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May 24, 2021

VIA EMAIL

Mayor Darcy Paul
Vice Mayor Liang Chao
Councilmembers Hung Wei,
Kitty Moore and Jon Willey
City Council
City of Cupertino
10300 Torre Avenue
Cupertino, California 95014

Re: Regulation of Small Cell Wireless Facilities in the Right-of-Way

Dear Mayor Paul, Vice Mayor Chao and Councilmembers:

We write on behalf of Verizon Wireless regarding the Council's proposals for permitting small cells, discussed at your April 20 study session. Since 2017, Verizon Wireless has worked with the City to submit and process some 120 small cell applications, pursuant to the terms of a Settlement Agreement executed with the City that year. Last summer, Department of Public Works staff developed the City's current guidelines for small cells on City-owned poles, released August 27, 2020 (the "Guidelines"). Since then, Verizon Wireless has filed only two dozen applications under the terms of both the Settlement Agreement and the Guidelines. In October 2020, Verizon Wireless signed a "Shot Clock" tolling agreement with the City, extending the time period for Public Works to process the applications per Federal Communications Commission ("FCC") rules.

Some of the approved Verizon Wireless facilities criticized by the Council on April 20 would be restricted by the Guidelines if their applications were filed today. The Guidelines should be allowed to remain in effect, and their impact on new applications should be evaluated before they are revised, as they already address several of the Council's concerns. For example, the location preferences already favor non-residential zones over sites near residences, schools and playgrounds.

Several of the Council's new proposals would contradict federal or state law, as we explain. For example, limiting a wireless permit term to three years directly violates state law. Requiring applicants to prove that a denial would violate federal or state law is inconsistent with Federal Communications Commission ("FCC") regulations.

The City should continue processing small cell applications under the current Guidelines. Verizon Wireless proposes one modification to the Guidelines to address public participation, by giving the Department of Public Works discretion to hold a public hearing on an application prior to approval. We look forward to participating in the Council's next study session.

Federal Communications Commission Regulations Constrain Local Review of Small Cell Applications.

The FCC adopted its September 2018 order to provide direction on appropriate approval criteria for small cells. *See Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*, Declaratory Ruling and Third Report and Order, 33 FCC Rcd. 9088 (September 27, 2018) (the "Infrastructure Order"). The FCC determined that a city's aesthetic criteria for small cells must be "reasonable," that is, "technically feasible" and meant to avoid "out-of-character" deployments, and also "published in advance." Last year, the Ninth Circuit Court of Appeals upheld these FCC requirements. *See City of Portland v. United States*, 969 F.3d 1020 (9th Cir. 2020), petition for cert. pending, No. 20-1354 (filed March 22, 2021).

The Court agreed with the FCC that local requirements that "materially inhibit" deployment of new technology constitute an effective prohibition of service under the Telecommunications Act. 47 U.S.C. §§ 253(a), 332(c)(7)(B)(i)(II); *Infrastructure Order* ¶ 37; *City of Portland*, 969 F.3d at 1036. The Court also upheld the FCC's "Shot Clock" rules that require a decision on small cell applications within 60 days (for existing poles) or 90 days (for new/replacement poles), subject to tolling for incompleteness. 47 C.F.R. §§ 1.6003(c), (d); *City of Portland*, 969 F.3d at 1043.

Comments on Council Proposals

Below, we explain that some of the Council's proposals are already addressed by the Guidelines. Other proposals contradict state law, federal law or the FCC's small cell regulations.

Encouraging new poles in commercial areas, instead of siting facilities in residential zones. This would not improve on the City's current location standards. The Guidelines already prefer Category 1 non-residential zones over Category 2 residential zones. To site in a Category 2 location, applicants must show that any Category 1 streetlight poles within 500 feet are infeasible. This would steer a proposed small cell away from residences to one of the many streetlight poles typically found on nearby commercial streets, if feasible. The City should allow new poles where necessary, consistent with Public Utilities Code Section 7901. Verizon Wireless has placed several new streetlight poles per the City's request, dedicating them to the City.

Requiring review of alternatives within 1,000 feet. Currently, the Guidelines require review of any more-preferred locations within 500 feet. To expand the search distance to 1,000 feet would quadruple the search area (from 5.7 acres to 22.9 acres). In the right-of-

way, small cells serve targeted areas with a limited coverage footprint. Steering a small cell too far from a proposed location would leave a target coverage area underserved or unserved, constituting a prohibition of service in violation of federal law. *See* 47 U.S.C. §§ 253(a), 332(c)(7)(B)(i)(II); *see also* Infrastructure Order, ¶¶ 37-40.

The 500-foot search distance represents a reasonable compromise between the City's desire to regulate the placement of small cell facilities, and the technical limitations of the radio frequencies licensed by Verizon Wireless from the FCC. Any greater search distance prevents Verizon Wireless from efficiently deploying its licensed frequencies, and may constitute a prohibition of service that would contradict federal law. Accordingly, Berkeley and Davis recently adopted a search distance of 500 feet, Danville and Concord 250 feet, and Oakland 200 feet.

