

**MACKENZIE & ALBRITTON LLP**

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October 23, 2019

**VIA EMAIL**

Mayor Lynette Lee Eng  
Vice Mayor Jan Pepper  
Councilmembers Jeannie Bruins,  
Anita Enander and Neysa Fligor  
City Council  
City of Los Altos  
1 North San Antonio Road  
Los Altos, California 94022

Re: Verizon Wireless's Appeal of City Manager's Denial of  
Application No. SE19-00019  
Small Cell Wireless Facility, Right-of-Way at 155 Almond Avenue  
City Council Agenda, October 29, 2019

Dear Mayor Eng, Vice Mayor Pepper and Councilmembers:

We write on behalf of Verizon Wireless to ask that you grant its appeal of the City Manager's denial of a small cell wireless facility on a replacement utility pole (the "Proposed Facility"). The City Manager's denial was not supported by substantial evidence, and it relied on provisions of the Los Altos Municipal Code (the "Code") and recently-adopted wireless facility *Design and Siting Guidelines* (the "Guidelines") that are preempted by state or federal law. Located adjacent to a non-residential zone, the Proposed Facility poses minimal visual impact. The Council can grant approval in accordance with those City standards and findings that are consistent with applicable law. Further, approval would avoid an unlawful prohibition of service that would violate the federal Telecommunications Act. We urge you to grant Verizon Wireless's appeal and to approve the Proposed Facility.

**I. The Project**

The Proposed Facility has been thoughtfully designed and redesigned to minimize any impact to the surrounding neighborhood. Verizon Wireless proposes to place a single narrow two-foot canister antenna above a wood utility pole in the right-of-way adjacent to a parking lot in the PCF-public/community facilities zone. The antenna must be elevated at least six feet above pole-top electrical conductors to meet safety clearances required by Public Utilities Commission General Order 95. The existing wood utility

pole will be replaced to increase its height and structural capacity. Associated equipment will be stacked vertically on the side of the pole between eight and 18 feet: a very small electric meter, a disconnect switch, distribution panel, and an equipment shroud that will fully conceal radios and other network gear. This pole-mounted equipment will be rotated away from the roadway to reduce visibility and painted to match the pole. Established street trees on either side of the pole will help screen the associated equipment, and trees of greater height behind the pole will provide a backdrop to minimize the impact of the antenna.

Photosimulations of the Proposed Facility are attached as Exhibit A. A report by RF Global Safety Consultants, attached as Exhibit B, confirms that radio frequency exposure from the Proposed Facility will comply with Federal Communications Commission ("FCC") guidelines. A report by EBI Consulting, attached as Exhibit C, confirms that the Proposed Facility will comply with Code noise limits.

## **II. The City Manager's Denial Was Not Based on Substantial Evidence.**

Under the federal Telecommunications Act, a local government's denial of a wireless facility application must be based on "substantial evidence." *See* 47 U.S.C. § 332(c)(7)(B)(iii). As interpreted under controlling federal court decisions, this means that denial of an application must be based on requirements set forth in the local code and supported by evidence in the record. *See Metro PCS, Inc. v. City and County of San Francisco*, 400 F.3d 715, 725 (9th Cir. 2005) (denial of application must be "authorized by applicable local regulations and supported by a reasonable amount of evidence"). While federal law permits a local government to regulate the placement of wireless facilities based on aesthetics, mere generalized concerns or opinions about aesthetics or compatibility with a neighborhood do not constitute substantial evidence upon which a local government could deny a permit. *See City of Rancho Palos Verdes v. Abrams*, 101 Cal. App. 4th 367, 381 (2002).

The City Manager's denial was largely based on a lack information required to process the application. Verizon Wireless has subsequently provided: a letter of authorization from PG&E, a current certificate of liability insurance, a valid business license, a statement of willingness to allow other carriers to collocate, and a declaration providing evidence of its state authorization to use the right-of-way. These documents are attached as Exhibits D through H. As noted above, the EBI Consulting report confirms compliance with City noise limits.

Verizon Wireless also has revised architectural plans, attached as Exhibit I, showing that the Proposed Facility antenna has been reduced in height to two feet, with a volume falling under the three cubic foot threshold to qualify as a "small wireless facility" as defined by the FCC. 47 C.F.R. § 1.6002(l).

With these matters resolved, there remain only two other grounds for denial raised by the City Manager: the purported violation of the City's ban on facilities in residential



zone rights-of-way, and the subjective “compatibility with the community” finding. Neither of these grounds for denial were based on substantial evidence, and both are preempted.

**A. The Ban on Wireless Facilities in Residential Rights-of-Way is Preempted by State and Federal Law.**

The City Manager’s primary ground for denial was a claim that the Proposed Facility is in a residential zone right-of-way where wireless facilities are not allowed. However, the City Manager committed an error because the Proposed Facility is actually in the right-of-way adjacent to a parcel in the PCF-public/community facilities zone. While the parcels abutting and across the street are in residential zones, that is not pertinent because the guidelines specifically allow facilities in rights-of-way of non-residential zones such as the PCF zone. Guidelines § 4(D).<sup>1</sup>

Even if the Proposed Facility fell within a residential zone—which it does not—these restrictions are unenforceable under both state and federal law and therefore cannot be a basis for denial of the Proposed Facility.

Public Utilities Code Section 7901 grants telephone corporations such as Verizon Wireless a statewide right to place their equipment along any right-of-way. While the City has some discretion over the time, place, and manner of such access (Cal. Pub. Util. Code § 7901.1), and may review aesthetic and other site-specific impacts, the City’s outright ban on facilities in residential zone rights-of-way puts the great majority of rights-of-way in Los Altos either absolutely or presumptively off-limits for wireless facilities in violation of Section 7901. The state law preempts the local regulation.

The residential right-of-way ban is also preempted by the federal Telecommunications Act, which among other things provides that local government regulations “shall not prohibit or have the effect of prohibiting the provision of personal wireless services.” 47 U.S.C. § 332(c)(7)(B)(i)(II). The Ninth Circuit has held that local governments may violate this provision either by adopting a city-wide “general ban” on wireless facilities, or by individual denials that prevent a provider from filling a significant gap in service by the least intrusive means. *See Metro PCS, Inc. v. City and County of San Francisco*, 400 F.3d 715, 730-35 (9th Cir. 2005), *overruled on other grounds by T-Mobile South, LLC v. City of Roswell, Ga.*, 135 S. Ct. 808 (2015).

We address the second option below, but for present purposes note that the residential siting restrictions of the Guidelines may constitute an unlawful general ban

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<sup>1</sup> A footnote to the permitting table states, “Facilities located in the public rights-of-way shall have their preference evaluated based on the least-preferred zoning district adjacent to the proposed facility.” Guidelines § 4(D). However, with respect to the right-of-way, the zone preferences pertain to only the non-residential commercial and public zones. Residential zones are not preferred or discouraged in the right-of-way; they simply are not an option under the Guidelines. The footnote cannot be used to classify the Proposed Facility location as a residential zone.

even though they do not apply to the City's entire land area. The combined effect of these provisions is to place large contiguous areas of the City off-limits to wireless facilities, without any consideration of their impacts (or lack thereof). We are confident that a court would find the ban on facilities in residential areas to be unlawful on its face. *See Sprint Telephony PCS, L.P. v. County of San Diego*, 543 F.3d 571, 580 (9<sup>th</sup> Cir. 2008) ("That is not to say, of course, that a plaintiff could never succeed in a facial challenge. . . . [I]f an ordinance mandated that no wireless facilities be located within one mile of a road, a plaintiff could show that, because of the number and location of roads, the rule constituted an effective prohibition.").

**B. Federal Law Preempts the Subjective Finding of "Compatibility with the Community" with Respect to Small Cells.**

The City Manager found that the Proposed Facility does not satisfy the use permit finding of "compatibility with the community," but that finding is preempted by the FCC's recent order addressing appropriate small cell approval criteria. *See Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*, Declaratory Ruling and Third Report and Order, FCC 18-133 (September 27, 2018) (the "Small Cells Order"). The order requires that a city's aesthetic standards for small cells be objective and reasonable. Vague, subjective "compatibility" standards violate this requirement because they make it impossible for carriers to determine in advance what is permissible. *See Small Cells Order*, ¶¶ 86-88.

We note that while the City Manager did not grant any exceptions to City requirements because Verizon Wireless did not apply for any, the exceptions process does not excuse provisions of the Code or Guidelines that are preempted by state or federal law. Those preempted provisions cannot be the basis for denial.

In sum, all of the City's Manager's grounds for denial must be dismissed because either Verizon Wireless has provided all required application information or the findings of denial are preempted by state or federal law. Therefore, there is no substantial evidence to support denial of the Proposed Facility.

**III. Verizon Wireless Has Provided Ample Evidence to Warrant Approval.**

Verizon Wireless has provided substantial evidence to show that the Proposed Facility complies with those City standards and findings that are not preempted. For example, with respect to objective standards, the Proposed Facility is placed in a favored mid-block location near a property line. Guidelines §§ 4(E)(1). Photosimulations demonstrate the minimal impact of Verizon Wireless's small cell placed on a utility pole supporting existing utility infrastructure. The RF Global Safety Consultants report confirms that radio frequency exposure will comply with FCC guidelines. Code § 11.12.050(A)(5). With respect to applicable findings for approval, Verizon Wireless has confirmed its willingness to allow other carriers to collocate where feasible, and submitted evidence confirming noise compliance and its right to use the right-of-way. Code §



11.12.080. The City Manager's decision confirmed another finding of approval, that the Proposed Facility will not interfere with use of the right-of-way, subterranean infrastructure or future City plans. With ample evidence to support applicable findings of approval, the Council should grant Verizon Wireless's appeal and approve the Proposed Facility.

#### **IV. Denial Would Constitute an Unlawful Prohibition of Service.**

Under Ninth Circuit case law, a local government's denial of a permit for a wireless facility violates the "effective prohibition" clause of the Telecommunications Act if the wireless provider can show two things: (1) that it has a "significant gap" in service; and (2) that the proposed facility is the "least intrusive means," in relation to the land use values embodied in local regulations, to address the gap. See *T-Mobile USA, Inc. v. City of Anacortes*, 572 F.3d 987 (9<sup>th</sup> Cir. 2009).

If a provider proves both elements, the local government must approve the facility, even if there is substantial evidence to deny the permit under local regulations. This is because federal law preempts local regulations when denial of the permit would effectively prohibit the provision of personal wireless services. *Id.*, 572 F.3d at 999. To avoid such preemption, the local government must show that another alternative is available, technologically feasible, and less intrusive than the proposed facility. *Id.*, 572 F.3d at 998-999.

In the Small Cells Order, the FCC determined that the Ninth Circuit's two-part test is too narrow. Specifically, the FCC confirmed that a wireless carrier need not show an insurmountable barrier, or even a significant gap, to prove a prohibition of service. Small Cells Order, §§ 35, 38. Instead, "a state or local legal requirement constitutes an effective prohibition if it 'materially limits or inhibits the ability of any competitor or potential competitor to compete in a fair and balanced legal and regulatory environment.'" *Id.*, § 35. Thus, state or local regulations are preempted if they materially inhibit "densifying a wireless network, introducing new services, or otherwise improving service capabilities." *Id.*, § 37.

In this case, denial would not survive judicial review under either standard. The Proposed Facility constitutes the least intrusive means to address a significant gap in service, and denial would materially inhibit Verizon Wireless's ability to improve service on its network and to compete in a fair and balanced legal and regulatory environment.

##### **A. The Significant Gap and Least Intrusive Means Test**

As described in the *Statement of Verizon Wireless Radio Frequency Engineer Brian Ung* attached as Exhibit J (the "RF Engineer's Statement"), there is a significant gap in Verizon Wireless coverage and network capacity in north Los Altos. The Proposed Facility will provide new reliable in-building and in-vehicle coverage to the gap area. It will also provide new dominant signal to the vicinity, offloading demand from the distant Verizon Wireless facility currently serving the gap area that has reached capacity exhaustion. This will improve overall network performance in the area.

The Alternatives Analysis attached as Exhibit K reviews 11 alternative locations on utility poles in the right-of-way in the vicinity of the Proposed Facility. Several alternatives are infeasible because PG&E does not allow antennas above utility poles with certain operable equipment including primary risers and line cut-outs that function as fuses. Other alternatives are more intrusive because they are adjacent to residential zones or have less tree screening than the Proposed Facility, which is adjacent to a PCF-public/community facilities zone and has ample screening from established trees nearby. The Alternatives Analysis confirms that the Proposed Facility is the least intrusive feasible option within the right-of-way for Verizon Wireless to fill the Significant Gap. For wireless carriers to establish a case for prohibition of service, federal law does not require that a proposed facility be the “only” alternative, but rather that no feasible alternative is less intrusive than a proposed facility. *See Metro PCS*, 400 F.3d at 734-35.

The RF Engineer’s Statement and Alternatives Analysis provide sufficient evidence to demonstrate that denial of the Proposed Facility would satisfy the Ninth Circuit standard to establish an effective prohibition of service.

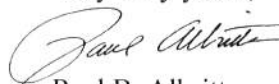
**B. The FCC’s Material Inhibition Test**

Since Verizon Wireless has satisfied the Ninth Circuit test to prove a prohibition of service, it has necessarily met the more flexible standard set forth in the FCC’s Small Cells Order. Whether or not it demonstrates a significant gap in service, the RF Engineer’s Statement proves at a minimum that the Proposed Facility will improve Verizon Wireless service in the area. Thus, denial of the application would prevent Verizon Wireless from improving its service, and therefore materially limit or inhibit its ability to compete in a fair and balanced legal and regulatory environment. In other words, denial would effectively prohibit service in violation of the Telecommunications Act. *See* 47 U.S.C. § 332(c)(7)(B)(i)(II); Small Cells Order, ¶¶ 35, 37.

**Conclusion**

Verizon Wireless has worked diligently to identify the ideal location and design for a small cell facility to enhance service in Los Altos. The Proposed Facility is consistent with Code and Guidelines requirements that are not pre-empted, and it meets applicable findings for approval of a small cell pursuant to FCC regulations. Bringing improved Verizon Wireless service to this area is essential to residents, visitors and emergency services providers in the surrounding community. We strongly encourage you to grant Verizon Wireless’s appeal and to approve the Proposed Facility.

Very truly yours,

  
Paul B. Albritton



cc: Christopher Diaz, Esq.  
Gail Karish, Esq.  
Chris Jordan  
Vency Woo

**Schedule of Exhibits**

Exhibit A: Photosimulations  
Exhibit B: RF Global Radio Frequency Exposure Report  
Exhibit C: EBI Consulting Noise Report (without Appendixes)  
Exhibit D: PG&E Letter of Authorization  
Exhibit E: Certificate of Liability Insurance  
Exhibit F: Business license  
Exhibit G: Statement of Willingness To Allow Other Carriers To Collocate  
Exhibit H: Verizon Wireless Declaration of Authorization to Use Right-of-Way  
Exhibit I: Revised Architectural Drawings  
Exhibit J: RF Engineer's Statement  
Exhibit K: Alternatives Analysis

# PROPOSED SITE LOCATION



**E COORDINATES**  
LATITUDE: 37.385059  
LONGITUDE: -122.110073

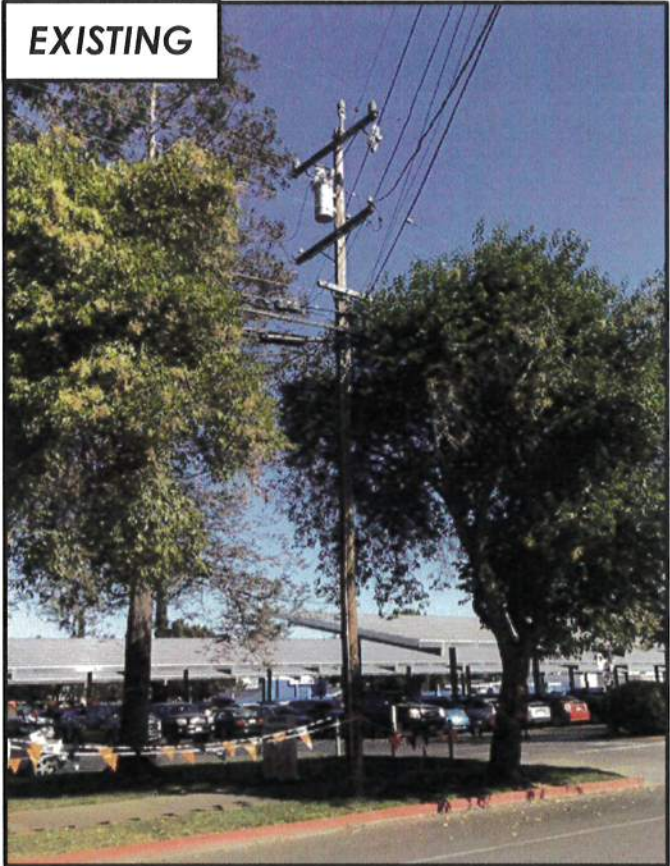
**LOS ALTOS 001**  
ALMOND AVE  
LOS ALTOS, CA 94022  
Location Code: 427814

**SHOT MAP**  
**Verizon Node: "LOS ALTOS 001"**  
Verizon Location Code: 427814

CBR Group  
Arnold Dr., Suite A  
Sunnyvale, CA 94553

**Exhibit A**

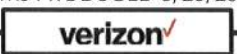


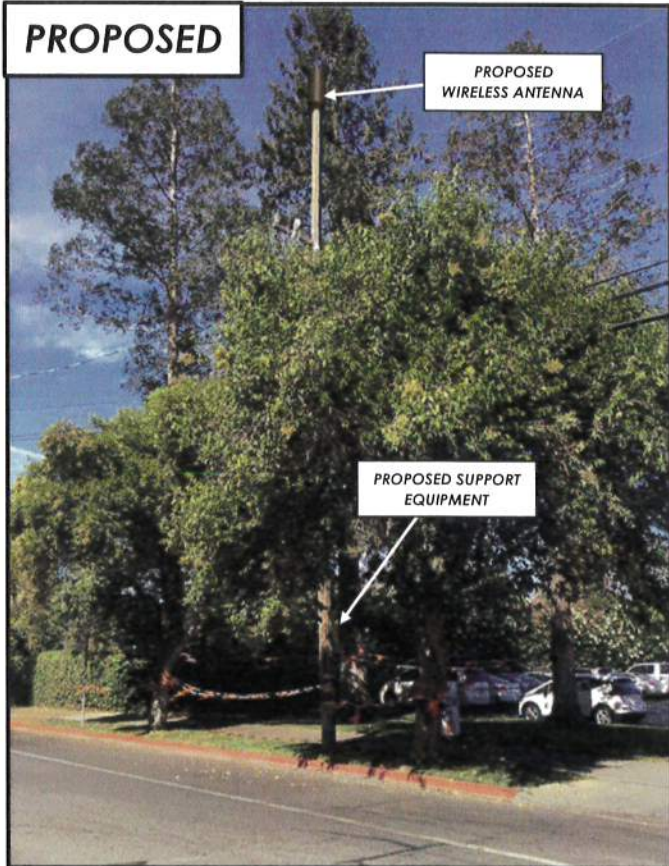
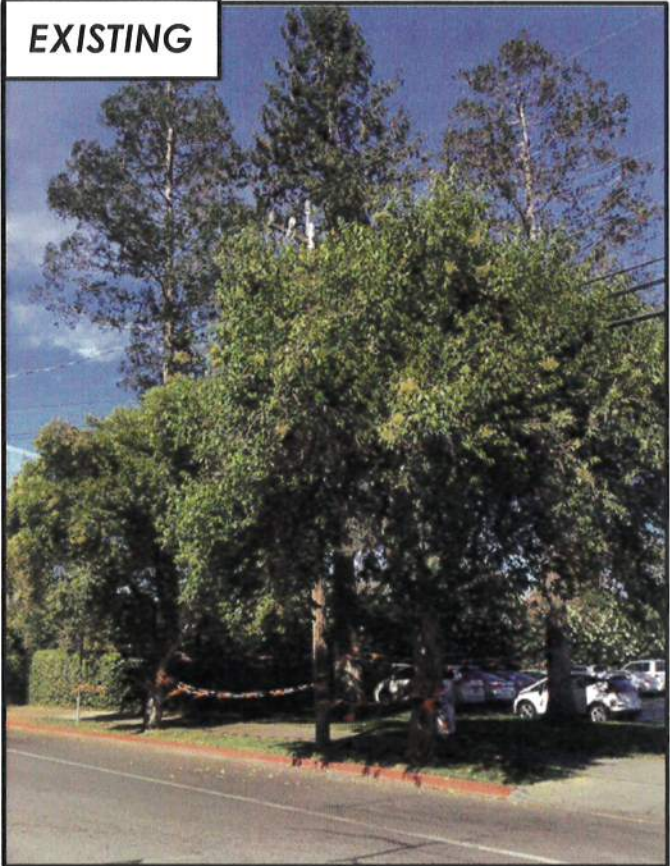


