The County of San Diego

Planning Commission Hearing Report

Date:	July 19, 2019	**Case/File No.:**	POD-19-003
Place:	County Conference Center 5520 Overland Avenue San Diego, CA 92123	**Project:**	Zoning Ordinance Update for Small Cell Wireless Facilities
Time:	9:00 a.m.	**Location:**	All Districts
Agenda Item:	#3	**General Plan:**	Various
Appeal Status:	Board of Supervisors is the final decision maker	**Zoning:**	Various
Applicant:	County of San Diego	**Community:**	All
Environmental:	15162-15164 Environmental Checklist	**APNs:**	Various

A. EXECUTIVE SUMMARY

Introduction

In September 2018, the Federal Communications Commission (FCC) passed Declaratory Ruling and Third Report and Order 18-133 (FCC Order) which restricted regulations for the placement, permit fee, and permit processing timeline of a Small Cell Wireless facility (SCW).

On February 27, 2019, the Board of Supervisors (Board) adopted a Zoning Ordinance amendment to establish a definition for Small Cell Wireless Facilities and a ministerial process to comply with the new FCC fee and processing regulations. At that hearing, the Board also directed staff to evaluate additional changes to the Zoning Ordinance for SCW and to return to the Board within 180 days.

The purpose of this staff report is to provide the Planning Commission with the information necessary to evaluate and consider the proposed Zoning Ordinance amendment. The report includes 1) Federal and State legal requirements, 2) input from the public on the development of the ordinance, 3) best practice research conducted, and 4) options and recommendations. The Planning Commission is requested to make a recommendation to the Board to either adopt the staff recommendation as presented or with changes, or not adopt any changes to the Zoning Ordinance.

Recommendations

Planning & Development Services (PDS) conducted extensive public outreach and analysis of the proposed Zoning Ordinance Amendment. Comments and suggestions received from the public that conflicted with the FCC Order, or not recommended by PDS staff for inclusion are identified in this report for consideration. Based on PDS's review and analysis, staff recommends approval of the proposed Zoning Ordinance amendment as presented.

If the required findings can be made, PDS recommends that the Planning Commission take the following actions:

1. Find that it has reviewed and considered the information contained in the Final Program EIR, dated August 3, 2011, on file with PDS as Environmental Review Number 02-ZA-001, the Draft Addendum thereto, dated August 3, 2018, on file with PDS as PDS2017-POD-17-004, and the Environmental Review Update Checklist Form, dated July 19, 2019, on file with PDS as Environmental Review Number PDS2019-POD-19-003, prior to making its recommendation on the Small Cell Wireless Ordinance Update.

2. Recommend that the Board of Supervisors adopt the attached Form of Ordinance:

   AN ORDINANCE AMENDING THE SAN DIEGO COUNTY ZONING ORDINANCE RELATED SMALL CELL WIRELESS FACILITIES (POD 17-004) (Attachment A - Clean & Attachment B - Strikeout).

B. BACKGROUND

On February 27, 2019, the Board of Supervisors (Board) adopted a Zoning Ordinance amendment to establish a definition for SCWs and a ministerial process to comply with the new Federal Communications Commission (FCC) fee and processing regulations. At that hearing, the Board also directed staff to evaluate additional changes to the Zoning Ordinance for SCW and to return to the Board within 180 days. The items for evaluation include reduction of cluttering, avoidance of certain areas, co-location of an SCW with existing infrastructure, the distance between poles, placement of equipment on poles, preferred locations for residential areas, undergrounding of equipment, and additional public noticing.

Also, the Board held a closed session after the February 27, 2019 hearing and directed to staff to support other jurisdictions in challenging the FCC Order. On June 24, 2019, the County of San Diego (County) filed a joinder letter in support of Petitioner Local Governments' Joint Opening Brief (Case No. 18-72689, et al.) (Docket No. 62) in its entirety; the Joint Brief for Intervenors the City of New York and National Association of Telecommunications Officers and Advisors (Case No. 19-70123, et al.) (Docket No. 93) in its entirety; and the Amicus Brief of the Association of Washington Cities Supporting Petitioners (Case No. 19-70144) (Docket No. 88-2), Sections I., II., and III.

The proposed Zoning Ordinance amendment was informed by 1) Federal and State legal requirements, 2) input from the public on the development of the ordinance, and 3) best practice research. Below is a summary of each consideration.

1. Legal Requirements

The Federal Telecommunications Act of 1996 (Act) applies to all applications for "personal wireless services facilities." The Act established the FCC as the national authority in setting radio frequency limits. It also preempted all state and local governments from regulating the placement, construction, and modification of personal service wireless facilities based on the environmental effects of radio frequency emissions if they comply with the set emissions standards.

The FCC issued Declaratory Ruling and Third Report and Order 18-133 (FCC Order) in September 2018. The FCC Order became effective on January 14, 2019 and required all local jurisdictions to process applications for SCW on existing poles within 60 days and applications for SCW on new poles within 90 days. The FCC Order established a maximum application fee amount of $500 for up to five SCW and $100 for each additional SCW installed on existing poles and $1,000 for a new pole supporting one or more SCW. The FCC Order also established the maximum amount of reoccurring fees that a local jurisdiction could collect at $270 per SCW per year. This amount includes any possible right-of-way access fee or fee for attachment to a County-owned structure in the public right-of-way. The FCC Order allows a local jurisdiction to charge higher fees based on regional cost variances. The FCC Order also placed restrictions on a local jurisdiction's ability to regulate the placement of SCW.

The California Public Utilities Code Section 7901 allows wireless communication companies to construct and maintain telecommunications antennas within the public right-of-way if they do not "incommode" or inconvenience public use of the road.

There are two bills in the United States Congress that would impact the current FCC Order. The first, is the House of Representatives Bill 530 (H.R. 530) authored by California Congresswoman Anna Eshoo, which would repeal the FCC's regulations and would restore the authority of local governments to regulate small cell wireless infrastructure deployment that was limited under the FCC ruling. PDS has worked with the County's Office of Strategy and Intergovernmental Affairs, who has conveyed the County's support of H.R. 530 to Congress. The proposed ordinance includes a requirement that any permits issued in this section are subject to the validity of the FCC Ruling. Any small cell wireless facilities permit issued would expire 12 months from the date the FCC Ruling is repealed (e.g., by passage of H.R. 530) or overturned through litigation.

Senate Bill 1699 (S. 1699) was proposed on June 3, 2019 by Senator John Thune from South Dakota. The Bill, "Streamlining The Rapid Evolution And Modernization of Leading-edge Infrastructure Necessary to Enhance Small Cell Deployment Act", would incorporate the main components of the FCC Order into the Telecommunications Act. The County will continue to monitor all federal and state legislation that would impact the County's regulations.

2. Best Practices

PDS staff researched and analyzed over 50 wireless telecommunication ordinances from jurisdictions within San Diego County, California, and across the United States. Staff identified best practices to implement the FCC Order and referenced them when evaluating suggestions from

stakeholders as well as the items directed by the Board for analysis and inclusion in the Zoning Ordinance amendment. Nearly every ordinance that staff reviewed had height requirements limits, co-location, noise, and removal of antennae if a facility was no longer in use. Several items suggested by the public for inclusion in the ordinance were not in the ordinances researched and not included in the proposed Zoning Ordinance amendment. These items include shielding requirements, deposits to compensate for reduced property value resulting from the installation of an SCW nearby, use of a fiber-optic network as an alternative to SCWs, and language to nullify an ordinance if the FCC Order were repealed or overturned.

3. Public Input

Public outreach was a key component of this program. Since the Board's direction in February 2019, PDS staff met with various organizations and stakeholders to receive input on the proposed ordinance. On May 18, 2019, PDS staff presented a brief overview of the ordinance update to the Community Planning and Sponsor Group (CP/SG) chairpersons' quarterly meeting. Also, staff attended six CP/SG meetings throughout the unincorporated area (Sweetwater, Crest/Dehesa/Harbison Canyon/Granite Hills, Spring Valley, Fallbrook, Campo/Lake Morena, and Jamul/Dulzura) to present the draft ordinance and answer any questions. On May 31, 2019, a draft of the zoning ordinance, application form, and submittal checklist were made available to all interested stakeholders for review and comments for a 30-day public review period. Staff met with seven individuals, groups, and industry representatives during and immediately after the public review period.

