  
for: Aaron Whiting  
Planning Assistant

Recommended by,

  
\_\_\_\_\_  
for: Danny Santana  
Planning Manager

Attachments:

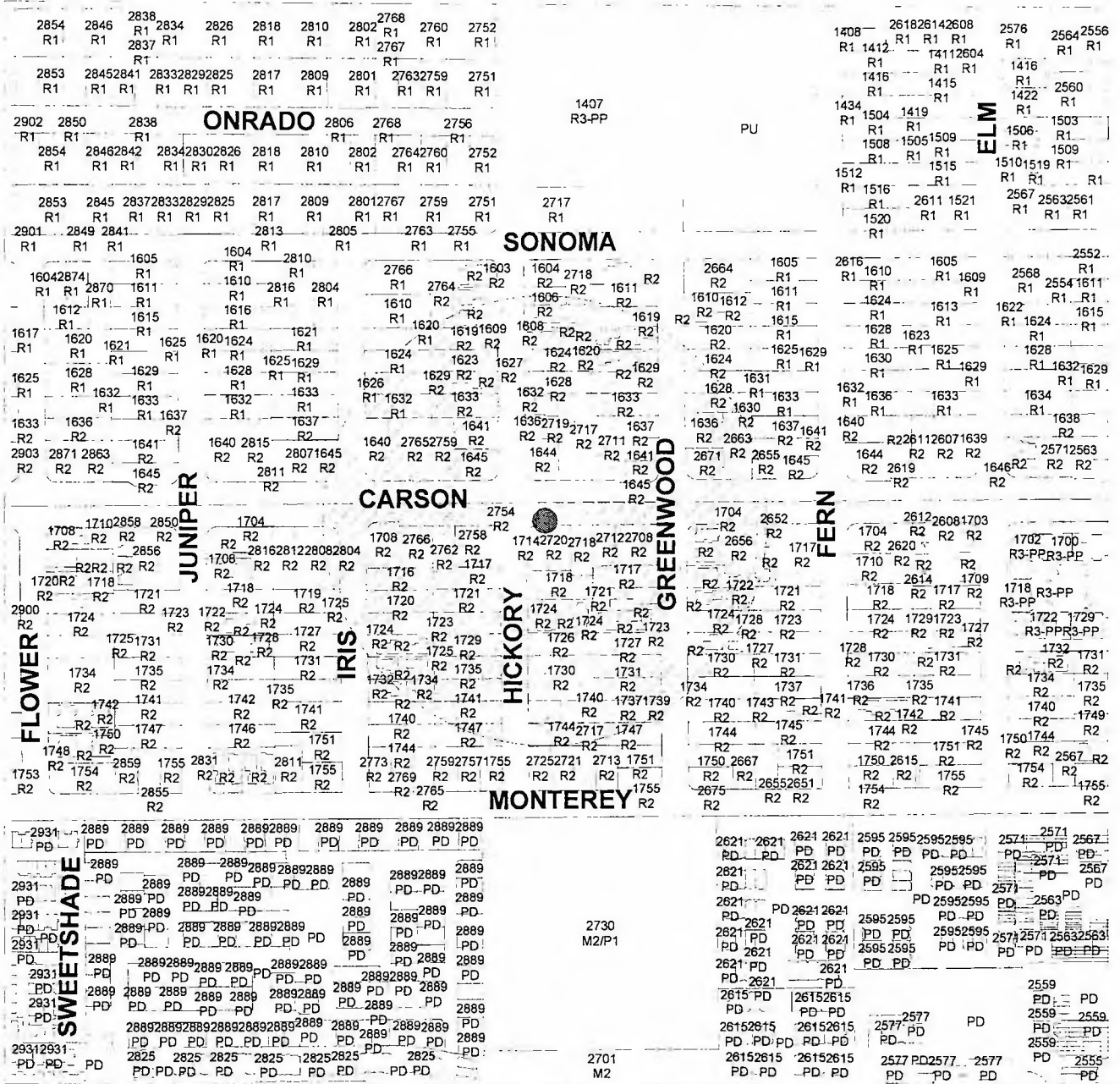
1. Notification Map and Posting
2. Telecom Law Firm Memorandums
3. Supplemental Technical Information Report and Documentation
4. Recommended Conditions and Code Requirements, if approved
6. Plans/Photo Simulations (Limited Distribution)

\_\_\_\_\_  
This request for a Telecom Permit (WTC18-00005) is      APPROVED      DENIED  
per Ordinance No. 3561, Section 92.39.060, Satellite Antennas, of the Torrance Municipal  
Code, Division 9.

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Felipe Segovia  
Telecommunications Committee Chair

Decisions made by the Telecommunications Committee are appealable to the Planning  
Commission within 15 calendar days following the above date of approval/denial.

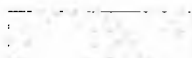


**LOCATION AND ZONING MAP**  
WTC18-00005  
Public Right-Of-Way  
2720 Carson Street

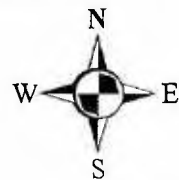
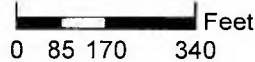
**LEGEND**



Project Location



Notification Area







## APPLICATION INCOMPLETE MEMORANDUM

**TO:** Mr. Oscar Martinez [REDACTED]  
**FROM:** Dr. Jonathan Kramer [REDACTED]  
**DATE:** February 20, 2018 [REDACTED]  
**CITY ID:** WTC18-00005  
**SITE ID:** ATTRB-41  
**USID:** 177981  
**RE:** Application Completeness Review – New Proposed Wireless Facility in the Public Right-of-Way F/O 2720 W. Carson Street (N 33° 49' 52" W 118° 20' 3.7")

**APPLICANT:** Crown Castle NG West, LLC  
**APPLICANT JOB #:** 414620  
**APPLICANT PROJECT #:** 438004

The City of Torrance (the “City”) requested that Telecom Law Firm, PC (“TLF” or “We”) review the Crown Castle NG West, LLC (the “Applicant”) application on behalf of AT&T Mobility (“AT&T”) to remove an existing light pole and replace it with a new light pole (“Pole”) to operate a new wireless site on the Pole in the public right-of-way (“ROW”) located at near 3960 Pacific Coast Highway see Figure 1.

The date the Applicant submitted this project to the City was January 23, 2018.

On top of the Pole, the Applicant proposes to install:

- One Galtronics Extent P6480 24.7' x 10.0" omni-directional antenna (“Antenna”).
- A pole-top mount to hold the proposed Antenna.
- A 9.5" x 8" pole-top shroud below the Antenna.
- Two 2-foot tall equipment shrouds to situate a total of four remote radio units (“RRUs”).
- One RF sign (at approximately at 23' 5" above ground level (“AGL”).
- The replacement of the existing street and RF signs which were originally on the old light pole.

The height of the Pole supporting this project is to remain at 28' 9" AGL; however, the vertical height of the Pole plus the wireless facility will be 31' 8" AGL due to the proposed installation of the omni-antenna [this increase in height appears acceptable under Torrance Municipal Code 92.39.040(a)(1)(A) since the total height of the structure will not exceed 35 feet AGL].

This memorandum reviews the application and related materials to determine whether the Applicant submitted a complete and responsive application. The following review may also discuss regulatory and technical issues related to wireless infrastructure. Although many technical issues implicate legal issues, the analysis and recommendations contained in this memorandum do not constitute legal advice.



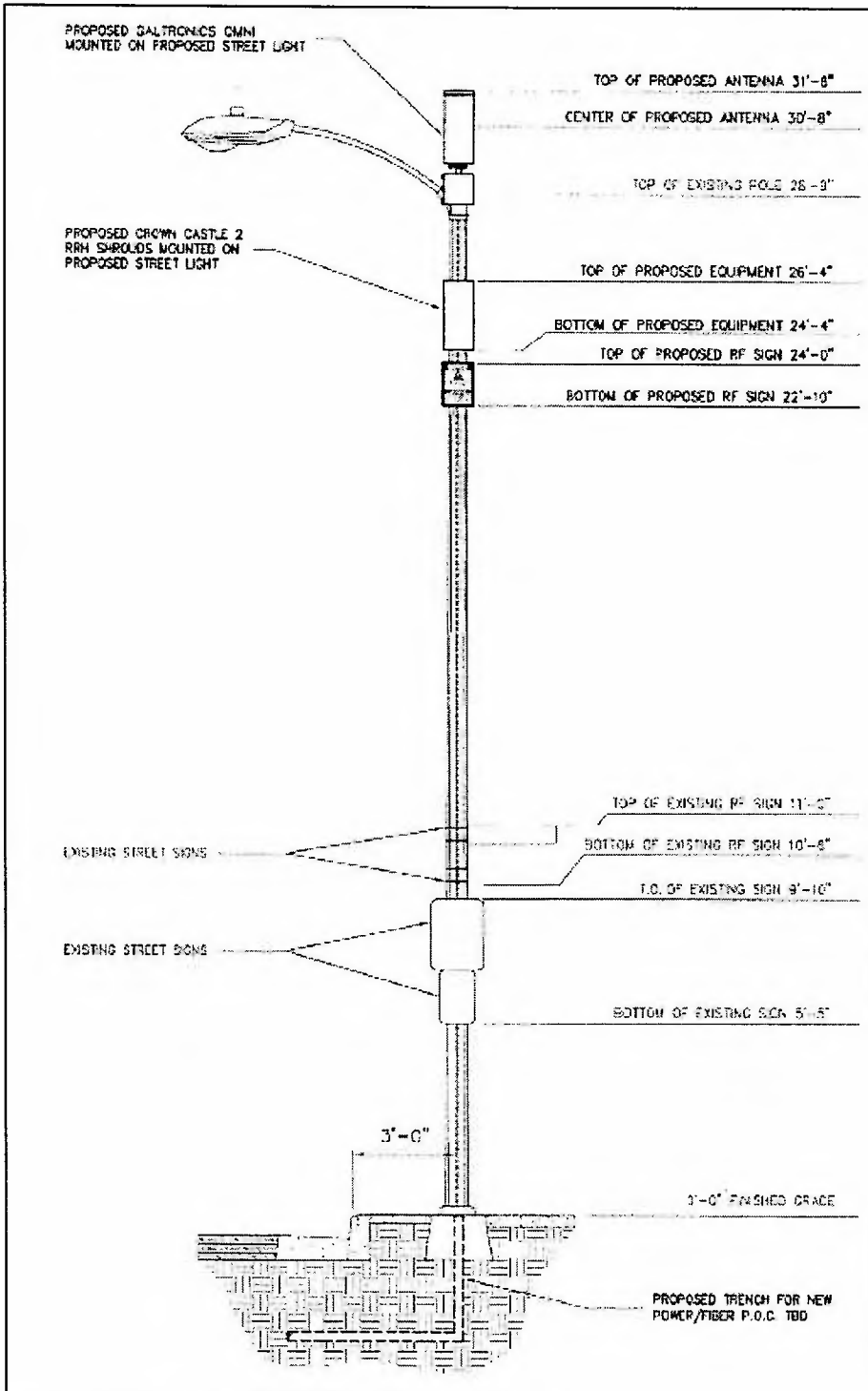


Figure 1: Proposed Pole (Source: Plans page A-3 panel 1).



For its electrical and fiber connections, the Applicant proposes a new underground power/fiber trench for power/fiber to run from an existing underground location. We note that the Plans page A-1 panel 2 show that the power/fiber run is TBD (to be determined). See Figure 2 below.

Additionally, Figure 2 shows a 17" x 30" handhole with proposed wireless technology rate ("WTR") electrical connection. From this handhole, an underground power line is proposed to run to the Applicant's equipment on the Pole.

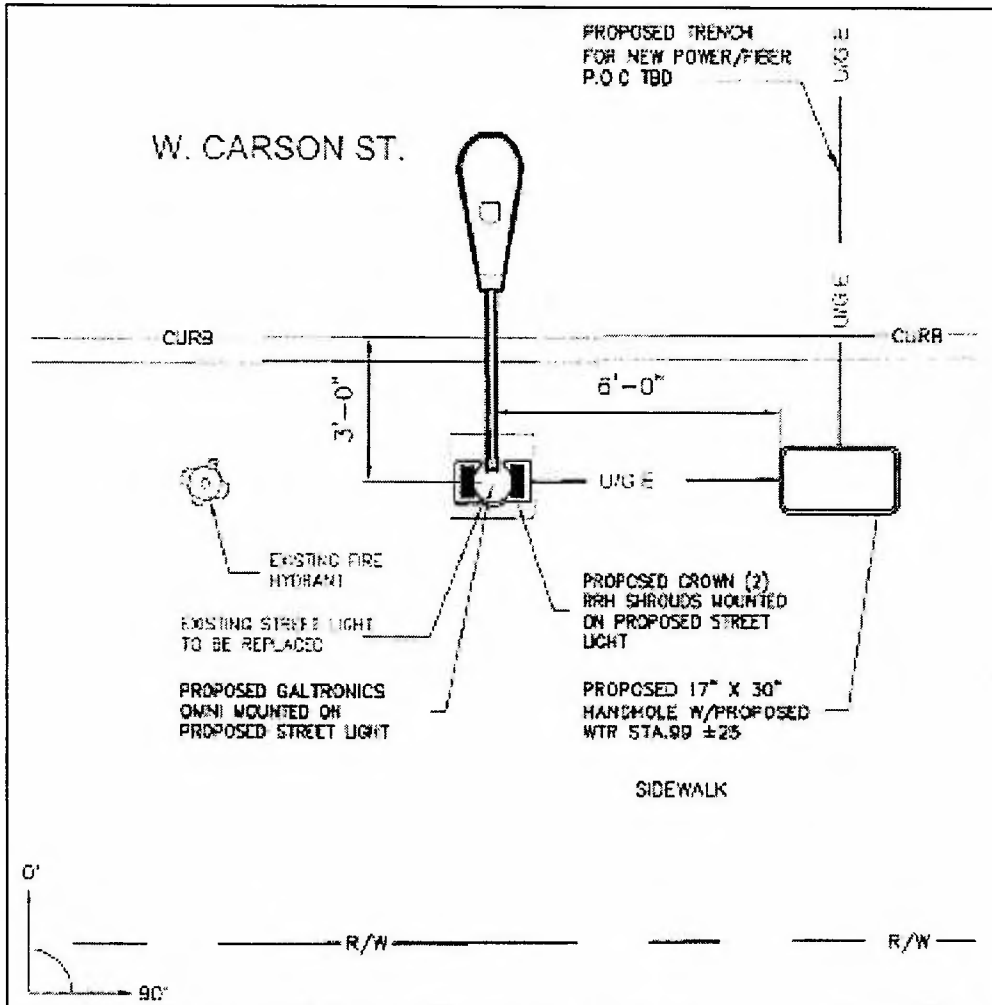


Figure 2: Power/Fiber connections (Source: Plans page A-1 panel 2).

We note that the Development Application mentions that two underground vaults will be installed. See Figure 3. The Plans and the Development Application do not match since no underground fiber is depicted on the Plans. All materials submitted for this specific project must be internally consistent for project design reliability and clarity.



<b>PROPOSED USE OF PROPERTY AND PURPOSE OF APPLICATION(S):</b> _____ install (1) omni directional antenna on (N) steel streetlight pole, install (4) RRUs within (2) new enclosures on (N) pole. install (1) UG vault to house WTR (power source) and (1) UG vault to house fiber.
--

**Figure 3:** Proposed use and purpose of property (Source: Development Application).

## **A. APPLICATION COMPLETENESS REVIEW**

Based on the City's Submittal Requirements for Wireless Telecommunications Facility ("**Requirements Form**"), we recommend that the City deem the Applicant's application submittal **incomplete** and issue an incomplete notice on or before February 22, 2018 regarding the items more fully discussed within this incomplete memorandum.

### **REQUIREMENTS FORM**

#### **I. APPLICATION FORM**

The City requires a Development Application and a Supplemental Technical Information Report ("**STIR**").

- **Development Application:**

The Development Application checklist appears to be properly filled out.

- **Supplemental Technical Information Report:**

- **Sec. 3.02** – The Applicant only includes FCC licenses for the CLR 850 MHz frequencies; however, the Radio Frequency Electromagnetic Fields Exposure Report by Dtech Communications dated August 2, 2017 ("**Dtech RF Report**") notes the use of PCS and 5 GHz frequencies. Additionally, the Plans include references to AWS frequencies. Therefore for application completeness purposes, the respective FCC licenses should be included for planned operations. The FCC license call sign for each band within the MTA covering the City of Torrance is sufficient.
- **Sec. 3.03** – The Applicant checked off the box for "other" however, did not provide any additional information regarding what "other" means.
- **Sec. 3.09** – Missing Attachment LSGAC Appendix A, however the Applicant provided the Dtech R F Report, which it substitutes for the LSGAC Appendix A form.
- **Sec. 3.13** – Is not provided, however the Applicant provided the Dtech RF Report.



- **Sec. 6.03** – Applicant has not provided the map required. The application requires that an Applicant provide an isolated node-specific map without the coverage of any other existing or proposed wireless sites.
- **Sec 7.0** – The Applicant has not provided any photo simulations to the proposed project- The Applicant must provide the requested simulations.
- **Sec 8.0** – The Applicant has not provided any candidate sites. The Applicant must provide the requested candidate sites analysis.

## **II. PROPERTY OWNERSHIP**

The Applicant has not provided written proof that the Pole owner, Sout hern California Edison has granted permission for this project therefore this portion of the application is incomplete.

## **III. PROJECT PLANS**

TLF notes that the Plans pages A-2 and A-3 both panels 1 and 2 depict an existing RF sign on the existing pole. We recommend a confirmation of the existing street sign inventory to be relocated onto the Pole. See Figure 1

Additionally, we note that the Plans page D-4 panel 1 depict that two of the RRUs are for future use and do not show any connections to the Antenna. We recommend the City require the Applicant to eliminate all “Future” elements from the current proposal, specifically the two “Future” 2203 RRUs shown in Figure 4.

If the two “future” 2203 RRUs are eliminated, then only one 2-foot tall equipment shroud will be necessary to encompass the two active 2203 RRUs

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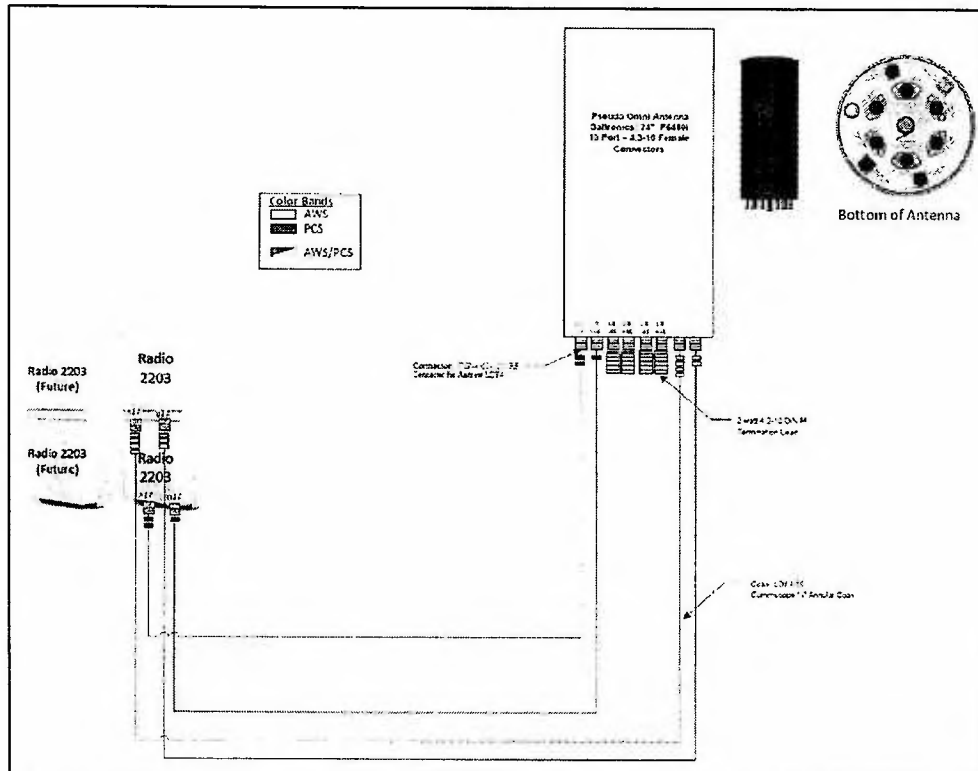


Figure 4: Two current RRUs connected to the Antenna, and two “future” RRUs not connected to the Antenna (Source: Plans page D-4, Panel 1)

#### IV. JUSTIFICATION

The Applicant’s answer in Section 4.01 is that they hold a CPCN, thus they need not provide the required narrative. That reply insufficient to justify the installation and operation of wireless equipment at this particular project location.

While a telephone corporation has compulsory access to the public right of way, PUC Section 7901.1, conditions that compulsory access, which states in its entirety:

7901.1.

(a) It is the intent of the Legislature, consistent with Section 7901, that *municipalities shall have the right to exercise reasonable control as to the time, place, and manner in which roads, highways, and waterways are accessed.*

(b) The control, to be reasonable, shall, at a minimum, be applied to all entities in an equivalent manner.

(c) Nothing in this section shall add to or subtract from any existing authority with respect to the imposition of fees by municipalities.

(Emphasis added.)



Holding a CPCN still makes the project subject to reasonable time, place, and manner reviews and adjustment by the City. There is no demonstration that the specific project site is the only site that can possibly work (most likely that is not the case), especially when the Applicant, like here, is not the FCC licensee.

**V. MAPS**

As discussed above, some of the maps are missing/incomplete.

**VI. VISUAL SIMULATIONS**

The Applicant has not provided any photo simulations of the proposed project, therefore, this portion of the application is incomplete.

**B. OTHER PERMITS AND APPLICATIONS REQUIRED**

This project is likely to require an encroachment permit as a separate set of approvals including potentially an excavation permit and a building permit.

The City shall insure that when granting the excavation permit for the new light standard it also requires as a condition that the discontinued light standard's foundation is hammered out and the ground be restored and properly compacted.

The City should condition the project, if approved, to show that the replacement Pole is not a wireless tower for any purpose, but rather it is considered only a replacement light pole to be owned by the City. The primary purpose of this Pole is and shall remain for street illumination rather than for any primary use as a wireless tower and/or base station.

**C. CLOSING COMMENTS AND RECOMMENDATION**

TLF notes that page 3 of the STIR (at section 4.01) and at page 4 of the STIR (after section 6.05), has a handwritten note as "Please see Bushberg Report". While not an incomplete item nor part of the STIR, TLF is only aware of a Dtech RF Report being submitted for this project. The Applicant should provide a copy of the referenced Bushberg Report for our review.