Requiring applicants to show that a proposed location meets their service needs, compared to alternatives. Both state and federal law preempt requirements for wireless carriers to demonstrate the need for their small cells. California Public Utilities Code Section 7901 grants telephone corporations a statewide right to place their equipment along any right-of-way, including new poles, so wireless applicants need not provide information regarding need. Further, as discussed above, the FCC determined that small cells are needed to densify networks, and to enhance and introduce new services. These are Verizon Wireless's objectives in placing small cells in Cupertino.

Consistent with the FCC's direction to develop "reasonable" aesthetic criteria, the appropriate standard for comparing alternatives is technical feasibility. The Guidelines already list feasibility as a factor for reviewing more-preferred locations within 500 feet. Verizon Wireless has discounted alternative poles for feasibility factors such as excessive tree cover that blocks signal, or difficulty connecting to a sufficient power source compared to proposed pole.

Adding Categories 4 and 5, whereby sites within 40 feet of homes would require Planning Commission approval, and within 20 feet, Council approval. Proximity to residences is already addressed in the Guidelines, which list locations within 20 feet of any occupied structures in least-preferred siting Category 3. Currently, an applicant proposing a site within 20 feet of residence must show that within 500 feet, there are no feasible alternatives that are *not* within 20 feet of an occupied structure.

Because the Guidelines impose this reasonable location constraint, hearings before the Commission and/or Council are unnecessary, and would be burdensome on staff time and resources. The Planning Commission is tasked with issuing land use permits, not encroachment permits. The City Engineer has the expertise to evaluate technical feasibility of alternatives. A Commission or Council denial would likely contradict the location preferences of the Guidelines, if more-preferred location options within 500 feet are infeasible. Such a denial would "materially inhibit" service improvements, constituting a prohibition of service. Any decision of the Planning Commission or Council that contradicts the Guidelines would violate the federal requirement that standards be technically feasible and published in advance.

Increasing the setback from occupied structures from 20 to 40 feet would restrict most rights-of-way. The attached analysis by Richard Kos, AICP, evaluates the impact of an increased setback on the rights-of-way where small cells can be placed on streetlights, based on City GIS data. Combined, the current setbacks of 20 feet from occupied structures and 100 feet from schools and playgrounds limit 17.29% of the rights-of-way suitable for small cells. Increasing the occupied structure setback to 40 feet would limit 75.81% of the rights-of-way – over four times as much, and clearly constituting a prohibition of service under federal law. We also note that, if used as a measure to require Planning Commission review, the 40-foot setback would require nearly all small cell applications to be subject to a lengthy hearing process.

Finally, as noted, the City has been unable to process current Verizon Wireless applications within the required FCC “Shot Clock” periods. As a result, Verizon Wireless and the City have had to enter into multiple agreements to avoid City liability for failing to meet these federal processing timelines. To add Planning Commission and City Council hearings to this process, whether by right or through appeals, would seriously compound the City’s current inability to timely process small cell applications. The City should avoid new regulations that would make processing applications within the FCC’s “Shot Clock” timelines impossible.

Requiring applicants to show that denial would violate federal or state law. This is similar to wireless permit findings in Los Altos, which Verizon Wireless has sued because of its unlawful ordinance and an unfounded denial of a small cell (AT&T also has sued Los Altos). There is no reason to require applicants to explain why a denial would violate federal or state law, as that has no bearing on the “reasonable” aesthetic and location criteria required by the FCC.

This proposal implies that the City would deny a proposed small cell if the decision-maker did not believe that an applicant provided a sufficient legal explanation. However, such judicial determinations must be left to the courts. Evaluating the risks of denial on a case-by-case basis would suggest that the City adopted legally-suspect regulations. Instead, a city should confirm that its small cell policies are reasonable and lawful at the outset.

Limiting permit term to three years for sites closer to residences. This would violate California Government Code Section 65964(b), which bars cities from unreasonably limiting wireless permit terms, and presumes that a period less than 10 years is unreasonable.

Two-year master plan if applicant submits 10 or more applications per year. A master plan implies an evaluation of the need for a facility, but as explained above, state and federal law preempt requirements for wireless applicants to prove the need for their small cells in the right-of-way. Adherence to a previously-submitted master plan could not be a decision factor for future applications; each small cell must be evaluated on its own merits. Wireless networks are dynamic, and a carrier’s network plans may change

based on new frequencies available from the FCC, evolving technologies, shifts in customer demand, and new federal regulations. A master plan prepared today may be inapplicable next year.

Appeal to the City Manager. This would expand the City Manager’s duties with respect to administrative appeals, requiring an ordinance amendment. A formal appeal process is unnecessary because the Guidelines already provide for public participation. Currently, applicants must mail public notice to property owners with 500 feet, respond to public comments received within 21 days, and prepare a public comment report for the City Engineer. As noted, Verizon Wireless has cooperated with requests from Public Works to relocate seven of its approved small cells in response to public comment, confirming that the Guidelines’ current notice and comment procedures work.