CA\_LOS\_ALTOS\_001  
 155 ALMOND AVE  
 LOS ALTOS, CA 94022  
 Location Code: 427814

**VIEW 1: LOOKING NORTH EAST ALONG  
 ALMOND AVE**  
 PHOTOSIMS PRODUCED 6/20/2019

**THE CBR GROUP**  
 The CBR Group  
 841 Arnold Dr., Suite A  
 Martinez, CA 94553  
 info@thecbrgroup.com





**LOS ALTOS 001**  
155 ALMOND AVE.  
LOS ALTOS, CA 94022  
Location Code: 427814

**VIEW 2: LOOKING NORTH WEST ALONG  
ALMOND AVE**  
PHOTOSIMS PRODUCED 6/20/2019



 **THE  
CBR  
GROUP**

The CBR Group  
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Martinez, CA 94553  
info@thebrgroup.com





**Radio Frequency Electromagnetic Energy (RF-EME)  
Maximum Permissible Exposure (MPE)  
Public Exposure Safety Report**

**Verizon Wireless 4G Small Cell Site  
"CA\_LOS ALTOS\_001"  
155 ALMOND AVE.  
Los Altos, California 94022  
LAT:37.385059, LONG:-122.11073**

**October 22, 2019**



Prepared by RF GLOBAL SAFETY CONSULTANTS  
California Registered Professional Engineer



### **Executive Summary**

This report concludes that the proposed wireless 4G small cell site equipment to be installed at the aforementioned location with the specifications provided by Verizon Wireless complies with the applicable FCC- approved safety standards and guidelines for general public and occupational exposure.

### **General Information**

In 1992, the American National Standards Institute (ANSI) published IEEE Standard C95.1-1991, "Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 KHz to 300 GHz." This current publication defines "controlled" (i.e., occupational) and "uncontrolled" (i.e., public) environments, setting for the latter more restrictive exposure limits, but longer periods for time averaging.

The FCC has provided direction to the telecommunications industry on determining compliance with ANSI standards. This is presented in the Office of Engineering and Technology Bulletin No. 65, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields," dated August 1997. The equations given in this document are designed to yield a "worst-case" prediction of RF power densities in the near-field of an antenna.

The occupational (controlled) exposure limit is for personnel operating and maintaining the facilities small cell wireless equipment. This type of personnel should have training on the radiating equipment and will be able to disable the equipment when performing routine maintenance and replacement of equipment.

The general public (uncontrolled) exposure limit is for people who are unaware of the facilities small cell equipment and they are unfamiliar with any safety measures for being near this type of equipment.

### **I. Introduction**

Verizon Wireless is proposing to build a 4G small cell site at the location described below. This is part of the 4G Network Verizon Wireless is building nationwide. The equipment to be installed at this site will be mounted on the electric utility pole. The cell site will include a radio mounted near the base of the pole and antenna will be mounted on an extended mast on top of the utility pole. This report will determine if the proposed cell site equipment when in operation, complies with the applicable FCC and ANSI safety guidelines.

### **II. Proposed Site Information**

The proposed site will be located in the City of Los Altos at aforementioned location. The equipment will be mounted on the utility pole at 48.9 feet above ground. The base station and antenna units will be mounted at the designated height and connected to the Verizon fiber network.

#### **II.a Site Map - Google Earth**





**Equipment Information**

The site equipment will be comprised of base station(s) and antenna(s) mounted on a utility pole.

Base Station make and Model: Ericsson, RRU-2208 & 2205.

Operating Frequencies (MHz): 1900 (PCS); 2100 (AWS).

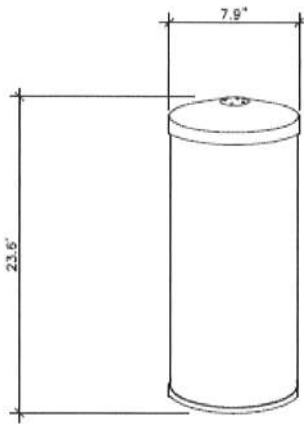
Antenna make and model: ANDREW/COMMSCOPE, VVSSP-360S-M.

Output Power (ERP, dBm): 1900 (52.64); 2100 (52.64).

Antenna Type: Quasi-Omnidirectional multi-port.

Unit Dimension (in), Height x Diameter: 23.6 x 7.9.

**Table-3** Below is a snapshot of the unit specification



**IV. Theoretical Calculation of the proposed cell site exposure limits**

Table IV.1

Ground Level,	% of Limit, (Highest)	Compliance Y/N	Mitigation Y/N
Occupational/ Controlled Exposure	0.10	Y	N,1
General Public/ Uncontrolled Exposure	0.49	Y	N,1



Table IV.2

Antenna Face Level	Distance, Feet (closest)	% of limit	Compliance, Y/N	Mitigation Y/N
Occupational/ Controlled Exposure	5.5	86	Y	N,1
General Public/Uncontrolled Exposure	12	90	Y	N,1

1 It is recommended that RF safety signage and warnings to be posted to remind general public and personnel of the existence of cell transmitter that is generating electromagnetic energy equipment at this location.

**IV.a Power Density calculation method**

The calculation was based on the OET Bulletin 65 guidelines for Maximum Permissible Exposure (MPE) to humans. A worst case scenario is used to calculate the power density using the following mathematical formula:

$$S = 0.0334 * P / R^2$$

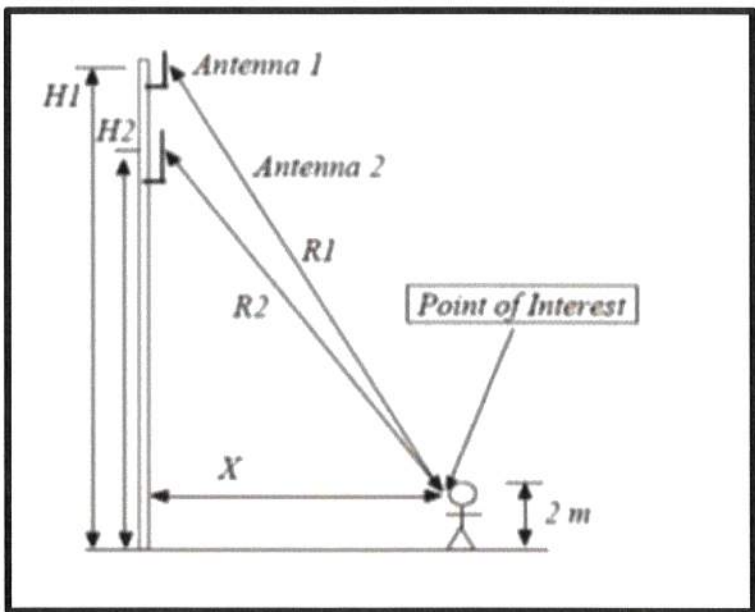
- S is the power density in mW/cm<sup>2</sup>
- P is the Effective radiated power in Watts
- R is the distance from the center of the antenna in meters

**IV.b Distance Calculation from the small cell antenna**

The above calculation was based on a worst case scenario for a person with an average height of 6.56 feet and standing at various distances in feet from the base of the utility pole. The direct distance R used in the calculation below is determined by using the mathematical formula:

$$R = \text{SQRT}(H^2 + X^2)$$

Illustration-1



Where X is the distance from the general public to the base of the pole and H is the distance from the

general public (individual) standing on the ground to the bottom of the panel antenna. The average height of an individual used in the calculations is 2 meters or 6.56 feet.

It should be noted that the strongest energy radiated from the antenna is at the face and center of the antenna. The general public may be exposed to more RF energy when standing in the face of the panel antenna. Additional calculations were done to determine the power density when general public is exposed to the energy at the antenna face level, such as on balconies in a residential area or in an office building that is in close proximity to the cell site. Calculations were completed at various distances for locations in direct path of the antenna beam. The table shows the calculated values of the minimum safe distances from the cell site.

## **V. Conclusion**

The proposed Verizon Wireless 4G small cell site to be installed at the designated location with the equipment specifications provided will comply with the applicable FCC safety guidelines for maximum permissible occupational and general public exposure limits. This conclusion based on the analysis conducted in this report that showed the power density calculated to be below the safety limits set by the FCC OET Bulletin 65. The minimum distance from the face of the antenna where occupational and general public are below safety guidelines are 5.5 feet and 12 feet respectively. The power density calculated at the roof of the closest building (about 85 feet from the antenna pole) is 1.81% of the general public exposure limit. Furthermore, since the study was based on worst case scenario, the actual power density that may result from the equipment when in operation will most likely be far less than showing in the tables IV.1 and IV.2. And even though the proposed site to be installed will comply with applicable safety standards, it is recommended that signage to be posted on the utility pole to let the general public and personnel know of the presence of the cell site.

## **References:**





**A) Technical Standards applicable to this measurement**

1. "Safety Levels with Respect to Human Exposure Frequency Electromagnetic Fields", American National Standards Institute (ANSI); IEEE Standard C95.1-1991.
2. "Evaluating Compliance with FCC Guidelines for Human Exposure to Frequency Electromagnetic Fields, Federal Communications Commission, Office of Engineering and Technology; OET Bulletin 65, Edition 97-01, August 1997.

**B) Occupational and general public exposure limits as guidelines per the FCC OET Bulletin 65.**

**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> )
0.3-3.0	614	1.63	(100)*
3.0-30	1842/f	4.89/f	(900/f <sub>2</sub> )*
30-300	61.4	0.163	1.0
300-1500	--	--	f/300
1500-100,000	--	--	5.0

**(B) Limits for General Population/Uncontrolled Exposure**

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

f=frequency in MHz

\*Plane-wave equivalent power density

# Small Cell Noise Study

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Los Altos 001  
155 Almond Avenue  
Los Altos, California 94022  
Santa Clara County  
37.385059; -122.110730 NAD83

EBI Project No. 6219005379  
October 11, 2019



Prepared for:

Verizon  
c/o The CBR Group  
2840 Howe Road, Suite E  
Martinez, CA 94553

Prepared by:



## EXECUTIVE SUMMARY

### Purpose of Report

EnviroBusiness Inc. (dba EBI Consulting) has been contracted by The CBR Group and Verizon to evaluate potential environmental noise impacts for modeling for Verizon Site Los Altos 001 located at 155 Almond Avenue in Los Altos, California.

This report summarizes the results of EBI's technical review of equipment specifications in relation to the Exterior Noise Limits as outlined in the Los Altos Municipal Code, Section 6.16.050. Theoretical results included in this report are based on equipment shown in site drawings dated July 12, 2019. Subsequent changes to the site design may yield changes in the projected post construction noise levels or compliance with applicable regulations and guidelines.

### Statement of Compliance

Based on the results of this study, EBI concludes that the noise produced from operation of the proposed remote radio units (RRUs) and associated wireless telecommunication equipment will comply with the Exterior Noise Limits as outlined in the Los Altos Municipal Code, Section 6.16.050 at the nearest residential property line.

## 1.0 REGULATORY REQUIREMENTS

### City of Los Altos, California Municipal Code 16.16.050 – Exterior Noise Limits.

The City of Los Altos limits sound pressure levels generated by any use of combination of uses to the decibel levels specified in Table I, below. These limits are applicable at the property line.

**TABLE I – Table of Applicable Los Altos Exterior Noise Level Limits**

Receiving Land Use Category	Maximum Noise Level in dBA at Property Line
All R1 Zoning Districts	45 (nighttime) 55 (daytime)
All R3 and PCF Zoning Districts	50 (nighttime) 55 (daytime)
All OA Zoning Districts	55 (nighttime) 60 (daytime)
All C Zoning Districts	60 (nighttime) 65 (daytime)

Where nighttime is defined as the period between 10:00 p.m. and 7:00 a.m. and daytime is defined as the period between 7:00 a.m. and 10:00 p.m.



## 2.0 PROJECT DESCRIPTION

The Site Los Altos 001 includes a proposed Small Cell Wireless Facility on a proposed pole at an existing right of way located in Los Altos, California. The proposed site design does not include installation of emergency back-up generators, equipment cabinets or other noise-generating equipment typically associated with traditional wireless telecommunications sites. The following equipment is proposed for installation at this site:

Quantity	Description	Manufacturer	Model Number	Sound Pressure Level (dBA)	Distance (m)
1	Remote Radio Head	Ericsson	Radio 8843	30	2
1	Remote Radio Head	Ericsson	Radio 2205 (single radio)	38	2
1	Remote Radio Head	Ericsson	RRU 2208	4.8	2
1	Remote Radio Head	Ericsson	Power 6302	None measureable	n/a
1	Omnidirectional Antenna	Amphenol	CUUS070X12FX0Z0-T00-1900	None measureable	n/a
n/a	RF Coaxial Cables	n/a	n/a	None measureable	n/a
n/a	Power Conductors	n/a	n/a	None measureable	n/a

An ambient temperatures were assumed to reach up to 40° Celsius / 104° Fahrenheit to approximate the acoustic properties of the RRU-2208 and 2205. No acoustic specifications were available for the Power 6302 unit, as is passively cooled via air flanges.

## 6.0 RESULTS AND CONCLUSIONS

Projected noise levels from the equipment installation at 155 Almond Avenue were calculated using the calculation methodology shown in Appendix B, using the equipment data provided by the manufacturer (see Appendix A). Antenna and RRU specifications for the proposed antenna are provided in Appendix A for the purposes of this study. The proposed installations will not utilize any external alarms.

Sound level propagation calculations were performed to determine the minimum distance at which the worst-case modeled equipment sound levels will comply with the most restrictive noise level limit. Equipment sound levels at or above the City's most restrictive noise limit of 45 dBA were calculated to extend less than 0.97 meters (3.18 feet) away from the equipment. All nodes with this equipment configuration located farther away from any property line, dwelling, or other noise-sensitive receiver will be in compliance Exterior Noise Limits as outlined in the Los Altos Municipal Code, Section 6.16.050.

This minimum compliance distance, and the worst-case modeled equipment noise level at that distance is shown in Table 3. The sources and receiver were assumed to be at the same reference height in order to account for balconies, open windows and changes in elevation at adjacent properties in the site vicinity. All calculations shown in Table 3 assume a free-field environment with no ground absorption, reflecting surfaces, barriers, or other obstructions. Actual results may vary due to field and environmental conditions.

**TABLE 3 – CALCULATED SOUND LEVEL RESULTS AND APPLICABLE LIMITS**

Source	Distance from Receiver at which site Complies with Applicable Limit
	3.18 feet / 0.97 meters
Equipment (See Table 2)	44.9 dBA
Applicable Limit	45 dBA

According to the construction drawings and aerial photographs, the nearest residential property is located approximately 14 feet to the west of the proposed equipment. This nearest residential property would experience a noise impact of approximately 32 dBA at the property line. Since the distance between the proposed equipment and the receivers is considerably greater than the minimum compliance distance, the proposed Los Altos 001 Small Cell installation located at 155 Almond Avenue in Los Altos, California will comply with the Exterior Noise Limits as outlined in the Los Altos Municipal Code, Section 6.16.050.



## **7.0 LIMITATIONS**

This report was prepared for the use of The CBR Group and Verizon. 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. Calculations contained in this report should be considered accurate to within one decibel. 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.

## 8.0 CERTIFICATION

This report has been reviewed and approved by:



sealed 14oct2019

Michael McGuire PE  
Professional Electrical Engineer  
California License# E18898  
[mike@h2dc.com](mailto:mike@h2dc.com)

Note that EBI's scope of work is limited to an evaluation of the Sound Properties of the 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.



August 06, 2019

City of Los Altos  
Planning Department  
1 N San Antonio Rd, Los Altos, CA 94022

**RE:** *Proposed Verizon Wireless telecommunication installation located on PG&E owned utility poles located in the City of Los Altos. 155 Almond Ave. Los Altos, CA 94022; 123 N El Monte Ave. Los Altos, CA 94022; 447 Yerba Buena Ave. Los Altos, CA 94022; 365 Traverso Ave. Los Altos, CA 94022*

To whom it may concern:

PG&E entered into a Master License Agreement (MLA) with Verizon Wireless in October 2016. The MLA allows Verizon to attach their equipment and antennas to PG&E distribution poles, subject to PG&E approval. Verizon had already been authorized to attach their equipment below the primary and secondary power lines in the "communications zone." Under the MLA, Verizon is now licensed to use the "power zone" space owned by PG&E. The power zone is at the pole top, above the power lines. California Public Utilities Commission (CPUC) General Order 95, Rule 94 established that antennas can be installed at the pole top position.

PG&E will comply with CPUC regulations and standards with regard to its distribution poles and reviews of proposed attachments.

However, Verizon is solely liable and responsible for complying with all applicable requirements, including CPUC General Order 95, with regard to its attachments on distribution poles. PG&E provides no guarantees that any or all of Verizon's applications will be approved, but consents to Verizon filing jurisdictional permit applications for space on the pole(s) listed in this LOA.

Please call me at (925) 459-3706 if you have any questions or concerns regarding this matter.