We believe that the Applicant has not yet submitted a permit application that complies with the City's Requirements Form. The list of incomplete items in this memo contains our observations. The City may have other items for the incomplete notice. Under the FCC rules, there is only one incomplete notice, so it is imperative that all items which are incomplete are listed in the first notice.

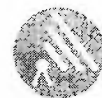
We recommend that the City deem this application incomplete and issue a timely incomplete notice to the Applicant no later than February 22, 2018 (based on the application materials tender



date of January 23, 2018). Our recommendation is that the City send the incomplete notice by email and on the same day also sends it by First Class or Certified U.S. Mail postage prepaid.

Once a reply to the City's incomplete notice is received back from the Applicant, the City has only 10 calendar days to determine whether the reply is responsive to the incomplete notice, and each of the 10 days counts against the overall 150 day shot clock, thus immediate review upon resubmission should occur.

/JLK





## APPLICATION INCOMPLETE MEMORANDUM

**TO:** Mr. Oscar Martinez [REDACTED]  
**FROM:** Dr. Jonathan Kramer [REDACTED]  
**DATE:** October 31, 2018  
**CITY ID:** WTC18-00005  
**SITE ID:** ATTRB-41  
**USID:** 177981  
**RE:** Application Completeness Review – New Proposed Wireless Facility in the Public Right-of-Way F/O 2720 Carson Street (N 33° 49' 52.0" W 118° 20' 3.7")

**APPLICANT:** Crown Castle NG West, LLC  
**APPLICANT JOB #:** 414620  
**APPLICANT PROJECT #:** 438004

On January 23, 2018, Crown Castle NG West, LLC ("**Crown Castle**") on behalf of AT&T submitted wireless site application materials to the City of Torrance ("**City**"). Per the City's request, on February 20, 2018, Telecom Law Firm, PC ("**TLF**" or "**We**") submitted an Application Incomplete Memorandum (the "**First Memorandum**") to the City that evaluated the Crown Castle's application to remove an existing light pole and replace it with a new light pole ("**Pole**") in the public right-of-way ("**PROW**") located near 2720 Carson Street.

TLF's First Memorandum concluded that Crown Castle failed to submit a complete permit application that fully responded to the City's publicly stated application requirements. We recommended that the City deem Crown Castle's application incomplete and issue a timely notice, which it did.

On August 7, 2018 Crown Castle submitted additional materials (the "**August 2018 Submission**") to address the deficiencies identified in our First Memorandum related to its initial submission. Per the City's request, on August 13, 2018, TLF submitted an Application Incomplete Memorandum (the "**Second Memorandum**") to the City. TLF's Second Memorandum concluded that Crown Castle failed to submit a complete permit application that fully responded to the City's publicly stated application requirements. We recommended that the City deem Crown Castle's application incomplete and issue a timely notice, which it did.

On October 23, 2018, Crown Castle submitted additional materials (the "**October 2018 Submission**") to address the deficiencies identified in TLF's Second Memorandum related to its August 2018 Submission.

This memorandum reviews the Crown Castle's October 2018 Submission to determine whether the applicant submitted a complete and responsive application. The following review may also discuss regulatory and technical issues related to wireless infrastructure. Although many technical issues implicate legal issues, the analysis and recommendations contained in this memorandum do not constitute legal advice.



TLF recommends that the City continue to deem the Crown Castle's application submittal **incomplete** and issue an incomplete notice on or before November 2, 2018 regarding the items more fully discussed within this incomplete memorandum.

## **I. PROPERTY OWNERSHIP**

Crown Castle has not provided written proof that the Pole owner, Southern California Edison has granted permission for this project therefore this portion of the application remains incomplete. The City should not proceed without this written authorization.

## **II. JUSTIFICATION**

The October 2018 Submission included the below verbiage as justification.

“The CPCN was submitted and establishes Crown Castle's compulsory access to the ROW. In addition, the alternative packet was submitted examining multiple alternatives in the area of the proposed facility. That slide deck should more than suffice in allowing the city the necessary review under time, place and manner to approve the application. Further, the exact same alternatives packet was submitted for the rest of the applications, 13 of which have been deemed approved, therefore one would assume that particular packet provided sufficient justification.”

The Applicant's comments just above are non-responsive to resolving its failure to provide the required and complete answer to Section 4.01 of the application. As previously discussed, the issue is not whether Crown Castle has a CPCN; it is whether their failure to provide the answer interferes with the City's time, place, and manner duties under PUC 7901 and 7901.1. We believe their repeated failure to provide the required application response does exactly that.

We recommend the City continue to hold the application as being incomplete for failure to provide the application-required information necessary to allow the City to properly perform its duties under the Public Utilities Code.

## **CLOSING COMMENTS AND RECOMMENDATION**

We conclude that the Crown Castle continues to omit from its permit application necessary information that complies with the City's application, thus the application remains incomplete. The list of incomplete items in this memo contains TLF's observations. The City may have other items for the incomplete notice.

We recommend that the City deem this application incomplete and issue a timely incomplete notice to the Crown Castle no later than November 2, 2018 (based on the October 2018 Submission



Mr. Oscar Martinez  
F/O 2720 Carson Street (Crown Castle)  
October 31, 2018  
Page 3 of 3

tender date of October 23, 2018). Our recommendation is that the City send the incomplete notice by email and on the same day also sends it by First Class or Certified U.S. Mail postage prepaid.

/JLK



RB41

WTC 18-00005



City of Torrance, Community Development Department Jeffery W. Gibson, Director  
3031 Torrance Blvd., Torrance, CA 90503, Phone (310) 618-5990 Fax (310) 618-5829

## **SUBMITTAL REQUIREMENTS FOR WIRELESS TELECOMMUNICATION FACILITIES**

---

### **APPLICATION FORM**

- One original Development Application and Supplemental Technical Information Report.

### **PROPERTY OWNERSHIP**

- Evidence of ownership of the real property on which the proposed telecom facility will be located, and evidence of authorization from the real property owner to place the facility on the property.

### **SEVEN (7) SETS OF THE FOLLOWING:**

#### **PROJECT PLANS**

- Full size (24"X36") Plot Plan, Floor Plans and Elevations need to be stapled, collated and folded to approximately 9"X12" in size.

#### **JUSTIFICATION**

- A brief narrative, accompanied by written documentation where appropriate, which explains the purpose of the facility and validates the applicant's efforts to comply with the design, location, and co-location standards of Article 39 of Chapter 2 of Division 9. Please refer to section 4.00 of the SUPPLEMENTAL TECHNICAL INFORMATION REPORT.

#### **MAPS**

- A map or maps showing the geographic area to be served by the facility. Please refer to section 6.00 of the SUPPLEMENT TECHNICAL INFORMATION REPORT.

#### **VISUAL SIMULATIONS**

- Visual simulations showing "before" and "after" views of the proposed facility. Consideration shall be given to views from both public areas and private residence. Please refer to section 7.00 of the SUPPLEMENTAL TECHNICAL INFORMATION REPORT.

OCT 23 2018



City of Torrance, Community Development Department Jeffery W. Gibson, Director  
3031 Torrance Blvd., Torrance, CA 90503, Phone (310) 618-5990 Fax (310) 618-5829

## SUPPLEMENTAL TECHNICAL INFORMATION REPORT FOR WIRELESS TELECOMMUNICATION FACILITIES

1.00: Project Address ROW F/O 2720 W CARSON ST

Assessor Parcel Number N/A Public ROW

2.00: Disclose the Name and Address of all Project Owners, and attach a letter of agency appointing the Applicant as representative of the Project Owners in connection with this application. Designate the letter of agency as "Attachment 2.00".

3.00: FCC Licensee/FAA Compliance Information

3.01: Identify each person or legal entity that will be using the wireless site and contact information (Attach additional sheets if necessary)

Name: Crown Castle NG West LLC-Aaron Snyder

Address: 200 Spectrum Center Drive, Suite 1800

City, State, Zip: Irvine, CA 92618

Phone: (949) 344-7834 Fax: \_\_\_\_\_

Email: Aaron.Snyder@crowncastle.com

3.02: Attach a complete copy of each FCC license or FCC Construction Permit for each person/legal entity that will be subject to the FCC license for the Project site. Designate the license(s)/Construction Permit(s) as "Attachment 3.02". If none of the proposed radio facilities require an FCC license so indicate on Attachment 3.02.

3.03: What is the intended use of the facility (check all that apply):

- Broadcast Radio
- Broadcast TV
- Cellular telephone
- Enhanced Specialized Mobile Radio
- Microwave
- PCS telephone
- Paging
- Specialized Mobile Radio
- Other: 5 GHz Spectrum

3.04: Project latitude and longitude: N 33 49 52.0 W 118 20 03.7



## SUPPLEMENTAL TECHNICAL INFORMATION REPORT FOR WIRELESS TELECOMMUNICATION FACILITIES

- 3.05: Specify DATUM use above:  WGS84  NAD23  NAD83
- 3.06: Project Maximum height (ft): 34'9"
- 3.07: Bottom of lowest antenna (ft): ~~32'6"~~ 32'6"
- 3.08: Rad-center of the antennas (ft): ~~33'7"~~ 33'7"
- 3.09: For each licensee, and for each radio service, complete and attach the two page "Appendix A" form from "A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance" available from the following website: <http://www.FCC.gov/oet/rfsafety>. Designate the completed two page form as "Attachment 3.09". Additional RF safety disclosure information may be required by the government to determine compliance with FCC OET 65 requirements if the site is not "categorically excluded" under OET 65.
- 3.10 Are any areas adjacent to the antennas subject to RF emissions that are in excess of the "General Public/uncontrolled" standard in FCC OET 65? For this purpose, assume that all persons other than the Carrier's technical staff are considered to be members of the General Public.  
 Yes  No  
(If the answer to 3.10 is NO proceed to 3.12)
- 3.11 Provide a detailed RF analysis for each emitter and each band showing the distance, in feet, in all directions to the boundary of the General Public/uncontrolled boundary. Designate this attachment, "Attachment 3.11".
- 3.12 Considering your response to 3.10, above, and any other identifiable RF emitters that OET 65 requires be evaluated in connection with this project, are all portions of this project cumulatively "categorically excluded" under FCC OET 65 requirements?  
 Yes  No  
(If the answer to 3.12 is YES proceed to 3.14.)
- 3.13 Describe in an attachment each and every RF emitter of the project that is not "categorically excluded" under the FCC OET 65 requirements. Designate this attachment, "Attachment 3.13".
- 3.14: Does this project require the Applicant to file an FAA Form 7460 or other documentation under Federal Aviation Regulation Part 77.13 et seq, or under the FCC rules?  
 Yes  No  
(If the answer to 3.14 is NO proceed to 4.00.)



## SUPPLEMENTAL TECHNICAL INFORMATION REPORT FOR WIRELESS TELECOMMUNICATION FACILITIES

3.15 Attach complete copies of all required FAA/FCC forms including all attachments and exhibits thereto, including without limitation FAA Form 7460. Designate this attachment, "Attachment 3.15".

### 4.00: Project Purpose

4.01: Justification. Provide a brief narrative, accompanied by written documentation where appropriate, which explains the purpose of the facility and validates the applicant's efforts to comply with the design, location, and co-location standards of Chapter 2, Division 9, Article 39 of the City's Municipal Code.

Crown Castle NG West LLC, Utility No. U-6745-C, obtained a Certificate of Public Convenience and Necessity (CPCN) from the California Public Utilities Commission

In Decision No. 07-04-045 to provide full facilities based radiofrequency transport services. CPCN Conclusion of Law No. 4 states: "Public convenience and necessity

require NextG's full facilities-based local exchange services to be offered to the public subject to the terms and conditions set forth herein." This justification is

sufficient under the California state law and under Crown's authorized provision of radiofrequency transport services. No further site justification is required.

4.02: Indicate whether the dominant purpose of the Project is to add additional network capacity, to increase existing signal level, or to provide new radio frequency coverage (check only one).

Add network capacity without adding substantial new RF coverage area (Proceed to 5.00)

Increase the existing RF signal level in an existing coverage area (Proceed to 5.00)

Provide new radio frequency coverage in a substantial area not already served by existing radio frequency coverage (Proceed to 5.00)

Other

4.03 Attach a statement fully and expansively describing the "Other" dominant purpose of this project. Designate this attachment, "Attachment 4.03".

### 5.00: Build-Out Requirements

5.01: Do any of radio services identified in 3.04 above require the licensee to provide specific radio frequency/population coverage pursuant to the underlying FCC license?

x Yes    \_\_\_ No

(If the answer to 5.01 is NO proceed to 6.00.)

5.02: Have all of the FCC build-out requirements as required by all licenses covering all radio services proposed at this Project been met?

x Yes    \_\_\_ No

(If the answer to 5.02 is YES proceed to 6.00.)



## SUPPLEMENTAL TECHNICAL INFORMATION REPORT FOR WIRELESS TELECOMMUNICATION FACILITIES

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5.03: State by licensee all remaining build-out requirements which have yet to be met, and the known or estimated date when the remaining build-out requirements will be met. Designate this attachment "Attachment 5.03".

### 6.00: Radio Frequency Coverage Maps

6.01: Where a licensee intends to provide radio frequency geographic coverage to a defined area from the Project (including applicants in the cellular, PCS, broadcast, ESMR/SMR categories, and others as requested by the City of Torrance), the coverage maps and information requested in Section 6 are required attachments. All others proceed to 7.00.

For the coverage maps required here, the following mandatory requirements apply. Failure to adhere to these requirements may delay your application processing.

1. The size of each submitted map must be no smaller than 11" by 8.5".
2. If the FCC rules for any proposed radio service defines a minimum radio frequency signal level that level must be shown on the map in a color easily distinguishable from the base paper or transparency layer, and adequately identified by RF level and map color or gradient in the map legend. If no minimum signal level is defined by the FCC rules you must indicate that in the legend of each RF coverage map. You may show other RF signal level(s) on the map so long as they are adequately identified by objective RF level and map color or gradient in the map legend.
3. Where the City of Torrance determines that one or more submitted maps are inadequate, it reserved the right to request that one or more supplemental maps with greater or different detail be submitted.

6.02: Existing RF coverage within the City of Torrance on the same network, if any (if none, so state). This map should not depict any RF coverage to be provided by the Project. Designate this attachment "Attachment 6.02".

6.03: RF coverage to be provided by the Project. This map should not depict any RF coverage provided any other existing or proposed wireless sites. Designate this attachment "Attachment 6.03".

6.04: RF coverage to be provided by the Project and by other wireless sites on the same network should the Project site be activated. Designate this attachment "Attachment 6.04".

6.05: Provide a written certification that the facility will continuously comply with FCC OET Bulletin 65 radio frequency emissions standards, and that use of the facility will not interfere with other communication, radio, or television transmission or reception.



## SUPPLEMENTAL TECHNICAL INFORMATION REPORT FOR WIRELESS TELECOMMUNICATION FACILITIES

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### 7.00: Project Photographs and Photo Simulations

- 7.01: Where an Applicant proposes to construct or modify a wireless site, and the wireless site is visible from other residential properties, the Applicant shall submit pre-project photographs, and photo simulations showing the project after completion of construction, all consistent with the following standards:
1. Minimum size of each photo simulation must be 11 inches by 8.5 inches (portrait or landscape orientation);
  2. All elements of the project as proposed by the Applicant must be shown in one or more close-in photo simulations.
  3. The overall project as proposed by the Applicant must be shown in five or more area photos and photo simulations. Photos and photo simulation views must, at a minimum, be taken from widely scattered positions separated by an angle of no greater than 72 degrees from any other photo location.

The number of site photos, and photo simulations, and the actual or simulated camera location of these photos and photo simulations is subject to City of Torrance determination. The Applicant should submit photos and photo simulations consistent with these instructions, and be prepared to provide additional photos and photo simulations should they be requested by the City of Torrance.

### 8.00: Candidate Sites

- 8.01: For applicants in the cellular, PCS, broadcast, ESMR/SMR categories, and others as requested by the City of Torrance, the information requested in Section 8 is required. All others proceed to 9.00.
- 8.02: Has the Applicant or Owner or anyone working on behalf of the Applicant or Owner secured or attempted to secure any leases or lease-options or similar formal or informal agreements in connection with this project for any sites other than the candidate site identified at 1.00?  
 Yes  No  
(If the answer to 8.02 is NO, proceed to 8.05.)
- 8.03: Provide the physical address of each such other location, and provide an expansive technical explanation as to why each such other site was disfavored over the Project Site. Designate this attachment "Attachment 8.03".
- 8.04: Considering this proposed site, is it the one and only one location within or without the City of Torrance that can possibly meet the objectives of the project?  
 Yes  No  
(If the answer to 8.04 is NO, proceed to 9.00.)





**SUPPLEMENTAL TECHNICAL INFORMATION REPORT  
FOR WIRELESS TELECOMMUNICATION FACILITIES**

8.05: Provide a technically expansive and detailed explanation supported as required by comprehensive radio frequency data fully describing why the proposed site is the one and only one location within or without the City of Torrance that can possibly meet the radio frequency objectives of the project. Explain, in exact and expansive technical detail, all of the objectives of this project. Designate this attachment "Attachment 8.05".

**9.00: Identification of Key Persons**

9.01: Identify by name, title, company affiliation, work address, telephone number and extension, and email address the key person or persons most knowledgeable regarding:

- (1) the site selection for the proposed project, including alternatives;
  - (2) the radio frequency engineering of the proposed project;
  - (3) rejection of other candidate sites evaluated, if any;
  - (4) approval of the selection of the proposed site identified in this project.
- Designate this attachment "Attachment 9.01"

9.02 If more than one person is/was involved in any of the four functions identified in this section, attach a separate sheet providing the same information for each additional person, and identifying which function or functions are/were performed by each additional person. Designate this attachment "Attachment 9.02".

Initial here \_\_\_\_\_ to indicate that the information above is complete and there is no Attachment 9.02, or initial here AS to indicate that Attachment 9.02 is attached hereto.

**10.00: Technical Information Report Certification**

10.01: The undersigned certifies on behalf of itself and the Applicant that the answers provided here are true and complete to the best of the undersigned's knowledge.

[Redacted Signature]	GRPM
Signature	Title
Aaron Snyder	Aaron.Snyder@crowncastle.com
Print Name	Provide Email Address
Crown Castle NG West LLC	949-344-7834
Print Company Name	Provide Telephone Number
9/27/18	
Date Signed	

1

2

3

Incomplete Notice Responses-

3.12-The application was updated to reflect the correct statement relative to the wireless facility not being categorically excluded.

In addition, per the application, the following info pertains to the RF emitter to be located on the pole-

Amitabh Sharma

AT&T Area Manager C&E

1452 Edinger Ave

Phone #-844-485-1035

7.01-photo sims are updated to include vaults and RF signage.

The project plans were updated to reflect the comment addressed on the incomplete notice.

9.01+9.02 -below is the identification of key persons in addition to the above response for 3.12:

The below are Crown Castle Employees-

Aaron Snyder

Government Relations Project Manager

200 Spectrum Center Drive Suite 1800

Irvine, Ca 92618



Saeed Garshasbi

Senior RF Engineer

200 Spectrum Center Drive Suite 1800

Irvine, Ca 92618

Office # 949-344-7817

**Justification-**

The CPCN was submitted and establishes Crown Castle's compulsory access to the ROW. In addition, the alternative packet was submitted examining multiple alternatives in the area of the proposed facility. That slide deck should more than suffice in allowing the city the necessary review under time, place and manner to approve the application. Further, the exact same alternatives packet was submitted for the rest of the applications, 13 of which have been deemed approved, therefore one would assume that particular packet provided sufficient justification.



YOUR RF SAFETY PARTNER

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## RADIO FREQUENCY ELECTROMAGNETIC FIELDS EXPOSURE REPORT

Prepared for Crown Castle

**Site Name:** Pole Top Configuration  
**Site Type:** Omni Antenna RC  $\geq$  18 ft  
**Report By:** Christopher Stollar, P.E.  
**Report Date:** 8/2/2017

Based on FCC Rules and Regulations, Crown Castle will be compliant provided recommendation(s) are implemented.

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## 1.0 EXECUTIVE SUMMARY

Dtech Communications, LLC (“Dtech”) has been retained by Crown Castle to determine whether its wireless communications facility complies with the Federal Communications Commission (“FCC”) Radio Frequency (“RF”) Safety Guidelines. This report contains a computer-simulated analysis of the Electromagnetic Fields (“EMF”) exposure resulting from a typical, minimum 18-foot antenna radiation center (“RC”), sign pole facility. The analysis also includes assessment of existing wireless carriers on site, where information is provided. The table below summarizes the result at a glance:

*Table 1: EMF Summary*

Parameter	Summary
<b>Access Type</b>	Walk-Up
<b>Access to antennas locked</b>	NA
<b>RF Sign(s) @ access point(s)</b>	None
<b>RF Sign(s) @ antennas</b>	Information (Recommended)
<b>Barrier(s) @ sectors</b>	NA
<b>Max Cumulative EMF level for Crown Castle on Ground</b>	1.5% General Population
<b>Max Cumulative EMF level for Crown Castle at Antenna Elevation</b>	43.2% General Population (8.6% Occupational)
<b>General Population Keep Back Distance (At Antenna Elevation)</b>	NA

## 2.0 SITE DESCRIPTION

The wireless telecommunication facility is located on the ground. The antenna is omni-directional, designed to achieve 360 degrees of coverage. For this scenario, Crown Castle's antenna is mounted on a sign pole and connected to the equipment via cables (see Appendix E).

### 2.1 Antenna Inventory

Technical specifications in the table below are provided by our clients or gathered from physical field surveys where applicable and/or possible. Conservative estimates are used where information is not provided or available.

*Table 2: Site Technical Specifications*

Antenna ID	Operator	Carrier #	Antenna Mfg	Antenna Model	Type	DAS Equipment	Frequency (MHz)	Orientation (°T)	Horizontal BWidth (°)	Antenna Aperture (ft)	Antenna Gain (dBd)	Total ERP (Watts)	Bottom Tip Height Above Ground (Z) (ft)	Bottom Tip Height Ant Level (Z) (ft)
A1	Crown Castle	1	Galtronics	P6480i	Omni	(2) RRU2203	1900	0	360	2.1	6.9	69.2	17.0	0.0
A1	Crown Castle	1	Galtronics	P6480i	Omni	(1) RRU2205	5000	0	360	2.1	3.9	2.5	17.0	0.0



### 3.0 ANALYSIS

#### 3.1 Emission Predictions

Figure 1: Plan (bird's eye) view map of results compared to the FCC's General Population MPE (Maximum Permissible Exposure) Limits. Gray represents areas where exposure levels are calculated to be at or below 5%; Green- between 5% & 100% (below MPE limits); blue, yellow & red - greater than 100% (exceeds MPE limits). Individuals can safely occupy areas in gray and green for an indefinite amount of time; whereas areas in blue, yellow & red must be restricted to RF trained personnel who have been made fully aware of potential for exposure, have control and know how to reduce their exposure with the use of personal protection equipment or have the ability to power down the transmitters.