Instead of public appeals to the City Manager, the Council should consider adding a provision to the Guidelines granting the Department of Public Works the discretion to hold a public hearing on an application, if warranted by public comment. The hearing could be conducted by the Director of Public Works, the City Engineer, or their designee, with hearing comments included in the record prior to a decision on an application.

Verizon Wireless appreciates the Council’s recognition that appeals should not be allowed if based on concern over radio frequency emissions, because that is preempted by the Telecommunications Act. 47 U.S.C. § 332(c)(7)(B)(iv). Because many public objections are based on radio frequency emissions, appeals generally would be barred by this Council proposal, demonstrating why a new appeal process is unnecessary.

Stronger aesthetic requirements. As explained above, the FCC requires that a city’s aesthetic standards for small cells be technically feasible. Wireless carriers are limited to antenna and radio models available from manufacturers that work with the frequencies that the carrier has licensed from the FCC.

Verizon Wireless has designed its small cells to minimize the profile of this required equipment. The current screened design is a compromise that allows for a uniform profile that works for Verizon Wireless, AT&T and other wireless carriers. The designs approved for Verizon Wireless small cells in Cupertino are shown in Exhibit B, “Approved Designs,” of the 2017 Settlement Agreement.

Fiber backhaul networks. Fiber lines should not be addressed in a city’s wireless regulations. Verizon Wireless will not install the fiber backhaul lines that connect its small cells in Cupertino, but will be a customer of fiber companies that provide connections for various users along a fiber route. Fiber companies are regulated differently. For example, they generally are registered with the California Public Utilities Commission as wireline telephone companies, whereas Verizon Wireless is a cellular carrier. Further, fiber backhaul networks are beyond the scope of a “small wireless facility” as defined by the FCC. 47 C.F.R. § 1.6002(l). Verizon Wireless’s encroachment permits encompass each small cell up to its point-of-connection with the

Cupertino City Council

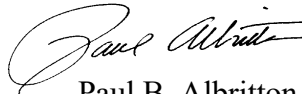
May 24, 2021

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fiber backhaul network, but not beyond. Fiber providers would secure their own permits under applicable regulations.

The Guidelines are consistent with small cell regulations adopted by numerous other cities. Of note, the reasonable location preferences and the 500-foot search distance provide clear siting criteria for both applicants and City staff, while avoiding an unlawful prohibition of service. We encourage the City to continue processing small cell applications according to the current Guidelines.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Paul Albritton".

Paul B. Albritton

Attachment

cc: Heather Minner, Esq.
Marlene Dehlinger, Esq.
Chad Mosley
Kirsten Squarcia

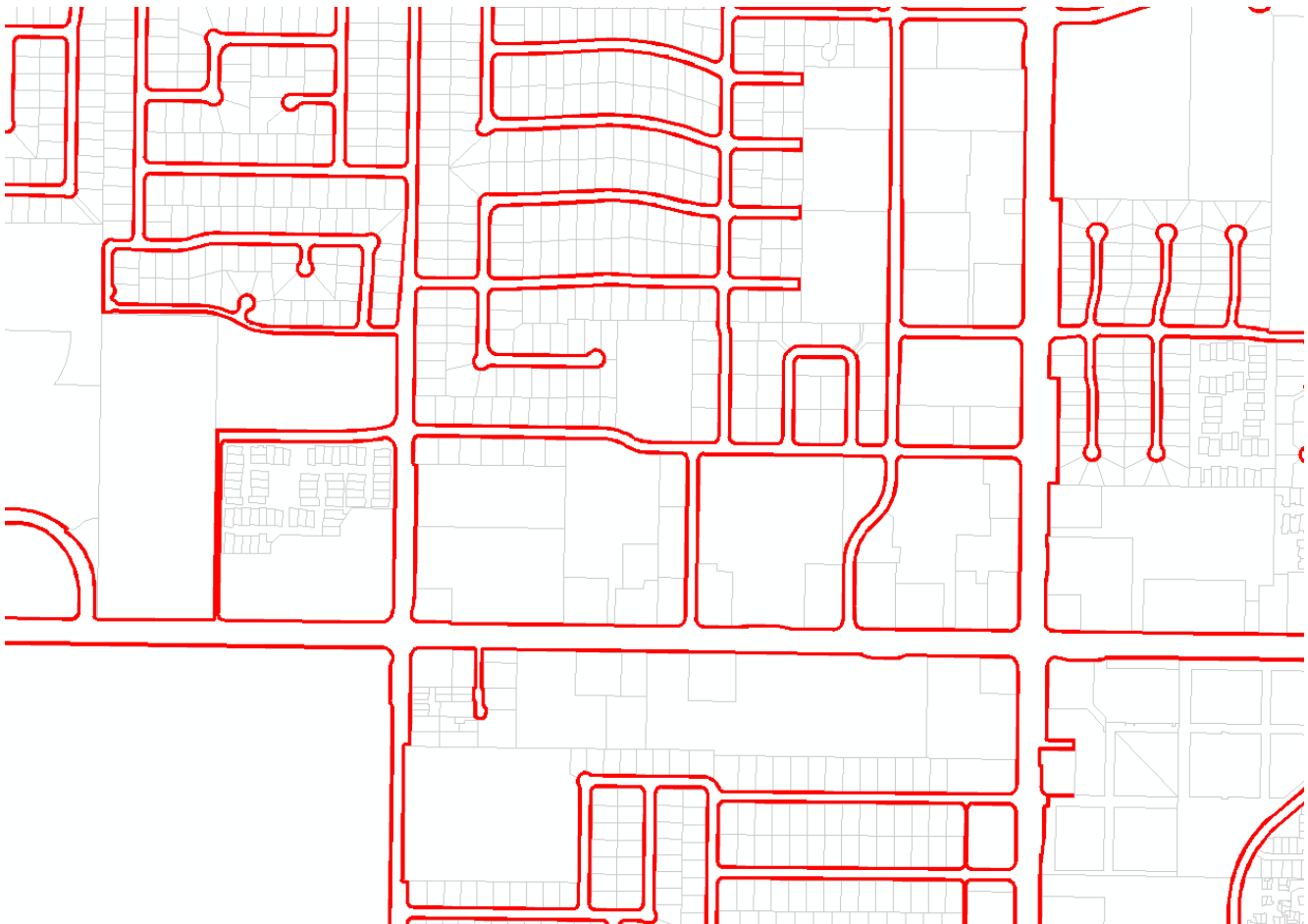
Methodology for calculating impact of setback requirements on the siting of future Verizon small cell wireless telecommunications facilities in the City of Cupertino