Respectfully,  
Kristopher L. Van Liew

Kris Van Liew  
[k1v6@pge.com](mailto:k1v6@pge.com)  
Program Manager  
PG&E Joint Utilities

LOA PG&E: Los Altos 001 - 155 Almond Ave. Los Altos, CA 94022  
Los Altos 002 - 123 N El Monte Ave. Los Altos, CA 94022  
Los Altos 003 - 447 Yerba Buena Ave. Los Altos, CA 94022  
Los Altos 004 - 365 Traverso Ave. Los Altos, CA 94022



# CERTIFICATE OF LIABILITY INSURANCE

## Exhibit E

DATE(MM/DD/YYYY)  
07/24/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must have **ADDITIONAL INSURED** provisions or be endorsed. If **SUBROGATION IS WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Aon Risk Services Northeast, Inc. New York NY Office One Liberty Plaza 165 Broadway, Suite 3201 New York NY 10006 USA	<b>CONTACT NAME:</b> <b>PHONE (A/C. No. Ext):</b> (866) 283-7122 <b>FAX (A/C. No.):</b> (800) 363-0105															
	<b>E-MAIL ADDRESS:</b>															
<b>INSURED</b> Cellco Partnership dba Verizon Wireless 1095 Avenue of the Americas New York NY 10036 USA		<table border="1"> <thead> <tr> <th>INSURER(S) AFFORDING COVERAGE</th> <th>NAIC #</th> </tr> </thead> <tbody> <tr> <td>INSURER A: National Union Fire Ins Co of Pittsburgh</td> <td>19445</td> </tr> <tr> <td>INSURER B: New Hampshire Insurance Company</td> <td>23841</td> </tr> <tr> <td>INSURER C: AIU Insurance Company</td> <td>19399</td> </tr> <tr> <td>INSURER D: American Home Assurance Co.</td> <td>19380</td> </tr> <tr> <td>INSURER E: Illinois National Insurance Co</td> <td>23817</td> </tr> <tr> <td>INSURER F:</td> <td></td> </tr> </tbody> </table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A: National Union Fire Ins Co of Pittsburgh	19445	INSURER B: New Hampshire Insurance Company	23841	INSURER C: AIU Insurance Company	19399	INSURER D: American Home Assurance Co.	19380	INSURER E: Illinois National Insurance Co	23817	INSURER F:	
INSURER(S) AFFORDING COVERAGE	NAIC #															
INSURER A: National Union Fire Ins Co of Pittsburgh	19445															
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INSURER C: AIU Insurance Company	19399															
INSURER D: American Home Assurance Co.	19380															
INSURER E: Illinois National Insurance Co	23817															
INSURER F:																

Holder Identifier :

**COVERAGES**                                      **CERTIFICATE NUMBER:** 570077603194                                      **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

Limits shown are as requested

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> XCU Coverage is Included  GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC <input type="checkbox"/> OTHER:			GL6412251	06/30/2019	06/30/2020	EACH OCCURRENCE	\$1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	\$2,000,000
							MED EXP (Any one person)	\$10,000
							PERSONAL & ADV INJURY	\$1,000,000
							GENERAL AGGREGATE	\$2,000,000
							PRODUCTS - COMP/OP AGG	\$2,000,000
A	<b>AUTOMOBILE LIABILITY</b>			CA 299-19-14 AOS	06/30/2019	06/30/2020	COMBINED SINGLE LIMIT (Ea accident)	\$2,000,000
A	<input checked="" type="checkbox"/> ANY AUTO			CA 299-19-18 MA	06/30/2019	06/30/2020	BODILY INJURY (Per person)	
A	<input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS			CA 299-19-15 VA	06/30/2019	06/30/2020	BODILY INJURY (Per accident)	
A	<input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY			See Next Page	06/30/2019	06/30/2020	PROPERTY DAMAGE (Per accident)	
	<b>UMBRELLA LIAB</b> <input type="checkbox"/> OCCUR						EACH OCCURRENCE	
	<b>EXCESS LIAB</b> <input type="checkbox"/> CLAIMS-MADE						AGGREGATE	
	<input type="checkbox"/> DED <input type="checkbox"/> RETENTION							
B	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b>			WC014649148 AOS	06/30/2019	06/30/2020	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER	
D	ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A	WC014649146 CA	06/30/2019	06/30/2020	E.L. EACH ACCIDENT	\$1,000,000
							E.L. DISEASE-EA EMPLOYEE	\$1,000,000
							E.L. DISEASE-POLICY LIMIT	\$1,000,000

Certificate No : 570077603194



DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)  
 RE: Public Rights-of-way throughout the City of San Jose. City of San Jose, its officers, officials, agents and volunteers are included as Additional insured with respect to the General Liability and Automobile Liability policies.

### CERTIFICATE HOLDER

### CANCELLATION

City of San Jose  
 Attn: City of San Jose Finance Department, Risk Management  
 200 E. Santa Clara St., 14th Floor  
 San Jose CA 95113 USA

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

*Aon Risk Services Northeast, Inc.*



# ADDITIONAL REMARKS SCHEDULE

AGENCY Aon Risk Services Northeast, Inc.		NAMED INSURED Cellco Partnership dba Verizon Wireless	
POLICY NUMBER See Certificate Number: 570077603194			
CARRIER See Certificate Number: 570077603194	NAIC CODE	EFFECTIVE DATE:	

**ADDITIONAL REMARKS**

**THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,  
FORM NUMBER: ACORD 25 FORM TITLE: Certificate of Liability Insurance**

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER	
INSURER	
INSURER	
INSURER	

**ADDITIONAL POLICIES** If a policy below does not include limit information, refer to the corresponding policy on the ACORD certificate form for policy limits.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS	
	AUTOMOBILE LIABILITY							
A				CA 299-19-16 NH - Primary	06/30/2019	06/30/2020		
A				CA 299-19-17 NH - Excess	06/30/2019	06/30/2020		
	WORKERS COMPENSATION							
C		N/A		WC014649149 NY	06/30/2019	06/30/2020		
E		N/A		WC014649144 FL	06/30/2019	06/30/2020		
B		N/A		WC014649145 MA, ND, OH, WI, WY	06/30/2019	06/30/2020		
B		N/A		WC014649147 NJ, TX, VA	06/30/2019	06/30/2020		



NON TRANSFERABLE

EXPIRATION  
06/30/2020

# CITY OF LOS ALTOS

**Business License**  
1 N SAN ANTONIO RD  
LOS ALTOS, CA 94022-3000

POST IN CONSPICUOUS PLACE

**Exhibit F**

TYPE OF BUSINESS      SERVICE - OUTSIDE CITY

LICENSE NUMBER

**BL-000332**

BUSINESS NAME      GTA Mobilenet of California



MAILING ADDRESS      GTA Mobilenet of California  
C/O KPMG LLP  
2200 Cabot Dr., Ste. 400  
LISLE, IL 60532

BUSINESS ADDRESS  
101 FREMONT AVENUE  
LOS ALTOS, CA 94022



Re: Verizon Wireless Application No. SE19-00019 for Small Cell Wireless Facility, 155 Almond Avenue Collocation Statement Pursuant to Los Altos Municipal Code Section 11.12.080

To Whom it May  
Concern,

In compliance with Los Altos Municipal Code Section 11.12.080(A)(3), Verizon Wireless (the "Applicant") confirms its willingness to allow other carriers to collocate on the proposed wireless telecommunications facility wherever technically and economically feasible and where collocation would not harm community compatibility. Verizon Wireless makes no representation or warranty. Its consent to collocation set forth herein does not grant any right, title or interest to the utility pole or right-of-way upon which the wireless facility is to be located, which rights are controlled by others.

Respectfully  
Submitted,

A handwritten signature in black ink, appearing to read "Alba Barber", written over a horizontal line.

Alba Barber

Senior Real Estate Manager  
-Verizon Wireless, Northern  
California Northern Nevada

## DECLARATION OF JESUS G. ROMAN

I, **Jesús G. Román**, declare and state:

1. I am the Associate General Counsel for GTE Mobilnet of California Limited Partnership dba Verizon Wireless (GTE Mobilnet). My business address is 15505 Sand Canyon Avenue, Irvine, CA 92618. My phone number is 949-286-7202.

2. I am providing this declaration in connection with establishing that GTE Mobilnet is authorized to use the Right of Way and operate in California pursuant to a Certificate of Public Convenience and Necessity (CPCN) with the California Public Utilities Commission (CPUC) and because it is deemed pursuant to law to hold a Wireless Identification Registration (WIR). GTE Mobilnet holds a CPCN by virtue of CPUC Decision No. 85-04-008. CPUC Decision 94-10-031, implementing Federal legislation that prohibits states from erecting barriers to wireless service entry, explicitly recognized that a wireless provider with a CPCN (like Mobilnet) is deemed to satisfy the WIR requirement, stating: "Such carriers are deemed to have complied with the Wireless Identification Registration requirement." See D.94-10-031, 1994 Cal. PUC LEXIS 700, \*7, 56 CPUC2d 578 (Cal. P.U.C. Oct. 12, 1994).

3. The CPUC maintains a publicly available database of public utilities that have authority to operate in California. The CPUC assigns a Utility Number to each such public utility. GTE Mobilnet's CPCN can be verified by visiting the CPUC's website <https://apps.cpuc.ca.gov/apex/f?p=102:1:0::NO:RP::> and entering GTE Mobilnet into the "Search Utility Name" field. Doing this will show the utility name as GTE Mobilnet of Ca., Ltd. Ptnrshp and show the dba as Verizon Wireless. It will also show the Utility number assigned to GTE Mobilnet as 3002. Graphically, it shows this:



### Utility Contact System Search

The Utility Contact System (UCS) is the Communications Division's database for the primary regulatory contact for each telephone corporation operating in California. The Communications Division sends important regulatory notices to the regulatory contact for each telephone corporation via e-mail, so it is important for primary regulatory contacts to update their UCS record if their e-mail address changes.

Telephone corporations may update UCS contact information using the form on the following page: [Carrier Reporting Requirements](#)

A description of the different Utility types (granted authorities) are listed on the following page: [Utility Type Descriptions](#)

Utility Name	Alias (DBA Name)	Utility Number	Street Address	City	State	Zip	Phone Number	Email	Utility Type	CPCN Approval Date
GTE Mobilnet of Ca., Ltd Ptnrshp	VERIZON WIRELESS	3002	201 SPEAR STREET	SAN FRANCISCO	CA	94105	(415) 228-1485	rutyrbyes@verizon.com	CEC	
GTE Mobilnet of Ca., Ltd Ptnrshp	VERIZON WIRELESS	3002	ONE GTE PLACE	ALPHARETTA	GA	30004	(878) 339-4281		CEC	
GTE Mobilnet of Ca., Ltd Ptnrshp	VERIZON WIRELESS	3002	3100 CLIMBERLAND BLVD SUITE 700	ATLANTA	GA	30339	(908) 306-7449		CEC	
GTE Mobilnet of Ca., Ltd Ptnrshp	VERIZON WIRELESS	3002	818 FM 1860 WEST BITE 400	HOUSTON	TX	77090			CEC	

Comments & Feedback

1 - 4

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on October 6, 2017 at Simi Valley, CA.

Jesús G. Román  
Associate General Counsel

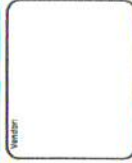












Site Number: 427824  
 Site Name: LOS ALTOS 001  
 Site Address: 155 ALMOND AVENUE, LOS ALTOS, CA 94022  
 County: SANTA CLARA COUNTY

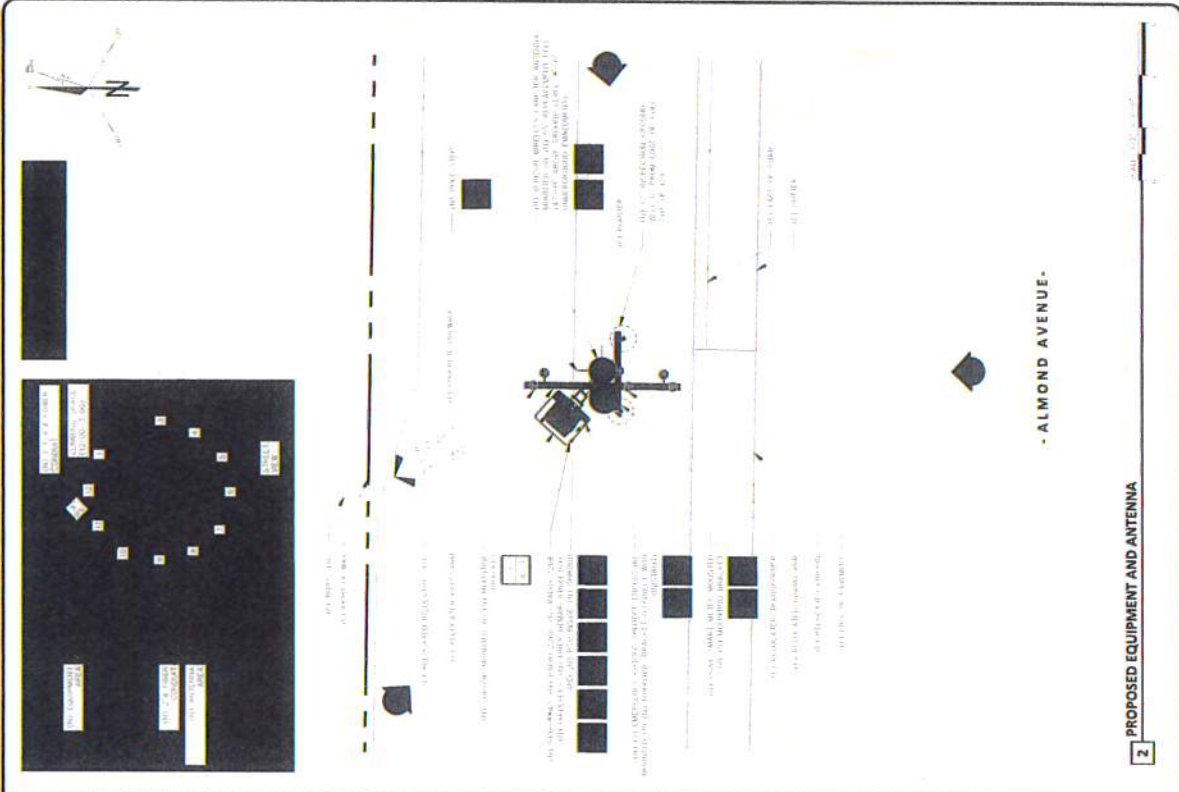
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REV	DATE	DESCRIPTION	BY
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Sheet Title: EXISTING AND PROPOSED EQUIPMENT AND ANTENNA PLANS

Sheet Number: A-2



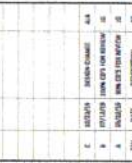


Vendor

Site Number: 427824  
 Site Name: LOS ALTOS 001  
 Site Address: 155 ALMOND AVENUE, LOS ALTOS, CA 94022  
 County: SANTA CLARA COUNTY

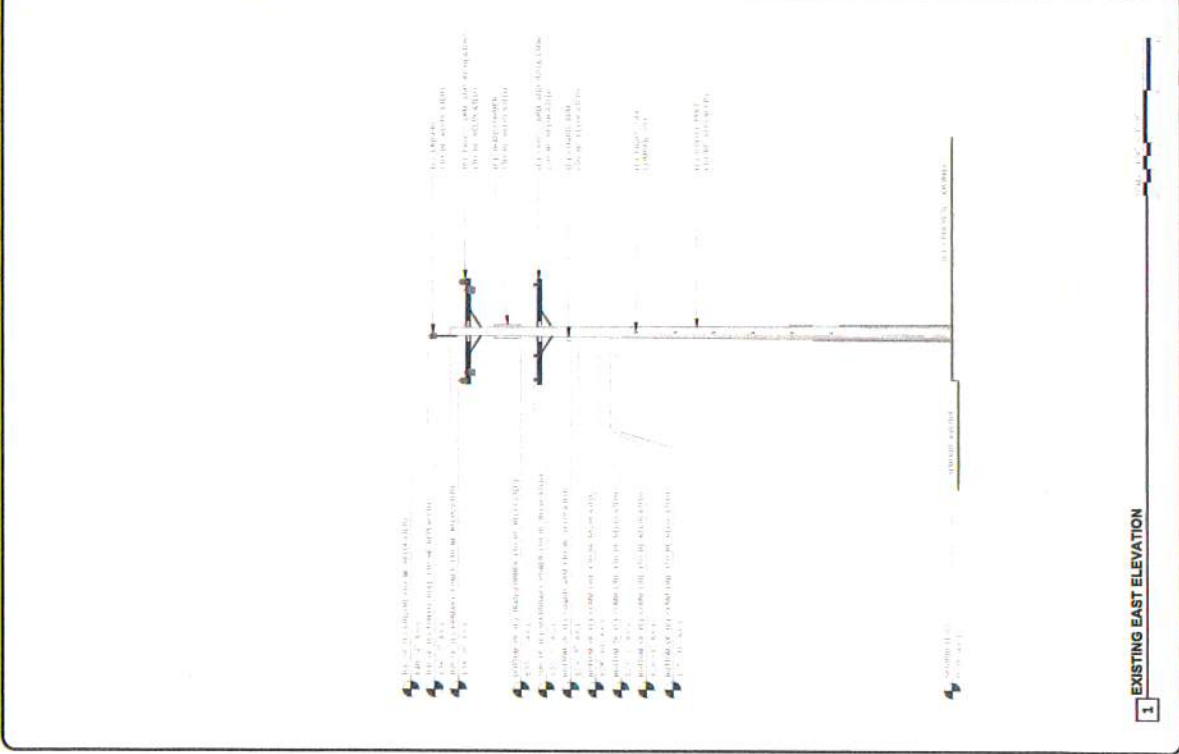
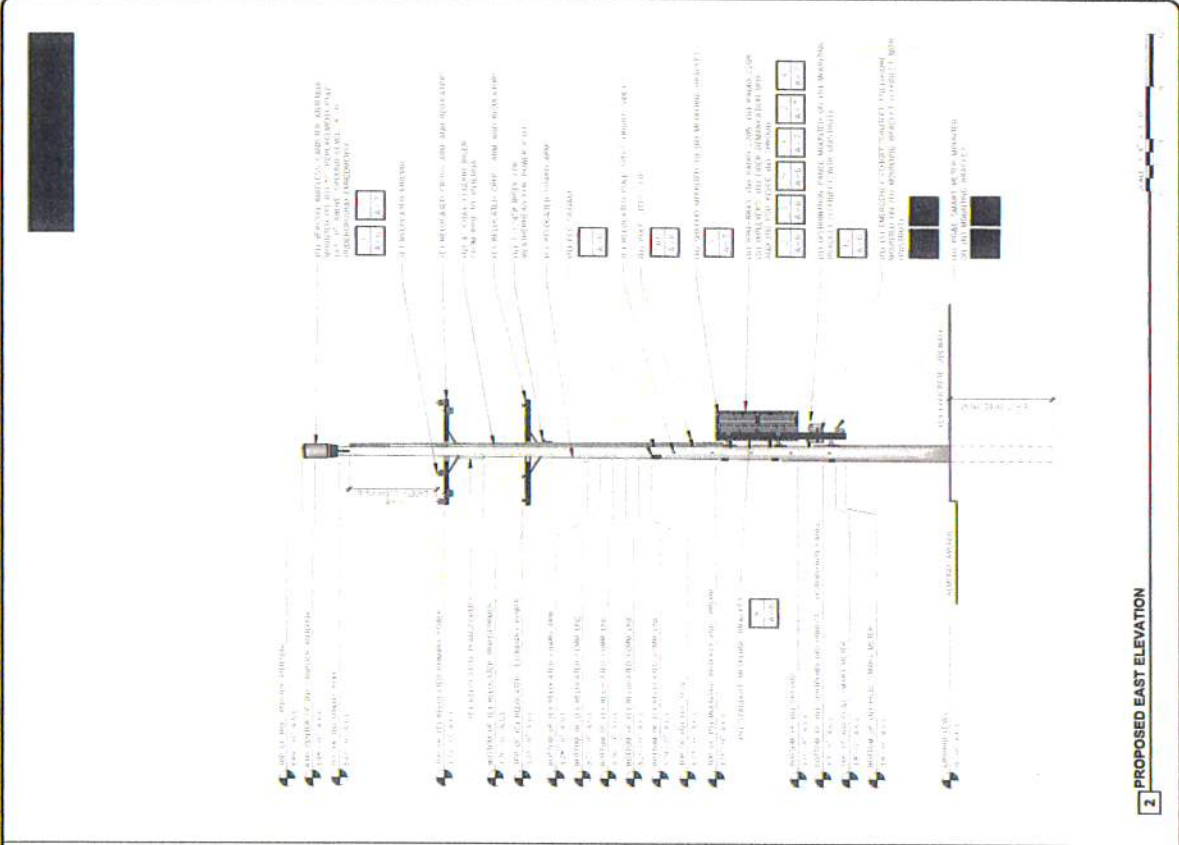
CONSTRUCTION