A total of 80 comments were received during and after the comment period. Seven from CP/SGs, six from the wireless industry, six from organizations, and 64 from individuals. Most of the comments and suggestions were on specific topics such as spacing standards, bonding, distance from residential homes, denial of incomplete applications, signage, fire prevention, Radio Frequency (RF) emissions check, and many others. Staff incorporated many of the comments into the draft ordinance. Others would either conflict with the FCC Order, or are not recommended by PDS staff for inclusion. Topic areas not considered for the ordinance are summarized below; the items either recommended for inclusion or those not recommended due to their legality are further outlined in the Public Input and Options section of this report.

- RRF Emissions – Many of the comments received requested additional requirements in the proposed ordinance that would limit the amount of RF Emissions exposure. If an SCW complies with the FCC's RF emissions regulations, Federal law prohibits local jurisdictions from regulating the placement, construction, and modification of personal wireless service facilities based on the environmental effects of RF emissions. The FCC Order also prohibits local jurisdictions from requesting information on an SCW's RF emissions. Lastly, the FCC Order stipulates that a local jurisdiction cannot adopt a regulation that “materially limits or inhibits the ability of any competitor or potential competitor to compete in a fair and balanced legal and regulatory environment.”

- ADA Accommodations - One request suggested that SCWs comply with the accommodation requirements of the Americans with Disabilities Act (ADA Act) by asserting discrimination against electrically-sensitive people. Chapter 8 of the County Code of Regulatory

Ordinances outlines the procedures for filing and reviewing reasonable accommodation requests. The County has received several requests for ADA accommodations to restrict the placement of SCWs in specific locations due to the RF emissions and their impact. While the County will consider all requests for reasonable accommodations, Section 704 of the Telecommunications Act of 1996 preempts local governments from considering RF emissions when regulating the placement of wireless facilities.

- Request for a moratorium – One stakeholder has requested a moratorium on SCW facilities due to health concerns and inconsistencies between the FCC Order and ADA Act. A moratorium requires findings that "there is a current and immediate threat to the public health, safety, or welfare, and that the approval of additional subdivisions, use permits, variances, building permits, or any other applicable entitlement for use which is required in order to comply with a zoning ordinance would result in that threat to public health, safety, or welfare." Federal law preempts the local jurisdictions from considering health impacts. Staff recommends the County continue to monitor legislation and lawsuits on this topic and report back to the Board in one year.

PDS staff also held a meeting with wireless telecommunication providers on June 13, 2019, to understand the technical requirements and capabilities of SCWs technology and answer questions about the proposed ordinance. Wireless industry providers included recommendations for the proposed ordinance. General comments from the Wireless industry were:

- Recommend removal of the requirements for minimum distance from schools, childcare centers, hospitals, and religious facilities in the ordinance.

- Recommend reduced distance or removal of notification to property owners and Community Planning or Sponsor Groups.

- Expressed concerns with the priority locations and that co-location may be technically infeasible in some circumstances.

- Commented that the antenna, meter and radio are equipment that is technically infeasible to underground.

C. Components of Small Cell Wireless Facilities

SCWs are composed of an antenna and additional support equipment. The support equipment may include a radio, electrical meter, fiber optic cable, and power lines. The antennas receive and transmit signals. The support equipment supports the antenna and process information. The FCC Order set limits for the dimensions of SCWs. Antennas must not exceed three cubic ft., and the support equipment must not exceed 28 cubic ft. In general, antennas, radios, and electrical meters are required to be aboveground.

D. PROJECT DESCRIPTION, ANALYSIS AND DISCUSSION

The purpose of the proposed Zoning Ordinance amendment is to implement the Board's direction to include requirements while maintaining compliance with state and federal law. Objectives covered in the draft ordinance are reduce clutter; remove physical obstruction; emphasize placement of facilities in commercial and industrial areas, over residential areas; provide public noticing and awareness of installations; and reduction of risk in the public right-of-way. Below are descriptions and purpose for each section of the Zoning Ordinance amendments by objective. Refer to Attachments A & B for clean and strikeout versions of the proposed ordinance.

1. Reduce Clutter

Configuration Preferences (6992.A.8.i.): This section establishes configuration preferences to reduce the number of new poles erected in the public right-of-way. The configuration preferences are listed below in order of preference to encourage co-location and installation on existing infrastructure. Attachment D-3-184 ~~175~~ outlines the proposed configuration preferences.

1. Co-location with an existing facility
2. Existing or replacement utility poles
3. Existing or replacement structure, or roof-mounted in Industrial & Commercial Zones only
4. County-owned street light poles
5. County-owned traffic signals
6. New utility poles

Encourage Co-location (6992.A.8.iii.): This section encourages co-location of facilities from more than one provider on a single structure to reduce the number of structures that will hold an SCW. The proposed ordinance sets a limit of two facilities per pole to reduce visual impacts. Allowing more than two facilities per pole will likely increase the height and diameter of the pole due to weight and spacing requirements between facilities on a single pole.

Pole Separation (6992.A.9.): This section establishes separation requirements for new poles with an SCW operated by the same provider to minimize visual clutter. Minimum spacing requirements for new poles were determined based on input from the wireless industry and range from 500 ft. in most preferred locations to 1000 ft. in the least preferred areas. Attachment D-3-200~~191~~ to D-3-208~~199~~ outlines the staff recommended spacing requirements. Staff does not propose a minimum spacing requirement for an SCW installed on existing structures. Installations on existing poles minimize visual clutter by limiting the number of new structures within the right-of-way. Also, staff proposes language that encourages co-location with existing facilities to further reduce the need for new structures in the public right-of-way.

The wireless industry expressed concern with the separation requirements for new poles with an SCW operated by the same provider. They indicated that a 300 ft. separation in most preferred locations and 500 ft. separation in the least preferred areas would be less restrictive.

Staff also evaluated separation distances for any SCW regardless of provider based on comments received from the community. Spacing requirements that set minimum spacing distances between

all facilities, regardless of provider, may be interpreted as an effective prohibition of service per the FCC Order. Attachment D-3-2100~~1~~ to D-3-2140~~5~~ compares the staff recommendation with the options presented based on stakeholder concerns.

2. Remove Physical Obstructions

Support Structure Placement (6992.A.10, 11 & 12.): This section establishes standards to limit obstruction of people (including equestrians) using the public right-of-way. These standards prohibit obstructions within the public right-of-way to ensure open access and maintain community character. Installation of radios or other support equipment on poles must be above seven ft. in all areas and above ten ft. in areas that allow equestrian activities. Any support cabinets must be clear of the path of travel and setback from the right-of-way.

Undergrounding (6992.A.15.): This section establishes undergrounding requirements for all new ground-mounted equipment, as technically feasible. Based on information from the wireless industry, antennas, radios, and electrical meters are the only components that must be above ground to function. All other related equipment must be placed underground to minimize obstructions within the public right-of-way. If undergrounding is technically infeasible in specific locations, the applicant must provide a statement explaining why it would not be technically feasible to underground the related equipment.

3. Emphasize Placement of Facilities in Commercial and Industrial Areas, Over Residential Areas

Priority Locations (6992.A.2.): This section establishes location preferences to guide development of wireless telecommunication services within the unincorporated area. The proposed ordinance includes language to encourage installation within the right-of-way. The preferences outlined below were established through best practice review, community input, and to minimize visual impacts in certain areas (Attachment D-3-63~~2~~ to D-3-75~~14~~ outlines the location preferences within the unincorporated area):

Most preferred locations include:

1. Industrial Zones
2. Commercial Zones (except C34 & C35)
3. Special Purpose Zones

Least preferred locations include:

1. Rural Zones
2. Commercial Zones C34 & C35
3. Residential Zones

The proposed location preferences are similar to the current requirements for all wireless telecommunication facilities.

Site Avoidance (6992.A.3.): This section identifies specific sites to avoid. The proposed ordinance establishes a 1,000-foot distance requirement from schools, childcare centers, hospitals, and religious facilities. The distance of 1,000 ft. was determined based on the equipment capabilities provided by the wireless industry. This distance would allow the County to ensure public safety from potential fall zones but does not prohibit service based on technological capabilities. During the public

review period, many individuals explained that owners of religious facilities utilize site agreements with the wireless industry for revenue. These sites are not prohibited from installing an SCW within the property. Attachment D-3-9301 through D-3-168~~107~~ outlines additional analysis staff conducted for 300, 500, and 1,000 ft. buffers from schools, childcare centers, hospitals, and religious facilities as well as other locations within the unincorporated area.