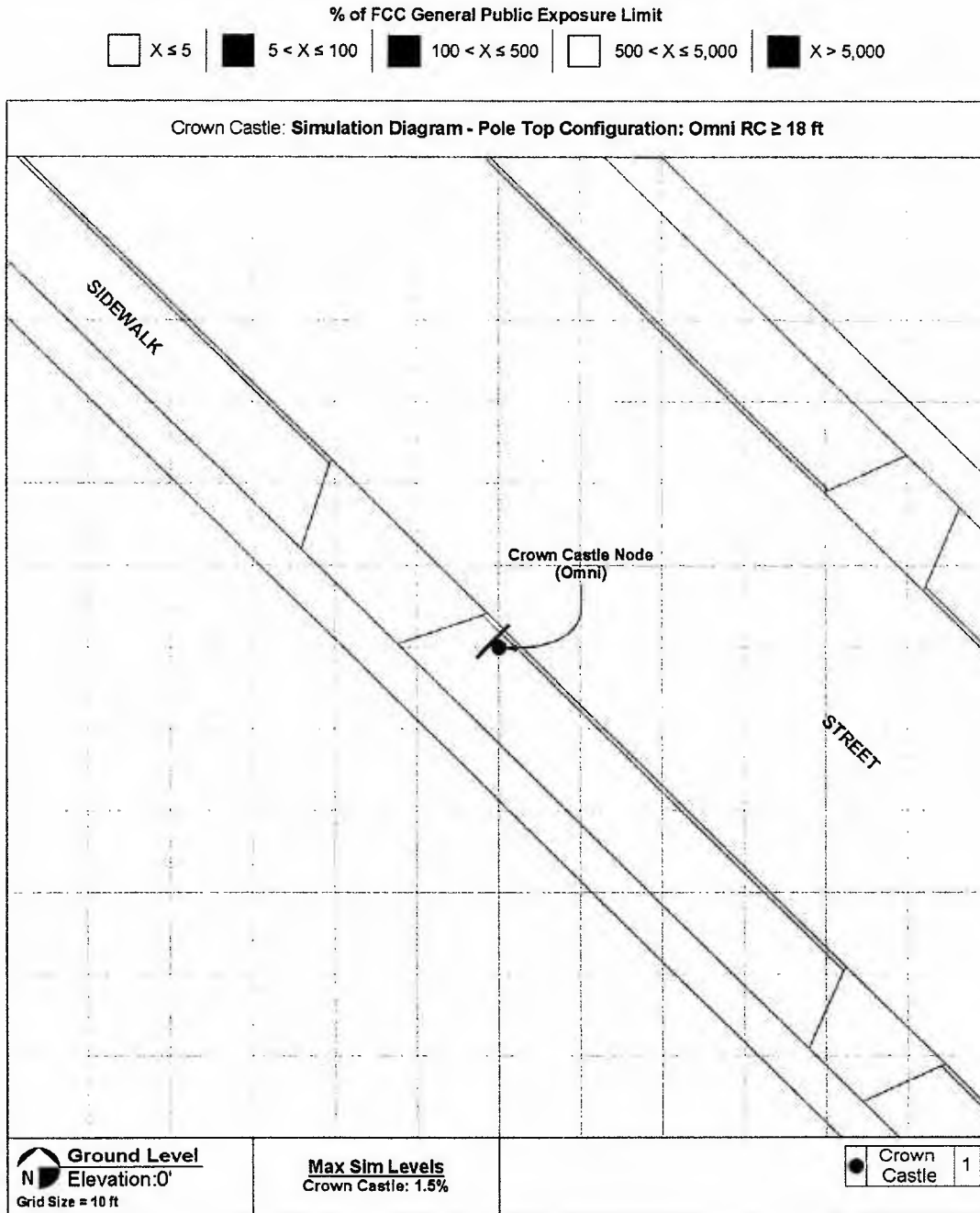
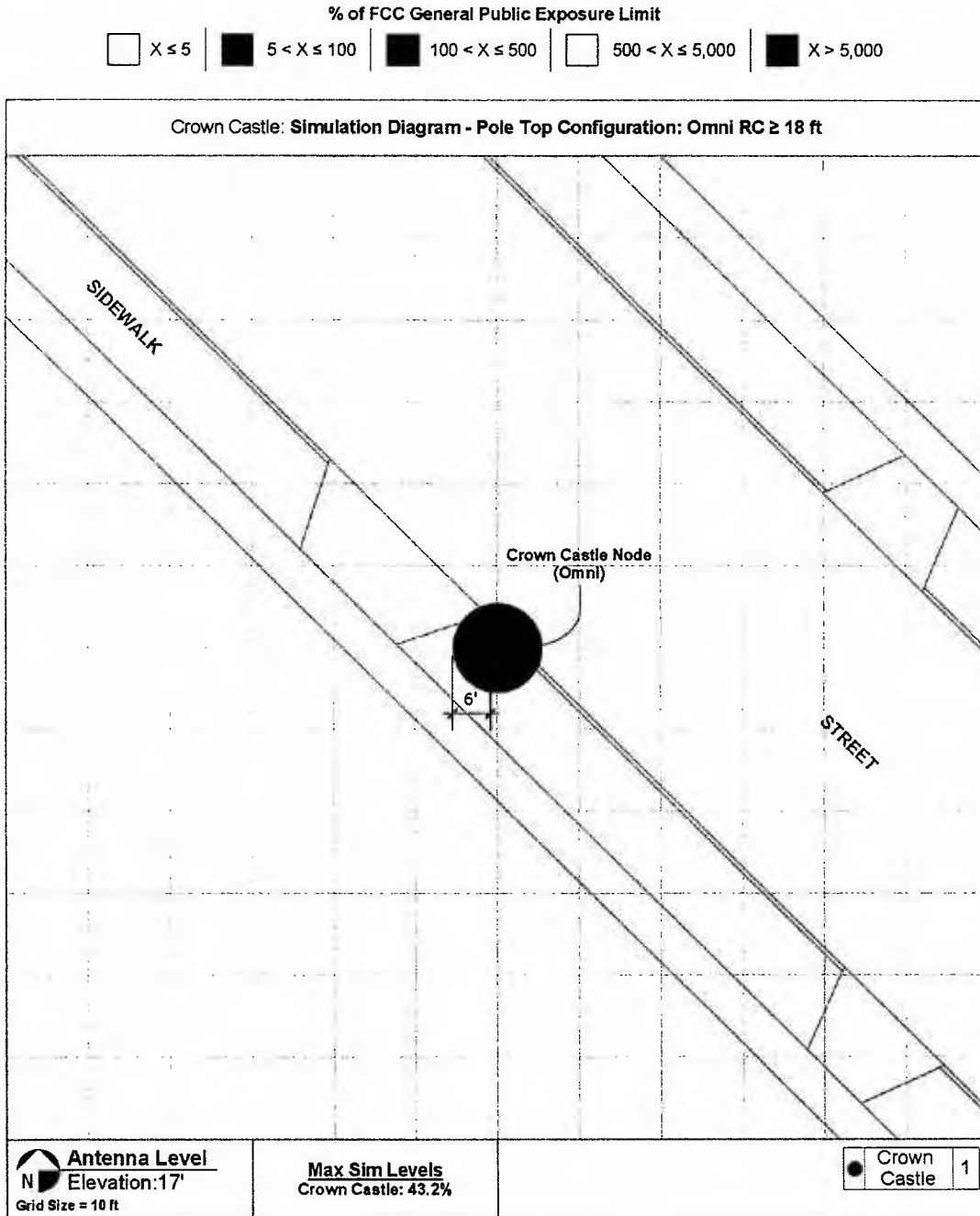


Figure 2: Plan (bird's eye) view map of results compared to the FCC's General Population MPE (Maximum Permissible Exposure) Limits. Gray represents areas where exposure levels are calculated to be at or below 5%; Green- between 5% & 100% (below MPE limits); blue, yellow & red - greater than 100% (exceeds MPE limits). Individuals can safely occupy areas in gray and green for an indefinite amount of time; whereas areas in blue, yellow & red must be restricted to RF trained personnel who have been made fully aware of potential for exposure, have control and know how to reduce their exposure with the use of personal protection equipment or have the ability to power down the transmitters.



## 4.0 CONCLUSION

### 4.1 Results

For a person standing on the ground, calculations for Crown Castle's site (at a minimum RC of 18-feet) resulted in exposure levels no higher than 1.5% of the applicable FCC's General Population MPE Limits (see figure 1). If the antenna is located higher than the minimum RC of 18-feet, the exposure levels on the ground would consequently be lower. The results on the ground are well below the applicable FCC's General Population MPE Limits, and members of the general public can safely occupy all areas on the ground for an indefinite amount of time.

At antenna elevation, the highest calculated exposure level is also below the FCC's General Population MPE Limits near the Crown Castle antenna (see figure 2). If the antenna is located higher than the minimum RC of 18-feet, the exposure levels at antenna elevation would be the same. The green areas represent exposure levels that are calculated to be between 5% and 100%, which is below the FCC's General Population MPE Limits. The green exposure area extends 6-feet from the front face of the Crown Castle antenna. Beyond 6-feet (areas represented in gray), exposure calculations would be at or below 5%, which are considered ambient levels. Individuals can safely occupy any areas in gray and green for an indefinite amount of time.

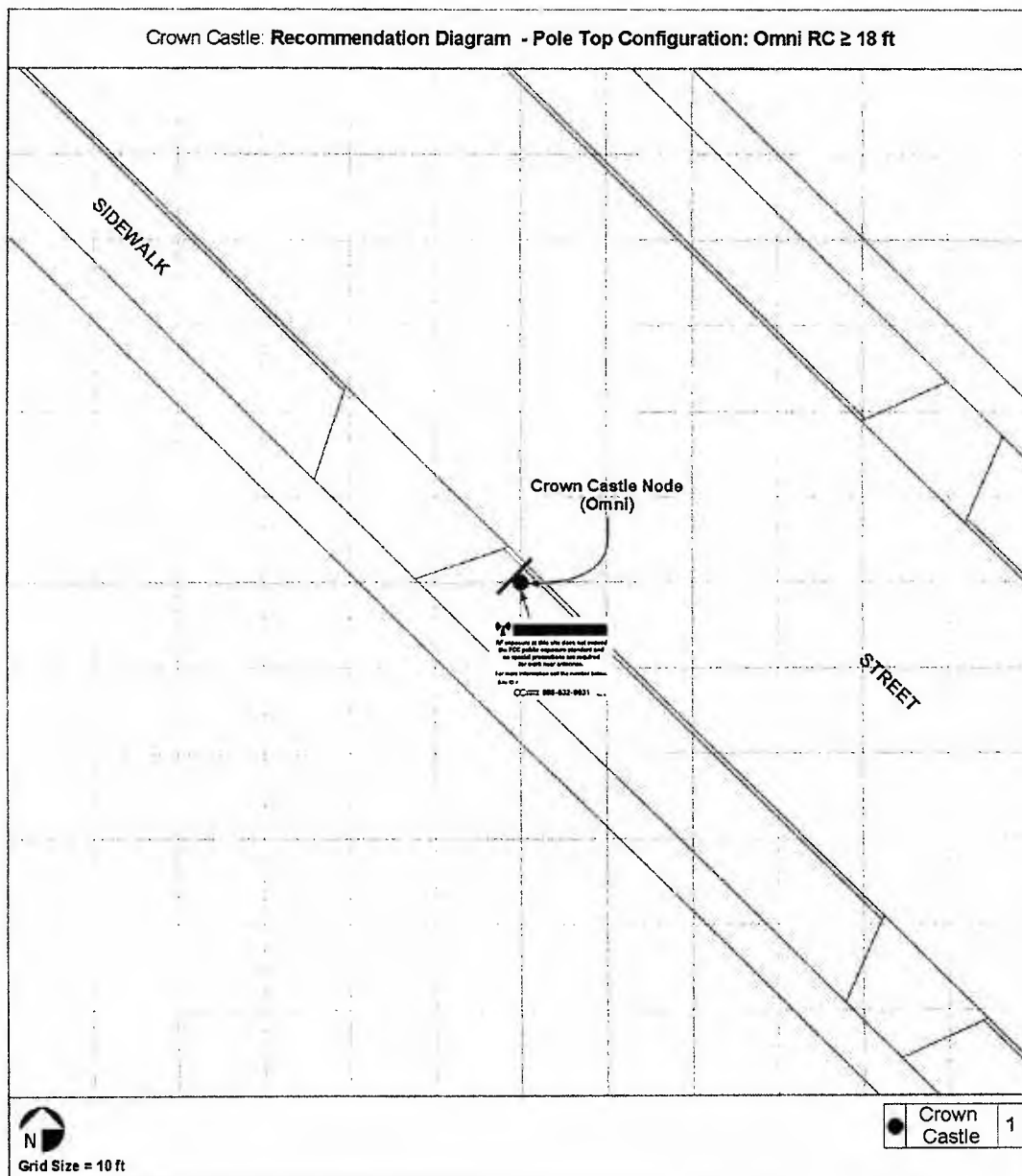
\*Note: The actual MPE results of this analysis are only applicable to the specific antenna make/model, minimum heights, line/cable losses, total power output, and frequencies. Compliance actions are the same even if the antenna is raised above the minimum RC of 18-feet.

### 4.2 Recommendation(s)

For the facility to be classified as an Occupational/Controlled environment, the following action(s) are recommended in accordance with the FCC's and Crown Castle's RF Safety Guidelines (see figure 3):

- 1) Install INFORMATION Sign(s) on or near the antenna. Signage should be placed high and away from public view.

Figure 3: Recommendation(s)



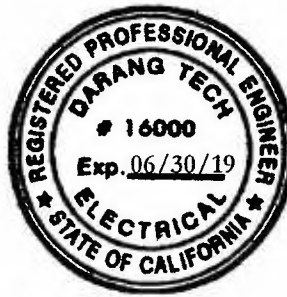
#### 4.3 Statement of Compliance

Based on the above results, analysis and recommendation(s), it is the undersigned's professional opinion that Crown Castle's site will be compliant with the FCC's RF Safety Guidelines provided recommendation(s) are implemented.

#### 4.4 Engineer Certification

This report has been prepared by or under the direction of the following Registered Professional Engineer: Darang Tech, holding California registration number 16000. I have reviewed this report and believe it to be both true and accurate to the best of my knowledge.

  
Darang Tech, P.E.



## Appendix A: Background

Dtech uses the FCC's guidelines described in detail in Office of Engineering & Technology, Bulletin No. 65 ("OET-65") "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields". The table below summarizes the current Maximum Permissible Exposure ("MPE") safety limits classified into two groups: General population and Occupational.

Table 3: FCC MPE Limits (from OET-65)

Frequency Range (MHz)	General Population MPE (V/m)	Occupational MPE (V/m)	Controlled MPE (V/m)	Reference
30 - 300	0.2	30	1.0	6
300 - 1500	Frequency (Mhz)/1500 (0.2 - 1.0)	30	Frequency (Mhz)/300 (1.0 - 5.0)	6
1500 - 100,000	1.0	30	5.0	6

**General population/uncontrolled** limits apply in situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment, and may not be fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public always fall under this category when exposure is not employment-related.

**Occupational/controlled** limits apply in situations in which persons are exposed as a consequence of their employment, and those persons have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits, 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.

It is important to understand that the FCC guidelines specify *exposure* limits not *emission* limits. For a transmitting facility to be out of compliance with the FCC's RF safety guidelines an area or areas where levels exceed the MPE limits must, first of all, be in some way *accessible* to the public or to workers. When accessibility to an area where excessive levels is appropriately restricted, the facility or operation can certify that it complies with the FCC requirements.

## **Appendix B: Measurement and/or Computer Simulation Methods**

Spatial averaging measurement technique is used. An area between 2 and 6 feet, approximately the size of an average human, is scanned in single passes from top to bottom in multiple planes. When possible, measurements were made at very close proximity to the antennas and inside the main beam where most of the energy is emitted. The spatial averaged values were recorded.

Dtech uses an industry standard power density prediction computer Model<sup>1</sup> to assess the worse-case, cumulative EMF impact of the surrounding areas of the subject site. The Model does not take into account losses due to buildings. Its methodologies are conservative enough to account for typical down-tilts deployed in wireless communications. In addition, the analysis is performed at 100% duty cycle-all transmitters are active at all times and transmitting at maximum power. For purposes of a cumulative study, nearby transmitters are included where possible. The result is a surrounding area map color-coded to percentages of the applicable FCC's MPE Limits. A result higher than 100% exceeds the Limits.

## **Appendix C: Limitations**

Dtech performed this analysis based on data provided by our clients that Dtech believes to be true and correct. Estimates where noted, are based on common industry practices and our best interpretation of available information. As mobile technologies continuously change, these data and results may also change. Therefore, Dtech disclaims all other warranties either expressed or implied. Any use of this document constitutes an agreement to hold Dtech and its employees harmless and indemnify it for any and all liability, claims, demands, litigation expenses and attorneys fees arising from such use. This is a technical document and may contain minor grammatical and/or spelling errors.

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<sup>1</sup> Roofview® Version 4.15, Richard Tell Associates, Inc. © 1996-2000.

Appendix D: Crown Castle RF Advisory Signs



**RF exposure at this site does not exceed the FCC public exposure standard and no special precautions are required for work near antennas.**

**For more information call the number below.**

Site ID #

**CC** CROWN CASTLE 888-632-0931 Rev. A

INFORMATION Sign



## POLE WORKERS

**There is an antenna operation high on this pole. Please follow guidance on signs near the antenna or call the number below.**

Site ID #

**CC** CROWN CASTLE 888-632-0931 Rev. A

NOTICE Sign



**Keep Back \_\_\_\_ FT From this Antenna. FCC RF Public Exposure Limits May Be Exceeded Within This Distance. Call 888-632-0931 for Instructions. Qualified Workers: FCC Occupational Limits May Be Exceeded Within This Distance.**

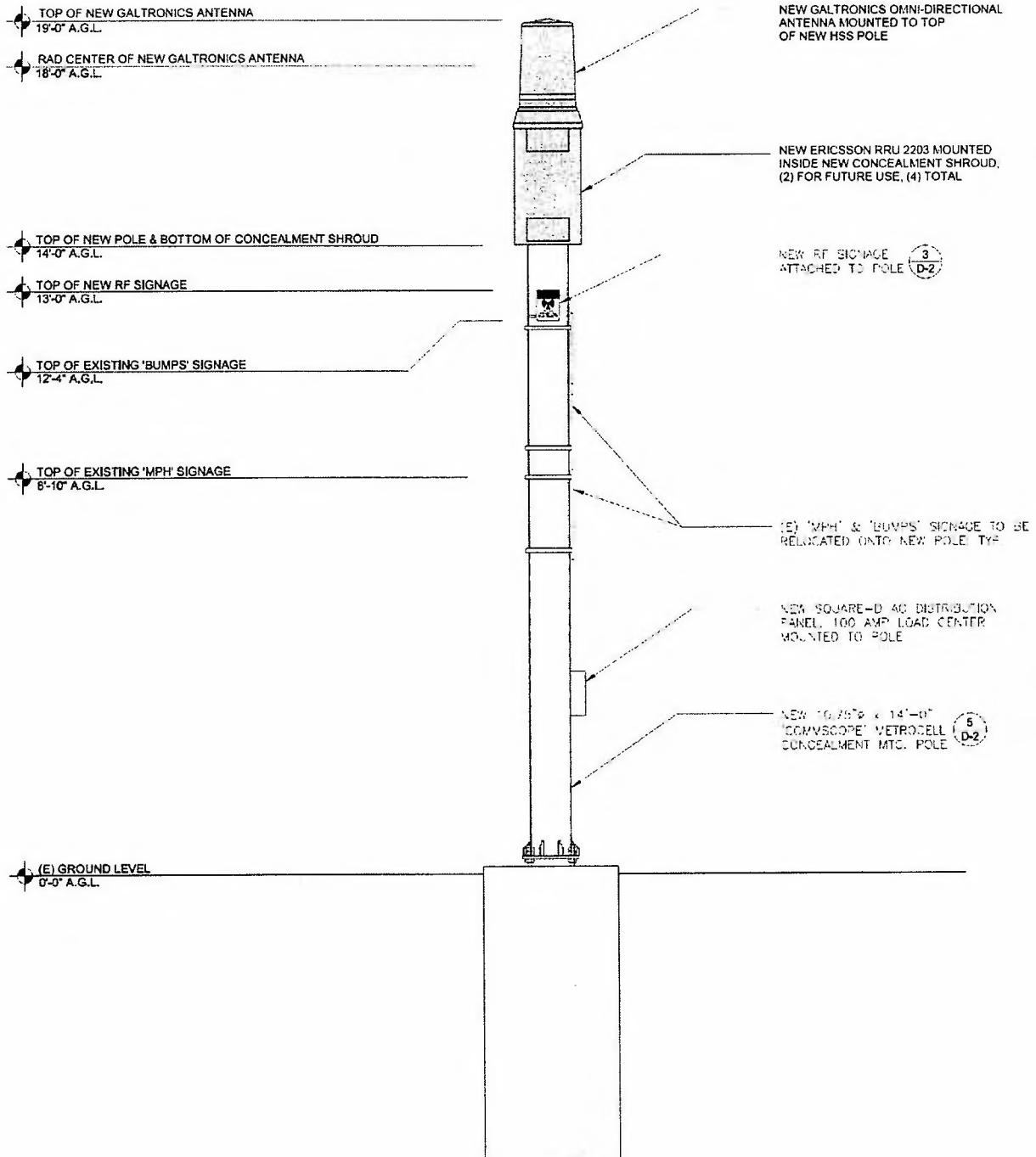
Site ID #

Rev. A

CAUTION Sign



Appendix E: Pole Top Configuration: Omni RC  $\geq$  18 ft



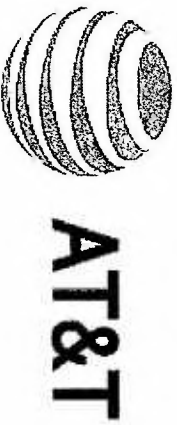
Appendix F: Crown Castle Carrier MPE Contributions

	Carrier 1	Carrier 2
Carrier 1 - AT&T	1.5% GP (0.3% OC)	43.2% GP (8.6% OC)