Prepared by Richard Kos, AICP | March 2021

Step 1. Assemble spatial datasets from the city’s open data portal (<https://www.cupertino.org/online-services/open-government-data/open-datahub>) into a geodatabase; project all datasets to a common projected coordinate system (U.S. State Plane Zone III, NAD 1983, linear units feet):

- Light poles (not “traffic poles”)
- Building footprints
- City boundary
- Edge of pavement
- Parcels
- Zoning
- Facilities
- Park structures

Step 2. Create a map layer depicting all portions of public right-of-way within 10 feet of parcel lines. This is a conservative estimate of the portion of right-of-ways within which small sites might be constructed and which lie outside of vehicular travel areas. Begin by dissolving all parcels with centroids in the Cupertino city limits into a single shape. Then use the Buffer function to delineate the 10-foot distances from the resulting edges. A portion of the resulting map layer is shown below (10-foot distances in red)



The objective of this analysis is to show the impact of city-imposed setback distances on the feasibility of constructing new Verizon small cell sites in “Least Preferred Sites”. Small cells are permitted on city-owned light poles per the city’s *Guidelines for Encroachment Permit Submittals*. Relevant portions of Attachment C from the *Guidelines* are shown below (highlighting added).

For reference, note the setback requirements listed below in “Category 3” (items a. through e.) The following sections of this report analyze four of the five setback distances, excluding the 500’ setback between facilities, provided under 3.b

<p>The following Categories of sites for small cell facility installations are listed in order of preference. As described below, Category 1 sites are preferred over Category 2 sites, and small cell facilities in Category 3 sites are generally not permitted, either in Category 1 or Category 2 areas:</p> <p>1) <u>Category 1 (Preferred Sites)</u> - Non-residential zoning districts</p> <p>2) <u>Category 2 (Less Preferred Sites)</u> – All residential zoning districts</p> <p>The following street types (as defined by the Cupertino General Plan) in residential zoning districts are listed from more preferred to less preferred for placement of small cell facilities:</p> <ol style="list-style-type: none"> Boulevards and Arterials Major Collectors Minor Collectors Neighborhood Connectors Residential Streets <p>Where an applicant proposes a facility on a streetlight pole in a Category 2 site, the applicant shall provide documentation showing that all streetlight poles in any Category 1 site and in any more-preferred Category 2 site within 500 feet of the proposed facility are infeasible to meet the carrier’s needs (e.g. proximity to signal barriers, such as trees, capacity and coverage needs, etc.). For example, a facility proposed for a Category 2.e (Residential Street) site would need to provide documentation showing that all Category 1 and Category 2.a, 2.b., 2.c, and 2.d sites within 500 feet are infeasible.</p>	<p>3) <u>Category 3 (Least Preferred Sites)</u> – Any zoning district</p> <p>A facility shall not be permitted in a Category 3 site if non-Category 3 sites are available within 500 feet of the proposed facility, unless the applicant can provide documentation showing that a Category 3 site is the only feasible option available to address the carrier’s needs.</p> <p>The following locations are considered Least Preferred sites:</p> <ol style="list-style-type: none"> Any installation in the right of way that would result in a facility being located closer than 15 feet to a public roadway intersection. An intersection is measured from the start of the curb radius. Any installation in the right of way that would result in a facility being located closer than 500 feet to any other small cell facility in the right of way owned by the same wireless carrier. Any installation in the right of way that would result in a facility being located closer than 20 feet to an occupied structure. Any installation in the right of way that would result in a facility being located closer than 100 feet to any public-school building. Any installation in the right of way that would result in a facility being located closer than 100 feet to any publicly assessable playground. For purposes of this guideline, playground shall mean an improved outdoor area designed, equipped, and set aside for children’s play that is not intended for use as an athletic playing field or athletic court, and shall include any playground equipment, fall zones, surface materials, access ramps, and all areas within and including the designated enclosure and barriers.
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Category 3.a. 15 feet from a public roadway intersection.