Staff also evaluated requiring distances from fire and Sheriff stations, shopping areas, parking lots, other schools, and County Parks in response to comments received by the public. The Department of Parks and Recreation have expressed interest in maintaining their ability to locate wireless facilities within County Parks. The Zoning Ordinance does not apply to the Department of Parks and Recreation.

The community also requested staff perform an analysis for setback requirements from residential at 50 ft., 100 ft., 500 ft., 1,000 ft., and 1 mile. Because a large portion of the County is residentially zoned, staff analysis showed any setback would be an effective prohibition of service and may be a violation of the FCC Order. Based on the analysis and the current setback requirements associated with residential uses in the Zoning Ordinance, staff does not recommend additional setbacks. Attachment D-3-170~~109~~ through D-3-182~~173~~ outlines the requested setback requirements from property lines within the unincorporated area.

4. Public Noticing and Awareness of Installations

Public Noticing (6992.C.6.): This section expands public noticing requirements beyond the current need to notify CP/SGs to provide notice to property owners before construction. The proposed ordinance requires noticing to CP/SGs and neighbors within 500 ft. to ensure public awareness of incoming infrastructure. This distance goes beyond current noticing requirements of 300 ft. for many other types of projects. Staff determined this requirement does not effectively prohibit the provision of service per the FCC Order. The applicant must provide proof of public noticing within ten days of application submittal. Staff does not recommend noticing requirements before application submittal because this may violate the FCC Order. Any pre-application requirements would effectively start the shot clocks regardless of the submittal of an application.

The community has requested the County provide a central location for individuals to communicate concerns regarding the compliance of an SCW. A public hotline would provide a central location for the public to express concerns regarding compliance of an SCW with any local, state, or federal regulations. Staff would then redirect the caller to the appropriate compliance agency. Based on the current number of applications the County receives, staff has determined approximately 15 hours per week would be required for an individual to address all calls received regarding non-compliance of an SCW. Staff does not recommend establishment of a hotline.

5. Reduction of Risk in the Public Right-of-Way

Insurance Requirements (Permit Application): The community expressed concern that additional insurance should be required. As part of an application for the installation of an SCW, an applicant must provide a certificate of insurance for General Liability with a $500,000 minimum. The document must also name the County of San Diego Department of Public Works as a certificate holder to

protect the County. This insurance requirement applies to any project which requires an excavation permit for construction within the right-of-way.

Annual Reporting (6993.E.): Annual reports are required to be submitted by July of each year and include a list and location of active and non-operating SCW as well as those permitted but not yet installed within the unincorporated area. The annual report will be used to identify abandoned facilities. The County will notify carriers to remove abandoned facilities within 90 days. If the carriers to do not remove the facilities, the County reserves the right to remove the facility and require reimbursement from the owner. Annual reports will also include a current certificate of insurance for the list of active SCWs to ensure coverage is up-to-date for all facilities.

E. PUBLIC INPUT AND OPTIONS

This section includes an analysis of recommendations received by the public but not incorporated in the proposed Zoning Ordinance amendment because they would conflict with the FCC Order, or are not recommended by PDS staff for inclusion. The FCC Order limits local governments to considering primarily aesthetic and visual impacts when adopting regulations for wireless facility placement. The established requirements cannot prohibit the utilities from providing service and must be (1) reasonable, (2) not more burdensome than those applied to other types of infrastructure deployments, and (3) objective and published in advance. All the proposed staff recommendations would comply with FCC regulations and the Telecommunications Act while providing more direction to the industry and lessening the anticipated aesthetic and visual impacts that deployment of this technology will cause.

These items are divided into three categories based on the public review received 1) Location and Design, 2) Compliance and Monitoring, and 3) Public Input. To address these items, the Planning Commission may consider either the staff recommendation, a modified requirement, establishing new requirements, or making other recommendations to the Board. Attachment C outlines the language for each of the options presented if adopted.

1. **Location and Design**. Comments in this category focused on the location and placement of an SCW within the unincorporated area to minimize visual clutter and impacts.

   Residential Areas – Many individuals have expressed concerns regarding placement in residential areas due to impacts from radio frequency (RF) emissions, aesthetics, and loss of property value. They have asked the County to analyze specific setback requirements from residential property lines to minimize or avoid this impact. Analysis of these requirements is included in Attachment D, studying the application of this standard from property lines at 50, 100, 250, or 500 ft. The standard for evaluation is if this would be an effective prohibition of a company to provide service to this area. Based on this standard and analysis, staff does not recommend the inclusion of a distance from property lines. The Jamul-Dulzura and Descanso CP/SGs were in support of allowing an SCW in residential and rural areas for the benefit of residents. The other five CP/SGs were generally opposed to extensive SCW deployment.

   - **Staff Recommendation**: Not recommended.
   - **Option:** Establish a more restrictive requirement – Distance requirements from residences from 50 to 500 ft.

Site Avoidance (6992.A.3.) – The community has requested staff to analyze requiring specific distances from Fire and Sheriff stations, shopping areas, and County Parks. The Zoning Ordinance does not apply to County Parks or County Facilities. The Departments of Parks and Recreation and General Services will maintain the ability to locate wireless facilities within County Parks through lease or other real property agreements. Additional restrictions and requirements could be an effective prohibition in communities. Wireless industry comments recommend the removal of this requirement.

- **Staff Recommendation:** Establish 1,000 ft. distance requirement based on the capabilities of the equipment from schools, childcare centers, hospitals, and religious facilities for SCWs installed within the right-of-way.
- **Option:** Establish a more restrictive requirement – A SCW shall not be located within 1,000 ft. from additional sites such as fire and police stations, shopping areas, parking lots, other schools, and County Parks.

Visual Separation of Existing Structures (6992.A.8.iii.) – Staff received a range of comments requesting requirements for additional co-location to not allowing co-location. Because installations on existing structures will not introduce new structures within the right-of-way, the proposed ordinance encourages co-location of up to two facilities with existing facilities to minimize visual impacts.

- **Staff Recommendation**: Co-locate SCWs when possible and require new poles to accommodate a total of two facilities on one structure.
- **Option 1**: Modify requirement – Prohibit colocation of facilities.
- **Option 2:** Modify requirement – Increase the number of SCWs allowed to collocate on a pole to three or more facilities.

Visual Separation of New Structures (6992.A.9.) – The proposed ordinance establishes spacing requirements for new structures at 500 ft. in most preferred locations and 1,000 ft. in Least preferred locations. The wireless industry has expressed concern with the separation distance and has expressed a preference for a 300 ft. separation in most preferred locations and 500 ft. separation in Least preferred locations from the specific provider's nearest facility. New structures are required to blend in and match existing poles in a neighborhood visually. To address community concerns, separation distances, regardless of provider, were also evaluated.

- **Staff Recommendation:** An SCW owned by the same provider must be separated by 500 ft. in most preferred locations, and 1,000 ft. in Least preferred locations, or at different distances.
- **Option:** Modify requirement – SCWs must be separated by 500 ft. in most preferred locations, and 1,000 ft. in Least preferred locations, or at different distances.

2. **Compliance and Monitoring**– Comments in this category focused on continuous compliance with federal, state, and County requirements.

Informational Signage (6992.B.4.) – The community has requested signage with RF emission levels be required. The proposed ordinance does not require facility information to be posted on a

SCW; however, carriers could post warning and safety information if desired. This suggestion is not recommended by staff because this goes beyond what the County currently requires for similar types of utilities and may be a violation of the FCC Order.

- **Staff Recommendation**: No signs, striping, graphics, or other attention-getting devices are permitted on SCWs and supporting structures, except for warning and safety information. Signage should be limited to reduce visual clutter.
- **Option:** Establish a more restrictive requirement – Signage requirements with RF emission levels posted on SCW structure. Additional signage requirements may create visual impacts and are not recommended.

Bonding – The community has requested the County include bonding requirements for the duration of the permit to cover any costs the County may incur due to the abandonment of facilities. The current language on the permit application states that financial responsibility for removal falls on the owner of an SCW to reimburse the County if the facility is abandoned during or post-construction. Staff does not recommend bonding requirements for the installation of an SCW. Staff has determined that bond issuers do not typically provide bonding beyond the time it takes to construct a project. The County has authority under an encroachment permit and ability to file claims through insurance to remove inactive infrastructure.

- **Staff Recommendation:** Staff does not recommend additional requirements.
- **Option:** Establish a more restrictive requirement – Require minimum bonding assurances.

Master Plan (Not Included in Draft): The community has requested that wireless carriers provide an SCW Master Plan. Under the FCC Order the County cannot require master plans from the providers. An incentive could be provided to the carriers to encourage them to provide a Master Plan.