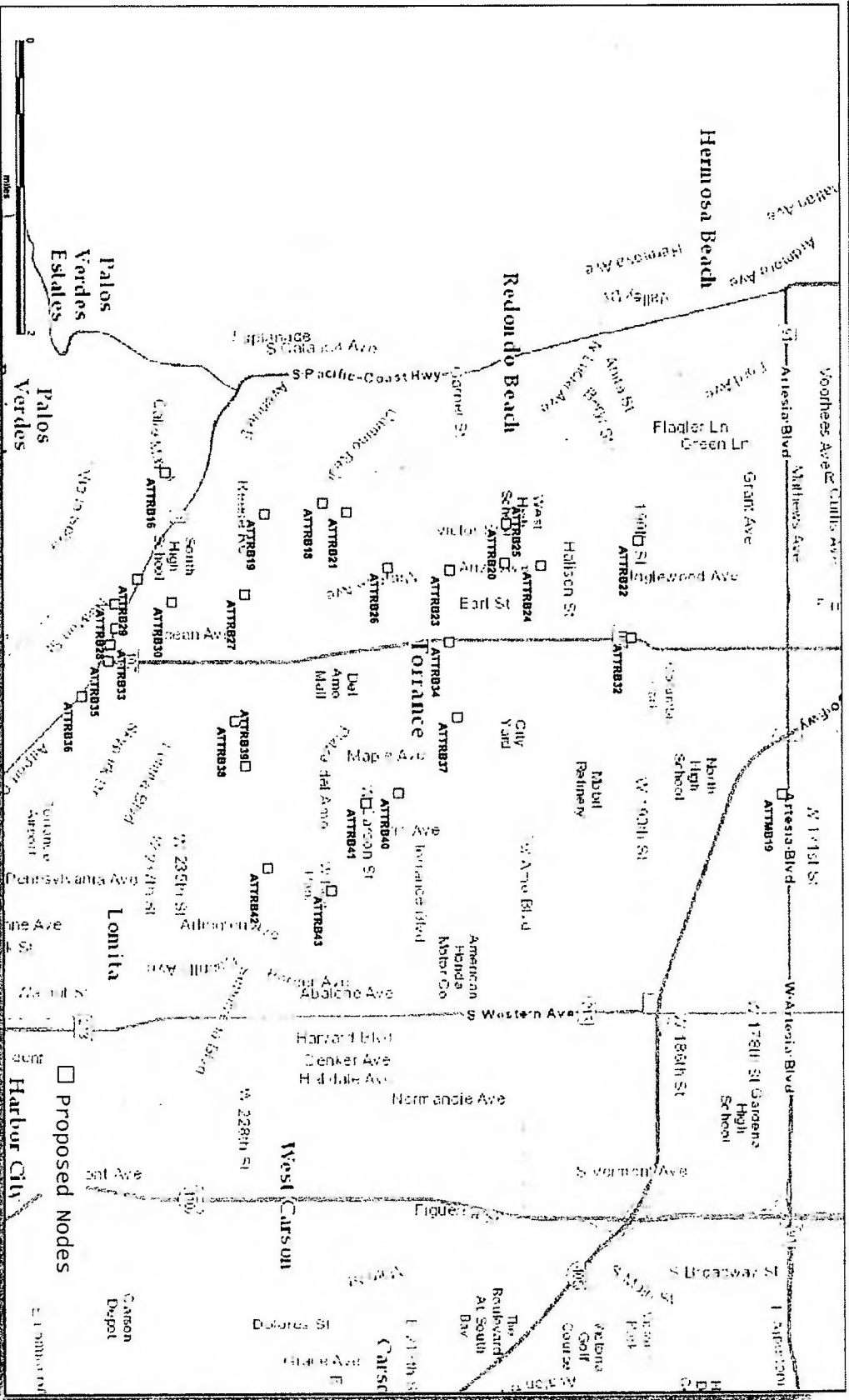


1/10/2018

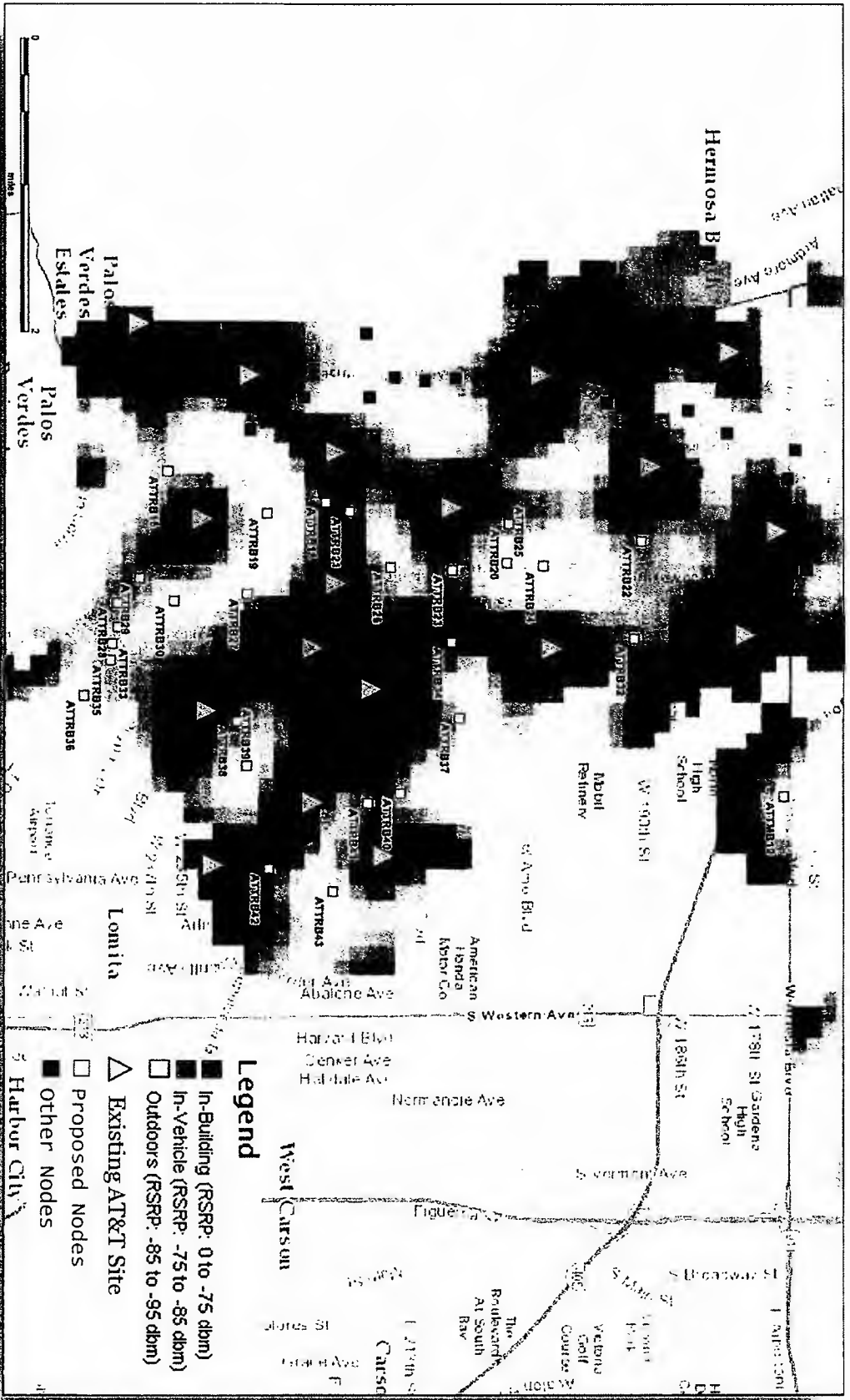
# AT&T Wireless Network Densification – Torrance Jurisdiction



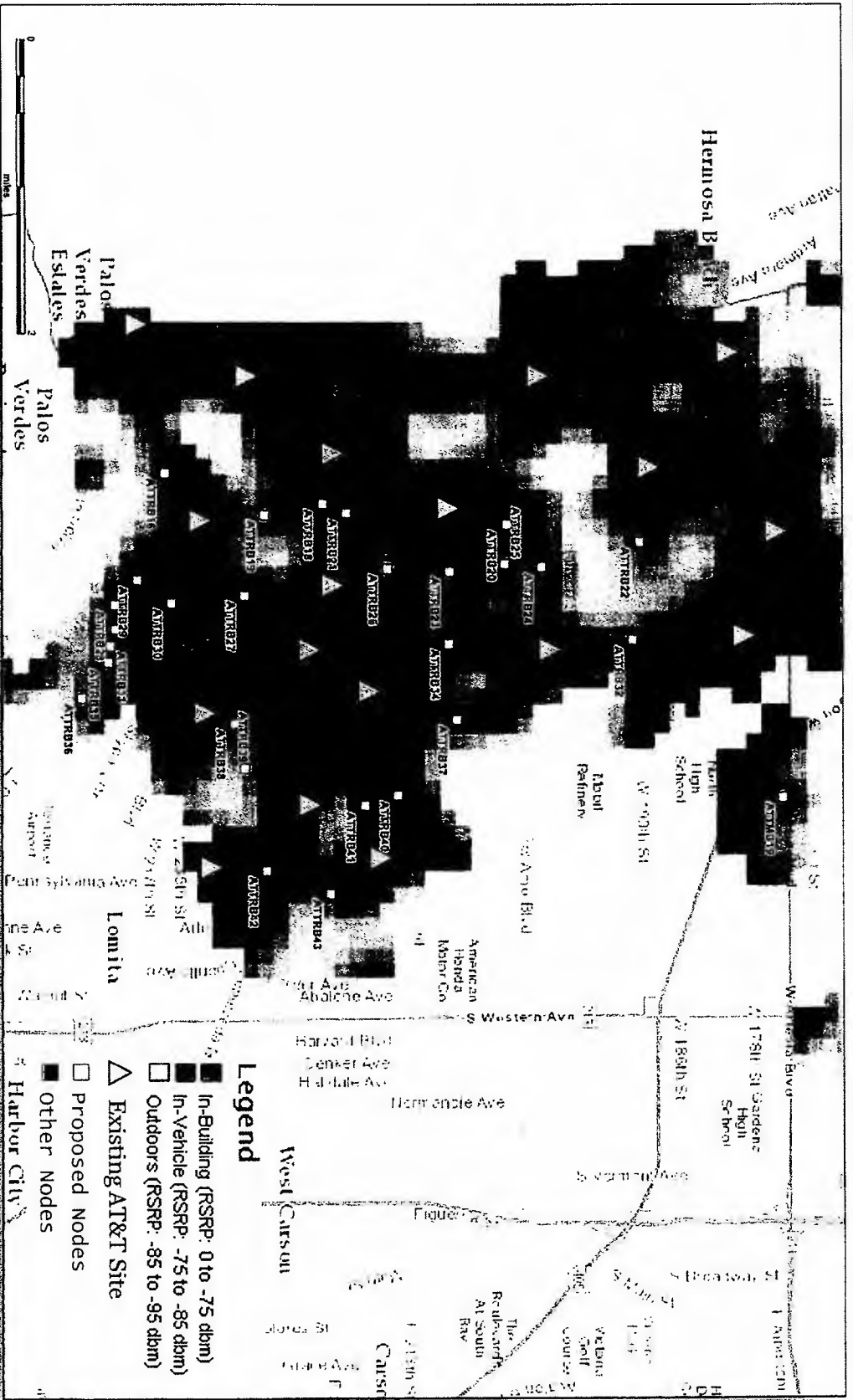
# Node Location



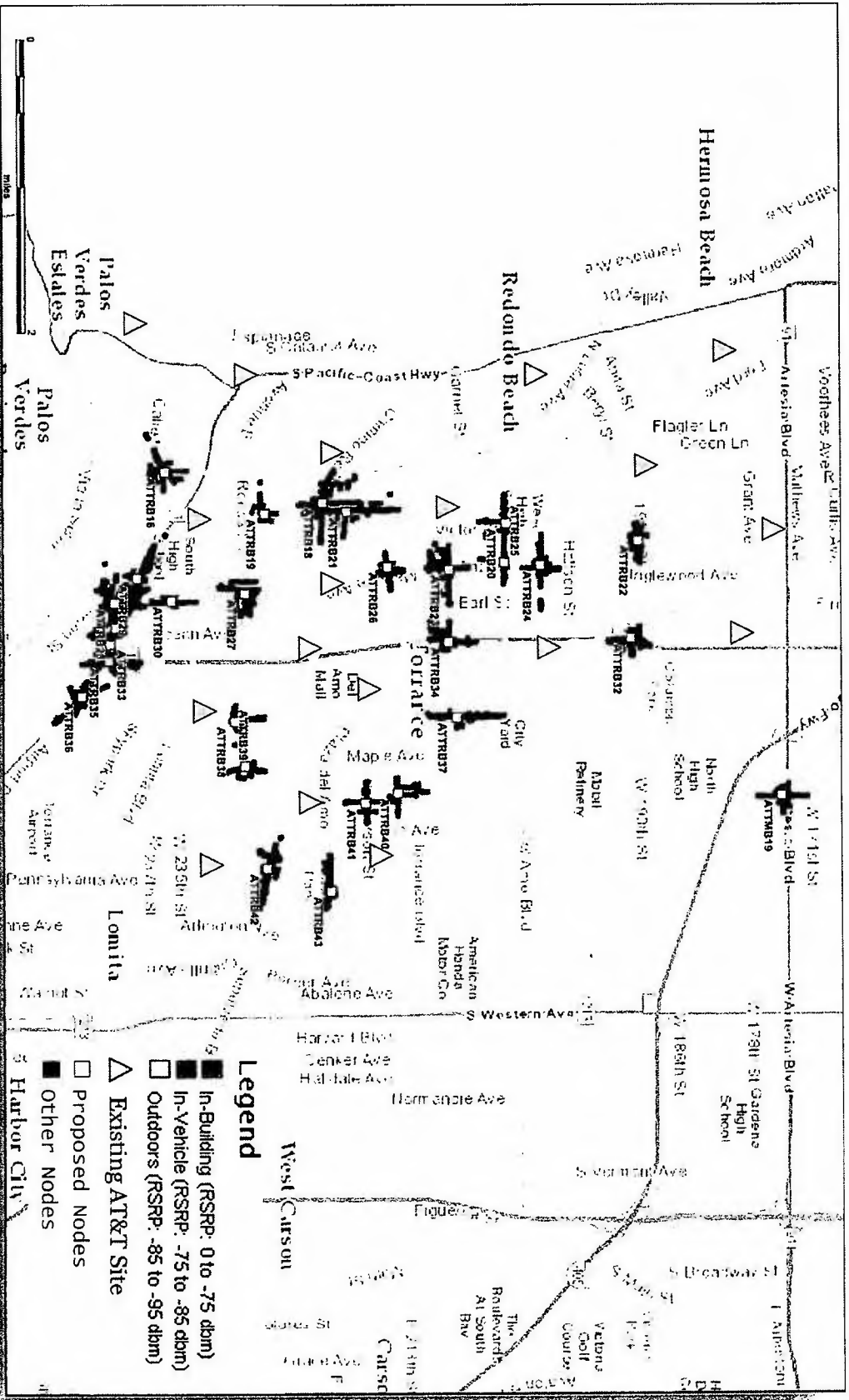
# Existing Coverage



# Combined Existing and Proposed Coverage



# Proposed Small Cell Drive Test Data



AT&T

# Node ATTRB41 Primary & Alternate Candidates

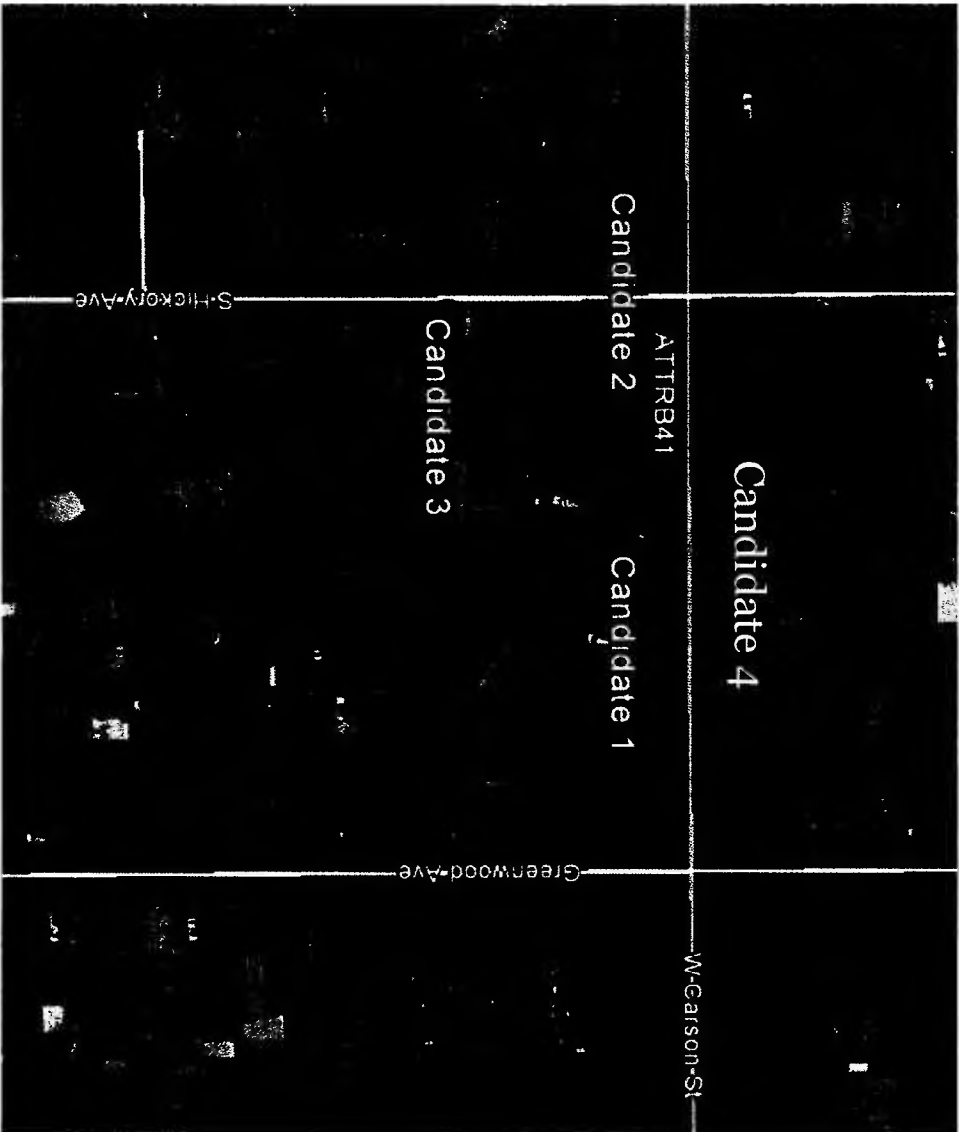
## Coverage Objectives:

Improve Network Capacity and Coverage for commuters and residents near intersection of W Carson St. and S Hickory Ave.

Node ID	Candidate	Latitude	Longitude	Structure Type	Meet Coverage Objective	Comments
ATTRB41	Primary	33.831120	-118.334350	Street light	Yes	Will meet the coverage objectives
	Candidate 1	33.831149	-118.334020	Street Light	Yes	Will meet the coverage objectives if landscaping in ROW is removed
	Candidate 2	33.831150	-118.334763	Street Light	Yes	Will meet the coverage objectives
	Candidate 3	33.830832	-118.334506	Utility Wood Pole	No	Will not work because there is no space on pole per G095 restrictions.
Candidate 4	33.831383	-118.334377	Street Light	Yes	Will meet the coverage objectives but requires landscaping of the ROW	



# Node ATTRB41 Primary & Alternate Candidates



**Primary Candidate**

Will meet the coverage objectives

**Alternate Locations:**

**Candidate 1:**

Will meet the coverage objectives if landscaping in ROW is removed

**Candidate 2:**

Will meet the coverage objectives

**Candidate 3:**

Will not work because there is no space on pole per G095 restrictions

**Candidate 4:**

Will meet the coverage objectives but requires landscaping of the ROW

Code Requirements and Conditions, if approved:

The following Code Requirements are applicable to the project, if approved:

- A Construction and Excavation Permit (C&E Permit) is required from the Community Development Department, Engineering Permits and Records Division, for any work in the public right-of-way on Carson Street.
- The traffic control plan(s) shall comply with the MUTCD manual.
- Must comply with TMC Section 92.39.070 regarding submission of RF compliance report.
- Must comply with TMC Section 92.39.090 regarding discontinued use or abandonment of facility.

Recommended Conditions, if Approved:

1. That the use of the subject site for a telecom facility shall be subject to all conditions imposed in WTC18-00005 and any amendments thereto or modifications thereof as may be approved from time to time pursuant to Section 92.39.070 et seq. of the Torrance Municipal Code on file in the office of the Community Development Director of the City of Torrance; and further, that the said use shall be established or constructed and shall be maintained in conformance with such maps, plans, specifications, drawings, applications or other documents presented by the applicant to the Community Development Department and upon which the Telecommunications Committee relied in granting approval;
2. That if this Approval is not implemented within one year after the approval, it shall expire and become null and void unless extended by the Community Development Director for an additional period, as provided for in Section 92.27.1 of the Torrance Municipal Code; (Planning)
3. That all requirements provided under Ordinance No. 3058, Section 92.2.8, Satellite Antennas, of the Torrance Municipal Code, Division 9, shall be met prior to the issuance of building permits and/or encroachment permits; (Planning)
4. That all pole mounted equipment be painted to match to the satisfaction of the Community Development Director; (Planning)
5. The permittee shall install and at all times maintain in good condition an "RF Notice" sign and network operations center sign. The signs required in this condition must be placed in a location where they are clearly visible to a person when he or she approaches streetlight pole; (Planning)
6. The permittee shall ensure that all RF signage complies with FCC OET Bulletin 65 or ANSI C95.2 for color, symbol and content conventions. All such signage shall provide a working local or toll-free telephone number to its network operations center that reaches a live person who can exert transmitter power-down control over this site as required by the FCC; (Planning)
7. That the antenna and all related equipment shall be removed if the telecommunications site remains inactive for more than 180 days; (Planning)
8. That the permittee shall conceal all cables, wires, jumpers and connectors within the antenna or equipment shrouds; (Planning)
9. That if existing footing of the street light pole cannot be utilized, the entire footing shall be removed; (Engineering)
10. That all proposed SCE power lines shall be installed underground; (Engineering)

CDD RECOMMENDATIONS – 1/8/19  
AGENDA ITEM 6D  
CASE NO. WTC18-00005

11. That SCE approval for conduit layout between the power manhole and the proposed light pole is required prior to the issuance of the Construction and Excavation Permit; (Engineering)
12. That a minimum 10' vertical clearance above public sidewalk surface for proposed antenna and equipment mounted on existing utility pole and a minimum 16' vertical clearance above sidewalk surface for proposed antenna and equipment within 2' or less horizontally of the public street shall be maintained; (Engineering)
13. That if generators are required at the site, they must meet Torrance Municipal code requirements for noise; (Environmental)

DATE: January 3, 2019  
TO: Telecommunications Committee  
FROM: Planning Division  
SUBJECT: **WIRELESS TELECOM FACILITY (WTC18-00010) – CROWN CASTLE NG WEST LLC**

A request for approval of a Telecom Permit to allow the installation of a small cell antenna and support equipment attached to a replacement concrete street light pole (Pole ID #2246342E) in the public right-of-way adjacent to 3401 W 229<sup>th</sup> Place in the R-1 Zone. This project is Categorically Exempt from CEQA per Guidelines Section 15301 – Existing Facilities

Applicant: Crown Castle NG West LLC  
Case No: WTC18-00010  
Location: 3401 W. 229<sup>th</sup> Place (ROW)  
Zoning: R-1: Single Family Residential

The subject request is for the installation of a wireless site in the public right-of-way adjacent to 3401 229<sup>th</sup> Place. Per Torrance Municipal Code 92.39.060(1), such requests within the public right-of-way adjacent to residentially zoned properties are reviewed by the Telecommunications Committee and requires notification to property owners within 300 feet of the proposed location. In compliance with prior City Council directives, on December 28, 2018, staff mailed notices to property owners within 500' radius and posted a notification to the subject pole (Attachment #1).