Item	Description	Quantity	Unit	Material
1	CONCRETE			
2	STEEL			
3	WOOD			
4	PAINT			
5	LABOR			
6	EQUIPMENT			
7	PERMITS			
8	INSURANCE			
9	TRAVEL			
10	TESTING			



Project Title:  
 EXISTING AND PROPOSED EAST ELEVATION

Sheet Number:  
**A-3**

















Vendor:

Site Number: 427816  
 Site Name: LOS ALTOS 001  
 Site Address: 135 ALMOND AVENUE, LOS ALTOS, CA 94022  
 County: SANTA CLARA COUNTY

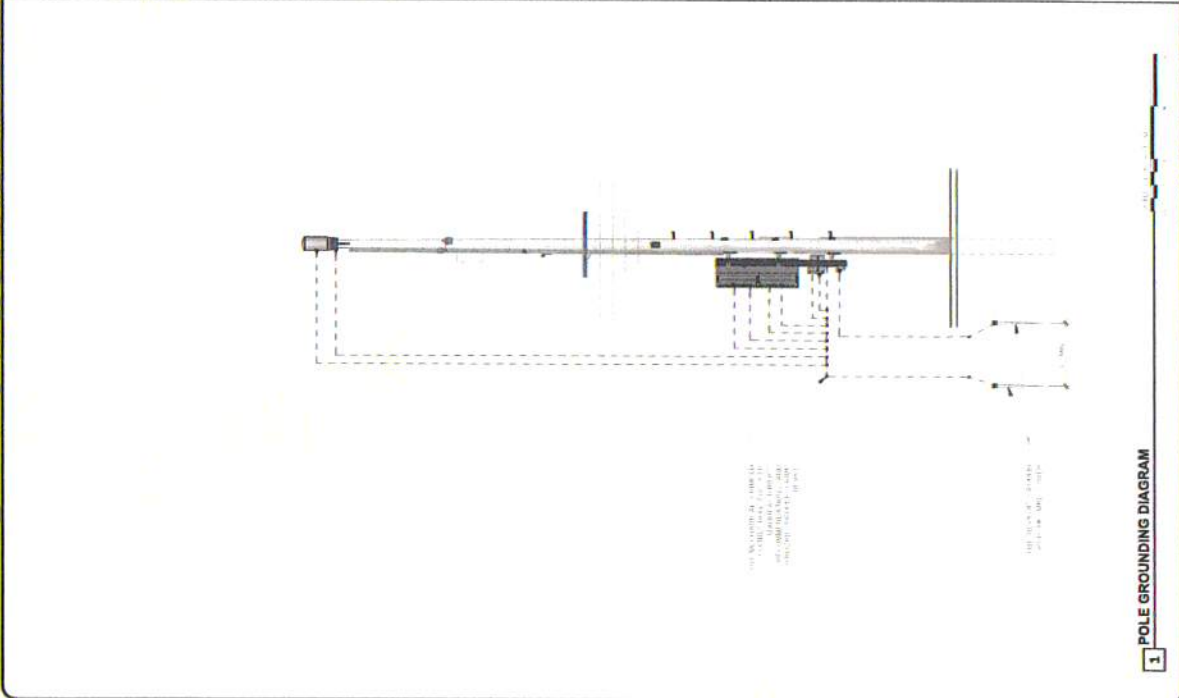
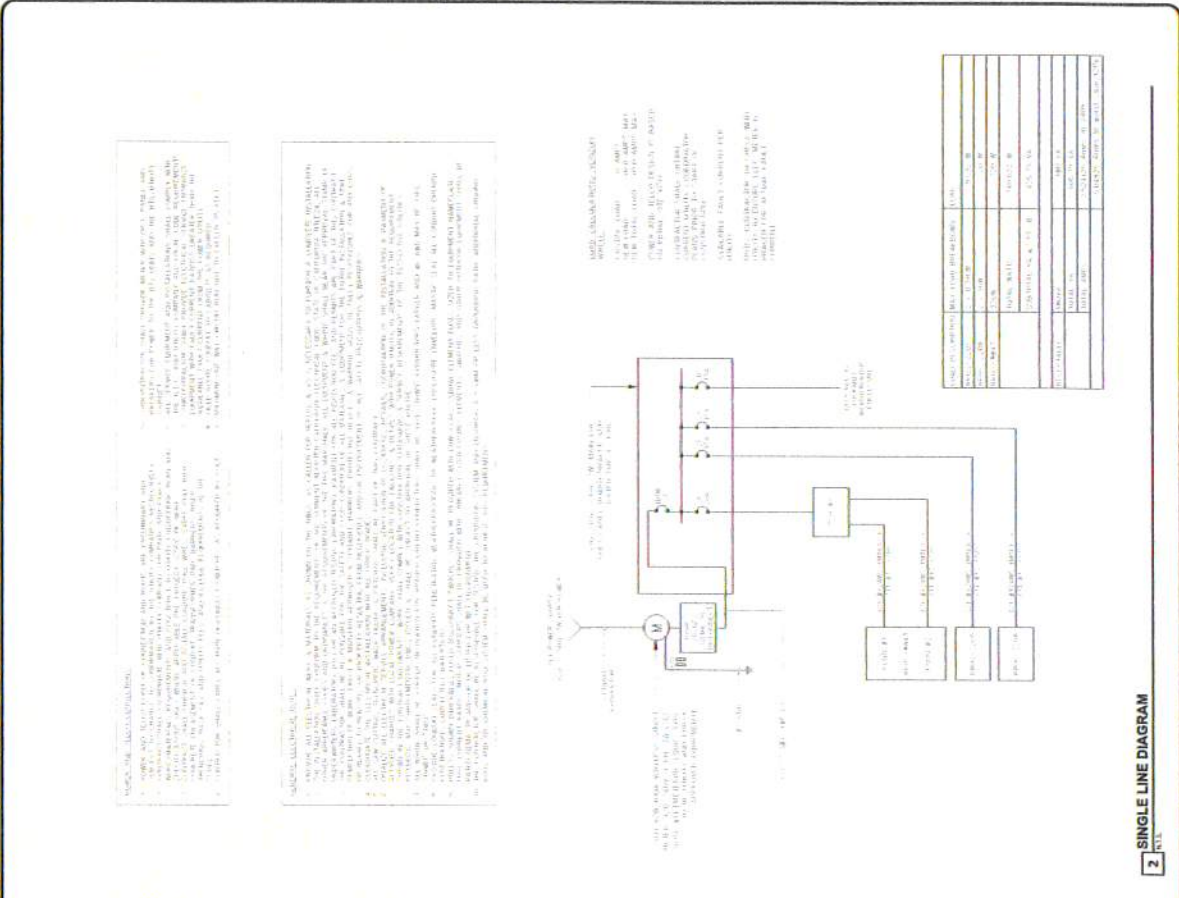
Sheet For: CONSTRUCTION

NO.	DATE	REVISION
1	10/20/11	ISSUED FOR PERMITS
2	11/02/11	ISSUED FOR CONSTRUCTION



Sheet Title: ELECTRICAL GROUND DIAGRAMS

Sheet Number: E-1





Number

Site Number: 427814  
 Site Name: LOS ALTOS 001  
 Site Address: 155 ALMOND AVENUE  
 LOS ALTOS, CA 94022  
 County: SANTA CLARA COUNTY

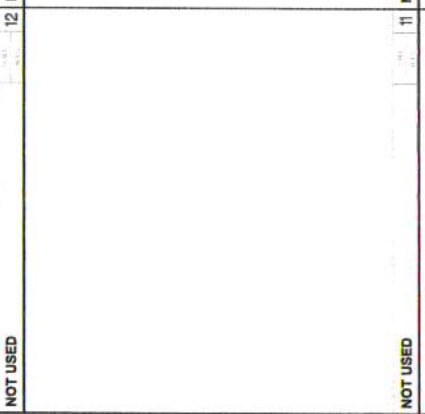
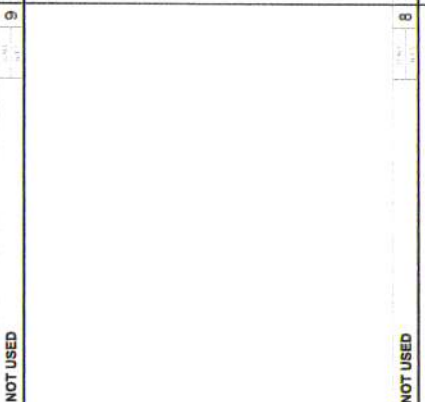
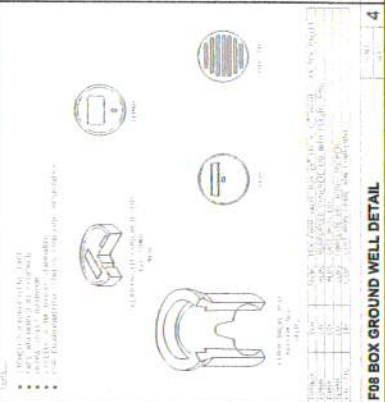
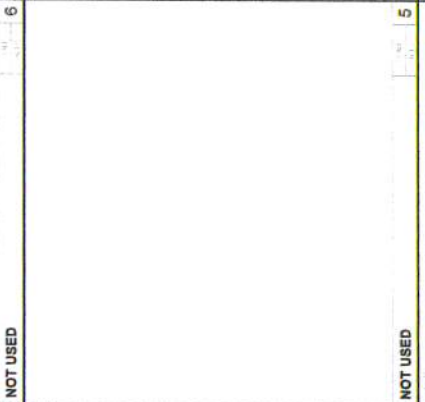
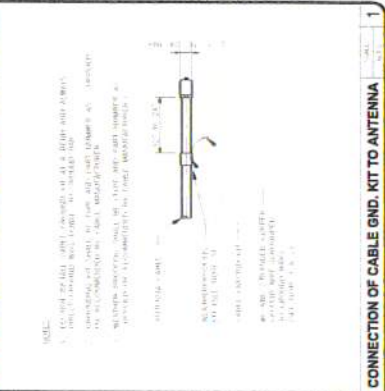
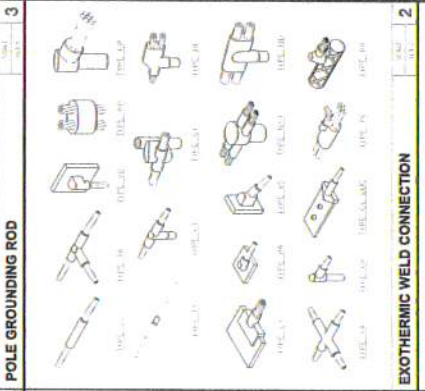
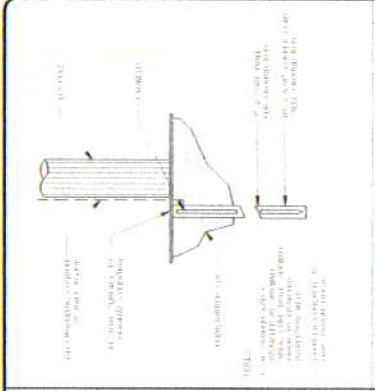
Notes For CONSTRUCTION

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2	Excavate	Remove concrete	AS
3	Excavate	Remove concrete	AS
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10	Excavate	Remove concrete	AS
11	Excavate	Remove concrete	AS
12	Excavate	Remove concrete	AS



Electrical Details

Sheet Number: E-2



NOT USED

NOT USED

NOT USED



Engineer: [Blank]

Site Number: 437814  
 Site Name: LOS ALTOS 001  
 Site Address: 535 ALMOND AVENUE  
 LOS ALTOS, CA 94022  
 County: SANTA CLARA COUNTY

Contractor: CONSTRUCTION

NO.	REVISION	DATE	DESCRIPTION
1	ISSUED FOR PERMITS		
2	ISSUED FOR PERMITS		
3	ISSUED FOR PERMITS		
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10	ISSUED FOR PERMITS		



Sheet Title: TRAFFIC CONTROL PLAN  
 Sheet Number: TCP



**GENERAL TRAFFIC CONTROL NOTES**

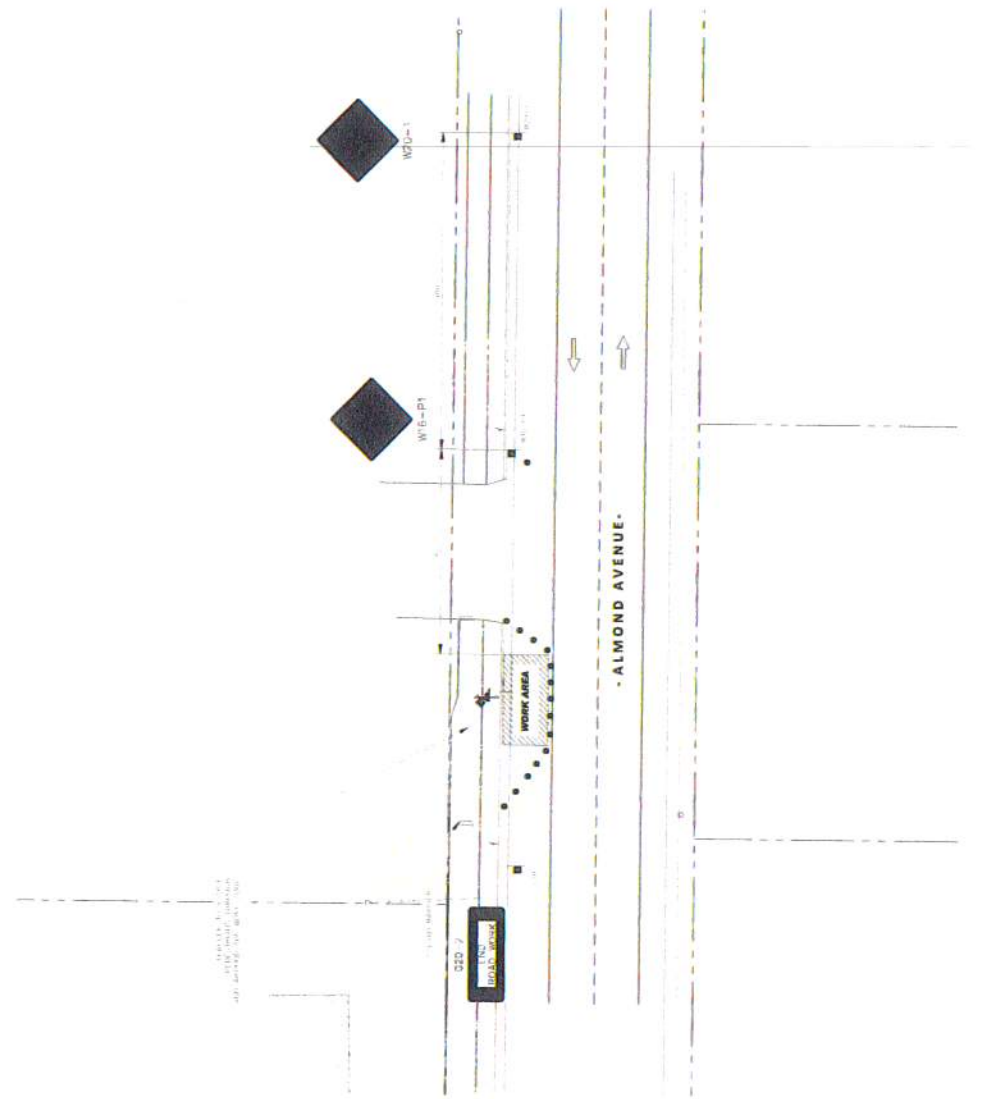
TRAFFIC SHALL BE CONTROLLED AT ALL TIMES. ALL ALTERNATE TRAFFIC CONTROL DEVICES MUST BE MAINTAINED AT ALL TIMES. ACCESS TO DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES. TURNING LANE SHALL BE MAINTAINED AT ALL TIMES ON ALL STREETS. ONE LANE OF TRAFFIC IN EACH DIRECTION AND ALL HIGH VOLUME STREETS SHALL BE MAINTAINED AT ALL TIMES. ALL TRAFFIC SIGNALS, STOP SIGNS, STOPPING AND STARTING MARKINGS SHALL BE REMOVED OR COVERED BEFORE TRAFFIC CONTROL IS IN PLACE. ANY TRAFFIC CONTROL DEVICES OR MARKINGS NOT NECESSARY SHALL BE REMOVED OR COVERED AS SOON AS POSSIBLE. SAFE PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES.

TABLE 6P-3 & 6P-4 - FROM THE 2014 CALIFORNIA MUTCD

MINIMUM MARKING LENGTH	MINIMUM MARKING WIDTH	MINIMUM MARKING SPACING	MINIMUM MARKING SPACING FROM CURB	MINIMUM MARKING SPACING FROM INTERSECTION	MINIMUM MARKING SPACING FROM STOP LINE	MINIMUM MARKING SPACING FROM STOP BAR
30	40	40	27	100	100	100
45	45	45	42	150	150	150
60	60	60	60	200	200	200
75	75	75	75	250	250	250
90	90	90	90	300	300	300
105	105	105	105	350	350	350
120	120	120	120	400	400	400
135	135	135	135	450	450	450
150	150	150	150	500	500	500
165	165	165	165	550	550	550
180	180	180	180	600	600	600
200	200	200	200	650	650	650
220	220	220	220	700	700	700
240	240	240	240	750	750	750
260	260	260	260	800	800	800
280	280	280	280	850	850	850
300	300	300	300	900	900	900
320	320	320	320	950	950	950
340	340	340	340	1000	1000	1000

TABLE 6P-3 & 6P-4 - FROM THE 2014 CALIFORNIA MUTCD

- TYPE 1 BARRICADE WITH SIGN
- TYPE 2 BARRICADE WITH SIGN
- CHANGELINE DEVICE
- TRAFFIC CONE WITH CLIP DESIGN
- SIGN
- SIGNALIZED INTERSECTION
- ARROW PANEL (PLACING ARROWS) (WHERE REQUIRED)
- HIGH LEVEL WARNING DEVICE (PRACTICE) (OPTIONAL)
- PLACER
- TRUCK
- TRUCK WITH STOPPING AREA TO (OR FROM) ROAD
- TRUCK WITH STOPPING AREA TO (OR FROM) ROAD
- WORK ZONE ACTIVITY AREA LIMIT
- DIRECTION OF TRAFFIC (ACT FURNISH MARKING)
- ROADWAY REDEMPTION (A THROUGH D)
- SITE





**verizon**<sup>✓</sup>  
2785 Mitchell Drive  
Walnut Creek, CA 94598

October 21, 2019

**To: City Council, City of Los Altos**

**From: Brian Ung, Radio Frequency Design Engineer  
Verizon Wireless Network Engineering Department**

**Subject: Statement in Support of Verizon Wireless's Proposed  
Small Cell, Right-of-Way at 155 Almond Avenue, Los Altos**

**Executive Summary**

Verizon Wireless has identified a significant gap in its fourth-generation long-term evolution (LTE) service in north Los Altos. This area currently receives inadequate LTE service coverage from the existing Verizon Wireless Mountain View facility 1.1 miles north of the proposed small cell, the Downtown Mountain View facility 1.6 miles east, the Los Altos facility 0.9 miles south, and the Los Altos Hills facility 1.5 miles west.