- **Staff Recommendation:** Staff does not recommend additional requirements because an incentive program may not be feasible.
- **Option:** Establish an additional requirement – Encourage wireless providers to submit a master plan with the permit application by offering more extended permit expiration dates. SCWs are primarily used to increase the capacity of current wireless facilities; a Master Plan would allow the County to guide development further and determine the need for additional capacity.

RF Emissions Check (Not Included in Draft): Community has requested requiring wireless providers to submit a RF emissions report with the permit application to be reviewed by an independent, third-party consultant. Staff does not recommend requiring RF emissions reports to be provided with the application because the proposed ordinance requires compliance with all FCC regulations.

- **Staff Recommendation:** Staff does not recommend additional requirements because the report is not actionable.
- **Option:** Establish an additional requirement – Require wireless providers to submit a RF emission levels report with the permit application. This option would require additional staff time and cost.

Annual Reporting (6993.E.): Community has requested the County establish requirements to include reporting of RF emissions for each location within the annual report. Since RF emission reports are not currently required, staff does not recommend this additional requirement.

- **Staff Recommendation:** Providers are required to submit an annual report with a list of current facilities and insurance certificates.
- **Option:** Establish an additional requirement – Require annual reporting of RF emission levels.

3. **Public Input** – Comments in this category focus on providing information for the public to better understand the roll-out of SCWs in San Diego County.

   Public Noticing (6992.C.6.): Community has requested notification beyond 500 ft. due to potential impacts that may go beyond this distance. The wireless industry has asked for shorter distances or no notification of neighbors as these requirements are not current practice for other wireless facilities. Staff can be directed to adopt a different distance for noticing requirements.

   - **Staff Recommendation:** Wireless providers must send a notice of intent to install to the corresponding CP/SGs and property owners within 500 ft. within ten days of application submittal.
   - **Option:** Modify requirement – Require public notification at a greater distance.

F. California Environmental Quality Act (CEQA) Compliance

No substantial changes are proposed in the project and there are no substantial changes in the circumstances under which the project will be undertaken that will require major revisions to the previous EIR due to the involvement of significant new environmental effects or a substantial increase in the severity of previously identified significant effects. Also, there is no "new information of substantial importance" as that term is used in CEQA Guidelines Section 15162(a)(3). Therefore, the previously certified Program EIR (August 2011) and Addendum dated January 30, 2019 can be relied on without modification.

G. RECOMMENDATIONS

PDS recommends that the Planning Commission:

1. Find that it has reviewed and considered the information contained in the Final Program Environmental Impact Report (EIR), dated August 3, 2011, on file with Planning & Development Services (PDS) as Environmental Review Number 02-ZA-001, the Draft Addendum thereto, dated August 3, 2018, on file with PDS as PDS2017-POD17-004; PDS2018-REZ-18-008, and the Environmental Review Update Checklist Form, dated July 19, 2019, on file with PDS as Environmental Review Number PDS2019-POD-19-003, prior to making its recommendation on the Zoning Ordinance Update (Attachment F). This ordinance change is not subject to CEQA and is not included in the Addendum to the General Plan EIR.

2. Recommend that the Board of Supervisors adopt the attached Form of Ordinance:

   AN ORDINANCE AMENDING THE SAN DIEGO COUNTY ZONING ORDINANCE RELATED SMALL CELL WIRELESS FACILITIES (POD 19-003) (Attachment A - Clean & Attachment B - Strikeout).

3. Recommend that the Board of Supervisors adopt additional implementation options in the three categories outlined in the Implementation Options Summary Report: Location and Design Attributes, Compliance and Monitoring, and Public Input from Attachment C:

   IMPLEMENTATION OPTIONS SUMMARY REPORT

Report Prepared By:	***Report Approved By:***
Eric Lardy, Chief, Departmental Operations	Mark Wardlaw, Director
858-495-5334	858-694-2962
eric.lardy@sdcounty.ca.gov	mark.wardlaw@sdcounty.ca.gov

AUTHORIZED REPRESENTATIVE: Mark Wardlaw

MARK WARDLAW, DIRECTOR

ATTACHMENTS:

Attachment A – AN ORDINANCE AMENDING THE SAN DIEGO COUNTY ZONING ORDINANCE RELATED TO SMALL CELLL WIRELESS FACILITIES (POD 17-004) (CLEAN COPY)
Attachment B – AN ORDINANCE AMENDING THE SAN DIEGO COUNTY ZONING ORDINANCE RELATED TO SMALL CELLL WIRELESS FACILITIES (POD 17-004) (STRIKE-OUT/UNDERLINE COPY)
Attachment C – Implementation Options Summary Report
Attachment D – Visual Analysis of Recommended and Requested Requirements
Attachment E – DRAFT Small Cell Wireless Application and Checklist
Attachment F – Environmental Checklist
Attachment G – Correspondence

Attachment A – An Ordinance Amending the San Diego County Zoning Ordinance Related to Small Cell Wireless Facilities (POD 17-004) (CLEAN COPY)

DRAFT July 19, 2019
Information Copy

Clean Copy

ORDINANCE NO. _____ (NEW SERIES)

AN ORDINANCE AMENDING THE SAN DIEGO COUNTY ZONING ORDINANCE RELATED TO SMALL CELLL WIRELESS FACILITIES.

The Board of Supervisors of the County of San Diego ordains as follows:

Section 6980 is amended to read as follows:

6980 WIRELESS TELECOMMUNICATIONS FACILITIES

6981 CONFLICT RESOLUTION

Sections 6980 – 6993 are intended to be supplemental to the Zoning Ordinance. In case of conflict between the provisions represented in these sections and the provisions set forth in the Zoning Ordinance, the provisions of these sections shall apply.

6982 PURPOSE

[NO CHANGES]

6983 DEFINITIONS

For the purpose of the Wireless Telecommunications Facilities regulations contained in Sections 6980 through 6993, certain abbreviations, terms and words shall be used, interpreted and defined as set forth in this Section. Unless the context clearly indicates to the contrary, words used in the present tense include the future tense and words used in the plural indicate the singular.

a. Administrative Site Plan – A Site Plan, pursuant to Sections 7150 through 7174 of this Ordinance, that does not require community review except as noted in Section 6987 A of this Ordinance.

Antenna – Any system of wires, poles, rods, reflecting discs or similar devices designed for telephonic, radio, facsimile, data or television communications through sending and/or receiving of electromagnetic waves when such system is either external to or attached to the exterior of a structure. Antennas shall include, but not be limited to, devices having active elements extending in any direction, and directional beam-type arrays having elements carried by and disposed from a generally horizontal boom that may be mounted up and rotated through a vertical mast or tower interconnecting the boom and antenna support, all of which elements are deemed to be part of the antenna.

Antenna Height – The vertical distance measured from the ground surface at grade to the tip of the highest point of the proposed structure.

Antenna Support – Any pole, telescoping mast, tower tripod or any other structure that supports a device used in the transmitting and/or receiving of electromagnetic waves.

Applicant – A person who applies for a wireless facility siting. An applicant can be the owner of the property or someone who is representing the owner, such as a builder, developer, optional purchaser, lessor, consultant or architect.

c. Camouflaged – Any telecommunications facility that is designed to blend into the surrounding environment. Examples of camouflaged facilities may include architecturally screened roof-mounted antennas, building-mounted antennas painted to match the existing structure, antennas integrated into architectural elements, towers made to look like trees and antenna structures designed to look like light poles. Camouflaged facilities may be considered low or high visibility depending on the type of facility, degree of camouflaging and compatibility with the surrounding existing environment (see definitions of low and high visibility).

Co-location – Locating wireless telecommunications equipment from more than one provider on a single site.

Commercial Zones - are defined as consisting of the following zones: C32, C34, C35, C36, C37, C38, C40, C42, and C44, and also S88 when the proposed site is in a commercial component of a Specific Plan.

Community Character – Those unique attributes including, but not limited to, architecture, historical and cultural features, historical development patterns, landscape, hardscape and the size, scale and spacing of buildings and other structures that define a community's identity.

d. Decorative pole – Any pole that includes decorative or ornamental features, design elements and/or materials intended to enhance the appearance of the pole or the public right-of-way in which the pole is located

e. Equipment Building, Shelter or Cabinet – A cabinet or building used to house equipment used by telecommunication providers at a facility.

f. Façade Mounted Antenna – An antenna architecturally integrated into the façade of a building or structure.