The proposal involves the installation of an omni-directional antenna and three remote radio units (RRU) within a radome on a new 29.25' street light pole and the removal of an existing 29.25' street light pole. The radome is designed to attach to the top of the new street light pole.

The proposed radome is 5.5' in height and 2.3' in diameter. The radome is proposed to be mounted at 29.25' above ground level with a maximum height of 34.75'. A 6' aluminum elliptical luminaire is proposed to be mounted at 27.25' with an overall height of 30'. The submitted plans indicate the facility will receive fiber and power underground. Two 2'x3' hand vaults are proposed within the sidewalk at approximately 3' away from the base of the street light pole and 2' setback from the curb. No additional cabinets are required as this configuration eliminates the need for above ground appurtenances.

The purpose of the proposed site, according to the applicant, is to "Increase the existing RF signal level in an existing coverage area" for AT&T's network. The target area described in the RF Coverage maps is the surrounding residential area along 229<sup>th</sup> Place, between 229<sup>th</sup> Street to the north and Kashiwa Court to the south and between Maple Avenue to the east and Madison Street to the west. The proposed antenna would

propagate signal omni-directionally. The application was reviewed by the City's telecom consultant, Telecom Law Firm PC, multiple times for technical and regulatory issues. Staff notes that the applicant has submitted the remaining documentation that is mentioned in the last memo dated October 31, 2018.

The applicant has submitted an RF compliance report (included as part of Attachment #3) that evaluates the proposed facility's planned compliance with FCC Guidelines. Staff notes that the City cannot impose additional requirements with respect to FCC requirements with the exception of requesting verification that the site is operating in compliance. If approved, per TMC92.39.070 a radio frequency and compliance radiation report is required to be submitted within 30 days after installation of the facility.

The proposed facility utilizing a new concrete street light pole falls into a location that requires a special review by the Telecommunications Committee as it is in the right-of-way adjacent to a residential district. Per the Applicant's submittals, the site identified will provide the coverage needed to fulfill the applicant's objectives.

In order to recommend Approval of this Telecom Permit, the following findings must be made per 92.39.040(b)(3):

- i. Other locations that do not require special approval under this Section 92.39.040(B) are either not available or not feasible; and
- ii. Establishment of the facility at the requested location is necessary to provide service; and
- iii. Lack of such a facility would result in a prohibition of service;

Staff notes that the proposal meets the first finding as there are no other tall non-residential structures in the vicinity which may lend themselves to a small cell installation that is on the prioritized location per the City's code. The applicant proposed three alternate locations that met coverage objectives; however, they either require the placement of considerable new infrastructure or are no less intrusive than the proposed location. In the judgement of staff, however, not all of the necessary findings can be made. Per the applicant's documentation and the City's consultant confirmation, there currently is AT&T service within the coverage area and as such, establishment of the facility is not necessary to provide service and lack of this facility does not result in a prohibition of service.

Although the proposed small cell facility has been designed to provide increased capacity while simultaneously providing a less visually intrusive structure, under the narrow purview of the code, staff cannot make the findings per TMC92.39.040(b)(3) and recommends denial of the request. Should the Committee wish to approve the facility, recommended conditions and code requirements have been attached for your review (Attachment #4).

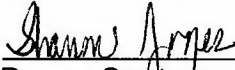
**PROJECT RECOMMENDATION:** Denial

Prepared by,



*kmz*  
\_\_\_\_\_  
Aaron Whiting  
Planning Assistant

Recommended by,



*fa*  
\_\_\_\_\_  
Danny Santana  
Planning Manager

**Attachments:**

1. Notification Map and Posting
2. Telecom Law Firm Memorandums
3. Supplemental Technical Information Report and Documentation
4. Recommended Conditions and Code Requirements, if approved
6. Plans/Photo Simulations (Limited Distribution)

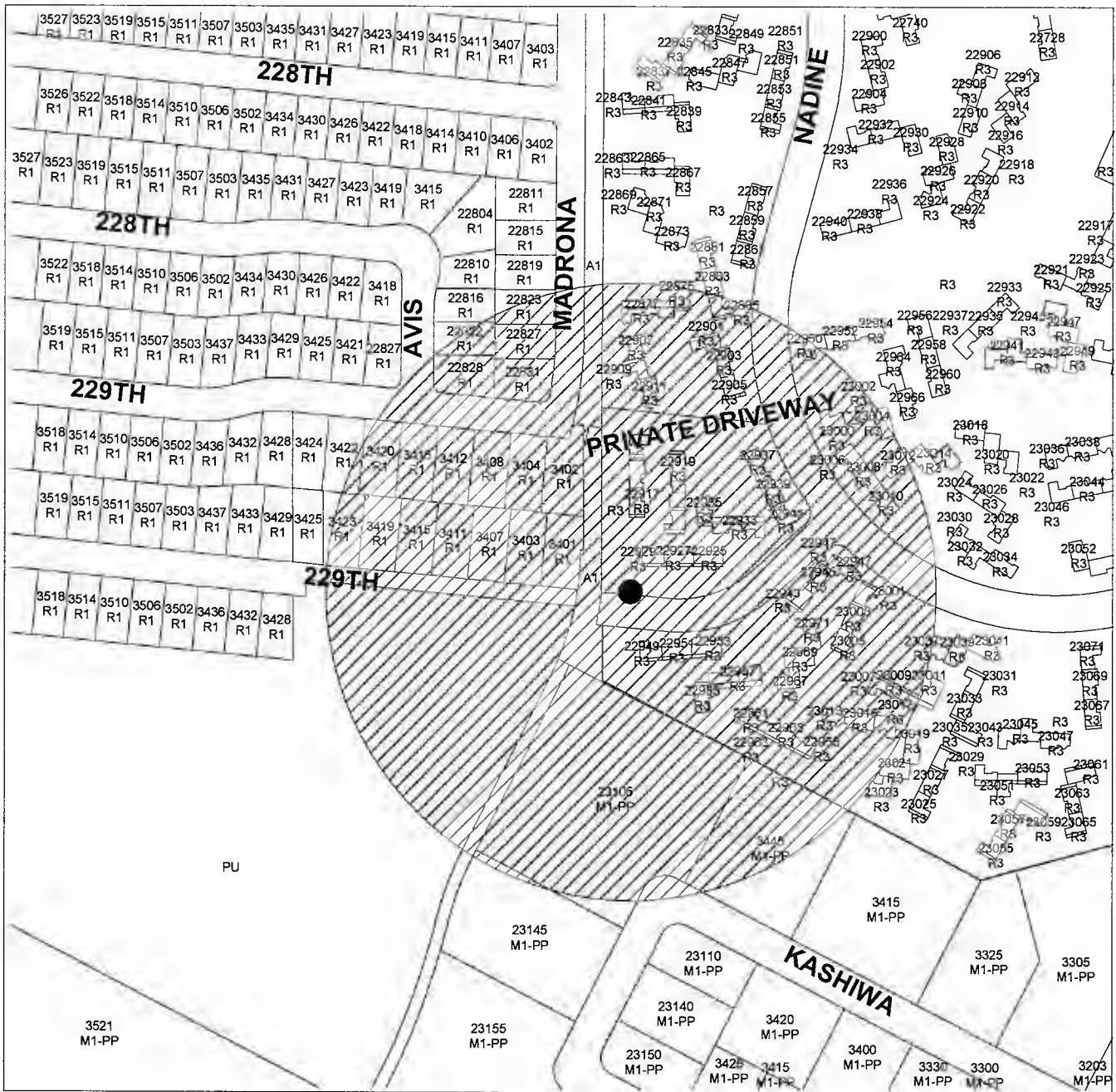
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This request for a Telecom Permit (WTC18-00010) is        APPROVED        DENIED per Ordinance No. 3561, Section 92.39.060, Satellite Antennas, of the Torrance Municipal Code, Division 9.

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Felipe Segovia  
Telecommunications Committee Chair



Decisions made by the Telecommunications Committee are appealable to the Planning Commission within 15 calendar days following the above date of approval/denial.



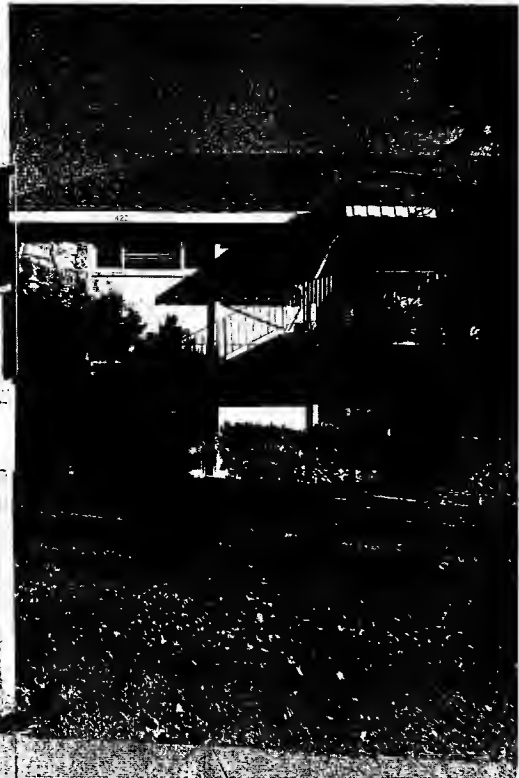
**LOCATION AND ZONING MAP**  
**WTC18-00010**  
**Public Right-Of-Way**  
**3401 229th Place**



**LEGEND**

-  Project Location
-  Notification Area









## APPLICATION INCOMPLETE MEMORANDUM

**TO:** Mr. Oscar Martinez [REDACTED]  
**FROM:** Dr. Jonathan Kramer [REDACTED]  
**DATE:** February 20, 2018  
**CITY ID:** WTC18-00010  
**SITE ID:** ATTRB-38  
**USID:** 177978  
**RE:** Application Completeness Review – New Proposed Wireless Facility in the Public Right-of-Way F/O 3401 W. 229<sup>th</sup> Place (N 33° 49' 5.8" W 118° 20' 38.9")

**APPLICANT:** Crown Castle NG West, LLC  
**APPLICANT JOB #:** 414620  
**APPLICANT PROJECT #:** 438004

The City of Torrance (the “City”) requested that Telecom Law Firm, PC (“TLF” or “We”) review the Crown Castle NG West, LLC (the “Applicant”) application on behalf of AT&T Mobility (“AT&T”) to remove an existing light pole and replace it with a new light pole (“Pole”) to operate a new wireless site on the Pole in the public right-of-way (“ROW”) located near 3401 W. 229<sup>th</sup> Place see Figure 1.

The date the Applicant submitted this project to the City was January 23, 2018.

On top of the Pole, the Applicant proposes to install:

- One Galtronics Extent P6480 24.7’ x 10.0” omni-directional antenna (“Antenna”).
- A pole-top mount to hold the proposed Antenna.
- A 9.5” x 8” pole-top shroud below the Antenna.
- Two 2-foot tall equipment shrouds to situate a total of four remote radio units (“RRUs”).
- Two RF signs (one approximately at 23’ 5” above ground level (“AGL”) and one approximately at 10’ 9” AGL).
- The replacement of the existing street signs which were originally on the old light pole.

The height of the Pole supporting this project is to remain at 28’ 9” AGL; however, the vertical height of the Pole plus the wireless facility will be 31’ 8” AGL due to the proposed installation of the omni-antenna [this increase in height appears acceptable under Torrance Municipal Code 92.39.040(a)(1)(A) since the total height of the structure will not exceed 35 feet AGL].

This memorandum reviews the application and related materials to determine whether the applicant submitted a complete and responsive application. The following review may also discuss regulatory and technical issues related to wireless infrastructure. Although many technical issues implicate legal issues, the analysis and recommendations contained in this memorandum do not constitute legal advice.

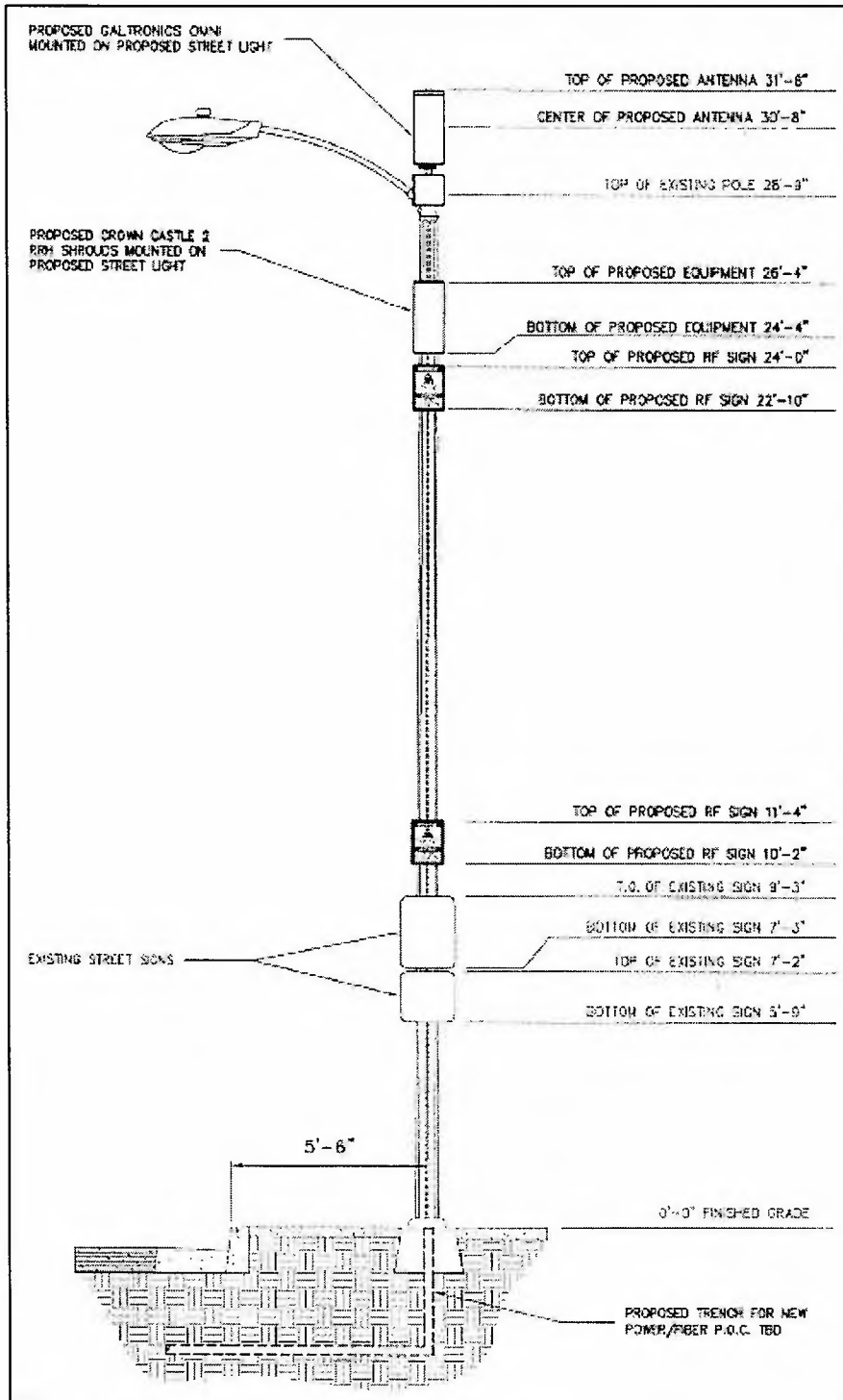


Figure 1: Proposed Pole (Source: Plans page A-3 panel 1).



For its electrical and fiber connections, the Applicant proposes a new underground power/fiber trench for power/fiber to run from an existing underground location. We note that the Plans page A-1 panel 2 show that the power/fiber run is TBD (to be determined). See Figure 2 below.

Additionally, Figure 2 shows a 17" x 30" handhole with proposed wireless technology rate ("WTR") electrical connection. From this handhole, an underground power line is proposed to run to the Applicant's equipment on the Pole.

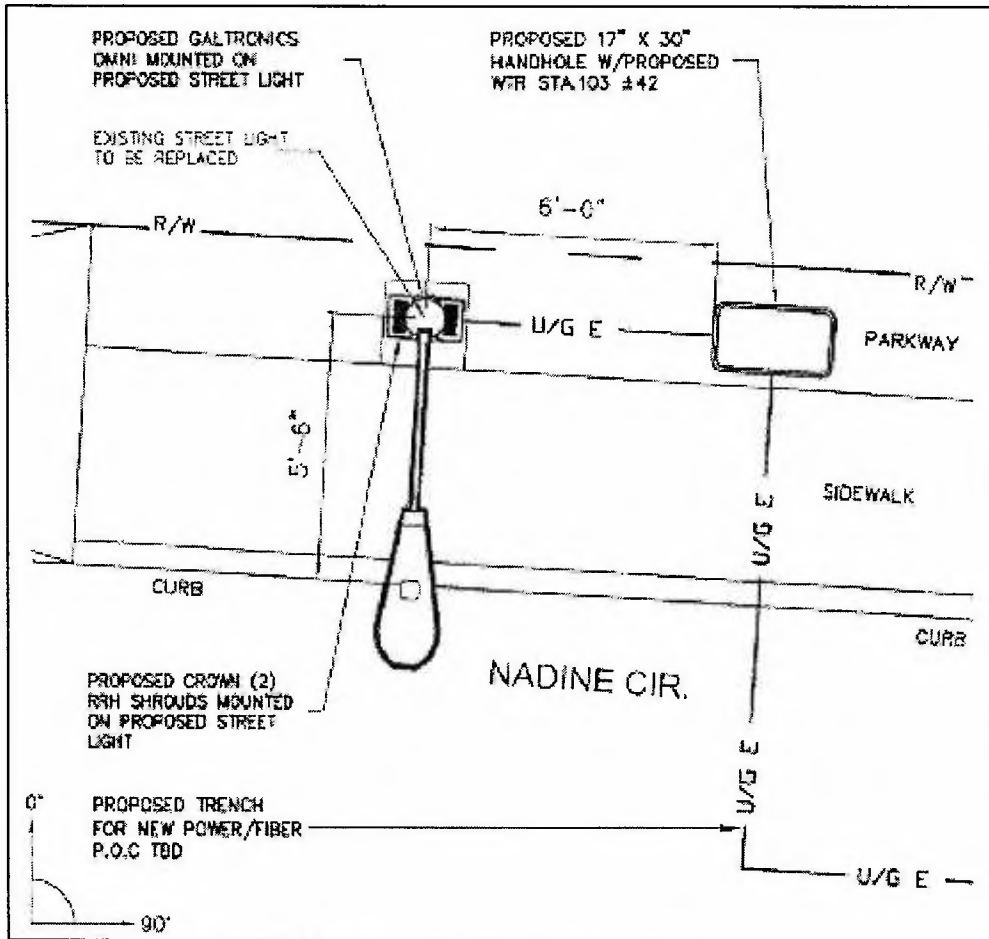


Figure 2: Power/Fiber connections (Source: Plans page A-1 panel 2).

We note that the Development Application mentions that two underground vaults will be installed. See Figure 3. The Plans and the Development Application do not match since no underground fiber is depicted on the Plans. All materials submitted for this specific project must be internally consistent for project design reliability and clarity.



<b>PROPOSED USE OF PROPERTY AND PURPOSE OF APPLICATION(S):</b> _____ Install (1) omni directional antenna on (N) steel streetlight pole, install (4) RRUs within (2) new enclosures on (N) pole, install (1) UG vault to house WTR (power source) and (1) UG vault to house fiber.
--

Figure 3: Proposed use and purpose of property (Source: Development Application).

## A. APPLICATION COMPLETENESS REVIEW

Based on the City's Submittal Requirements for Wireless Telecommunications Facility ("**Requirements Form**"), we recommend that the City deem the Applicant's application submittal **incomplete** and issue an incomplete notice on or before February 22, 2018 regarding the items more fully discussed within this incomplete memorandum.

### REQUIREMENTS FORM

#### I. APPLICATION FORM

The City requires a Development Application and a Supplemental Technical Information Report ("**STIR**").

- **Development Application:**

The Development Application checklist appears to be properly filled out.

- **Supplemental Technical Information Report:**

- **Sec. 3.02** – The Applicant only included FCC licenses for the CLR 850 MHz frequencies; however, the Radio Frequency Electromagnetic Fields Exposure Report by Dtech Communications dated August 2, 2017 ("**Dtech RF Report**") notes the use of PCS and 5 GHz frequencies. Additionally, the Plans include references to AWS frequencies. Therefore, for application completeness purposes, the respective FCC licenses should be included for planned operations. The FCC license call sign for each band within the MTA covering the City of Torrance is sufficient.
- **Sec. 3.03** – The Applicant checked off the box for "other" however, did not provide any additional information regarding what "other" means.
- **Sec. 3.09** – Missing Attachment LSGAC Appendix A, however the Applicant provided the Dtech RF Report, which substitutes for the LSGAC Appendix A form.
- **Sec. 3.13** – Is not provided, however the Applicant provided the Dtech RF Report.



- **Sec. 6.03** – Applicant has not provided the map required. The application requires that an Applicant provide an isolated node-specific map without the coverage of any other existing or proposed wireless sites.
- **Sec 7.0** – The Applicant has not provided any photo simulations to the proposed project- The Applicant must provide the requested photo simulations.
- **Sec 8.0** – The Applicant has not provided any candidate sites. The Applicant must provide the requested candidate sites analysis.

## II. PROPERTY OWNERSHIP

The Applicant has not provided written proof that the Pole owner, Sout hern California Edison has granted permission for this project therefore this portion of the application is incomplete.

## III. PROJECT PLANS

TLF notes that the Plans page A-1 panel 2 labels the street name incorrectly.

Additionally, we note that the Plans page D-4 panel 1 depict that two of the RRUs are for future use and do not show any connections to the Antenna. We recommend the City require the Applicant to eliminate all “Future” elements from the current proposal, specifically the two “Future” 2203 RRUs shown in Figure 4.