As a result of the distance from those existing facilities, there is a gap in reliable LTE in-building and in-vehicle service coverage in north Los Altos. Further, accelerated growth in voice and data usage by Verizon Wireless customers has increased the demand on the existing Verizon Wireless network in a manner that compromises network accessibility and reliability. This accelerating growth in demand has led to capacity exhaustion of the existing Verizon Wireless facility that serves the gap area.

To meet this increased demand, Verizon Wireless is deploying efficient high-speed fourth-generation LTE technology in the Los Altos area. The majority of Verizon Wireless's LTE service is provided using high-band PCS and AWS frequency spectrum. With their shorter wavelengths, the PCS and AWS bands provide greater data capacity. However, these high-band frequencies do not travel as far as low-band frequencies and require facilities closer together and closer to the end user to provide reliable LTE service.

The coverage gap and capacity gap described below constitute the "significant gap" Verizon Wireless seeks to serve (the "Significant Gap"). To provide reliable LTE service and avoid further degradation of Verizon Wireless service in north Los Altos, the Significant Gap must be remedied through placement of a small cell on a utility pole in the right-of-way (the "Proposed Small Cell").

## Coverage Gap

Verizon Wireless is experiencing a gap in its LTE service coverage in north Los Altos. Reliable in-building coverage is lacking in an area that includes Los Altos High School, with an enrollment of approximately 2,100 students, and the surrounding residential neighborhood. Reliable in-vehicle coverage is lacking along a 0.5-mile stretch of Almond Avenue between San Antonio Road and North Avalon Drive, with a daily average traffic count of 5,430 vehicles.<sup>1</sup> Reliable in-vehicle coverage is also lacking along a 0.8-mile stretch of San Antonio Road between Alvarado Avenue and West Edith Avenue. (Collectively, the “Coverage Gap”).

A graphic description of the current high-band LTE coverage gap is shown in the following map, followed by a map showing the improved coverage provided by the Proposed Small Cell.

The Proposed Small Cell will provide reliable LTE service coverage to a total area of 0.7 square miles and a population of 2,290 residents. This will include new reliable in-building and in-vehicle coverage to serve the Coverage Gap.

Coverage plot maps like those below provide important information regarding the anticipated level of signal, and therefore the projected coverage provided by a site at a given location. The areas in green reflect good coverage that meets or exceed thresholds to provide consistent and reliable network coverage in homes and in vehicles. The areas in yellow and red depict decreasing levels of coverage, respectively, with yellow areas generally representing reliable in-vehicle coverage only, and red areas depicting poor service areas with marginal coverage unsuitable for in-vehicle use.

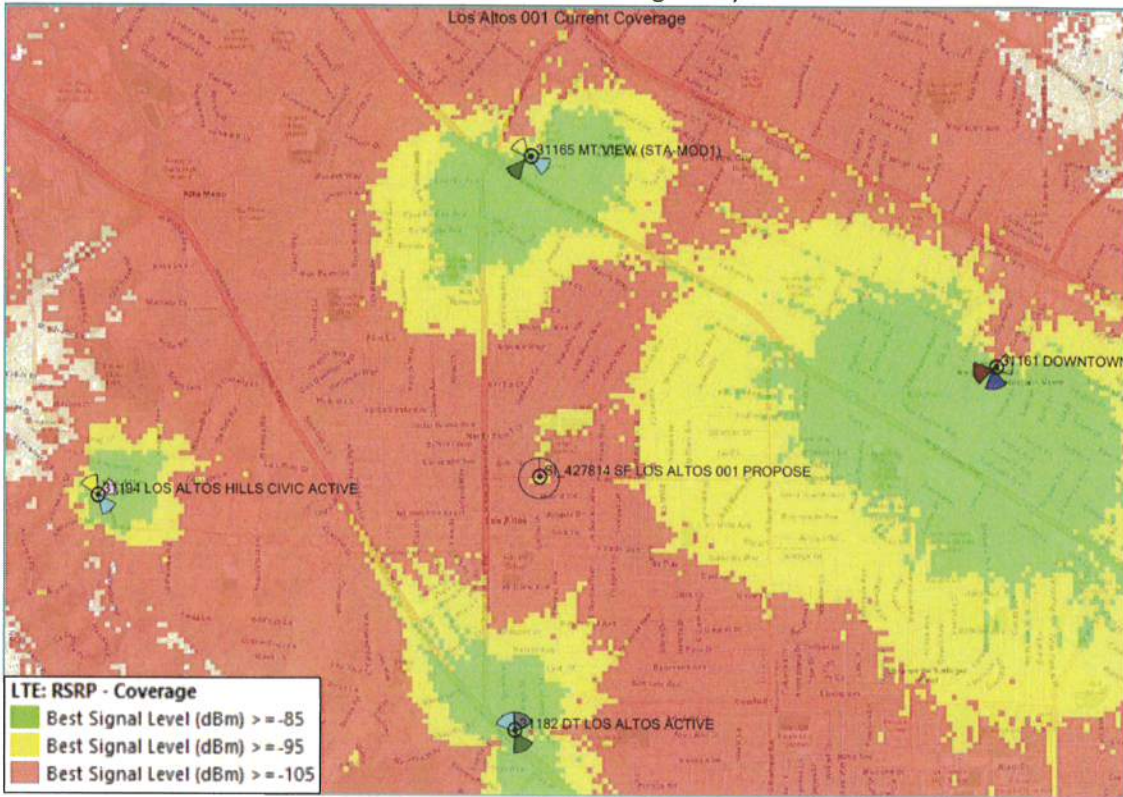
*See Coverage Maps on Following Page*

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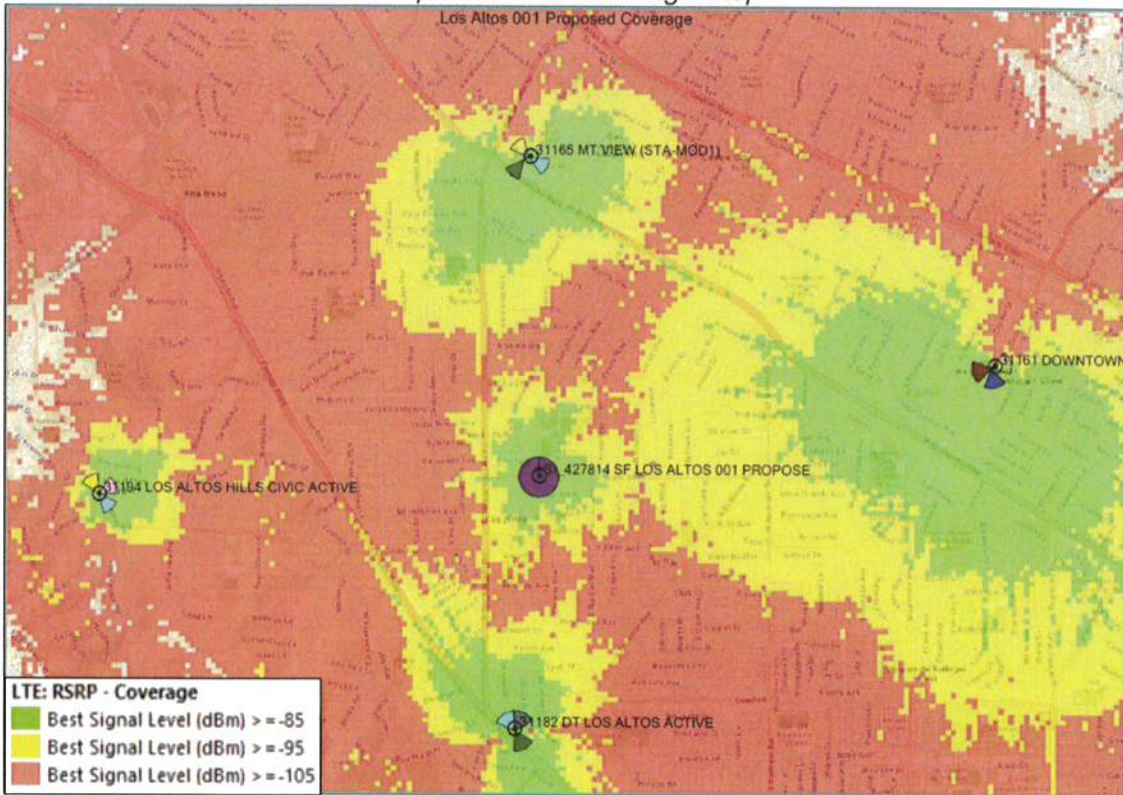
<sup>1</sup> RBF Consulting *Collector Traffic Calming Plan*, June 28, 2011.



### Current LTE Coverage Map



### Proposed LTE Coverage Map

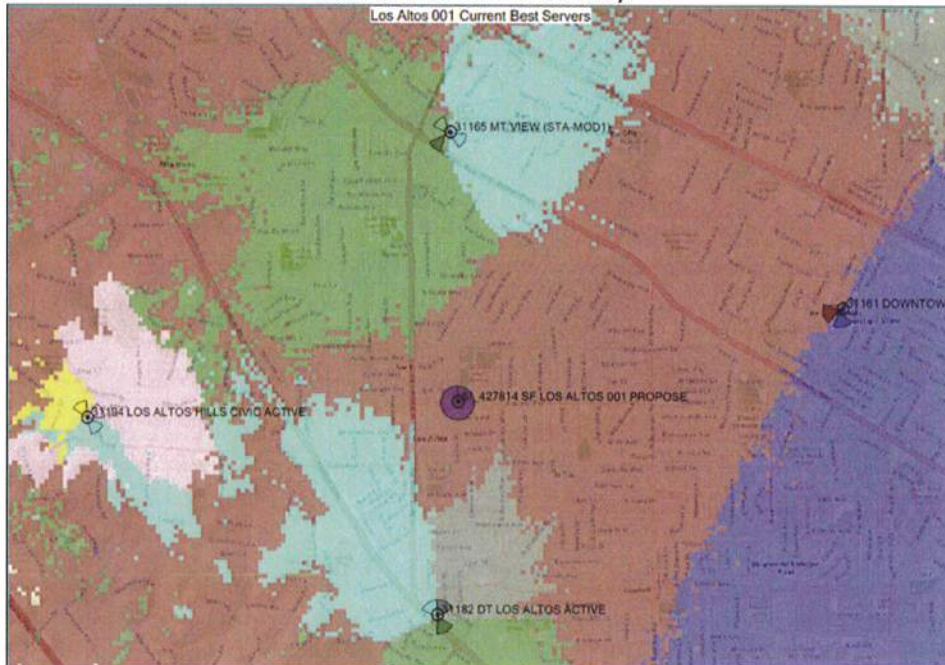




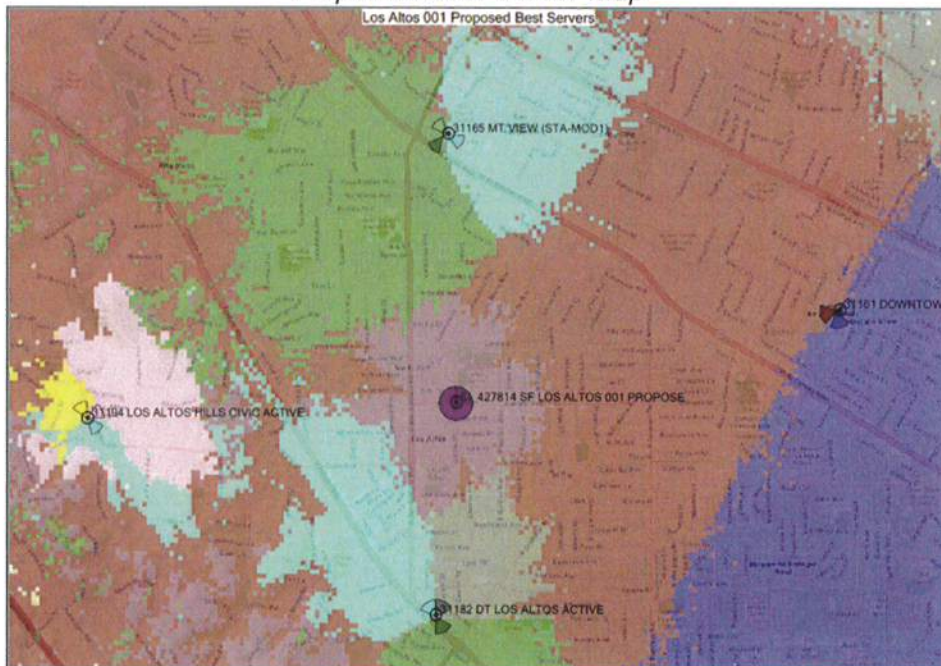
## Capacity Gap

As described above, the identified gap area receives inadequate service from distant Verizon Wireless macro facilities. This is illustrated in the following best server map. Best server maps depict the dominant signal provided by each Verizon Wireless facility in the greater area. Signal from each antenna sector of the macro facilities is depicted in a different color.

*Current Best Server Map*



*Proposed Best Server Map*



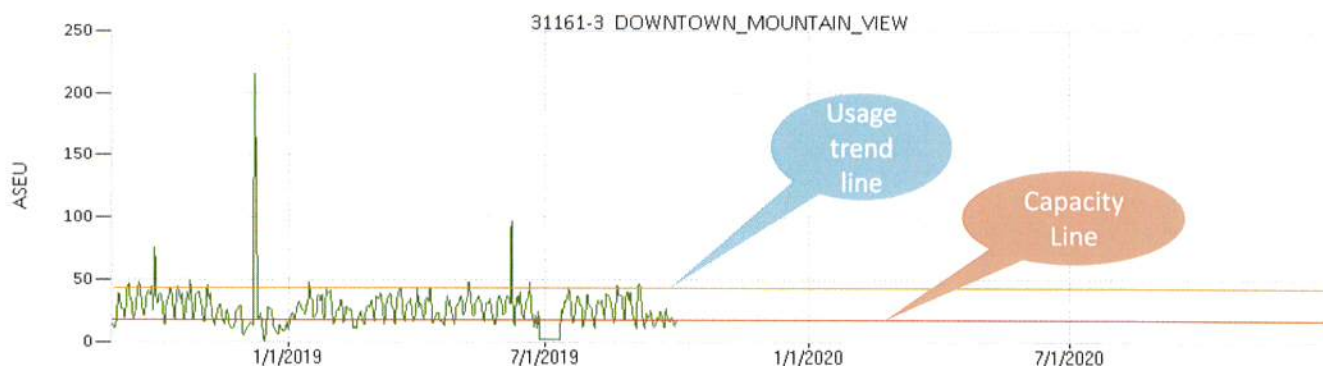
Of note, the west-facing (Gamma) antenna sector of the Downtown Mountain View facility, shown in brown on the best server maps, provides dominant signal to a particularly large area of 4.3 square miles, including the location the Coverage Gap and the Proposed Small Cell. Even though it provides the dominant signal to the gap area, the signal strength is decreased at such a great distance from the facility which is 1.6 miles east of the Proposed Small Cell.

The Proposed Small Cell, with its signal shown in lavender on the proposed best server map, is strategically located to provide new dominant signal to the gap area. It will substantially relieve the west-facing antenna sector of the Downtown Mountain View facility currently serving the gap, which has reached capacity exhaustion as explained below.

At times of high traffic volume, the coverage area of the surrounding Verizon Wireless macro facilities shrinks to accommodate an increasing number of mobile devices closer to that facility. As a result, the Coverage Gap area expands and is exacerbated during times of high customer usage. The contraction of coverage during times of high usage has become more relevant as the volume of voice and data services used by wireless customers has increased rapidly over time. In North America, mobile data traffic increased 44 percent during the year 2016.<sup>2</sup>

As shown in the following capacity chart, increased demand for voice and data services has already outstripped the capacity of the Downtown Mountain View west-facing antenna sector serving the gap area. The capacity chart shows the high usage of that antenna sector since mid-2018 as well as predicted usage through late 2020.

*Capacity Chart  
Downtown Mountain View Facility  
West-Facing (Gamma) Antenna Sector*



<sup>2</sup> Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2016-2021 White Paper, updated March 28, 2017.



ASEU (Average Scheduler Eligibility Usage) is a daily measure of data usage (green line). The ASEU chart trend line shows steady demand from customers accessing the network through this antenna sector.

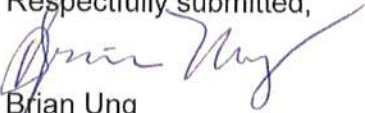
By comparing the trend line of average usage (orange line) with the maximum capacity of a facility (red line), Verizon Wireless RF engineering demonstrates that the Downtown Mountain View facility west-facing antenna sector reached capacity exhaustion over one year ago. Capacity exhaustion severely compromises the Verizon Wireless network in the entire area served by the exhausted antenna sector, leading to call failures, slow data speeds, and failure to connect to websites (the "Capacity Gap").

### **Conclusion**

As cellular networks mature, the network must be supplemented with more sites closer to customers, in large measure due to the increase in usage of the network. The LTE technology used by Verizon Wireless to provide fourth-generation service requires facilities closer to customers, and this technology cannot be provided by the current distant sites serving the gap area. These coverage and capacity demands have resulted in the Significant Gap in Verizon Wireless LTE coverage and network capacity in north Los Altos. Verizon Wireless must deploy the Proposed Small Cell to provide reliable LTE service to customers and to avoid further degradation of its network in the area of the Significant Gap.

Please feel free to contact me with any questions or comments regarding Verizon Wireless's proposed facility.

Respectfully submitted,



Brian Ung  
RF Design Engineer  
Network Engineering Department  
Verizon Wireless





VERIZON SMALL CELL  
FOR STAND ALONE SMALL CELL  
ALTERNATIVE SITE ANALYSIS

Verizon Small Cell Node "Los Altos 001" (near 155 Almond Ave.)