Facility – See Wireless Telecommunications Facility.

Faux Trees – A term used to refer to Monopalms, Monopines and other camouflaged monopoles made to resemble different types of trees.

g. Grade – The lowest point of elevation of the finished surface of the ground, paving or sidewalk within the area between the structure and the property line or, when the property line is more than 5 feet from the structure, between the structure and a line 5 feet from the structure.

Guyed Tower – A telecommunications tower that is supported, in whole or in part, by guy wires and ground anchors.

h. High Visibility – The following shall be considered High Visibility facilities:

1. Monopoles, lattice towers and guyed towers
2. Non-camouflaged facilities
3. Faux Trees
4. Any and all wireless facilities not defined as invisible or low visibility.
5. High Voltage Transmission Tower – a tower carrying transmission lines of at least 132 kilovolts.

i. Industrial Zones – are defined as consisting of the following zones: M50, M52, M54, M56, M58, and also S88 when the proposed site is in an industrial component of a Specific Plan.

j. Invisible – Facilities, including, but not limited to towers, antennas and equipment cabinets and any other ancillary equipment, that cannot be seen from any street and from all adjacent properties and that do not result in any apparent architectural changes or additions, including Community Identification Signs when the antennas are fully integrated into the sign. The addition of landscaping, walls, fences or grading as screening techniques does not meet the definition of invisible.

k. Lattice Tower – A guyed or self-supporting three or four sided, open, steel frame support structure used to support telecommunications equipment.

l. Low Visibility – the following shall be considered Low Visibility facilities if they do not exceed the height schedule pursuant to Sections 4610 - 4620 of this Ordinance:

m. Monopalm – a monopole camouflaged to resemble a palm tree.

Monopine – a monopole camouflaged to resemble a pine tree.

Monopole – A wireless communication facility consisting of a single pole constructed without guy wires and ground anchors.

p. Panel Antenna - An antenna or array of antennas designed to concentrate a radio signal in a particular area. Also called directional antennas.

Provider – Means a provider of wireless communications services that owns or controls all the elements necessary to sell and deliver services to an end user including radio spectrum allocation, wireless network infrastructure, back haul infrastructure, billing, customer care, provisioning computer systems and marketing and repair organizations.

Public Safety Communications facilities: Telecommunications facilities operated and maintained by public agencies that support Public Safety Communications Systems, which provide wireless communications to law enforcement, fire services, emergency medical services, and other public safety/service agencies. These facilities are considered Essential Services pursuant to Section 1335.

r. Residential Zones – for purposes of this section, are defined as consisting of the following zones: RS, RD, RR, RM, RV, RU, RMH, RRO, RC, S80, S90, C30, C31, C46 and also S88 when the proposed site is in a residential component of a Specific Plan.

Roof Mounted Antenna – Any antenna with its support structure placed directly on the roof of any building or structure.

Rural Zones – are defined as consisting of the following zones: A70, A72, S81 and S92.

s. School – An institution of learning for minors, whether public or private, which offers instruction in those courses of study required by the California Education Code or which is maintained pursuant to standards set by the State Board of Education. This definition includes a kindergarten, elementary school, junior high school, senior high school, or any special institution of learning under the jurisdiction of the State Department of Education, but does not include a trade, vocational or professional institution or an institution of higher education, including a community or junior college, college or university.

Service Area – The area served by a single telecommunications facility.

Service Network – The telecommunications transmission system operated by a service provider in a community or jurisdiction.

Shot Clock – Means the review time requirements established by Federal or State regulations.

Special Purpose Zones - are defined as consisting of the following zones: S82, S86, S94 and Solid Waste Facility.

Small Cell Wireless Facility (SCW) – A wireless telecommunication facility and all related equipment, where the antenna is no more than three cubic feet in volume and all other related equipment on the structure is no more than 28 cubic feet in volume. This term also applies to any Micro Wireless Facility meaning a wireless telecommunications facility where it is not larger in dimension than 36" in length, 18" in width and 12" in height, does not have an exterior antenna which is longer than 11 ½", and are installed directly onto existing overhead cables owned by telecommunications providers.

Structure – A pole, tower, base station, or other building, whether or not it has an existing facility, that is used or to be used for the provision of personal wireless service (whether on its own or comingled with other types of services) or other such facilities as defined in 47 C.F.R. § 1.6002(m).

t. Telecommunications – The transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received.

Telecommunications Tower - Any mast, pole, monopole, guyed tower, lattice tower, free standing tower or other structure designed and primarily used to support antennas.

Tower – See Telecommunications Tower

Travel Way – That portion of the right-of-way used for the movement of vehicles, people, equestrians, and goods, including travel lanes, curb and gutter, on-street parking spaces, bike lane facilities, travel lanes, turning lanes within the public ROW, sidewalks, shoulders, and pathways.

u. Utility pole – Any above-ground pole used to support electrical, telephone, cable, and internet wires.

w. Whip Antenna – An antenna that transmits signals in 360 degrees. Whip antennas are typically cylindrical in shape and are less than 3 inches in diameter and measure up to 6 feet in length, including the mounting. Also called omni-directional, stick or pipe antennas.

Wireless Community Master Plan – a Master Plan of preferred sites and designs for wireless facilities for a defined geographic area prepared in cooperation with one or more wireless service providers; formally submitted by the community planning group or sponsor group or by a homeowners association representing at least 4,000 residents and at least 5,000 acres to the Director; reviewed by the Director for such issues as aesthetics and community compatibility; and following public review, approved by the Director. A Community Master Plan can be applicable to all providers or to selected providers as defined in the Plan.

Wireless Telecommunications Facility – Any facility that transmits and/or receives electromagnetic waves, including, but not limited to, antennas, dish antennas and other types of equipment for the transmission or receipt of such signals, telecommunications towers or similar structures supporting said equipment, equipment buildings, parking area and other accessory development. Also known as a wireless communications facility.

This definition does not apply to Amateur Radio Stations as defined by the Federal Communications Commission, Part 97 of the Commission's Rules nor to TV and radio transmission facilities, nor to Public Safety Communications facilities.

6984 WIRELESS FACILITY APPLICATION REQUIREMENTS — NON-SCW

[NO CHANGES]

6985 WIRELESS FACILITY APPLICATION PROCESSING — NON-SCW APPLICATIONS

Although a tier may be assigned at project intake, a re-evaluation of the project tier may occur at any point in the process, including, but not limited to, review by the Planner, Environmental Analyst or Hearing Officer.

A. Applications will be processed based upon the following 4-tier permitting system, subject to the exceptions and general regulations found in Sections 6985 B and C:

TIER 1 – ADMINISTRATIVE SITE PLAN

Facilities meeting any of the following criteria shall be processed as an ADMINISTRATIVE SITE PLAN:

Industrial and Commercial Zones

- Invisible facilities
- Facilities on:
  - CALTRANS structures, "cobra-style" streetlights and poles in the public right of way, or an existing park and ride light standard, when they meet all the following:
    - The antennas do not project more than 24 inches above the structure,
    - No more than a total of two antennas are located on a site
    - The equipment cabinet is no larger than 6 cubic feet.
    - The equipment cabinet is concealed from public view through the use of undergrounding or screening by means other than walls or fences.
- Façade mounted antennas integrated into the architecture in such a manner that no change to the architecture is apparent and no part of the facility can be seen from public view.
- Facilities not subject to the "B", "D", "H" or "J" Designators and are:
  - Hidden from public view through the use of architectural treatments (cupolas, etc.); and
  - Consistent with the existing building and community character.

Any Zone

- Antennas located on high voltage transmission towers if they increase the bulk and scale of the structure by less than 5 percent.

TIER 2 – SITE PLAN WITH COMMUNITY REVIEW

Facilities meeting any of the following criteria shall be processed as a SITE PLAN WITH COMMUNITY REVIEW:

Commercial, Industrial and Special Purpose Zones

- Low visibility facilities.

All Zones

- Facilities covered by a Wireless Community Master Plan when the design and siting are consistent with the plan.

TIER 3 – MINOR USE PERMIT

Facilities meeting any of the following criteria shall be processed as a MINOR USE PERMIT:

- All facilities other than those meeting the criteria of Tiers 1, 2, or 4.

TIER 4 – MAJOR USE PERMIT

Facilities meeting the following criteria shall be processed as a MAJOR USE PERMIT:

- Non-camouflaged towers greater than 60 feet, or 15 feet above the maximum allowed height limit in the zone, whichever is lower, shall require a Major Use Permit in all zones (except where they are prohibited).
- All facilities in Residential and Rural zones except as specified in Tiers 1 and 2.