If the two “future” 2203 RRUs are eliminated, then only one 2-foot tall equipment shroud will be necessary to encompass the two active 2203 RRUs.

[Balance of page intentionally left blank]



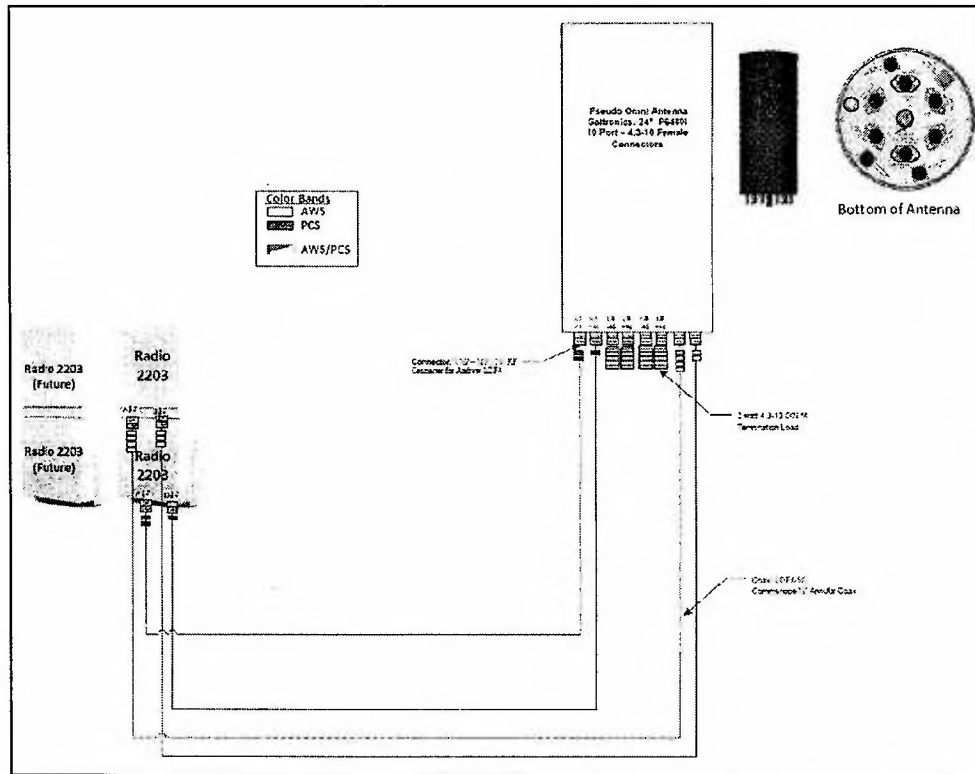


Figure 4: Two current RRUs connected to the Antenna, and two “future” RRUs not connected to the Antenna (Source: Plans page D-4 panel 1).

**IV. JUSTIFICATION**

The Applicant’s answer in Section 4.01 is that they hold a CPCN, thus they need not provide the required narrative. That reply insufficient to justify the installation and operation of wireless equipment at this particular project location.

While a telephone corporation has compulsory access to the public right of way, PUC Section 7901.1, conditions that compulsory access, which states in its entirety:

7901.1.

(a) It is the intent of the Legislature, consistent with Section 7901, that *municipalities shall have the right to exercise reasonable control as to the time, place, and manner in which roads, highways, and waterways are accessed.*

(b) The control, to be reasonable, shall, at a minimum, be applied to all entities in an equivalent manner.

(c) Nothing in this section shall add to or subtract from any existing authority with respect to the imposition of fees by municipalities.

(Emphasis added.)



Holding a CPCN still makes the project subject to reasonable time, place, and manner reviews and adjustment by the City. There is no demonstration that the specific project site is the only site that can possibly work (most likely that is not the case), especially when the Applicant, like here, is not the FCC licensee.

**V. MAPS**

As discussed above, some of the maps are missing/incomplete.

**VI. VISUAL SIMULATIONS**

The Applicant has not provided any photo simulations of the proposed project, therefore, this portion of the application is incomplete.

**B. OTHER PERMITS AND APPLICATIONS REQUIRED**

This project is likely to require an encroachment permit as a separate set of approvals including potentially an excavation permit and a building permit.

The City shall insure that when granting the excavation permit for the new light standard it also requires as a condition that the discontinued light standard's foundation is hammered out and the ground be restored and properly compacted.

The City should condition the project, if approved, to show that the replacement Pole is not a wireless tower for any purpose, but rather it is considered only a replacement light pole to be owned by the City. The primary purpose of this Pole is and shall remain for street illumination rather than for any primary use as a wireless tower and/or base station.

**C. CLOSING COMMENTS AND RECOMMENDATION**

TLF notes that page 4 of the STIR (after section 6.05), has a handwritten note as "Please see Bushberg Report". While not an incomplete item nor part of the STIR, TLF is only aware of a Dtech RF Report being submitted for this project. The Applicant should provide a copy of the referenced Bushberg Report for our review.

We believe that the Applicant has not yet submitted a permit application that complies with the City's Requirements Form. The list of incomplete items in this memo contains our observations. The City may have other items for the incomplete notice. Under the FCC rules, there is only one incomplete notice, so it is imperative that all items which are incomplete are listed in the first notice.

We recommend that the City deem this application incomplete and issue a timely incomplete notice to the Applicant no later than February 22, 2018 (based on the application materials tender



date of January 23, 2018). Our recommendation is that the City send the incomplete notice by email and on the same day also sends it by First Class or Certified U.S. Mail postage prepaid.

Once a reply to the City's incomplete notice is received back from the Applicant, the City has only 10 calendar days to determine whether the reply is responsive to the incomplete notice, and each of the 10 days counts against the overall 150 day shot clock, thus immediate review upon resubmission should occur.

/JLK







## APPLICATION INCOMPLETE MEMORANDUM

**TO:** Mr. Oscar Martinez  
**FROM:** Dr. Jonathan Kramer  
**DATE:** October 31, 2018  
**CITY ID:** WTC18-00010  
**SITE ID:** ATTRB-38  
**USID:** 177978  
**RE:** Application Completeness Review – New Proposed Wireless Facility in the Public Right-of-Way F/O 3401 W. 229<sup>th</sup> Place (N 33° 49' 5.8" W 118° 20' 38.9")

**APPLICANT:** Crown Castle NG West, LLC  
**APPLICANT JOB #:** 414620  
**APPLICANT PROJECT #:** 438004

On January 23, 2018, Crown Castle NG West, LLC (“**Crown Castle**”) on behalf of AT&T submitted wireless site application materials to the City of Torrance (“**City**”). Per the City’s request, on February 20, 2018, Telecom Law Firm, PC (“**TLF**” or “**We**”) submitted an Application Incomplete Memorandum (the “**First Memorandum**”) to the City that evaluated the Crown Castle’s application to remove an existing light pole and replace it with a new light pole (“**Pole**”) in the public right-of-way (“**PROW**”) located near 3401 W. 229<sup>th</sup> Place.

TLF’s First Memorandum concluded that Crown Castle failed to submit a complete permit application that fully responded to the City’s publicly stated application requirements. We recommended that the City deem Crown Castle’s application incomplete and issue a timely notice, which it did.

On August 15, 2018 Crown Castle submitted additional materials (the “**August 2018 Submission**”) to address the deficiencies identified in our First Memorandum related to its initial submission. Per the City’s request, on August 20, 2018, TLF submitted an Application Incomplete Memorandum (the “**Second Memorandum**”) to the City. TLF’s Second Memorandum concluded that Crown Castle failed to submit a complete permit application that fully responded to the City’s publicly stated application requirements. We recommended that the City deem Crown Castle’s application incomplete and issue a timely notice, which it did.

On October 23, 2018, Crown Castle submitted additional materials (the “**October 2018 Submission**”) to address the deficiencies identified in TLF’s Second Memorandum related to its August 2018 Submission.

This memorandum reviews the Crown Castle’s October 2018 Submission to determine whether the applicant submitted a complete and responsive application. The following review may also discuss regulatory and technical issues related to wireless infrastructure. Although many technical issues implicate legal issues, the analysis and recommendations contained in this memorandum do not constitute legal advice.

TLF recommends that the City continue to deem the Crown Castle's application submittal **incomplete** and issue an incomplete notice on or before November 2, 2018 regarding the items more fully discussed within this incomplete memorandum.

## **I. PROPERTY OWNERSHIP**

Crown Castle has not provided written proof that the Pole owner, Southern California Edison has granted permission for this project therefore this portion of the application remains incomplete. The City should not proceed without this written authorization.

## **II. JUSTIFICATION**

The October 2018 Submission included the below verbiage as justification.

“The CPCN was submitted and establishes Crown Castle's compulsory access to the ROW. In addition, the alternative packet was submitted examining multiple alternatives in the area of the proposed facility. That slide deck should more than suffice in allowing the city the necessary review under time, place and manner to approve the application. Further, the exact same alternatives packet was submitted for the rest of the applications, 13 of which have been deemed approved, therefore one would assume that particular packet provided sufficient justification.”

The Applicant's comments just above are non-responsive to resolving its failure to provide the required and complete answer to Section 4.01 of the application. As previously discussed, the issue is not whether Crown Castle has a CPCN; it is whether their failure to provide the answer interferes with the City's time, place, and manner duties under PUC 7901 and 7901.1. We believe their repeated failure to provide the required application response does exactly that.

We recommend the City continue to hold the application as being incomplete for failure to provide the application-required information necessary to allow the City to properly perform its duties under the Public Utilities Code.

## **CLOSING COMMENTS AND RECOMMENDATION**

We conclude that the Crown Castle continues to omit from its permit application necessary information that complies with the City's application, thus the application remains incomplete. The list of incomplete items in this memo contains TLF's observations. The City may have other items for the incomplete notice.

We recommend that the City deem this application incomplete and issue a timely incomplete notice to the Crown Castle no later than November 2, 2018 (based on the October 2018 Submission



tender date of October 23, 2018). Our recommendation is that the City send the incomplete notice by email and on the same day also sends it by First Class or Certified U.S. Mail postage prepaid.

/JLK



RB38

WTC18-00010



City of Torrance, Community Development Department Jeffery W. Gibson, Director  
3031 Torrance Blvd., Torrance, CA 90503, Phone (310) 618-5990 Fax (310) 618-5829

## **SUBMITTAL REQUIREMENTS FOR WIRELESS TELECOMMUNICATION FACILITIES**

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### **APPLICATION FORM**

- One original Development Application and Supplemental Technical Information Report.

### **PROPERTY OWNERSHIP**

- Evidence of ownership of the real property on which the proposed telecom facility will be located, and evidence of authorization from the real property owner to place the facility on the property.

### **SEVEN (7) SETS OF THE FOLLOWING:**

### **PROJECT PLANS**

- Full size (24"X36") Plot Plan, Floor Plans and Elevations need to be stapled, collated and folded to approximately 9"X12" in size.

### **JUSTIFICATION**

- A brief narrative, accompanied by written documentation where appropriate, which explains the purpose of the facility and validates the applicant's efforts to comply with the design, location, and co-location standards of Article 39 of Chapter 2 of Division 9. Please refer to section 4.00 of the SUPPLEMENTAL TECHNICAL INFORMATION REPORT.

### **MAPS**

- A map or maps showing the geographic area to be served by the facility. Please refer to section 6.00 of the SUPPLEMENT TECHNICAL INFORMATION REPORT.

### **VISUAL SIMULATIONS**

- Visual simulations showing "before" and "after" views of the proposed facility. Consideration shall be given to views from both public areas and private residence. Please refer to section 7.00 of the SUPPLEMENTAL TECHNICAL INFORMATION REPORT.

OCT 23 2018



City of Torrance, Community Development Department Jeffery W. Gibson, Director  
3031 Torrance Blvd., Torrance, CA 90503, Phone (310) 618-5990 Fax (310) 618-5829

## SUPPLEMENTAL TECHNICAL INFORMATION REPORT FOR WIRELESS TELECOMMUNICATION FACILITIES

1.00: Project Address ROW F/O 3401 W 229TH PLACE  
Assessor Parcel Number N/A Public ROW

2.00: Disclose the Name and Address of all Project Owners, and attach a letter of agency appointing the Applicant as representative of the Project Owners in connection with this application. Designate the letter of agency as "Attachment 2.00".

### 3.00: FCC Licensee/FAA Compliance Information

3.01: Identify each person or legal entity that will be using the wireless site and contact information (Attach additional sheets if necessary)

Name: Crown Castle NG West LLC-Aaron Snyder

Address: 200 Spectrum Center Drive, Suite 1800

City, State, Zip: Irvine, CA 92618

Phone: (949) 344-7834 Fax: \_\_\_\_\_

Email: Aaron.Snyder@crowncastle.com

3.02: Attach a complete copy of each FCC license or FCC Construction Permit for each person/legal entity that will be subject to the FCC license for the Project site. Designate the license(s)/Construction Permit(s) as "Attachment 3.02". If none of the proposed radio facilities require an FCC license so indicate on Attachment 3.02.

3.03: What is the intended use of the facility (check all that apply):

- Broadcast Radio
- Broadcast TV
- Cellular telephone
- Enhanced Specialized Mobile Radio
- Microwave
- PCS telephone
- Paging
- Specialized Mobile Radio
- Other: 5 GHz Spectrum

3.04: Project latitude and longitude: N 33 49 05.8 W 118 20 38.9



## SUPPLEMENTAL TECHNICAL INFORMATION REPORT FOR WIRELESS TELECOMMUNICATION FACILITIES

- 3.05: Specify DATUM use above:  WGS84  NAD23  NAD83
- 3.06: Project Maximum height (ft): 34'9"
- 3.07: Bottom of lowest antenna (ft): 32'6"
- 3.08: Rad-center of the antennas (ft): 33'7"
- 3.09: For each licensee, and for each radio service, complete and attach the two page "Appendix A" form from "A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance" available from the following website: <http://www.FCC.gov/oet/rfsafety>. Designate the completed two page form as "Attachment 3.09". Additional RF safety disclosure information may be required by the government to determine compliance with FCC OET 65 requirements if the site is not "categorically excluded" under OET 65.
- 3.10 Are any areas adjacent to the antennas subject to RF emissions that are in excess of the "General Public/uncontrolled" standard in FCC OET 65? For this purpose, assume that all persons other than the Carrier's technical staff are considered to be members of the General Public.  
 Yes  No  
(If the answer to 3.10 is NO proceed to 3.12)
- 3.11 Provide a detailed RF analysis for each emitter and each band showing the distance, in feet, in all directions to the boundary of the General Public/uncontrolled boundary. Designate this attachment, "Attachment 3.11".
- 3.12 Considering your response to 3.10, above, and any other identifiable RF emitters that OET 65 requires be evaluated in connection with this project, are all portions of this project cumulatively "categorically excluded" under FCC OET 65 requirements?  
 Yes  No  
(If the answer to 3.12 is YES proceed to 3.14.)
- 3.13 Describe in an attachment each and every RF emitter of the project that is not "categorically excluded" under the FCC OET 65 requirements. Designate this attachment, "Attachment 3.13".
- 3.14: Does this project require the Applicant to file an FAA Form 7460 or other documentation under Federal Aviation Regulation Part 77.13 et seq, or under the FCC rules?  
 Yes  No  
(If the answer to 3.14 is NO proceed to 4.00.)



## SUPPLEMENTAL TECHNICAL INFORMATION REPORT FOR WIRELESS TELECOMMUNICATION FACILITIES

3.15 Attach complete copies of all required FAA/FCC forms including all attachments and exhibits thereto, including without limitation FAA Form 7460. Designate this attachment, "Attachment 3.15".

### 4.00: Project Purpose

4.01: Justification. Provide a brief narrative, accompanied by written documentation where appropriate, which explains the purpose of the facility and validates the applicant's efforts to comply with the design, location, and co-location standards of Chapter 2, Division 9, Article 39 of the City's Municipal Code.

Crown Castle NG West LLC, Utility No. U-6745-C, obtained a Certificate of Public Convenience and Necessity (CPCN) from the California Public Utilities Commission

In Decision No. 07-04-045 to provide full facilities based radiofrequency transport services. CPCN Conclusion of Law No. 4 states: "Public convenience and necessity

require NextG's full facilities-based local exchange services to be offered to the public subject to the terms and conditions set forth herein." This justification is

sufficient under the California state law and under Crown's authorized provision of radiofrequency transport services. No further site justification is required.

4.02: Indicate whether the dominant purpose of the Project is to add additional network capacity, to increase existing signal level, or to provide new radio frequency coverage (check only one).

Add network capacity without adding substantial new RF coverage area (Proceed to 5.00)

Increase the existing RF signal level in an existing coverage area (Proceed to 5.00)

Provide new radio frequency coverage in a substantial area not already served by existing radio frequency coverage (Proceed to 5.00)

Other

4.03 Attach a statement fully and expansively describing the "Other" dominant purpose of this project. Designate this attachment, "Attachment 4.03".

### 5.00: Build-Out Requirements

5.01: Do any of radio services identified in 3.04 above require the licensee to provide specific radio frequency/population coverage pursuant to the underlying FCC license?

x Yes    \_\_\_ No

(If the answer to 5.01 is NO proceed to 6.00.)

5.02: Have all of the FCC build-out requirements as required by all licenses covering all radio services proposed at this Project been met?

x Yes    \_\_\_ No

(If the answer to 5.02 is YES proceed to 6.00.)



City of Torrance, Community Development Department Jeffery W. Gibson, Director  
3031 Torrance Blvd., Torrance, CA 90503, Phone (310) 618-5990 Fax (310) 618-5829  
**SUPPLEMENTAL TECHNICAL INFORMATION REPORT  
FOR WIRELESS TELECOMMUNICATION FACILITIES**

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5.03: State by licensee all remaining build-out requirements which have yet to be met, and the known or estimated date when the remaining build-out requirements will be met. Designate this attachment "Attachment 5.03".

**6.00: Radio Frequency Coverage Maps**

6.01: Where a licensee intends to provide radio frequency geographic coverage to a defined area from the Project (including applicants in the cellular, PCS, broadcast, ESMR/SMR categories, and others as requested by the City of Torrance), the coverage maps and information requested in Section 6 are required attachments. All others proceed to 7.00.

For the coverage maps required here, the following mandatory requirements apply. Failure to adhere to these requirements may delay your application processing.

1. The size of each submitted map must be no smaller than 11" by 8.5".
2. If the FCC rules for any proposed radio service defines a minimum radio frequency signal level that level must be shown on the map in a color easily distinguishable from the base paper or transparency layer, and adequately identified by RF level and map color or gradient in the map legend. If no minimum signal level is defined by the FCC rules you must indicate that in the legend of each RF coverage map. You may show other RF signal level(s) on the map so long as they are adequately identified by objective RF level and map color or gradient in the map legend.
3. Where the City of Torrance determines that one or more submitted maps are inadequate, it reserved the right to request that one or more supplemental maps with greater or different detail be submitted.

6.02: Existing RF coverage within the City of Torrance on the same network, if any (if none, so state). This map should not depict any RF coverage to be provided by the Project. Designate this attachment "Attachment 6.02".

6.03: RF coverage to be provided by the Project. This map should not depict any RF coverage provided any other existing or proposed wireless sites. Designate this attachment "Attachment 6.03".

6.04: RF coverage to be provided by the Project and by other wireless sites on the same network should the Project site be activated. Designate this attachment "Attachment 6.04".

6.05: Provide a written certification that the facility will continuously comply with FCC OET Bulletin 65 radio frequency emissions standards, and that use of the facility will not interfere with other communication, radio, or television transmission or reception.





## SUPPLEMENTAL TECHNICAL INFORMATION REPORT FOR WIRELESS TELECOMMUNICATION FACILITIES

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### 7.00: Project Photographs and Photo Simulations

7.01: Where an Applicant proposes to construct or modify a wireless site, and the wireless site is visible from other residential properties, the Applicant shall submit pre-project photographs, and photo simulations showing the project after completion of construction, all consistent with the following standards:

1. Minimum size of each photo simulation must be 11 inches by 8.5 inches (portrait or landscape orientation);
2. All elements of the project as proposed by the Applicant must be shown in one or more close-in photo simulations.
3. The overall project as proposed by the Applicant must be shown in five or more area photos and photo simulations. Photos and photo simulation views must, at a minimum, be taken from widely scattered positions separated by an angle of no greater than 72 degrees from any other photo location.

The number of site photos, and photo simulations, and the actual or simulated camera location of these photos and photo simulations is subject to City of Torrance determination. The Applicant should submit photos and photo simulations consistent with these instructions, and be prepared to provide additional photos and photo simulations should they be requested by the City of Torrance.

### 8.00: Candidate Sites

8.01: For applicants in the cellular, PCS, broadcast, ESMR/SMR categories, and others as requested by the City of Torrance, the information requested in Section 8 is required. All others proceed to 9.00.

8.02: Has the Applicant or Owner or anyone working on behalf of the Applicant or Owner secured or attempted to secure any leases or lease-options or similar formal or informal agreements in connection with this project for any sites other than the candidate site identified at 1.00?  
 Yes  No  
(If the answer to 8.02 is NO, proceed to 8.05.)

8.03: Provide the physical address of each such other location, and provide an expansive technical explanation as to why each such other site was disfavored over the Project Site. Designate this attachment "Attachment 8.03".

8.04: Considering this proposed site, is it the one and only one location within or without the City of Torrance that can possibly meet the objectives of the project?  
 Yes  No  
(If the answer to 8.04 is NO, proceed to 9.00.)



## SUPPLEMENTAL TECHNICAL INFORMATION REPORT FOR WIRELESS TELECOMMUNICATION FACILITIES

8.05: Provide a technically expansive and detailed explanation supported as required by comprehensive radio frequency data fully describing why the proposed site is the one and only one location within or without the City of Torrance that can possibly meet the radio frequency objectives of the project. Explain, in exact and expansive technical detail, all of the objectives of this project. Designate this attachment "Attachment 8.05".

### 9.00: Identification of Key Persons

9.01: Identify by name, title, company affiliation, work address, telephone number and extension, and email address the key person or persons most knowledgeable regarding:

- (1) the site selection for the proposed project, including alternatives;
  - (2) the radio frequency engineering of the proposed project;
  - (3) rejection of other candidate sites evaluated, if any;
  - (4) approval of the selection of the proposed site identified in this project.
- Designate this attachment "Attachment 9.01"

9.02 If more than one person is/was involved in any of the four functions identified in this section, attach a separate sheet providing the same information for each additional person, and identifying which function or functions are/were performed by each additional person. Designate this attachment "Attachment 9.02".

Initial here \_\_\_\_\_ to indicate that the information above is complete and there is no Attachment 9.02, or initial here g & to indicate that Attachment 9.02 is attached hereto.

### 10.00: Technical Information Report Certification

10.01: The undersigned certifies on behalf of itself and the Applicant that the answers provided here are true and complete to the best of the undersigned's knowledge.