There is no systematic or programmatic way in GIS to map this distance for every intersection in Cupertino since each intersection has unique geometry and there is no way to programmatically select each curb radius. Instead, a rough approximation of the right-of-way area impacted by provision 3.a. can be made. First, this 15-foot distance is understood to mean 15 feet as measured from a point of tangency at the “tip” of the curb radius. First, the number of intersections, citywide, is estimated.

Using the Intersect tool, with Cupertino roads as the input and points as output, 3,960 intersections were found after filtering out all points outside of the city limits and manually removing intersections along freeways. Manually remove another 500 points to estimate for multiple intersection points appearing along divided arterial streets (e.g. Stevens Creek Boulevard). The result is 3,460 intersections.

We can conservatively estimate that all Cupertino streets meet at 4-way intersections and – at each of these intersections – there are eight separate right-of-way “sides of the street” (sidewalk legs, for lack of a better term) per intersection.

Multiplying 3,460 intersection points by 8 ... then multiplying the result by 15 linear feet (per provision 3.a) = 415,200 linear feet of right-of-way, citywide, affected by provision 3.a. Since this analysis considers a right-of-way width of **10** feet as the area in which small cell sites could be added to city light poles, the **area** of rights-of-way affected by category 3.a. is (415,200 x 10) = 4,152,000 square feet. Divide this by 43,560 to arrive at 95.31 acres.

There are 324.30 acres in the 10-foot right of way, citywide, so dividing 95.31 acres into this value, represents **29.39% of total 10-foot right of way width is impacted by category 3.a.**

Category 3.b. 500 feet from any other small cell facility in the right-of-way owned by the same wireless carrier.

This layer is not shown on the maps. However, there may be instances where the separation of facilities is not within the applicant’s control.

Category 3.c. 20 feet from an occupied structure.

Per Modus, “occupied structure” is defined as:

“Occupied structures” as the City applies it includes any building that has people – residences, offices, commercial buildings.. it’s a pretty broad term to implement a mandatory 20’ setback across the board.¹



One way to determine how different buildings are typically occupied is to consider Cupertino’s zoning districts, listed at the right. From this list of districts, and considering the definition above, it appears that all buildings in all zoning districts could, technically, qualify as “occupied structures”. Therefore, all buildings in Cupertino appear to be subject to the small-cell building setback requirements. In Steps 3, 4, and 5 of this report, the impact of current building setbacks (20 feet) on small cell siting will be explored, along with an analysis of increasing these setbacks to 30 feet and 40 feet.

Category 3.d. 100 feet from a public school building.

The shapefile “Facilities” was downloaded from the city’s open data portal. This map layer includes locations of schools, including De Anza College. The layer was filtered to show only public school properties – there are 30 in the city. Since the map layer includes the entire school property for school sites, in order to isolate the school buildings “select by location” was used to select all of the building footprints that intersect those 30 properties – the result is 503 buildings, including primary structures and any other building on the school properties. The resulting 503 public school property buildings were then buffered by 100 feet.

Category 3.e. 100 feet from a publicly accessible playground.

The shapefile “Park Structures” was downloaded from the city’s open data portal. This map layer includes locations of playgrounds. When filtered for this park structure types, there are 38 playgrounds in the city. A 100-foot buffer was delineated from these 38 sites.

Step 3. Analyze the impact of 20-foot building setbacks (category 3.c.) in combination with Category 3.d, and 3.e. Buffers