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B. Exceptions

1. In addition to all other requirements in Sections 6980 through 6991, any proposed facility on a structure currently subject to a Major or Minor Use Permit shall obtain approval of the facility through the modification of the permit in accordance with Section 7378 of this Ordinance for a Use Permit or by Minor Deviation in accordance with Section 7609 of this Ordinance when the facility is invisible.

2. Major Use Permits for Wireless Telecommunications Facilities shall be under the original jurisdiction of the Planning Commission.

C. General Regulations

1. Non-camouflaged monopoles, lattice towers and guyed towers are prohibited in Residential and Rural zones.

2. All buildings and structures built to contain equipment accessory to a facility may not exceed 10 feet in height measured from the base of the foundation unless a greater height is necessary to maximize architectural integration and shall be screened by landscaping.

3. No more than three facilities are allowed on any site or parcel in commercial, industrial, rural or special purpose zones. No more than one facility is allowed on any parcel or site in a Residential zone. This requirement may be waived by the Director if a finding is made that co-location of more facilities is consistent with community character.

4. Telecommunications towers located adjacent to a residential use shall be set back from the nearest residential lot line by a distance at least equal to its total height or 50 feet, whichever is greater. The setback shall be measured from that part of the tower that is closest to the neighboring property (i.e., the setback for a faux tree would be measured from the end of the branch closest to the neighboring property).

5. No tower or equipment shall be located in a front, rear or side yard setback in any zone and no portion of any antenna array shall extend beyond the property lines.

6. Noise from any equipment supporting the facility shall meet the requirements of the County's Noise Ordinance on an average hourly basis.

7. The Director may grant an exemption from the requirement to process a Site Plan permit pursuant to Section 7156 of this Ordinance if he or she finds that all of the purposes and requirements of the Site Plan have been or will be fulfilled by another discretionary permit, or where the Director finds the proposed development or improvement is minor in nature and that the public purpose for which the Site Plan permit would normally be required will not be harmed by granting a Site Plan permit exemption. The Director's decision may be appealed pursuant to Section 7200 of this Ordinance.

8. All facilities located on a utility pole shall be promptly removed at the operator's expense at the time a utility is scheduled to be undergrounded.

9. Maintenance vehicles servicing facilities located in the public or private right of way shall not park on the traveled way or in a manner that would obstruct traffic.

10. Equipment cabinets and antenna structures shall be secured to disallow unauthorized access.

11. Use Permits for high visibility facilities shall have a maximum term of 6 years for facilities valued at less than $10,000; 10 years for facilities valued from over

12. $10,000 to $500,000; and 15 years for facilities valued at $500,000 or more. This may be extended for an additional period of time by modifying the permit if it is found that no smaller or less visible technology is available or feasible to replace the facility.

13. As a condition of approval, prior to use of the facility, submit evidence, such as photos, to the satisfaction of the Director to show proof that the facility is in conformance with photo simulations provided pursuit to Section 6984 (B) of this Ordinance.

14. Applications will be processed pursuant to the shot clocks outlined in Federal and State regulations.

6986 PREFERRED SITES – NON-SCW APPLICATIONS

[NO CHANGES]

6987 DESIGN REGULATIONS – NON-SCW APPLICATIONS

[NO CHANGES]

6988 MAINTENANCE

[NO CHANGES]

6989 ABANDONMENT OR DISCONTINUATION OF USE

[NO CHANGES]

6990 REVOCATION

[NO CHANGES]

6991 AMORTIZATION OF HIGH VISIBILITY FACILITIES IN RESIDENTIAL AND RURAL ZONES

[NO CHANGES]

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6992 SMALL CELL WIRELESS FACILITY APPLICATION REQUIREMENTS

Wireless Telecommunication Facility permit applications which meet the Small Cell Wireless Facility (SCW) definition shall be processed according to the following standards:

A. Development Standards

1. Location. To better assist applicants, minimize clutter, and limit other impacts to aesthetics and community character, subsection A.2. below sets out listed preferences for locations of SCWs. Applications that involve least preferred locations may be approved so long as the applicant demonstrates either: 1) no most preferred locations exist within 1,000 feet from the proposed site; or 2) any available most preferred locations within 1,000 feet from the proposed site would be technically infeasible.

2. Location Preferences.

    i. Most Preferred Locations include:

        1. Industrial Zones
        2. Commercial Zones (except C34 & C35)
        3. Special Purpose Zones

    ii. Least Preferred Locations include:

        1. Rural Zones
        2. Commercial Zones C34 & C35
        3. Residential Zones

3. SCWs in the right-of-way shall not be located within 1,000 feet of schools, child care centers, hospitals, or religious facilities. Distance, without regard to intervening structures, shall be a straight line measured from the closest property lines.

4. In addition to the location preferences above, SCWs are encouraged to locate in the public right-of-way.

5. SCWs with a proposed location in the public right-of-way shall be classified by the same zoning district as that of the nearest adjacent parcel. Form Based Code or Fallbrook Village Code Zoning Districts shall follow the most similar zoning district from lists above, based on the approved uses.

6. When located on private property, SCWs shall comply with all minimum zoning setback requirements.

7. Configuration. To better assist applicants, minimize clutter, and limit other impacts to aesthetics and community character, subsection A.8. below sets out listed preferences for configurations of SCWs. Applications that involve configurations in subsections 8.i.4., 8.i.5.,

or 8.i.6. may be approved so long as the applicant demonstrates either: 1) no preferred configurations in subsection 2.i.1. or subsection 2.i.2. exist within 1,000 feet from the proposed site; or 2) any available structures in subsections 8.i.1., 8.i.2., or 8.i.3. within 1,000 feet from the proposed site would be technically infeasible.

8. Configuration Preferences.

    i. Wherever possible, a SCW shall be installed in one of the following configurations, ordered from most to least preferred.

        1. Co-location with an existing facility
        2. Existing or replacement utility poles
        3. Existing or replacement structure, or roof-mounted in Industrial & Commercial Zones only
        4. County-owned street light poles
        5. County-owned traffic signals
        6. New utility poles

    ii. SCWs shall not be placed on decorative poles.

    iii. SCWs permitted on existing structures shall be co-located where possible, provided, however, that no more than two (2) SCWs shall be co-located on the same structure. SCWs shall be constructed and sited to accommodate the future co-location of up to one (1) additional facilities.

9. Visual Separation Requirements for New Structures. Wherever possible, no two SCWs owned by the same provider shall be located within 500 feet of one another in Most Preferred Locations, or within 1,000 feet of one another in Least Preferred Locations in order to minimize clutter and other impacts to aesthetics and community character within the right of way.

10. New or replacement structures required to support SCWs and related fixed equipment shall not be located within the recommended clear recovery zone alongside County roadways.

11. New structures and related fixed equipment shall not impede sight distance at intersections or driveways for all roadway users based on County Public Road Standards.

12. SCWs on new and related structures shall not impair pedestrian use of sidewalks or pathways, shall be designed and sited in compliance with all Americans with Disabilities Act (ADA) accessibility requirements, and shall not inhibit equestrian activities on designated public or private trail systems.

13. All SCWs shall be built in compliance with the Americans with Disabilities Act (ADA).

14. Height:

    i. When a SCW is attached or mounted on a structure, the least restrictive of the following height requirements shall apply:

        1. The combined height of the structure and SCW shall not exceed 50 feet (including antennas).
        2. The combined height of the structure and SCW can be no more than 10 percent greater in height than other structures located within 100 feet.
        3. The combined height of the structure and SCW shall not increase the height of the original structure by more than 10 percent.

    ii. Any SCW shall not increase the height of an existing facility.

15. Undergrounding. With the exception of antennas, electrical meters, and any other equipment that must be placed above ground to function, all SCW equipment must be undergrounded unless the applicant can demonstrate that undergrounding is technically infeasible.

16. Design.

    i. SCWs shall be designed to visually and operationally blend into the surrounding area and shall be the same or similar color as the facility or structure to which they are attached. New structures are required to visually blend in and match existing poles in a neighborhood.

    ii. SCWs shall comply with the Design Regulations contained in Section 6987 of this Zoning Ordinance, Subsections C, D, E, F, G, H, J, and M.

B. Operational and Maintenance Standards

1. SCWs shall be placed in operation only after receipt of post-inspection approval.

2. Noise. Noise from any equipment supporting the SCW shall meet the requirements of the County's Noise Ordinance on an average hourly basis.