[Redacted Signature]	GRPM
Signature	Title
Aaron Snyder	Aaron.Snyder@crowncastle.com
Print Name	Provide Email Address
Crown Castle NG West LLC	949-344-7834
Print Company Name	Provide Telephone Number
9/27/18	
Date Signed	



Incomplete Notice Responses-

3.12-The application was updated to reflect the correct statement relative to the wireless facility not being categorically excluded.

In addition, per the application, the following info pertains to the RF emitter to be located on the pole-

Amitabh Sharma

AT&T Area Manager C&E

1452 Edinger Ave

Phone #-844-485-1035

7.01-photo sims are updated to include vaults and RF signage.

9.01+9.02 -below is the identification of key persons in addition to the above response for 3.12:

The below are Crown Castle Employees-

Aaron Snyder

Government Relations Project Manager

200 Spectrum Center Drive Suite 1800

Irvine, Ca 92618



Saeed Garshasbi

Senior RF Engineer

200 Spectrum Center Drive Suite 1800

Irvine, Ca 92618

Office # 949-344-7817

#### Justification-

The CPCN was submitted and establishes Crown Castle's compulsory access to the ROW. In addition, the alternative packet was submitted examining multiple alternatives in the area of the proposed facility. That slide deck should more than suffice in allowing the city the necessary review under time, place and manner to approve the application. Further, the exact same alternatives packet was submitted for the rest of the applications, 13 of which have been deemed approved, therefore one would assume that particular packet provided sufficient justification.



YOUR BEST PARTNER

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## RADIO FREQUENCY ELECTROMAGNETIC FIELDS EXPOSURE REPORT

Prepared for Crown Castle

**Site Name:** Pole Top Configuration  
**Site Type:** Omni Antenna RC  $\geq$  18 ft  
**Report By:** Christopher Stollar, P.E.  
**Report Date:** 8/2/2017

Based on FCC Rules and Regulations, Crown Castle will be compliant provided recommendation(s) are implemented.

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## 1.0 EXECUTIVE SUMMARY

Dtech Communications, LLC (“Dtech”) has been retained by Crown Castle to determine whether its wireless communications facility complies with the Federal Communications Commission (“FCC”) Radio Frequency (“RF”) Safety Guidelines. This report contains a computer-simulated analysis of the Electromagnetic Fields (“EMF”) exposure resulting from a typical, minimum 18-foot antenna radiation center (“RC”), sign pole facility. The analysis also includes assessment of existing wireless carriers on site, where information is provided. The table below summarizes the result at a glance:

*Table 1: EMF Summary*

<b>Access Type</b>	Walk-Up
<b>Access to antennas locked</b>	NA
<b>RF Sign(s) @ access point(s)</b>	None
<b>RF Sign(s) @ antennas</b>	Information (Recommended)
<b>Barrier(s) @ sectors</b>	NA
<b>Max Cumulative EMF level for Crown Castle on Ground</b>	1.5% General Population
<b>Max Cumulative EMF level for Crown Castle at Antenna Elevation</b>	43.2% General Population (8.6% Occupational)
<b>General Population Keep Back Distance (At Antenna Elevation)</b>	NA



## 2.0 SITE DESCRIPTION

The wireless telecommunication facility is located on the ground. The antenna is omni-directional, designed to achieve 360 degrees of coverage. For this scenario, Crown Castle's antenna is mounted on a sign pole and connected to the equipment via cables (see Appendix E).

### 2.1 Antenna Inventory

Technical specifications in the table below are provided by our clients or gathered from physical field surveys where applicable and/or possible. Conservative estimates are used where information is not provided or available.

*Table 2: Site Technical Specifications*

Antenna ID	Operator	Carrier #	Antenna Mfg	Antenna Model	Type	DAS Equipment	Frequency (MHz)	Orientation (°T)	Horizontal BWidth (°)	Antenna Aperture (ft)	Antenna Gain (dBd)	Total ERP (Watts)	Bottom Tip Height Above Ground (Z) (ft)	Bottom Tip Height Ant Level (Z) (ft)
A1	Crown Castle	1	Galtronics	P6480i	Omni	(2) RRU2203	1900	0	360	2.1	6.9	69.2	17.0	0.0
A1	Crown Castle	1	Galtronics	P6480i	Omni	(1) RRU2205	5000	0	360	2.1	3.9	2.5	17.0	0.0

### 3.0 ANALYSIS

#### 3.1 Emission Predictions

Figure 1: Plan (bird's eye) view map of results compared to the FCC's General Population MPE (Maximum Permissible Exposure) Limits. Gray represents areas where exposure levels are calculated to be at or below 5%; Green- between 5% & 100% (below MPE limits); blue, yellow & red - greater than 100% (exceeds MPE limits). Individuals can safely occupy areas in gray and green for an indefinite amount of time; whereas areas in blue, yellow & red must be restricted to RF trained personnel who have been made fully aware of potential for exposure, have control and know how to reduce their exposure with the use of personal protection equipment or have the ability to power down the transmitters.

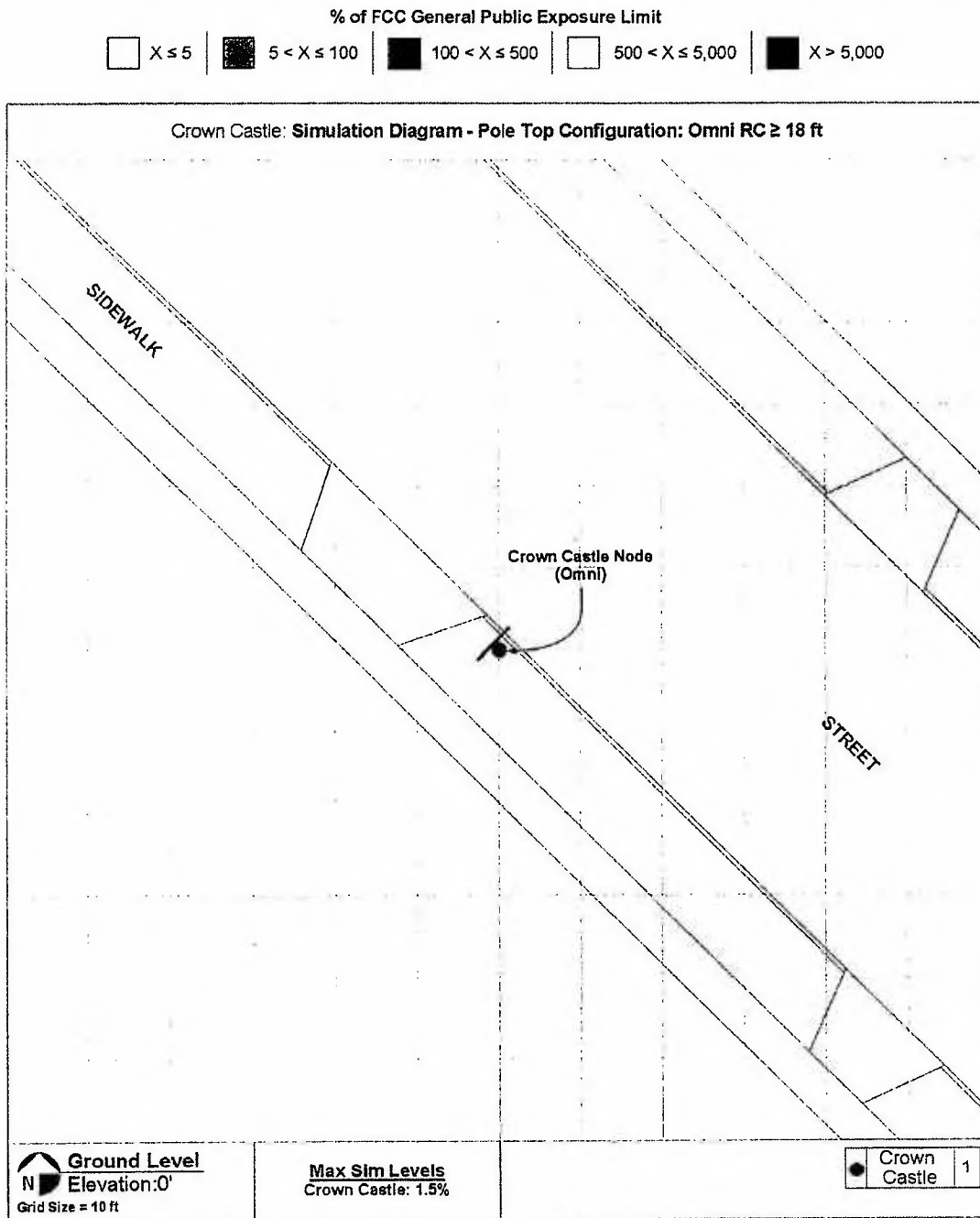
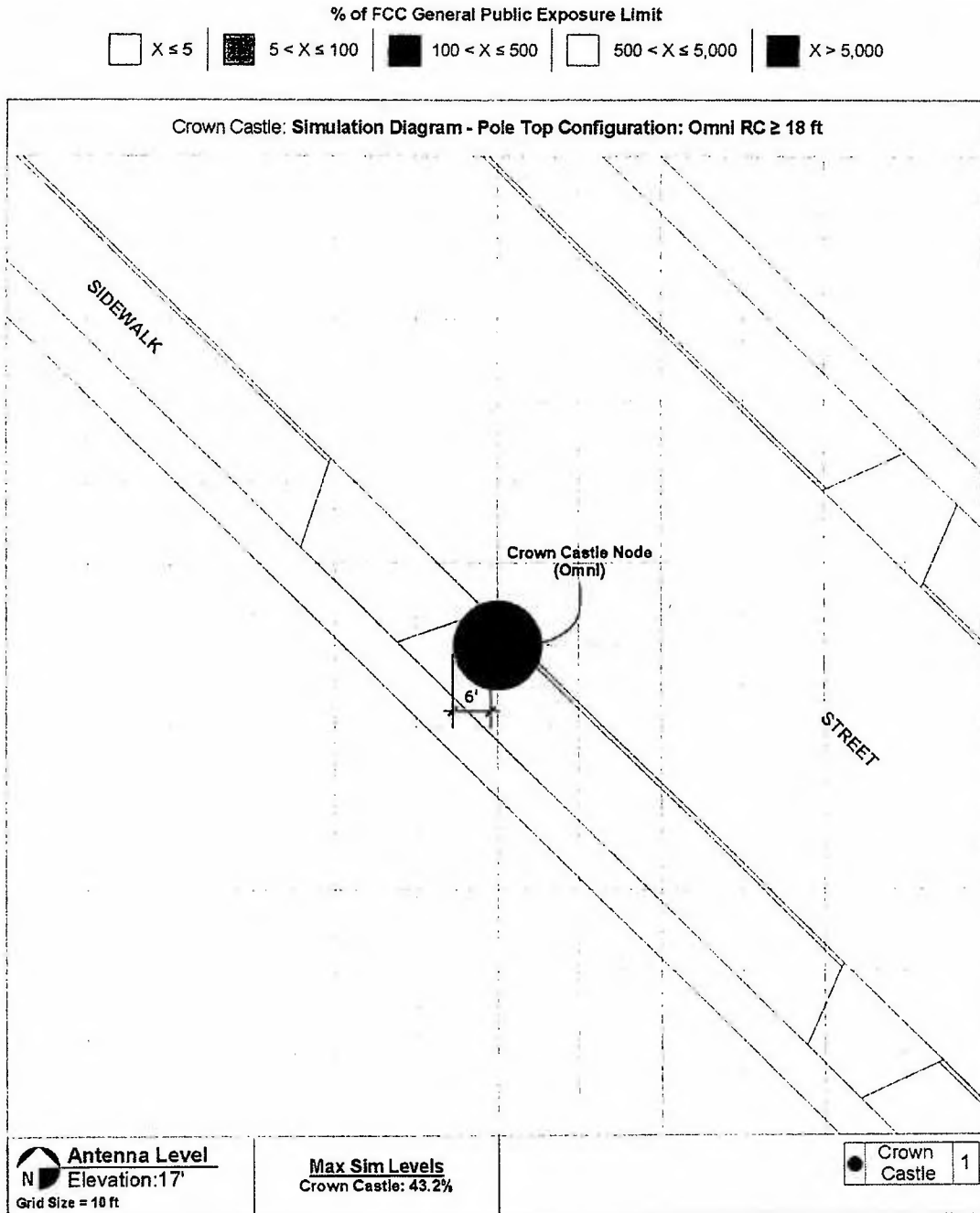


Figure 2: Plan (bird's eye) view map of results compared to the FCC's General Population MPE (Maximum Permissible Exposure) Limits. Gray represents areas where exposure levels are calculated to be at or below 5%; Green- between 5% & 100% (below MPE limits); blue, yellow & red - greater than 100% (exceeds MPE limits). Individuals can safely occupy areas in gray and green for an indefinite amount of time; whereas areas in blue, yellow & red must be restricted to RF trained personnel who have been made fully aware of potential for exposure, have control and know how to reduce their exposure with the use of personal protection equipment or have the ability to power down the transmitters.



## 4.0 CONCLUSION

### 4.1 Results

For a person standing on the ground, calculations for Crown Castle's site (at a minimum RC of 18-feet) resulted in exposure levels no higher than 1.5% of the applicable FCC's General Population MPE Limits (see figure 1). If the antenna is located higher than the minimum RC of 18-feet, the exposure levels on the ground would consequently be lower. The results on the ground are well below the applicable FCC's General Population MPE Limits, and members of the general public can safely occupy all areas on the ground for an indefinite amount of time.

At antenna elevation, the highest calculated exposure level is also below the FCC's General Population MPE Limits near the Crown Castle antenna (see figure 2). If the antenna is located higher than the minimum RC of 18-feet, the exposure levels at antenna elevation would be the same. The green areas represent exposure levels that are calculated to be between 5% and 100%, which is below the FCC's General Population MPE Limits. The green exposure area extends 6-feet from the front face of the Crown Castle antenna. Beyond 6-feet (areas represented in gray), exposure calculations would be at or below 5%, which are considered ambient levels. Individuals can safely occupy any areas in gray and green for an indefinite amount of time.

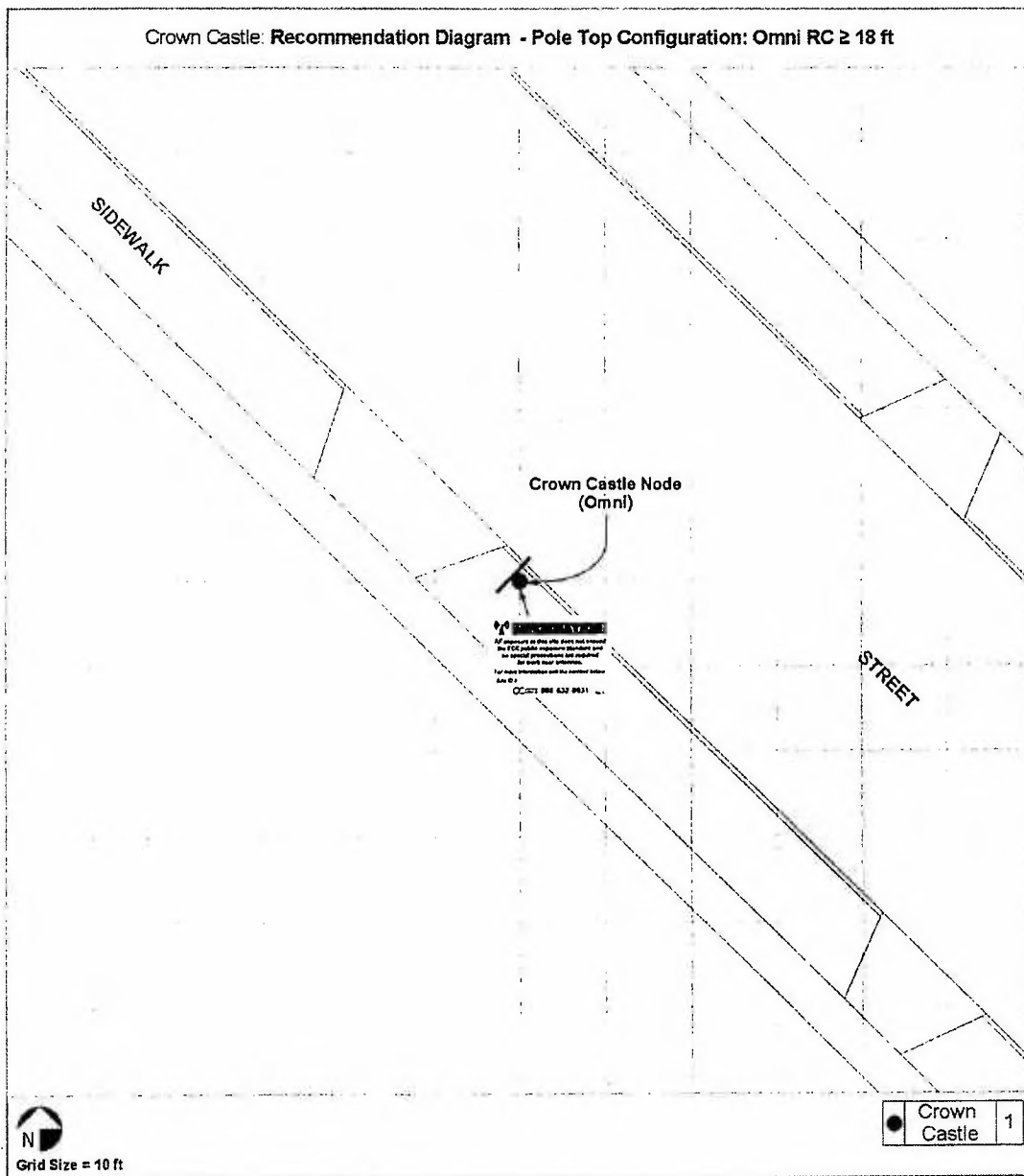
\*Note: The actual MPE results of this analysis are only applicable to the specific antenna make/model, minimum heights, line/cable losses, total power output, and frequencies. Compliance actions are the same even if the antenna is raised above the minimum RC of 18-feet.

### 4.2 Recommendation(s)

For the facility to be classified as an Occupational/Controlled environment, the following action(s) are recommended in accordance with the FCC's and Crown Castle's RF Safety Guidelines (see figure 3):

- 1) Install INFORMATION Sign(s) on or near the antenna. Signage should be placed high and away from public view.

Figure 3: Recommendation(s)



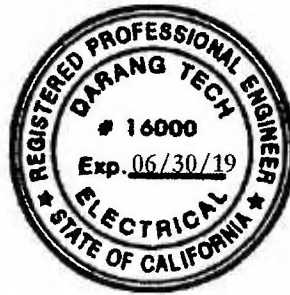
#### 4.3 Statement of Compliance

Based on the above results, analysis and recommendation(s), it is the undersigned's professional opinion that Crown Castle's site will be compliant with the FCC's RF Safety Guidelines provided recommendation(s) are implemented.

#### 4.4 Engineer Certification

This report has been prepared by or under the direction of the following Registered Professional Engineer: Darang Tech, holding California registration number 16000. I have reviewed this report and believe it to be both true and accurate to the best of my knowledge.

  
Darang Tech, P.E.



## Appendix A: Background

Dtech uses the FCC's guidelines described in detail in Office of Engineering & Technology, Bulletin No. 65 ("OET-65") "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields". The table below summarizes the current Maximum Permissible Exposure ("MPE") safety limits classified into two groups: General population and Occupational.

Table 3: FCC MPE Limits (from OET-65)

Frequency Range (MHz)	General Population MPE (V/m)	Occupational MPE (V/m)	General Population MPE (W/m <sup>2</sup> )	Occupational MPE (W/m <sup>2</sup> )
30 - 300	0.2	30	1.0	6
300 - 1500	Frequency (Mhz)/1500 (0.2 - 1.0)	30	Frequency (Mhz)/300 (1.0 - 5.0)	6
1500 - 100,000	1.0	30	5.0	6

**General population/uncontrolled** limits apply in situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment, and may not be fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public always fall under this category when exposure is not employment-related.

**Occupational/controlled** limits apply in situations in which persons are exposed as a consequence of their employment, and those persons have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits, 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.

It is important to understand that the FCC guidelines specify *exposure* limits not *emission* limits. For a transmitting facility to be out of compliance with the FCC's RF safety guidelines an area or areas where levels exceed the MPE limits must, first of all, be in some way *accessible* to the public or to workers. When accessibility to an area where excessive levels is appropriately restricted, the facility or operation can certify that it complies with the FCC requirements.

## Appendix B: Measurement and/or Computer Simulation Methods

Spatial averaging measurement technique is used. An area between 2 and 6 feet, approximately the size of an average human, is scanned in single passes from top to bottom in multiple planes. When possible, measurements were made at very close proximity to the antennas and inside the main beam where most of the energy is emitted. The spatial averaged values were recorded.

Dtech uses an industry standard power density prediction computer Model<sup>1</sup> to assess the worse-case, cumulative EMF impact of the surrounding areas of the subject site. The Model does not take into account losses due to buildings. Its methodologies are conservative enough to account for typical down-tilts deployed in wireless communications. In addition, the analysis is performed at 100% duty cycle-all transmitters are active at all times and transmitting at maximum power. For purposes of a cumulative study, nearby transmitters are included where possible. The result is a surrounding area map color-coded to percentages of the applicable FCC's MPE Limits. A result higher than 100% exceeds the Limits.

## Appendix C: Limitations

Dtech performed this analysis based on data provided by our clients that Dtech believes to be true and correct. Estimates where noted, are based on common industry practices and our best interpretation of available information. As mobile technologies continuously change, these data and results may also change. Therefore, Dtech disclaims all other warranties either expressed or implied. Any use of this document constitutes an agreement to hold Dtech and its employees harmless and indemnify it for any and all liability, claims, demands, litigation expenses and attorneys fees arising from such use. This is a technical document and may contain minor grammatical and/or spelling errors.

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<sup>1</sup> Roofview® Version 4.15, Richard Tell Associates, Inc. © 1996-2000.