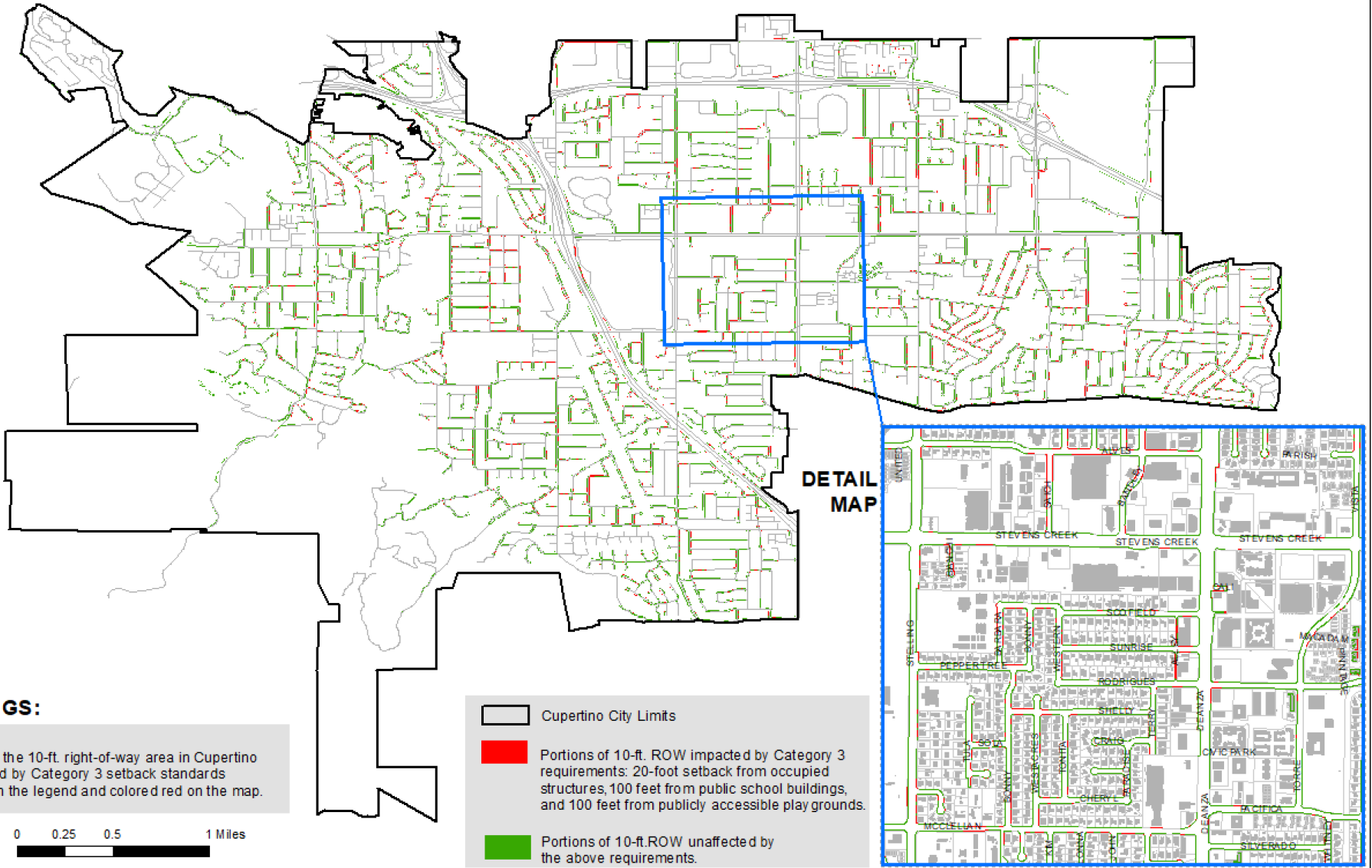
Generate 20-foot buffers around all occupied building footprints in the city and combine with the other two setback categories – school buildings and playgrounds. The map on page 4 shows rights-of-way colored **red that are impacted by these three combined setback areas** and **green where there is no impact of setbacks**.

Step 4. Repeat the process from Step 3 above, this time using a 30-foot setback from all occupied structures. The results of this analysis are shown on page 5.