Prepared October 21, 2019

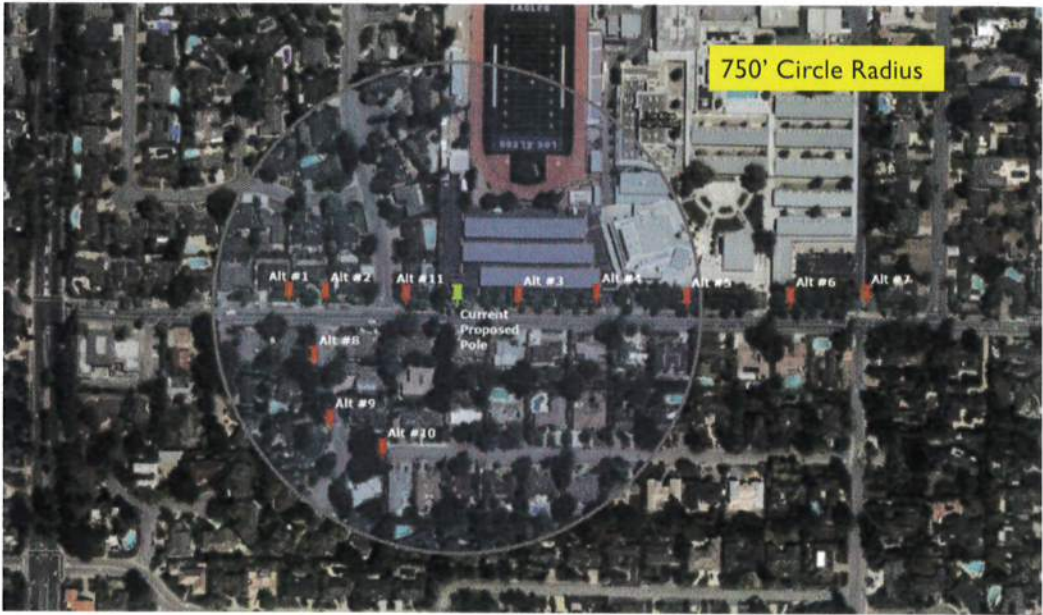


**Exhibit K**

## OVERVIEW

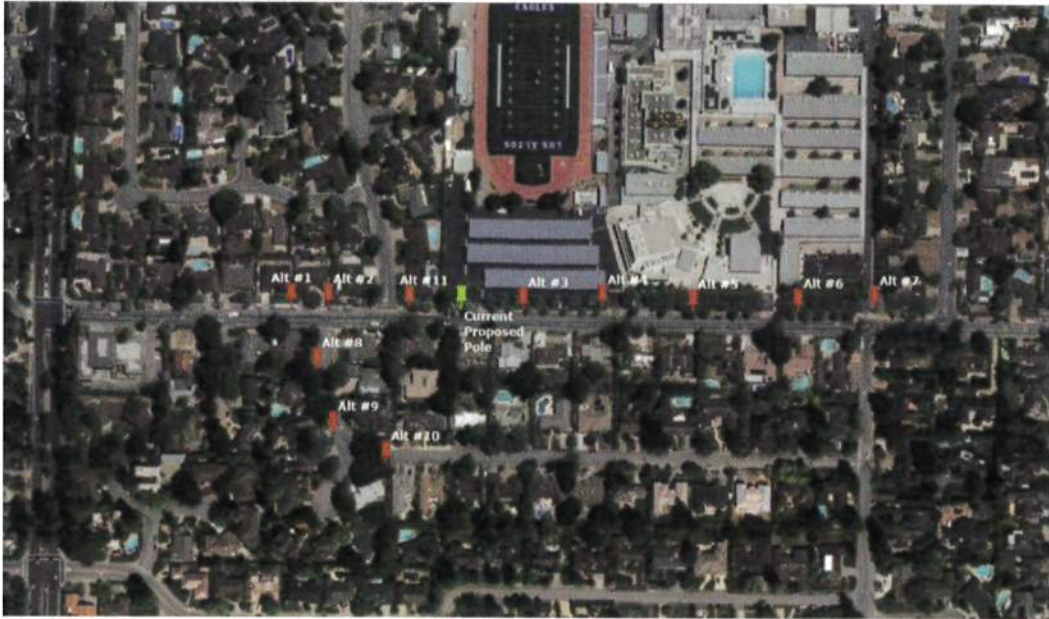
- Verizon is proposing to install a small cell standalone project in the area to improve network coverage and capacity.
- A small cell is just like the name implies. A small cell augments Verizon's capacity in a given area. It consists of a radio, antenna, power and a fiber connection. Small Cells are short range mobile cell sites used to complement larger macro cells (or cell towers). Small cells enable the Verizon network team to strategically add capacity to high traffic areas.
- Demand for wireless data services has nearly doubled over the last year, and is expected to grow 650% between 2013 and 2018 according to Cisco. It's part of Verizon's network strategy to provide reliable service and to stay ahead of this booming demand for wireless data.

SHOT MAP OF PROPOSED SITE LOCATION AND ALTERNATIVES CONSIDERED

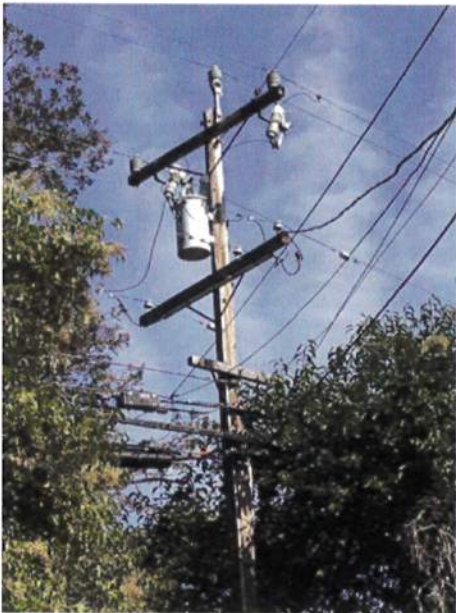




SHOT MAP OF PROPOSED SITE LOCATION AND ALTERNATIVES CONSIDERED



CURRENT PROPOSED SITE  
(155 ALMOND AVE.)



Los Altos 001

Revision Date 10/21/19

## ALTERNATIVES REVIEW

Alternatives	Coordinates		Comments (Expanded explanation on each slide)	Location
	Latitude	Longitude		
Alternative #1	37.385052	-122.112158	Less preferable, adjacent to residential front yard.	83 Almond Ave.
Alternative #2	37.385053	-122.111856	Cut outs on pole.	93 Almond Ave.
Alternative #3	37.385056	-122.110234	Less vegetated screening.	A/F 154 Almond Ave.
Alternative #4	37.385086	-122.109582	Cut outs and Primary riser on pole.	A/F 200 Almond Ave.
Alternative #5	37.385067	-122.108829	Cut outs and Primary riser on pole.	199 Almond Ave.
Alternative #6	37.385085	-122.107957	Primary riser on pole.	A/F 288 Almond Ave.
Alternative #7	37.385117	-122.107321	Cut outs on pole.	A/F 300 Almond Ave. Between 170 & 174
Alternative #8	37.384630	-122.111941	Less preferable, adjacent to residential front yard.	Fredrick Ct.
Alternative #9	37.384212	-122.111794	Less preferable, adjacent to residential front yard.	146 Fredrick Ct.
Alternative #10	37.384024	-122.111348	Cut outs on pole.	124 Merrit Rd.
Prior Candidate #11	37.385051	-122.111181	Moved off the location at the request of Los Altos Public Works. Less preferable, adjacent to residential front yard.	A/F 128 Almond Ave.



ALTERNATE SITE #1  
(83 ALMOND AV.)



Los Altos 001

Node - Alternative Site #1

This alternative location is a wood utility pole located in the Public ROW. The nearest address is 83 Almond Ave.

This pole is not a preferred candidate due to being adjacent to residential front yard.

ALTERNATE SITE #2  
(93 ALMOND AVE.)

Node - Alternative Site #2

This alternative location is a wood utility pole located in the Public ROW. This pole is located near 93 Almond Ave.

This pole has PG&E safety cut outs. Wireless equipment is not allowed on poles with these configurations. PG&E considers this "operable" equipment.



ALTERNATE SITE #3  
(A/F 154 ALMOND AVE.)



Node - Alternative Site #3

This alternative location is a wood utility pole located in the Public ROW. The nearest address is A/F 154 Almond Ave.

This pole is not well screened as the proposed candidate.



ALTERNATE SITE #4  
(A/F 200 ALMOND AVE.)

Node - Alternative Site #4

This alternative location is a wood utility pole located in the Public ROW. This pole is located across from 200 Almond Ave.

This pole has PG&E primary service riser. Wireless equipment is not allowed on poles with these configurations.



## ALTERNATE SITE #5 (199 ALMOND AVE.)



### Node - Alternative Site #5

This alternative location is a wood utility pole located in the Public ROW. The nearest address is 199 Almond Ave.

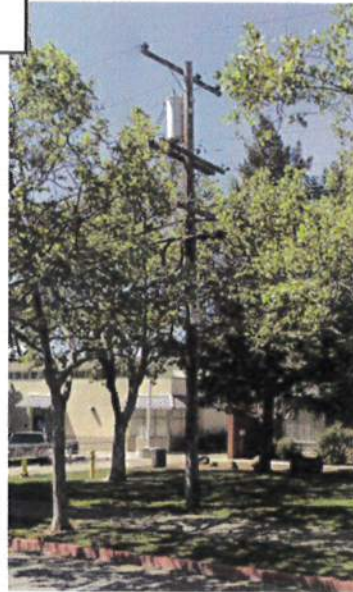
This pole has PG&E primary service riser. Wireless equipment is not allowed on poles with these configurations.

ALTERNATE SITE #6  
(A/F 288 ALMOND AVE.)

Node - Alternative Site #6

This alternative location is a wood utility pole located in the Public ROW. This pole is located near across from 288 Almond Ave.

This pole has PG&E primary service riser. Wireless equipment is not allowed on poles with these configurations.





ALTERNATE SITE #7  
(A/F 300 ALMOND AVE.)



Los Altos 001

Node - Alternative Site #7

This alternative location is a wood utility pole located in the Public ROW. The nearest address is across from 300 Almond Ave.

This pole has PG&E primary service riser. Wireless equipment is not allowed on poles with these configurations.

ALTERNATE SITE #8  
(BTWN 170 & 174 FREDRICK CT.)

Node - Alternative Site #8

This alternative location is a wood utility pole located in the Public ROW. This pole is located between 170 & 174 Fredrick Ct.

This pole is a less preferred candidate due to being adjacent to residential front yard.



ALTERNATE SITE #9  
(146 FREDRICK CT.)



Node - Alternative Site #9

This alternative location is a wood utility pole located in the Public ROW. The nearest address is 146 Fredrick Ct.

This pole is a less preferred candidate due to being adjacent to residential front yard.



ALTERNATE SITE #10  
(124 MERRIT RD.)

Node - Alternative Site #10

This alternative location is a wood utility pole located in the Public ROW. This pole is located near 124 Merrit Rd.

This pole has PG&E safety cut outs. Wireless equipment is not allowed on poles with these configurations.



**PRIOR CANDIDATE #11  
(A/F 128 ALMOND AVE.)**



Los Altos 001

**Node – Prior Candidate #11**

This alternative location is a wood utility pole located in the Public ROW. The nearest address is across from 128 Almond Ave.

This pole is a less preferred candidate due to being adjacent to residential front yard.



THANK YOU

The CBR Group, Inc.



**MACKENZIE & ALBRITTON LLP**

155 SANSOME STREET, SUITE 800  
SAN FRANCISCO, CALIFORNIA 94104

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TELEPHONE 415 / 288-4000  
FACSIMILE 415 / 288-4010

December 10, 2019

**VIA EMAIL**

Mayor Jan Pepper  
Vice Mayor Neysa Fligor  
Councilmembers Jeannie Bruins,  
Anita Enander and Lynette Lee Eng  
City Council  
City of Los Altos  
1 North San Antonio Road  
Los Altos, California 94022

Re: Verizon Wireless's Appeal of City Manager's Denial of  
Application No. SE19-00019  
Small Cell Wireless Facility, Right-of-Way at 155 Almond Avenue  
City Council Agenda, December 17, 2019

Dear Mayor Pepper, Vice Mayor Fligor and Councilmembers:

We write again on behalf of our client Verizon Wireless regarding its appeal of the City Manager's denial of a small cell facility in the Almond Avenue right-of-way (the "Proposed Facility"). In our prior letter of October 23, 2019, we explained that denial of the Proposed Facility would constitute a prohibition of service under the federal Telecommunications Act. 47 U.S.C. § 332(c)(7)(B)(i)(II). Denial also would violate California Public Utilities Code Section 7901 that grants telephone corporations such as Verizon Wireless a statewide right to place their equipment along any right-of-way. Indeed, the various wireless facility location restrictions of the Los Altos Municipal Code and *Design and Siting Guidelines* have a prohibitive effect throughout much of the City.

Verizon Wireless has commissioned an independent analysis of those restrictions. The result is shown in the attached *City of Los Altos Wireless Telecommunications Facility Analysis* prepared by Richard Kos, AICP, of San Jose State University. As calculated in Mr. Kos's analysis, wireless facilities are prohibited in 91.93% of the total area within the Los Altos city limits. In particular, the analysis confirms that the great majority of the City's rights-of-way are off-limits to wireless facilities. The analysis affirms the general prohibition of wireless service in Los Altos that is preempted by federal and state law. As noted in our prior letter, the exceptions process does not excuse provisions of the Code or design guidelines that are preempted.

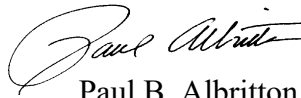
Los Altos City Council

December 10, 2019

Page 2 of 2

We have no illusion that the Council will grant Verizon Wireless's appeal under the provisions of the City's current Code and siting guidelines. However, Verizon Wireless wants to make sure that the Council is fully informed of the prohibitive nature of these recently-adopted regulations. We would be pleased to answer any questions you may have regarding Mr. Kos's analysis. Verizon Wireless appreciates your consideration of its appeal.

Very truly yours,

A handwritten signature in black ink, appearing to read "Paul Albritton", written in a cursive style.

Paul B. Albritton

Attachment

cc: Christopher Diaz, Esq.

Gail Karish, Esq.

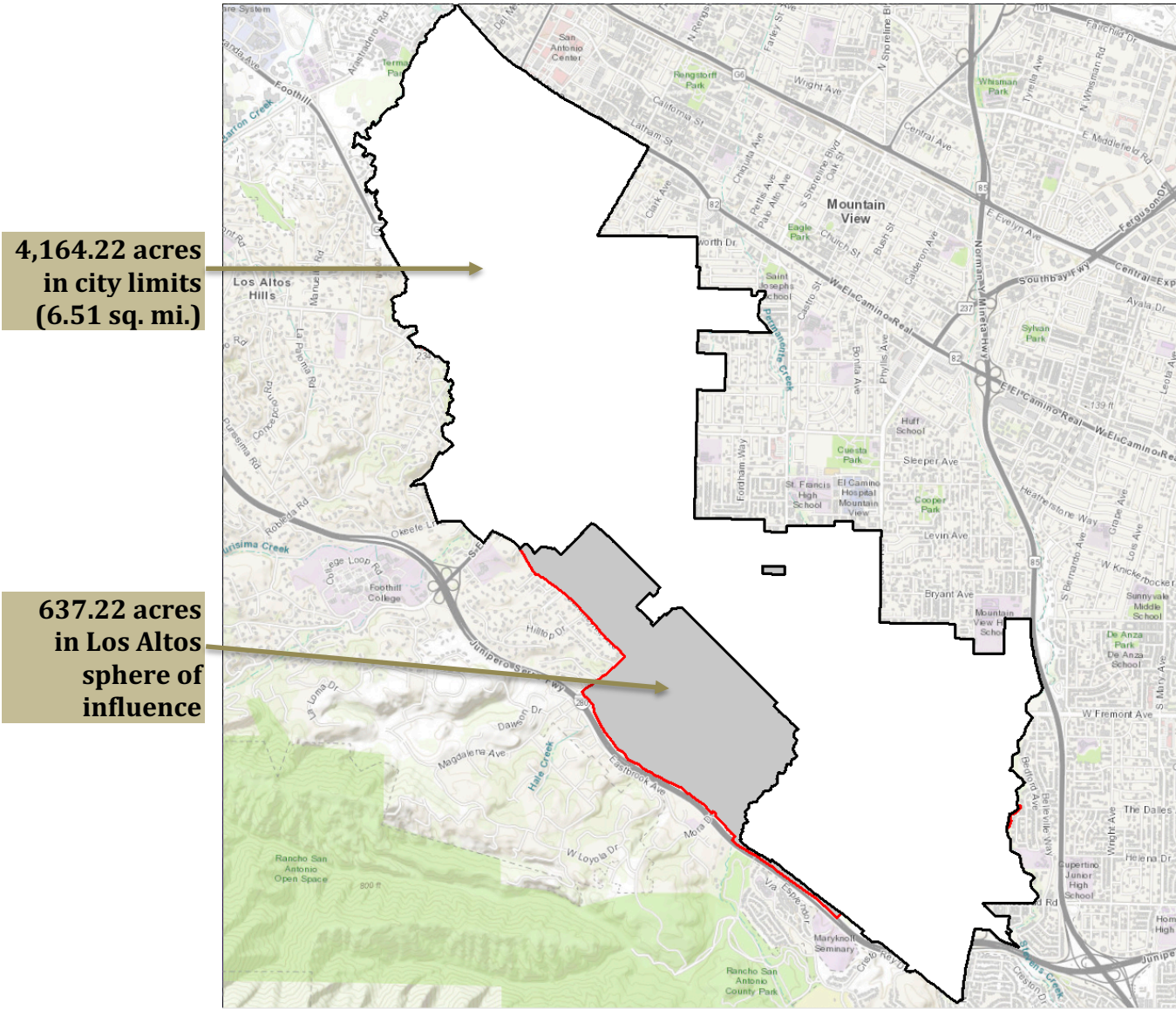
Chris Jordan

Vency Woo

# City of Los Altos Wireless Telecommunications Facility Analysis

## Methodology for calculating percentage of city land area permitting/prohibiting wireless telecommunications facilities

### Step 1. Calculate area of Los Altos city limits and sphere of influence.<sup>1</sup>



<sup>1</sup> Area calculated by author using ArcGIS 10.6.1 and the NAD83 California State Plane Zone III projection, planar units in feet. For comparison, the US Census Bureau lists the area of the city as **6.48** square miles: [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2016\\_Gazetteer/2016\\_gaz\\_place\\_06.txt](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2016_Gazetteer/2016_gaz_place_06.txt) (accessed November 22, 2019). To maintain consistency of calculations throughout this report, only the author-calculated areas using ArcGIS will be reported (i.e. 4,164.22 acres; 6.51 sq. miles).