3. Plant Disturbance. The applicant shall avoid disturbance to the natural landscape and existing vegetation. All vegetation disturbed during project construction shall be replanted with compatible vegetation and soils disturbed by development shall be reseeded to control erosion.

4. Signage. No signs, striping, graphics or other attention getting devices are permitted on SCWs and supporting structures, except for warning and safety signage.

5. Compliance with Law. All SCWs must be designed and sited in compliance with all applicable federal, state and local laws, regulations, rules, restrictions and conditions, which

includes without limitation the California Building Standards Code, General Plan and any applicable specific plan, the County of San Diego Municipal Code, the Federal Communications Commission Rules and Regulations, and any conditions or restrictions in any permit or other governmental approving issued by any public agency with jurisdiction over the facility.

6. Continuous Compliance. Wireless communications service providers and their operational SCWs must comply at all times with conditions of approval, this code, and all other applicable standards and laws. Failure to comply with a condition, standard or law is grounds for possible revocation pursuant to this code.

7. Removal. The removal of an existing SCW shall comply with Section 6989 of this ordinance. In addition, SCWs removed by the County shall be stored for no less than fifteen (15) days and thereafter may be disposed of by public auction, if deemed to be of value by the County, or otherwise permitted by law. The SCW provider shall provide the County with a copy of the discontinuation notice sent to the California Public Utilities Commission (CPUC) or Federal Communications Commission (FCC).

C. Small Cell Wireless Permit Application Contents

All SCW application requirements listed below shall be evaluated and signed by one or more of the following: Licensed Architect, Licensed Contractor, Licensed Engineer, and/or Licensed Surveyor.

1. Scope of Work: Applicant shall submit a scope of work with sufficient detail to determine compliance with the requirements set forth below.

2. Structural Evaluation: Applicant shall submit a structural pole evaluation completed by a Licensed Civil Engineer or Licensed Contractor prior to placing a SCW on any County-owned utility pole, street light, or traffic signal.

3. Site Agreement: Applicant shall submit a written authorization signed by the structure owner authorizing the applicant to place a SCW on the structure.

4. Traffic Control Plan: Applicant shall submit a traffic control plan completed by a Licensed Civil Engineer or Licensed Contractor prior to installing an aboveground SCW on any County-maintained road.

5. Fire Service. Applicant shall submit evidence of compliance with Fire Policy FP-2 or a service letter from the applicable fire district.

6. Notice. Any application for a new or co-located SCW shall include evidence of compliance with the following notice requirements:

    i. A notice of intent to request a permit for a new SCW shall be provided to all property owners within 500 feet of the proposed facility within 10 days of the submittal of a request.

ii. A notice of intent to request a permit for a new SCW shall be provided to any applicable community planning or sponsor group where the proposed facility within 10 days of the submittal of a request.

iii. The notice contents shall comply with the requirements set forth by the County.

6993 SCW APPLICATION PROCESSING

A. Any SCW Permit application that proposes to co-locate on an existing approved Tier 1, Tier 2, Tier 3, or Tier 4 facility described below shall not require any further discretionary review if it complies with the application requirements of Section 6992.

B. Applications will be processed pursuant to the shot clocks outlined in Federal and State regulations.

C. Any permit issued under this section is subject to the validity of the FCC Declaratory Ruling and Third Report and Order adopted September 26, 2018 (FCC 18-133). All SCWs shall be deactivated within 30 days from the date the FCC Ruling is repealed or overturned and shall be removed within 12 months.

D. Any permit issued under this section shall expire and become null and void if the work authorized by the permit is not completed within 90 days from the approval date. Upon permit expiration, the permit automatically terminates. An expiration extension may be issued for an additional 90 days with evidence that substantial progress has been made.

E. Prior to July 1 of every calendar year, each SCW provider shall submit documentation identifying the location of each SCW in the right-of-way of the unincorporated County. The documentation shall include SCWs that are approved, but not yet built, SCWs that are currently operating, and locations containing non-operating SCWs. A current certificate of insurance must be provided for all approved, built, and operating SCWs.

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Attachment B – An Ordinance Amending the San Diego County Zoning Ordinance Related to Small Cell Wireless Facilities (POD 17-004) (STRIKE-OUT/UNDERLINE COPY)

POD-19-003 **ATTACHMENT B**

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(~~Double strikeout~~ indicates moved to new section) Information Copy

ORDINANCE NO. _____ (NEW SERIES)

AN ORDINANCE AMENDING THE SAN DIEGO COUNTY ZONING ORDINANCE RELATED TO SMALL CELLL WIRELESS FACILITIES.

The Board of Supervisors of the County of San Diego ordains as follows:

Section 6980 is amended to read as follows:

6980 WIRELESS TELECOMMUNICATIONS FACILITIES

6981 CONFLICT RESOLUTION

Sections 6980 – ~~6991~~6993 are intended to be supplemental to the Zoning Ordinance. In case of conflict between the provisions represented in these sections and the provisions set forth in the Zoning Ordinance, the provisions of these sections shall apply.

6982 PURPOSE

[NO CHANGES]

6983 DEFINITIONS

For the purpose of the Wireless Telecommunications Facilities regulations contained in Sections 6980 through ~~6991~~6993, certain abbreviations, terms and words shall be used, interpreted and defined as set forth in this Section. Unless the context clearly indicates to the contrary, words used in the present tense include the future tense and words used in the plural indicate the singular.

a. Administrative Site Plan – A Site Plan, pursuant to Sections 7150 through 7174 of this Ordinance, that does not require community review except as noted in Section 6987 A of this Ordinance.

   Antenna – Any system of wires, poles, rods, reflecting discs or similar devices designed for telephonic, radio, facsimile, data or television communications through sending and/or receiving of electromagnetic waves when such system is either external to or attached to the exterior of a structure. Antennas shall include, but not be limited to, devices having active elements extending in any direction, and directional beam-type arrays having elements carried by and disposed from a generally horizontal boom that may be mounted up and rotated through a vertical mast or tower interconnecting the boom and antenna support, all of which elements are deemed to be part of the antenna.

   Antenna Height – The vertical distance measured from the ground surface at grade to the tip of the highest point of the proposed structure.

Antenna Support – Any pole, telescoping mast, tower tripod or any other structure that supports a device used in the transmitting and/or receiving of electromagnetic waves.

Applicant – A person who applies for a wireless facility siting. An applicant can be the owner of the property or someone who is representing the owner, such as a builder, developer, optional purchaser, lessor, consultant or architect.

c. Camouflaged – Any telecommunications facility that is designed to blend into the surrounding environment. Examples of camouflaged facilities may include architecturally screened roof-mounted antennas, building-mounted antennas painted to match the existing structure, antennas integrated into architectural elements, towers made to look like trees and antenna structures designed to look like light poles. Camouflaged facilities may be considered low or high visibility depending on the type of facility, degree of camouflaging and compatibility with the surrounding existing environment (see definitions of low and high visibility).

Co-location – Locating wireless telecommunications equipment from more than one provider on a single site.

Commercial Zones - are defined as consisting of the following zones: C32, C34, C35, C36, C37, C38, C40, C42, and C44, and also S88 when the proposed site is in a commercial component of a Specific Plan.

Community Character – Those unique attributes including, but not limited to, architecture, historical and cultural features, historical development patterns, landscape, hardscape and the size, scale and spacing of buildings and other structures that define a community's identity.

d. Decorative pole – Any pole that includes decorative or ornamental features, design elements and/or materials intended to enhance the appearance of the pole or the public right-of-way in which the pole is located.

e. Equipment Building, Shelter or Cabinet – A cabinet or building used to house equipment used by telecommunication providers at a facility.

f. Façade Mounted Antenna – An antenna architecturally integrated into the façade of a building or structure.

Facility – See Wireless Telecommunications Facility.

Faux Trees – A term used to refer to Monopalms, Monopines and other camouflaged monopoles made to resemble different types of trees.

g. Grade – The lowest point of elevation of the finished surface of the ground, paving or sidewalk within the area between the structure and the property line or, when the property line is more than 5 feet from the structure, between the structure and a line 5 feet from the structure.