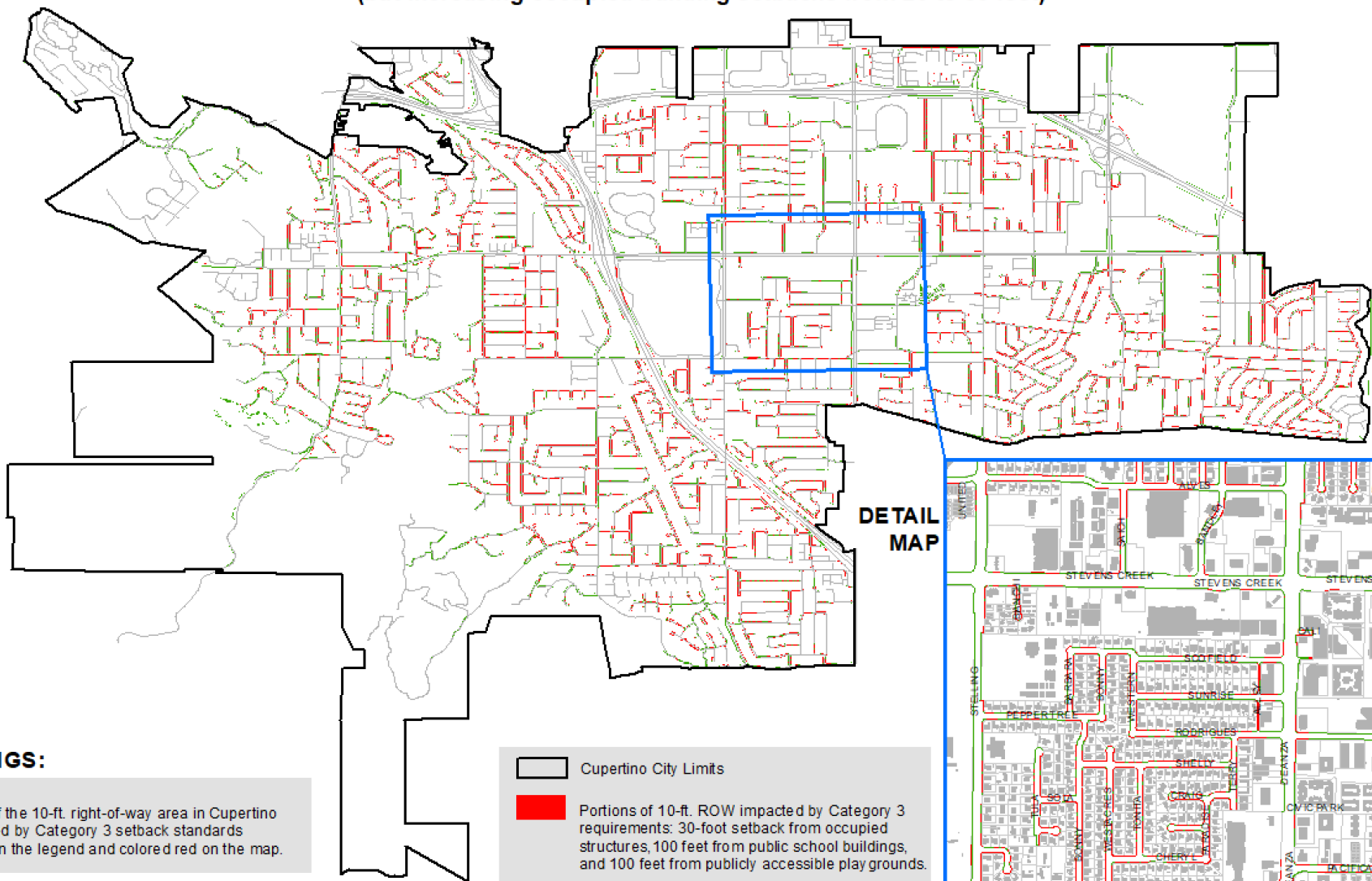
Step 5. Repeat the process from Step 3 above, this time using a 40-foot setback from all occupied structures. The results of this analysis are shown on page 6.

¹ Email from JoAnna Wang, Modus Director of Government & Community Affairs, to Richard Kos, January 12, 2021.

Verizon Exploratory Analysis: Impact of Guidelines for Encroachment Permit Submittals with Category 3 provisions

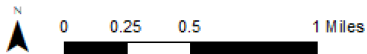





**Verizon Exploratory Analysis: Impact of Guidelines for Encroachment Permit Submittals with Category 3 provisions
(but increasing occupied building setbacks from 20 to 30 feet)**

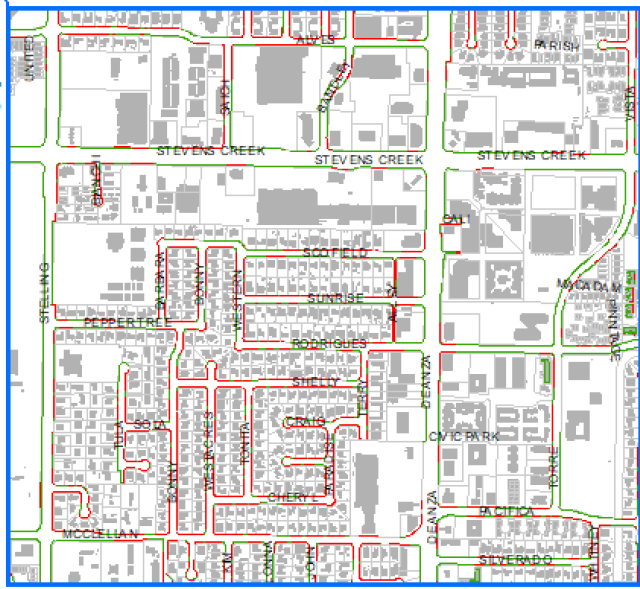


FINDINGS:

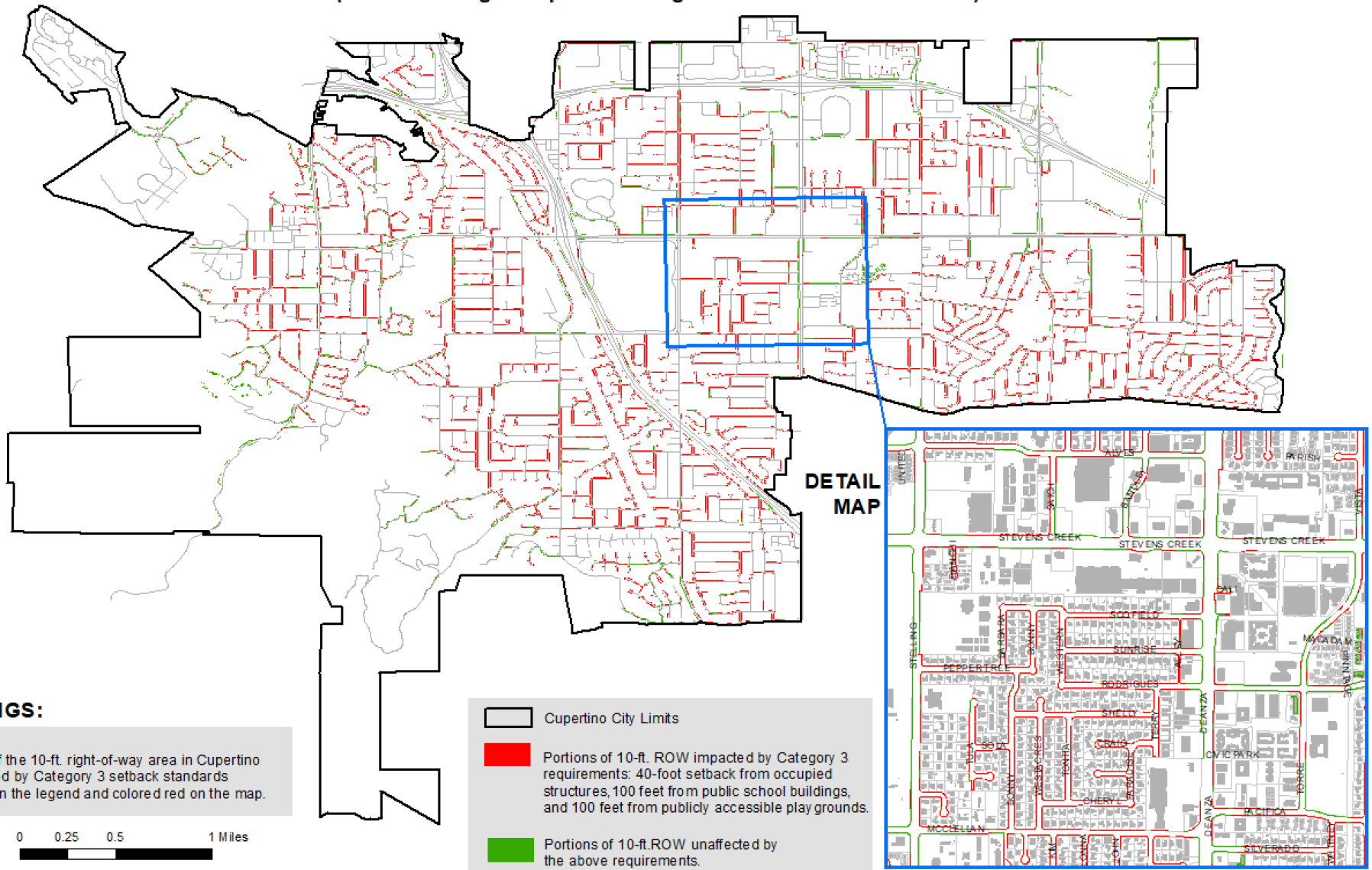
57.06% of the 10-ft. right-of-way area in Cupertino is impacted by Category 3 setback standards described in the legend and colored red on the map.



-  Cupertino City Limits
-  Portions of 10-ft. ROW impacted by Category 3 requirements: 30-foot setback from occupied structures, 100 feet from public school buildings, and 100 feet from publicly accessible playgrounds.
-  Portions of 10-ft.ROW unaffected by the above requirements.



**Verizon Exploratory Analysis: Impact of Guidelines for Encroachment Permit Submittals with Category 3 provisions
(but increasing occupied building setbacks from 20 to 40 feet)**



CONCLUSIONS

With the existing **20-foot** occupied building requirement (category 3.a.):

- 56.07 acres: citywide, impacted by Category 3.c, 3.d, 3.e setback requirements
Divided by
- 324.30 acres: citywide, all 10-foot right-of-way as measured from nearest property line
Equals
- **17.29%:** the portions of 10-foot right-of-way impacted by Category 3.c, 3.d, 3.e setback requirements.

With the existing 20-foot occupied building requirement increased to **30 feet:**

- 185.03 acres: citywide, impacted by Category 3.c, 3.d, 3.e setback requirements
Divided by
- 324.30 acres: citywide, all 10-foot right-of-way as measured from nearest property line
Equals
- **57.06%:** the portions of 10-foot right-of-way impacted by Category 3.c (modified to 30 feet), 3.d, and 3.e setback requirements.

If the existing 20-foot occupied building requirement were to be doubled to **40 feet:**

- 245.86 acres: citywide, impacted by Category 3.c, 3.d, 3.e setback requirements
Divided by
- 324.30 acres: citywide, all 10-foot right-of-way as measured from nearest property line
Equals
- **75.81%:** the portions of 10-foot right-of-way impacted by Category 3.c (modified to 40 feet), 3.d, and 3.e setback requirements.