**Step 2.** Calculate the area of parcels (not including rights-of-way) in each zoning district:

<b>In Los Altos City Limits:</b>			<b>In Los Altos Sphere of Influence:</b>		
<b>ZONING</b>	<b>No. Parcels</b>	<b>Acres</b>	<b>Zoning</b>	<b>No. Parcels</b>	<b>Acres</b>
CD	45	13.62905719	PCF	5	99.00728321
CD/R3	164	53.06700138	R1-10	517	166.5744121
CN	107	36.67943208	R1-20	447	207.3661853
CRS	126	20.35659167	R1-40	53	55.58118146
CRS/OAD	7	1.328183426	R1-H	30	18.69944337
CT	241	92.54624468	Unclassified		0.016197655
OA	46	21.99015899	<b>TOTAL</b>	<b>1052</b>	<b>547.2447031</b>
PC	28	49.80284541			
PCF	56	163.3639171			
PCF/R1-10	7	90.85162377			
PUD	333	68.00412482			
R1-10	9237	2635.790414			
R1-20	118	82.84539805			
R1-H	72	35.46118031			
R3-1	227	20.28982181			
R3-1.8	302	25.44781258			
R3-4.5	91	14.35932685			
R3-5	100	11.62340161			
Unclassified	2	2.64799			
<b>TOTAL</b>	<b>11309</b>	<b>3440.084526</b>			

**Step 3.** Note relevant provisions of city code pertaining to the siting of wireless telecommunications facilities (Council Resolution No. 2019-35, adopted August 5, 2019, pgs. 3-4)

**D. Order of Preference—Location.**

*Wireless facilities shall only be permitted in the City in accordance with the following table:*

<i>Description Wireless Facility</i>	<i>Private Property</i>		<i>Public Right-of-Way<sup>4</sup></i>
	<i>A-J, U, W<sup>1</sup> Zoning Districts</i>	<i>All Other Zoning Districts</i>	<i>Non-Residential Districts</i>
<i>Roof-mounted facility, building-mounted facility, or facility mounted on an existing pole</i>	<i>Not Permitted</i>	<i>Use Permit</i>	<i>Use Permit</i>
<i>Facility mounted on a replacement pole or new telecommunications tower</i>	<i>Not Permitted</i>	<i>Use Permit</i>	<i>Use Permit</i>
<i>New wireless telecommunications collocation facility</i>	<i>Not Permitted</i>	<i>Use Permit</i>	<i>Use Permit</i>
<i>Eligible facilities request<sup>2</sup> or application pursuant to California Government Code Section 65850.6<sup>3</sup></i>	<i>Permitted</i>	<i>Permitted</i>	<i>Permitted</i>

<sup>1</sup> See Section 14.04.010 (A-J, U, W) of the Code.

<sup>2</sup> See requirements of Section 11.12.100.

<sup>3</sup> See requirements of Section 11.12.110.

<sup>4</sup> Non-Residential Districts are defined in Section 14.04.010(K, L, O-S, V)

Furthermore, within the general categories specified above, the order of preference for the location of wireless telecommunications facilities from most preferred to least preferred is:

1. Commercial districts (as defined in Section 14.04.010 (K, L, O-R, V) of the Code).
2. Public districts (as defined in Section 14.04.010 (S) of the Code).

Facilities located in the public rights-of-way shall have their preference evaluated based on the least-preferred zoning district adjacent to the proposed facility.

**E. Other Location Preferences and Conditions**

1. Mid-block locations are preferred instead of at more visible corners and street intersections except if proposed on traffic signal control poles.
2. Where allowed by exception as provided in 7.H.4, new poles should be located in the parkway strip whenever possible and in alignment with existing trees, utility poles, and streetlights.
3. Where allowed by exception as provided in 7.H.4, new poles should be an approximately equal distance between trees when possible, with a minimum separation of 15 feet or the tree’s drip line, whichever is greater, such that no proposed disturbance shall occur within the critical root zone of any tree.

4. No facilities shall be permitted in any public park in a Public and Community Facilities (PCF) District.
5. No facilities shall be permitted within 500 feet of any school in a PCF District.
6. Each small cell facility must be separated by at least 1,500 feet.

**Step 4.** List zoning districts where wireless telecommunications facilities (WTFs) are:

- **prohibited** (red highlighting – see footnote 1 in Council Resolution No. 2019-35)
- **permitted** (green highlighting – see footnote 4 in Council Resolution No. 2019-35)
- Note: districts M, N, and T are not captured by footnotes 1 and 4 referenced above, and therefore are considered “all other zoning districts”.
- This analysis assumes that PCF and PCF/R-10-zoned school parcels themselves **prohibit** WTFs per Section 4(E)(5), in addition to the 500-foot buffer, where WTFs are also **prohibited** on both private property and right-of-ways within that buffer.
- Note: district E is an overlay district that supplements regulations for the underlying district. Visual inspection of the official Los Altos zoning map confirms that all district E (i.e. R1-S) areas are coincident with R1-10 zoning (which **prohibits** wireless facilities).
- Note: district V is also an overlay district. Visual inspection of the official Los Altos zoning map confirms that all district V (i.e. Loyola Corners Specific Plan) areas are coincident with CN zoning (which **permits** wireless facilities). There is one PCF-zoned parcel in district V (APN 19340048). It has been coded as permitting wireless facilities since no school or park is present on that parcel.

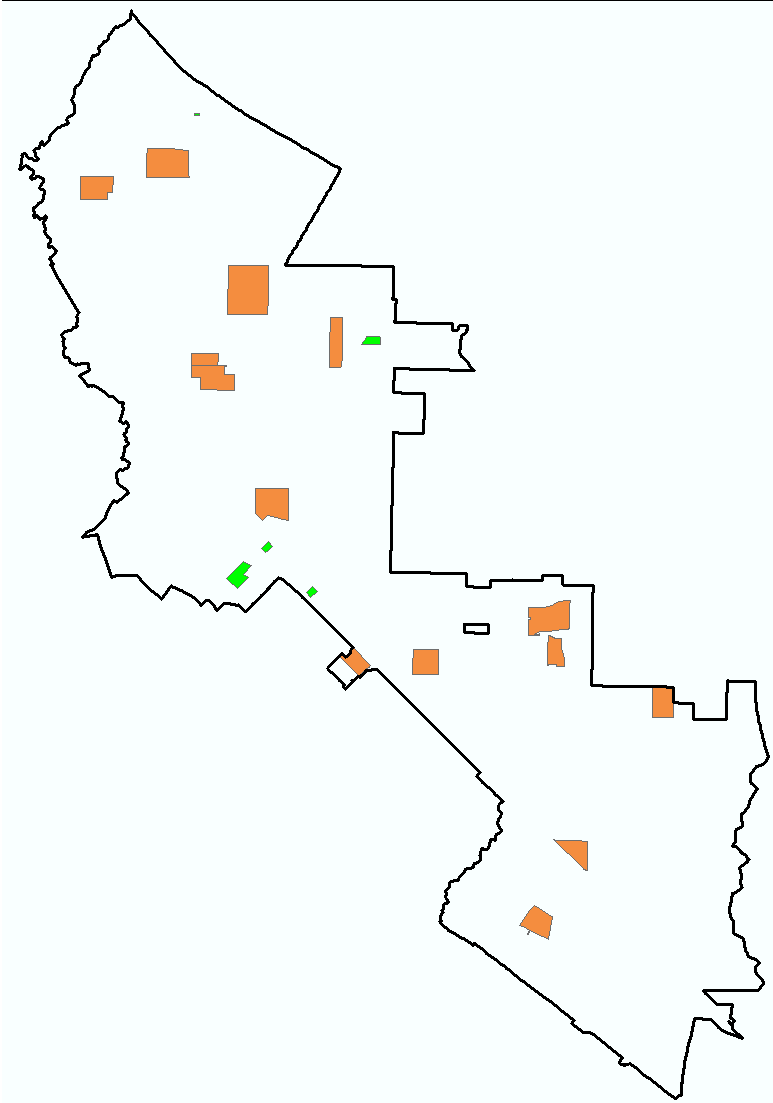
**14.04.010 - Districts.**

The districts established by this chapter shall be designated as follows:

- A. Single-Family District (R1-10);
- B. Single-Family District (R1-H);
- C. Single-Family District (R1-20);
- D. Single-Family District (R1-40);
- E. Single-Story Single-Family Overlay District (R1-S);
- F. Multiple-Family District (R3-4.5);
- G. Multiple-Family District (R3-5);
- H. Multiple-Family District (R3-3);
- I. Multiple-Family District (R3.1.8);
- J. Multiple-Family District (R3-1);
- K. Office-Administrative District (OA);
- L. Office-Administrative District (OA-1 and OA-4.5);
- M. Commercial Downtown/Multiple-Family District (CD/R3);
- N. Commercial Neighborhood District (CN);
- O. Commercial Downtown District (CD);
- P. Commercial Retail Sales District (CRS);
- Q. Commercial Thoroughfare District (CT);
- R. Commercial Retail Sales/Office District (CRS/OAD);
- S. Public and Community Facilities District (PCF);
- T. Public and Community Facilities/Single-Family District (PCF/R1-10);
- U. Planned Community (PC);
- V. Loyola Corners Specific Plan Overlay District (LCSPZ); and
- W. Planned Unit Development (PUD).

Allowing WTFs in districts S and T is dependent on presence of parks or schools





**Step 5:** Identify all school parcels (public and private) in PCF or PCF/R-10 districts per Council Resolution Section (4)(E)(5). Wireless facilities are prohibited on such parcels and within 500 feet of these parcels (including right-of-ways). Methodology:

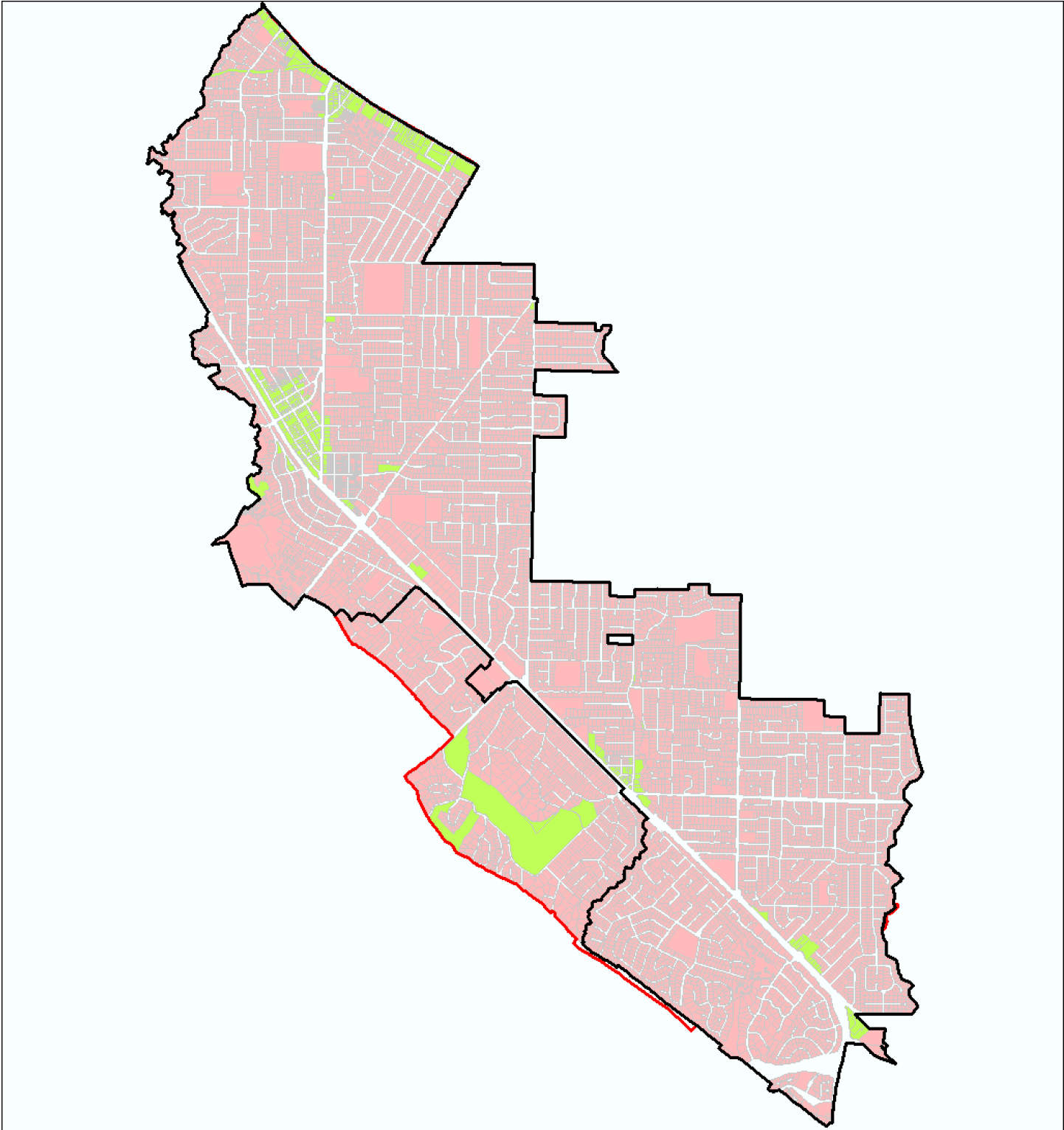
- 19 total parcels were identified with public and/or private schools (in green or orange on map to the left)
  - Of these 19 parcels, 14 parcels are in PCF or PCF/R1-10 zones (in orange)
  - 500-foot buffers were delineated around these 14 parcels.
  - If any parcel (or portion thereof) intersects these 500-foot buffers, the parcels were tagged as prohibiting wireless facilities (note: 2,040 parcels resulted)
  - Note: no schools are present in the Los Altos Sphere of Influence

**Step 6:** Identify all parcels in PCF districts containing parks per Council Resolution (4)(E)(4). Wireless facilities are prohibited within these parcels. Methodology:

- Per the Los Altos Parks Plan there are 12 parks in the city. The following parks are in PCF Districts and the 18 parcels that encompass them were tagged as prohibiting wireless facilities:
 

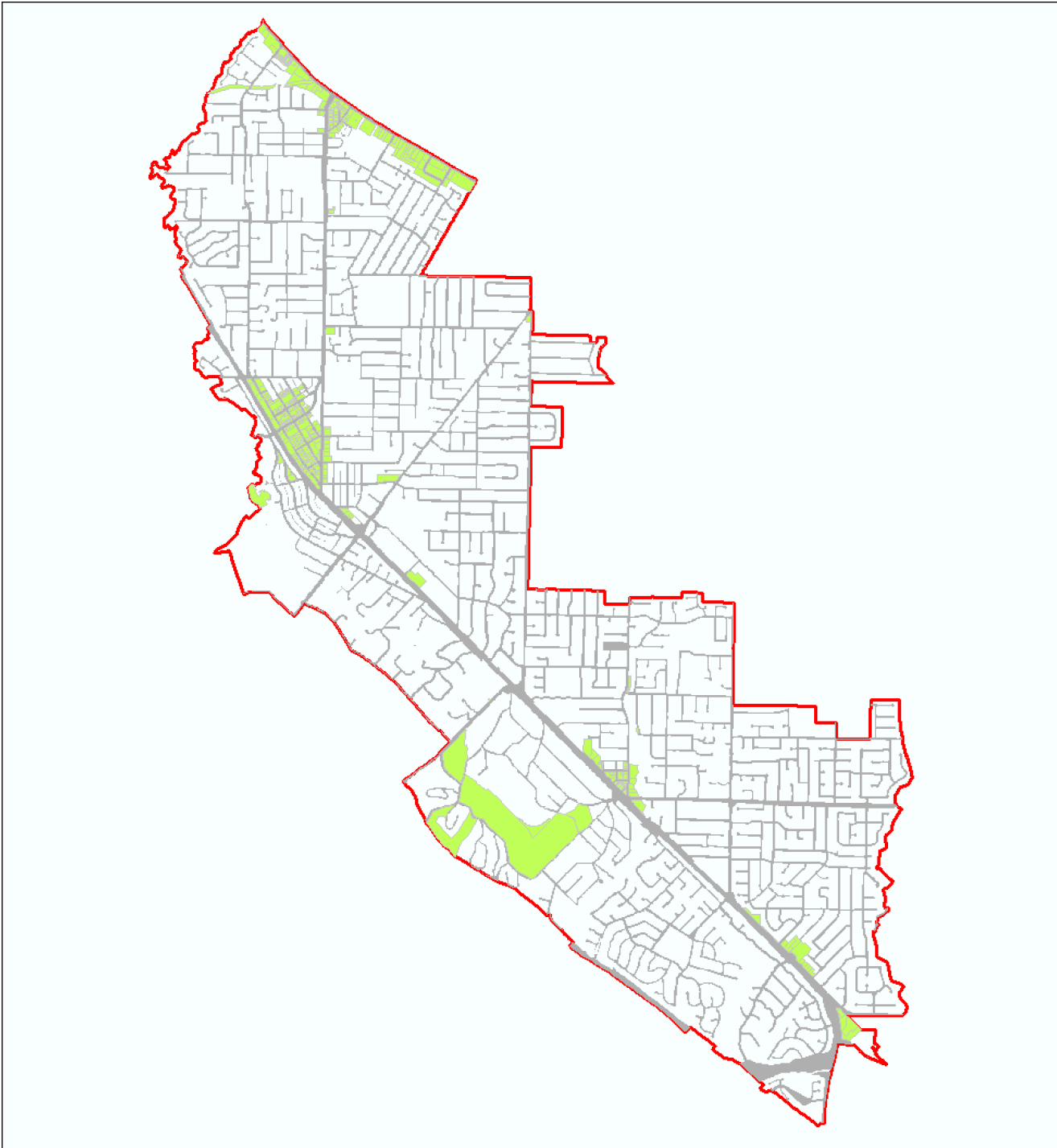
<ul style="list-style-type: none"> <li>○ Heritage Oaks</li> <li>○ Hillview</li> <li>○ Lincoln</li> <li>○ Shoup</li> <li>○ Redwood Grove</li> <li>○ Rosita</li> </ul>	<ul style="list-style-type: none"> <li>○ McKenzie</li> <li>○ Village Park</li> <li>○ Marymeade</li> <li>○ Grant</li> <li>○ Montclair</li> </ul>
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- These parks are not in PCF Districts:
  - Community Plaza
- All other PCF parcels without parks are tagged as permitting wireless facilities, unless these parcels fall within 500-foot school buffers, in which case WTFs would be prohibited.

**Step 7.** Assign a color to each parcel: wireless facilities permitted (green); wireless facilities prohibited (red). The map below depicts parcels both within city limits and in the Sphere of Influence. Right of way areas have not yet been considered – see Step 8.



**Step 8a. Consider impact of city regulations on right-of-ways.** Dissolve all parcel boundaries, then use “Erase/Difference” function to isolate rights-of-way (grey) in combined city limits and sphere of influence. Add layer of areas where wireless telecommunications facilities are permitted (green).