Appendix D: Crown Castle RF Advisory Signs



**RF exposure at this site does not exceed the FCC public exposure standard and no special precautions are required for work near antennas.**

**For more information call the number below.**

Site ID #

 **888-632-0931** Rev. A


INFORMATION Sign



### **POLE WORKERS**

**There is an antenna operation high on this pole. Please follow guidance on signs near the antenna or call the number below.**

Site ID #

 **888-632-0931** Rev. A

NOTICE Sign



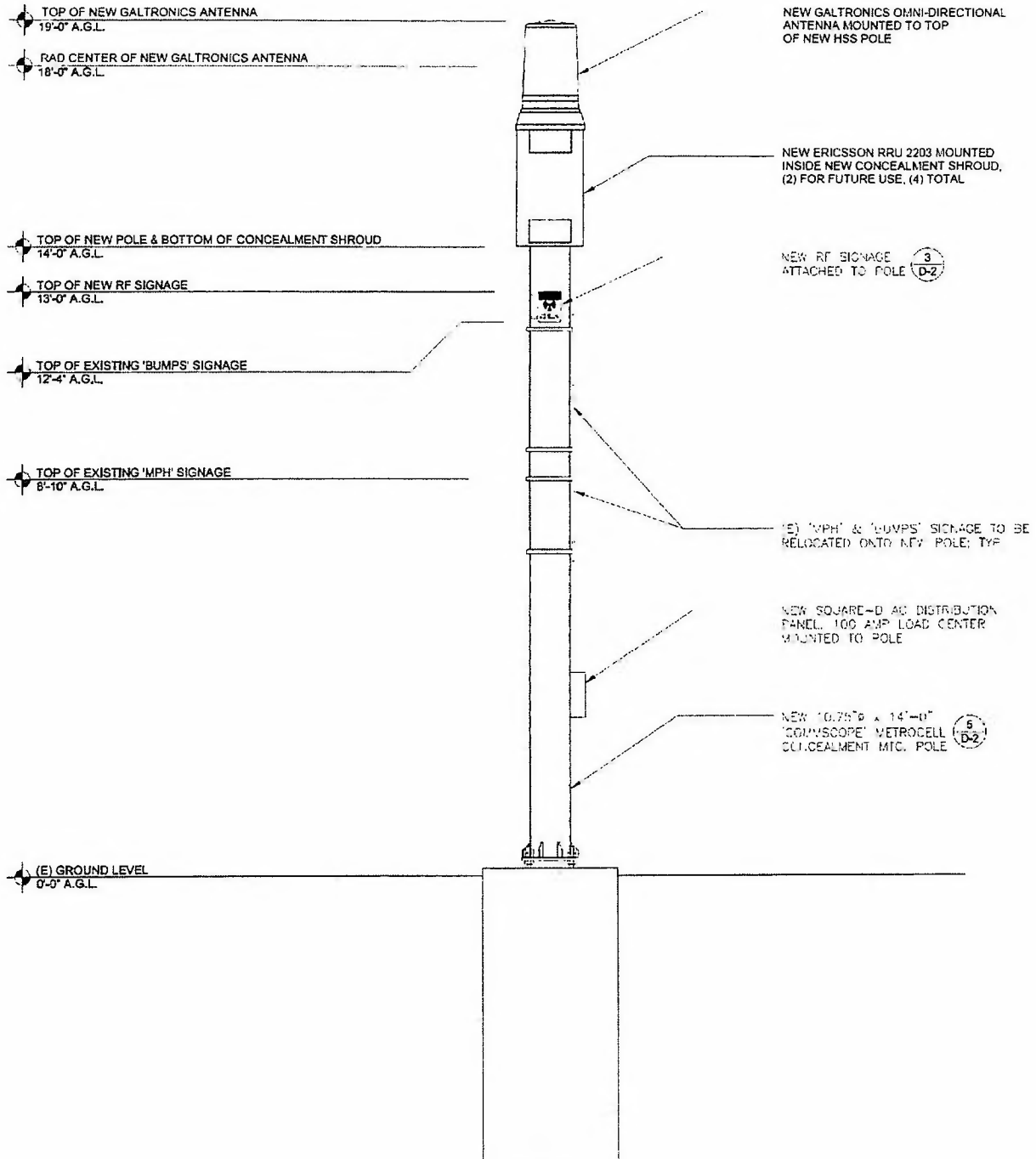
**Keep Back \_\_\_\_ FT From this Antenna. FCC RF Public Exposure Limits May Be Exceeded Within This Distance. Call 888-632-0931 for Instructions. Qualified Workers: FCC Occupational Limits May Be Exceeded Within This Distance.**

Site ID #

Rev. A

CAUTION Sign

Appendix E: Pole Top Configuration: Omni RC ≥ 18 ft



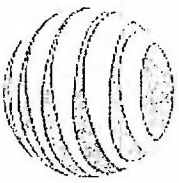
Appendix F: Crown Castle Carrier MPE Contributions

Carrier 1 - AT&T	1.5% GP (0.3% OC)	43.2% GP (8.6% OC)



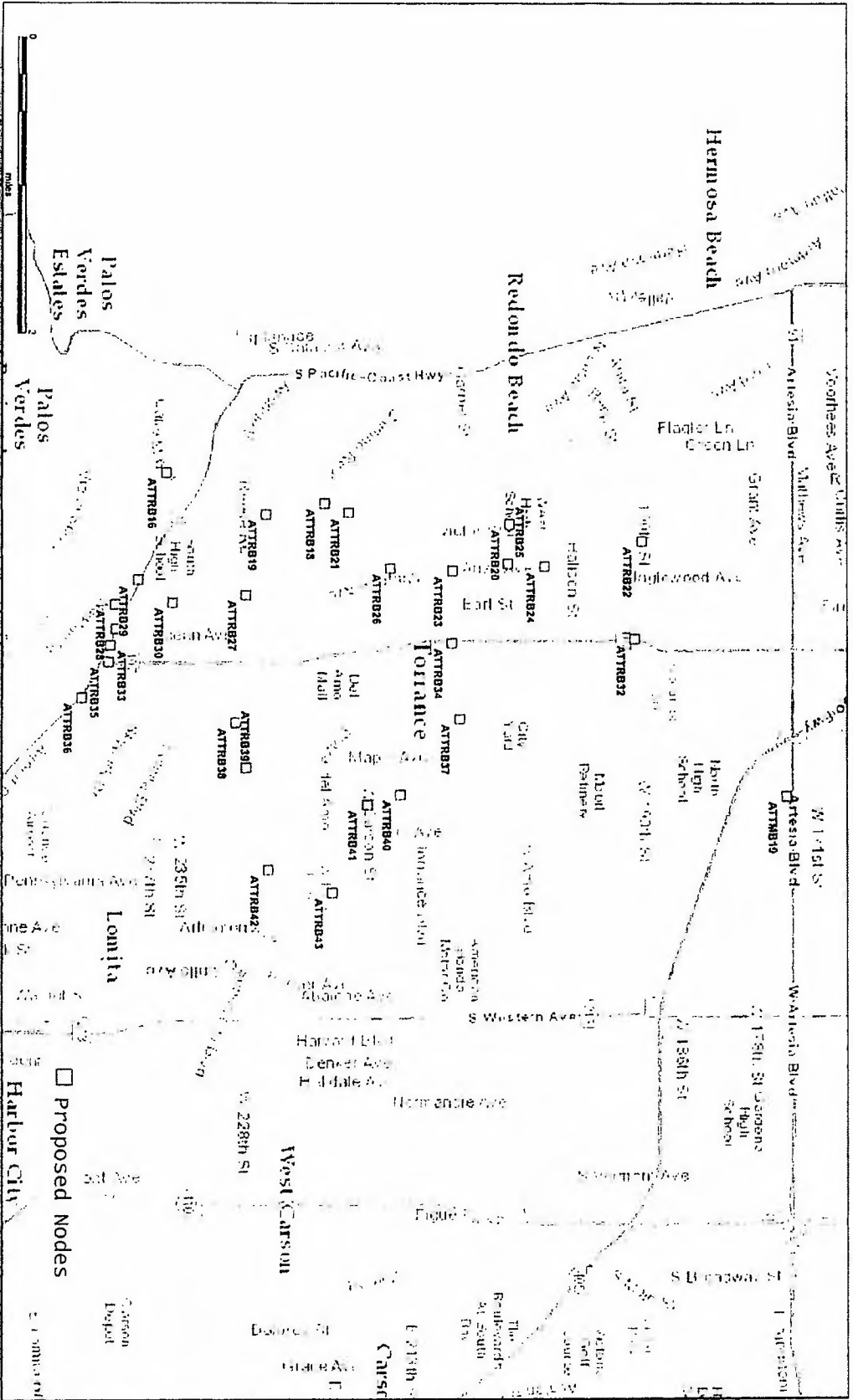
1/10/2018

# AT&T Wireless Network Densification – Torrance Jurisdiction



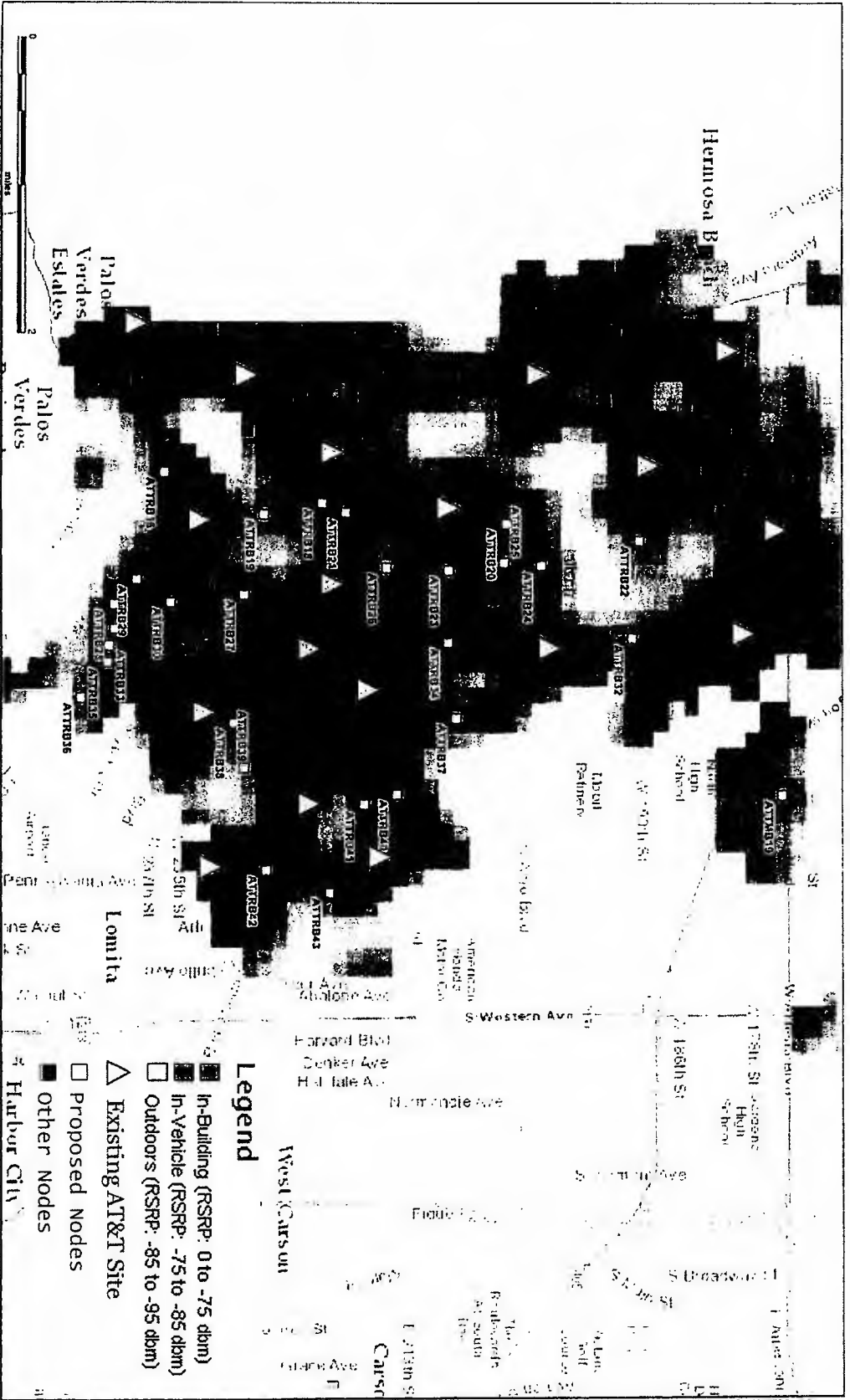
**AT&T**

# Node Location

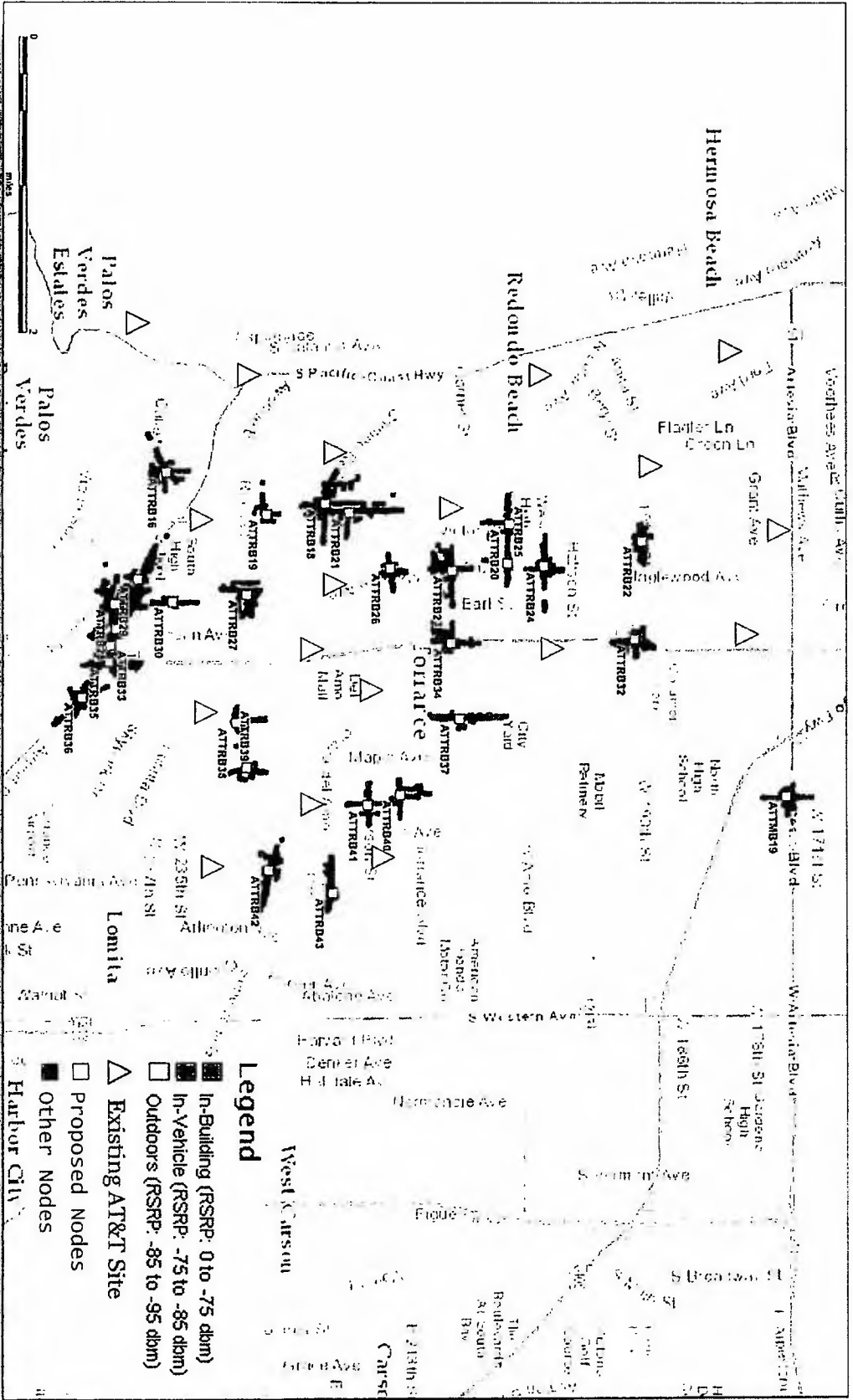




# Combined Existing and Proposed Coverage



# Proposed Small Cell Drive Test Data





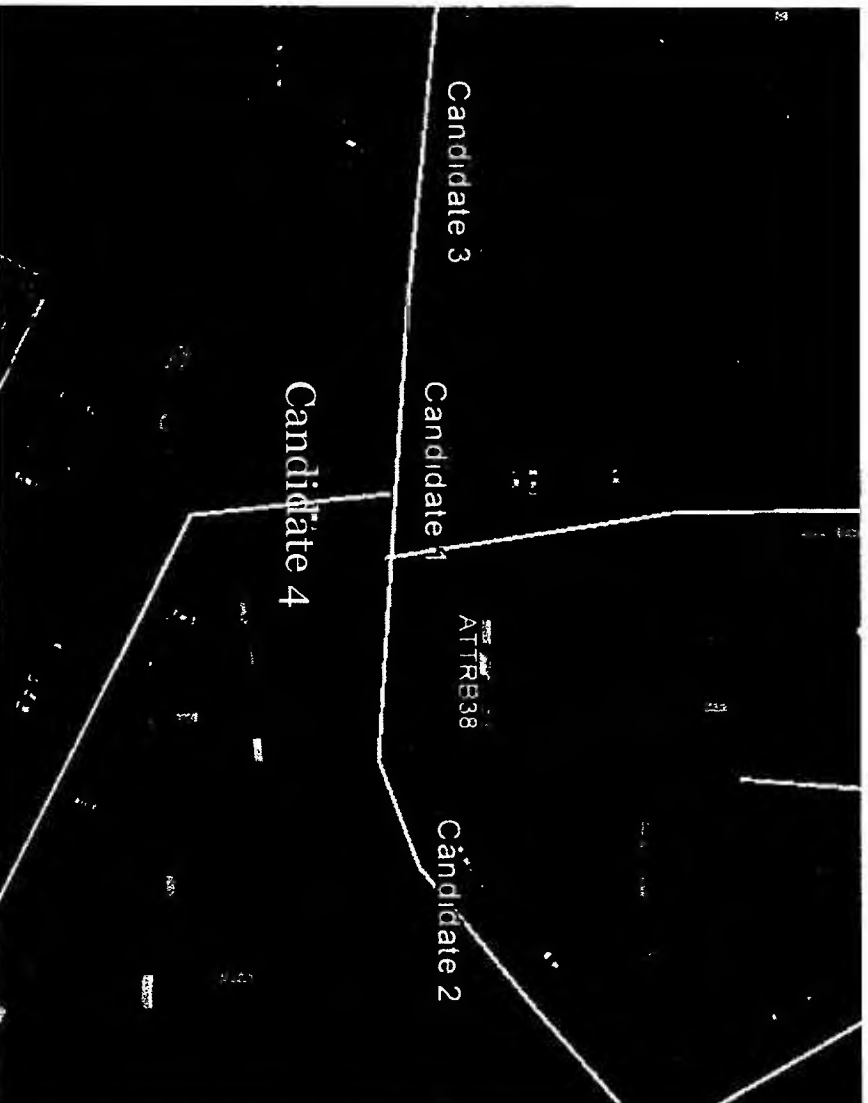
# Node ATTRB38 Primary & Alternate Candidates

## Coverage Objectives:

Improve Network Capacity and Coverage for commuters, residents and customers near business area on W 229<sup>th</sup> Pl.

Node ID	Candidate	Latitude	Longitude	Structure Type	Meet Coverage Objective	Comments
ATTRB38	Primary	33.818290	-118.344130	Street Light	Yes	Will meet the coverage objectives
	Candidate 1	33.818299	-118.344546	Street Light	Yes	Will meet the coverage objectives
	Candidate 2	33.818319	-118.343714	Street Light	Yes	Will meet the coverage objectives
	Candidate 3	33.818336	-118.345116	Street Light	Yes	Will meet the coverage objectives
	Candidate 4	33.81830	-118.344571	New Pole	Yes	Will meet the coverage objectives

# Node ATTRB38 Primary & Alternate Candidates



**Primary Candidate**

Will meet the coverage objectives

**Alternate Locations:**

**Candidate 1:** Will meet the coverage objectives

**Candidate 2:** Will meet the coverage objectives

**Candidate 3:** Will meet the coverage objectives

**Candidate 4:** Will meet the coverage objectives

Code Requirements and Conditions, if approved:

The following Code Requirements are applicable to the project, if approved:

- A Construction and Excavation Permit (C&E Permit) is required from the Community Development Department, Engineering Permits and Records Division, for any work in the public right-of-way on 229<sup>th</sup> Place.
- The traffic control plan(s) shall comply with the MUTCD manual.
- Must comply with TMC Section 92.39.070 regarding submission of RF compliance report.
- Must comply with TMC Section 92.39.090 regarding discontinued use or abandonment of facility.

Recommended Conditions, if Approved:

1. That the use of the subject site for a telecom facility shall be subject to all conditions imposed in WTC18-00005 and any amendments thereto or modifications thereof as may be approved from time to time pursuant to Section 92.39.070 et seq. of the Torrance Municipal Code on file in the office of the Community Development Director of the City of Torrance; and further, that the said use shall be established or constructed and shall be maintained in conformance with such maps, plans, specifications, drawings, applications or other documents presented by the applicant to the Community Development Department and upon which the Telecommunications Committee relied in granting approval;
2. That if this Approval is not implemented within one year after the approval, it shall expire and become null and void unless extended by the Community Development Director for an additional period, as provided for in Section 92.27.1 of the Torrance Municipal Code; (Planning)
3. That all requirements provided under Ordinance No. 3058, Section 92.2.8, Satellite Antennas, of the Torrance Municipal Code, Division 9, shall be met prior to the issuance of building permits and/or encroachment permits; (Planning)
4. That all pole mounted equipment be painted to match to the satisfaction of the Community Development Director; (Planning)
5. The permittee shall install and at all times maintain in good condition an "RF Notice" sign and network operations center sign. The signs required in this condition must be placed in a location where they are clearly visible to a person when he or she approaches streetlight pole; (Planning)
6. The permittee shall ensure that all RF signage complies with FCC OET Bulletin 65 or ANSI C95.2 for color, symbol and content conventions. All such signage shall provide a working local or toll-free telephone number to its network operations center that reaches a live person who can exert transmitter power-down control over this site as required by the FCC; (Planning)
7. That the antenna and all related equipment shall be removed if the telecommunications site remains inactive for more than 180 days; (Planning)
8. That the permittee shall conceal all cables, wires, jumpers and connectors within the antenna or equipment shrouds; (Planning)
9. That if existing footing of the street light pole cannot be utilized, the entire footing shall be removed; (Engineering)
10. That all proposed SCE power lines shall be installed undergrounded; (Engineering)

CDD RECOMMENDATIONS – 1/8/19  
AGENDA ITEM 6E  
CASE NO. WTC18-00010

11. That SCE approval for conduit layout between the power manhole and the proposed light pole is required prior to the issuance of the Construction and Excavation Permit; (Engineering)
12. That a minimum 10' vertical clearance above public sidewalk surface for proposed antenna and equipment mounted on existing utility pole and a minimum 16' vertical clearance above sidewalk surface for proposed antenna and equipment within 2' or less horizontally of the public street shall be maintained; (Engineering)
- 13.) That if generators are required at the site, they must meet Torrance Municipal code requirements for noise; (Environmental)