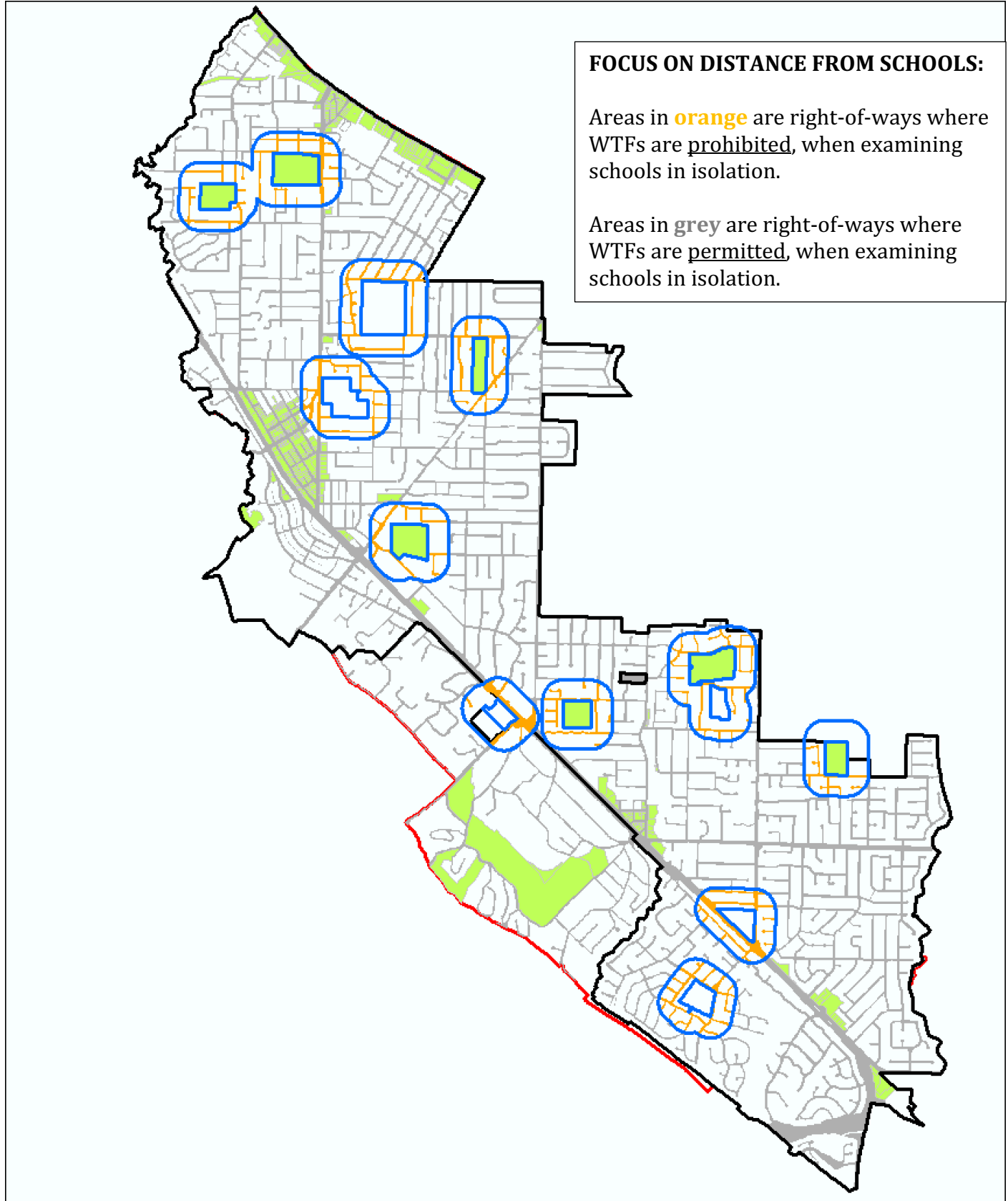
Note: there are 908.70 acres in right-of-ways within the area depicted below.<sup>2</sup>



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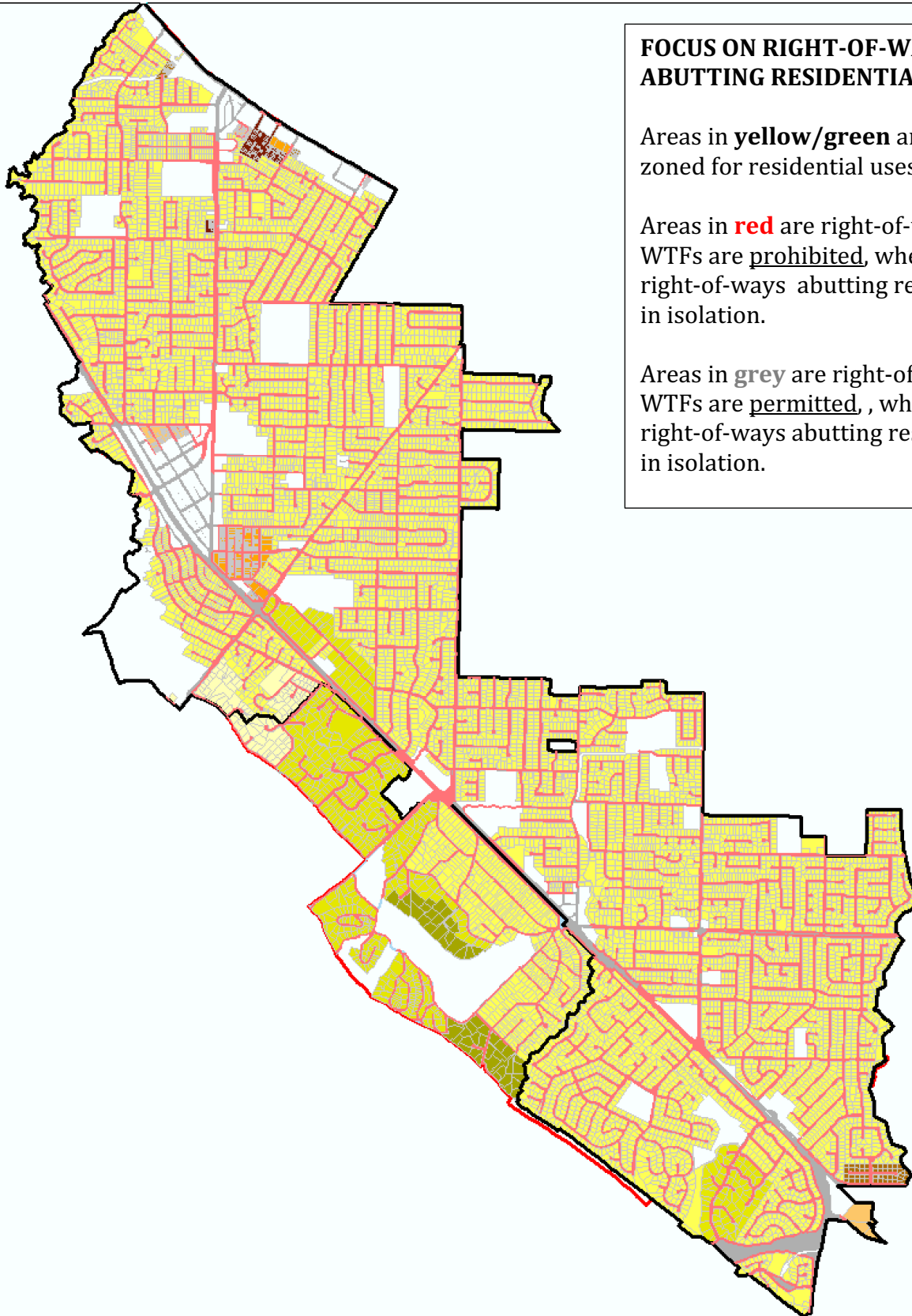
<sup>2</sup> 79.62 acres are within right-of-ways in the sphere of influence; 829.08 acres are within right-of-ways in the city limits.

**Step 8b.** Identify all right-of-ways within 500 feet of public and private schools in PCF or PCF/R-10 zones. WTFs are not permitted in these right-of-way areas, **shown in orange**. The 500-foot buffers are shown below in blue. They surround parcels zoned **PCF/R1-10** where schools are located (with light green interiors) and parcels where there are schools in **PCF** zones (with white interiors).





**Step 8c.** Identify all right-of-ways abutting residential districts – WTFs are **prohibited** in these right-of-ways. The districts are R1-H, R1-10, R1-20, R1-40, R3-1, R3-1.8, R3-3, R3-4.5, R3-5.....also known as districts A, B, C, D, F, G, H, I, and J. (assume 50-foot distance from outer edge of these parcels; intersect result with right-of-way map layer.....result below – WTFs prohibited in the **red** areas.)



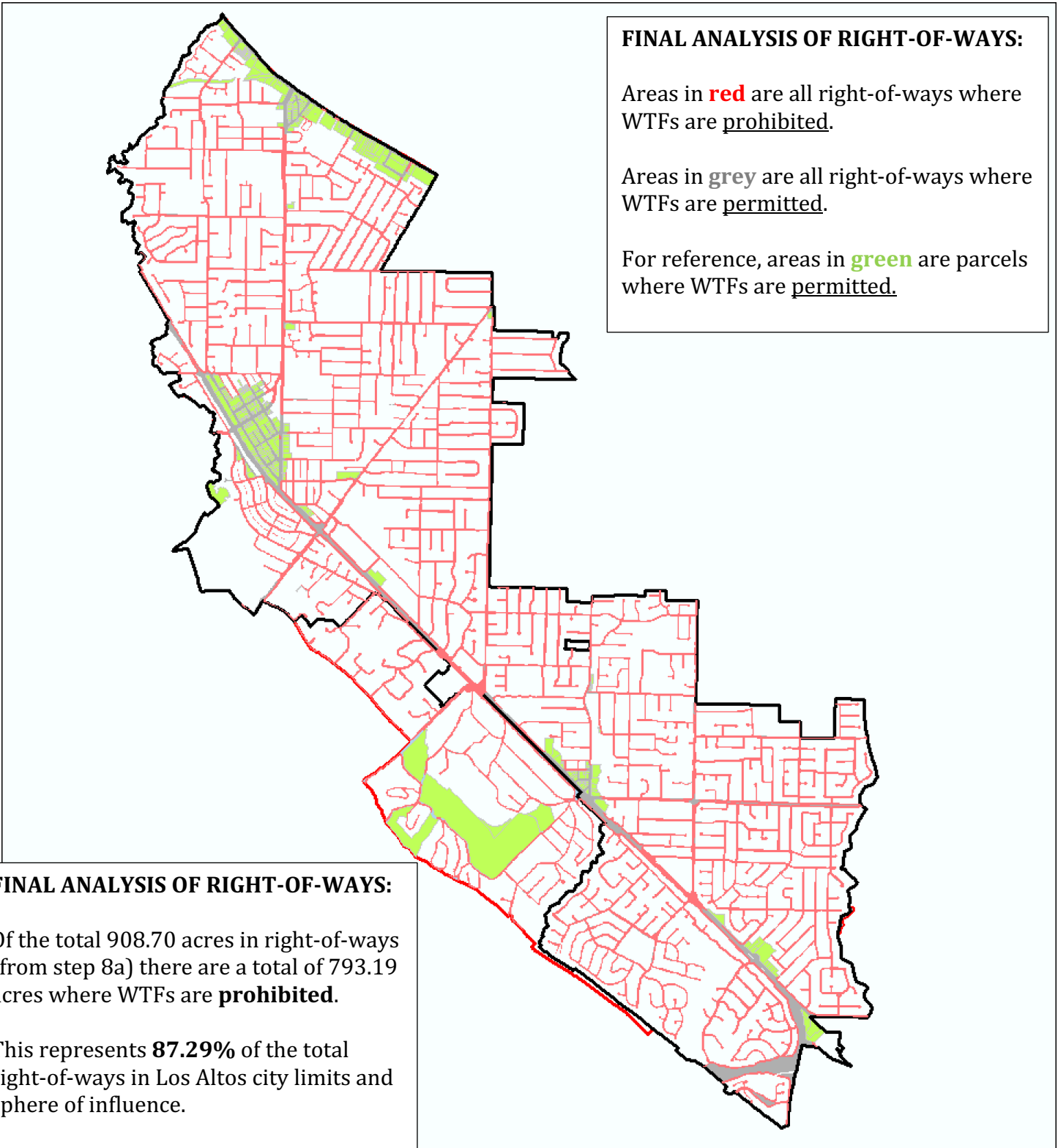
**FOCUS ON RIGHT-OF-WAYS  
ABUTTING RESIDENTIAL ZONES:**

Areas in **yellow/green** are parcels zoned for residential uses.

Areas in **red** are right-of-ways where WTFs are prohibited, when examining right-of-ways abutting residential zones in isolation.

Areas in **grey** are right-of-ways where WTFs are permitted, when examining right-of-ways abutting residential zones in isolation.

**Step 8d.** To avoid double-counting right-of-way areas from steps 8b and 8c, merge all right-of-way polygons into a single map layer, then dissolve the result. Result: **red right-of-way areas prohibit WTFs** by virtue of abutting residential districts and/or they are within 500 feet of public and private schools in PCF or PCF/R-10 zones....or are in parks in PCF zones.



**FINAL ANALYSIS OF RIGHT-OF-WAYS:**

Areas in **red** are all right-of-ways where WTFs are prohibited.

Areas in **grey** are all right-of-ways where WTFs are permitted.

For reference, areas in **green** are parcels where WTFs are permitted.

**FINAL ANALYSIS OF RIGHT-OF-WAYS:**

Of the total 908.70 acres in right-of-ways (from step 8a) there are a total of 793.19 acres where WTFs are **prohibited**.

This represents **87.29%** of the total right-of-ways in Los Altos city limits and sphere of influence.

**Step 9. Summary results table:**

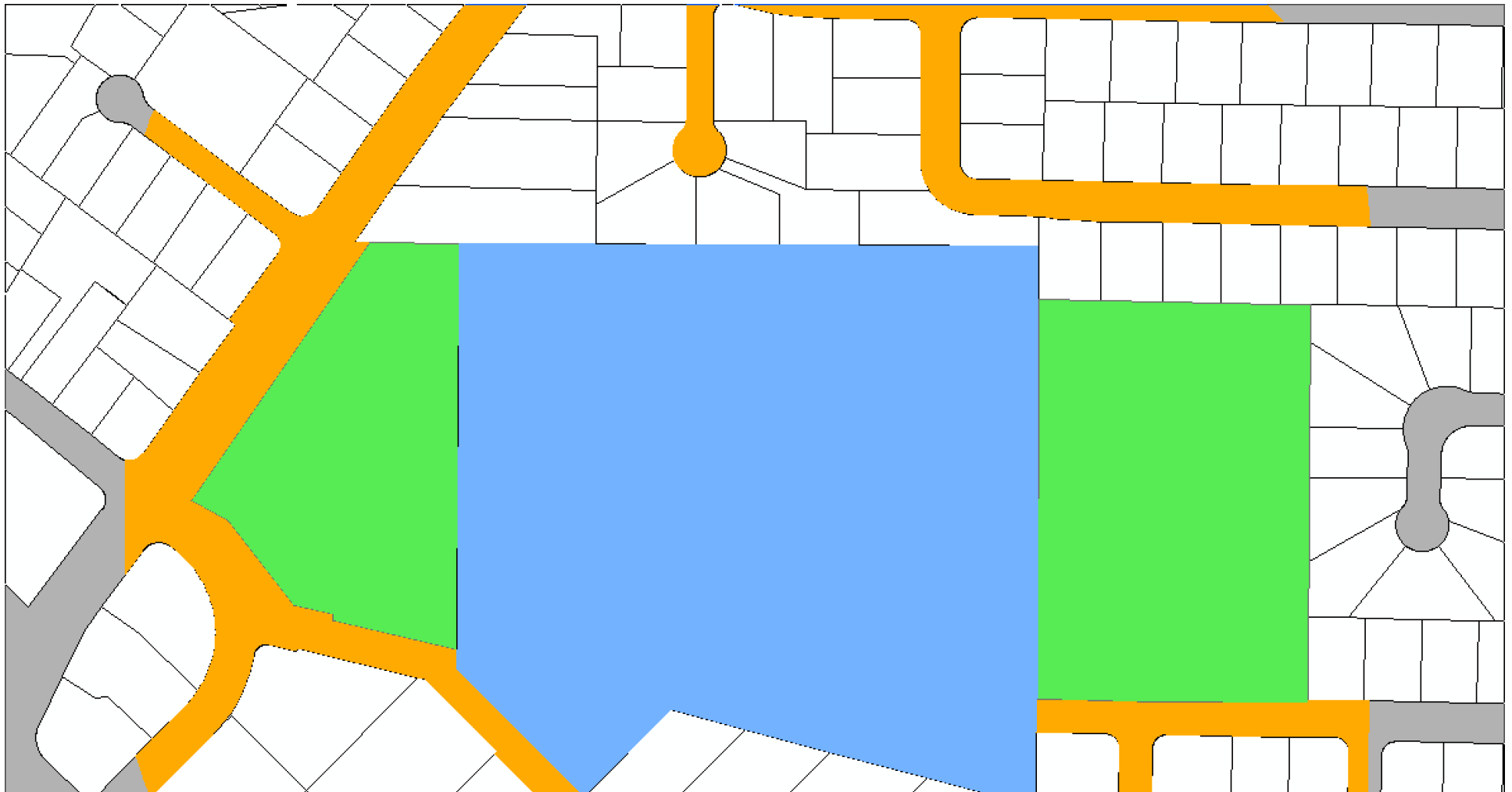
	Within City Limits			Within Sphere of Influence		
	Acres (within parcels)	Acres (within right-of- ways)	Percentage of City Limits	Acres (within parcels)	Acres (within right-of- ways)	Percentage of Sphere of Influence
<b>Wireless Facilities Prohibited</b>	3,205.04	718.99	$(3,205.04 + 718.99) / 4,268.40 =$ <b>91.93%</b>	448.22	74.20	$(448.22 + 74.20) / 626.86 =$ <b>83.34%</b>
<b>Wireless Facilities Permitted</b>	234.28	110.09	$(234.28 + 110.09) / 4,268.40 =$ <b>8.07%</b>	99.02	5.42	$(99.02 + 5.42) / 626.86 =$ <b>16.66%</b>
<b>Subtotals</b>	3,439.32*	829.08**		547.24*	79.62**	
<b>Totals</b>	4,268.40***		100%	626.86****		100%

\* aligns with results of Step 2

\*\* aligns with results of Step 8a

\*\*\* this value represents the total area of the city limits (both parcel areas and right-of-ways) based on calculations for this analysis. Recall from Step 1 that the total city limits was noted as 4,164.22 acres. The discrepancy is 104 acres. The discrepancy is explained by the apparent 'conflict' between portions of right-of-way that are impacted by multiple ordinance provisions: **(1)** prohibitions of WTFs within 500 feet of school properties; **(2)** prohibitions of WTFs in right-of-ways abutting residential districts; and **(3)** provisions in Section (4)(D) that permit WTFs in right-of-ways adjacent to "non-residential districts" (i.e. districts K, L, O, P, Q, R, S, V). There are approximately 100 acres of right-of-way in such areas of "conflict" and this overlap is factored into the last two rows in the table above. It has been assumed that in these areas of conflict that the more restrictive **(1) and (2)** trump permissive **(3)** in terms of siting WTFs. *(see example in map 1 below)*

\*\*\*\* this value represents the total area of the sphere of influence (both parcel areas and right-of-ways) based on calculations for this analysis. Recall from Step 1 that the total sphere of influence was limits was noted as 637.22 acres. The discrepancy is 10.36 acres – this is explained by the "tail" of the sphere of influence area provided by the County of Santa Clara in which there are no Los Altos-related zoning areas *(see map 2 below)*



**Map 1.** Grey areas show underlying right-of-ways. The parcel in blue holds a school, and no WTFs are permitted within 500 feet of schools per Section (4)(E)(5). The right-of-ways that fall within that distance are shown in orange, overlaid on the grey right-of-ways. (orange = WTFs prohibited)

The parcels in green are zoned as non-residential districts; right-of-ways adjacent to these parcels permit WTFs per Section (4)(D). However, these right-of-ways are assumed to be “trumped” by the school distance provision, so the affected right-of-ways remain orange.