Guyed Tower – A telecommunications tower that is supported, in whole or in part, by guy wires and ground anchors.

h. High Visibility – The following shall be considered High Visibility facilities:

1. Monopoles, lattice towers and guyed towers

2. Non-camouflaged facilities

3. Faux Trees

4. Any and all wireless facilities not defined as invisible or low visibility.

5. High Voltage Transmission Tower – a tower carrying transmission lines of at least 132 kilovolts.

i. Industrial Zones – are defined as consisting of the following zones: M50, M52, M54, M56, M58, and also S88 when the proposed site is in an industrial component of a Specific Plan.

j. Invisible – Facilities, including, but not limited to towers, antennas and equipment cabinets and any other ancillary equipment, that cannot be seen from any street and from all adjacent properties and that do not result in any apparent architectural changes or additions, including Community Identification Signs when the antennas are fully integrated into the sign. The addition of landscaping, walls, fences or grading as screening techniques does not meet the definition of invisible.

k. Lattice Tower – A guyed or self-supporting three or four sided, open, steel frame support structure used to support telecommunications equipment.

l. Low Visibility – the following shall be considered Low Visibility facilities if they do not exceed the height schedule pursuant to Sections 4610 - 4620 of this Ordinance:

m. Monopalm – a monopole camouflaged to resemble a palm tree.

Monopine – a monopole camouflaged to resemble a pine tree.

Monopole – A wireless communication facility consisting of a single pole constructed without guy wires and ground anchors.

p. Panel Antenna - An antenna or array of antennas designed to concentrate a radio signal in a particular area. Also called directional antennas.

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Provider – Means a provider of wireless communications services that owns or controls all the elements necessary to sell and deliver services to an end user including radio spectrum allocation, wireless network infrastructure, back haul infrastructure, billing, customer care, provisioning computer systems and marketing and repair organizations.

Public Safety Communications facilities: Telecommunications facilities operated and maintained by public agencies that support Public Safety Communications Systems, which provide wireless communications to law enforcement, fire services, emergency medical services, and other public safety/service agencies. These facilities are considered Essential Services pursuant to Section 1335.

r. Residential Zones – for purposes of this section, are defined as consisting of the following zones: RS, RD, RR, RM, RV, RU, RMH, RRO, RC, S80, S90, C30, C31, C46 and also S88 when the proposed site is in a residential component of a Specific Plan.

Roof Mounted Antenna – Any antenna with its support structure placed directly on the roof of any building or structure.

Rural Zones – are defined as consisting of the following zones: A70, A72, S81 and S92.

s. School – An institution of learning for minors, whether public or private, which offers instruction in those courses of study required by the California Education Code or which is maintained pursuant to standards set by the State Board of Education. This definition includes a kindergarten, elementary school, junior high school, senior high school, or any special institution of learning under the jurisdiction of the State Department of Education, but does not include a trade, vocational or professional institution or an institution of higher education, including a community or junior college, college or university.

Service Area – The area served by a single telecommunications facility.

Service Network – The telecommunications transmission system operated by a service provider in a community or jurisdiction.

Shot Clock – Means the review time requirements established by Federal or State regulations.

Special Purpose Zones - are defined as consisting of the following zones: S82, S86, S94 and Solid Waste Facility.

Small Cell Wireless ~~Facilities~~ Facility (SCW) – ~~are facilities~~ A wireless telecommunication facility and all related equipment, where ~~each~~ the antenna ~~shall be~~ is no more than three cubic feet in volume~~.~~ ~~The wireless equipment and any pre-existing associated equipment on the structure must be~~ and all other related equipment on the structure is no more than 28 cubic feet in volume. ~~Small wireless facilities shall be mounted on new or existing structures in the public right-of-way. Small wireless~~

~~facilities are also permitted on private property when attached to existing public utility poles or existing permitted telecommunication facilities.~~ This term also applies to any Micro Wireless Facility meaning a wireless telecommunications facility where it is not larger in dimension than 36" in length, 18" in width and 12" in height, does not have an exterior antenna which is longer than 11 ½", and are installed directly onto existing overhead cables owned by telecommunications providers.

Structure – A pole, tower, base station, or other building, whether or not it has an existing facility, that is used or to be used for the provision of personal wireless service (whether on its own or comingled with other types of services) or other such facilities as defined in 47 C.F.R. § 1.6002(m).

t. Telecommunications – The transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received.

Telecommunications Tower - Any mast, pole, monopole, guyed tower, lattice tower, free standing tower or other structure designed and primarily used to support antennas.

Tower – See Telecommunications Tower

Travel Way – That portion of the right-of-way used for the movement of vehicles, people, equestrians, and goods, including travel lanes, curb and gutter, on-street parking spaces, bike lane facilities, travel lanes, turning lanes within the public ROW, sidewalks, shoulders, and pathways.

u. Utility pole – Any above-ground pole used to support electrical, telephone, cable, and internet wires.

w. Whip Antenna – An antenna that transmits signals in 360 degrees. Whip antennas are typically cylindrical in shape and are less than 3 inches in diameter and measure up to 6 feet in length, including the mounting. Also called omni-directional, stick or pipe antennas.

Wireless Community Master Plan – a Master Plan of preferred sites and designs for wireless facilities for a defined geographic area prepared in cooperation with one or more wireless service providers; formally submitted by the community planning group or sponsor group or by a homeowners association representing at least 4,000 residents and at least 5,000 acres to the Director; reviewed by the Director for such issues as aesthetics and community compatibility; and following public review, approved by the Director. A Community Master Plan can be applicable to all providers or to selected providers as defined in the Plan.

Wireless Telecommunications Facility – Any facility that transmits and/or receives electromagnetic waves, including, but not limited to, antennas, dish antennas and other types of equipment for the transmission or receipt of such signals, telecommunications towers or similar structures supporting said equipment, equipment buildings, parking area and other accessory development. Also known as a wireless communications facility.

This definition does not apply to Amateur Radio Stations as defined by the Federal Communications Commission, Part 97 of the Commission's Rules nor to TV and radio transmission facilities, nor to Public Safety Communications facilities.

(Added by Ord. 9549 (N.S.) adopted 4-30-03)
(Amended by Ord. No. 10162 (N.S.) adopted 8-3-11)
(Amended by Ord. No. 10222 (N.S.) adopted 9-25-12. Opr. 11-26-12)
(Amended by Ord. No. 10359 (N.S.) adopted 10-29-14)

~~6984.A NON-DISCRETIONARY PERMIT REQUIREMENTS~~

~~Small cell wireless facilities located within the public right-of-way or on private property and attached to new or existing utility poles shall be processed as non-discretionary permits. Plans submitted for non-discretionary review shall comply with the following requirements:~~

~~A. A detailed site plan with sufficient detail to determine compliance with the requirements set forth below shall be submitted.~~

~~B. Small cell wireless facilities on existing poles or structures shall be designed to visually and operationally blend into the surrounding area and shall be the same or similar color as the facility or structure to which they are attached.~~

~~C. Small cell wireless facilities on new poles or structures shall be an earth tone color that blends with the surrounding environment and shall not be reflective or otherwise painted to attract attention.~~

~~D. Small cell wireless facilities on new or existing poles or structures and related equipment shall not impair pedestrian use of sidewalks or pathways, shall be designed and sited in compliance with all ADA (Americans with Disabilities Act) accessibility requirements, and shall not inhibit equestrian activities on designated public or private trail systems.~~

~~E. Small cell wireless facility equipment on new or existing poles or structures and related fixed equipment shall not be located within the recommended clear recovery zone alongside County roadways and shall not impede sight distance at intersections or driveways for all roadway users based on County Public Road Standards for these requirements.~~

~~F. No net loss in required parking spaces shall occur as a result of the installation of any small cell wireless facility.~~

~~G. Height: A small cell wireless facility shall comply with the following height requirements, whichever is least restrictive:~~

~~1. no taller than 50 feet (including their antennas),~~

~~2. no more than 10 percent taller than other structures in the area within 100 feet,~~

~~3. or, where the small cell wireless facility is affixed to an existing structure, that structure is not extended in height by more than 10 percent as a result of the deployment.~~

~~4. A small cell wireless facility allowed by Section 6985.a shall not increase the height of an existing telecommunications facility.~~

H. ~~When located on private property, small cell wireless facilities shall comply with all zoning requirements.~~

6984.~~B DISCRETIONARY~~ WIRELESS FACILITY APPLICATION REQUIREMENTS — NON-SCW

[NO CHANGES]

~~6985.A NON-DISCRETIONARY APPLICATION PROCESSING~~

~~Any small cell permit application that proposes to colocate on an existing approved Tier 1, Tier 2, Tier 3, or Tier 4 facility described below shall not require any further discretionary review if it complies with the application requirements of Section 6984.A.~~

6985.~~B DISCRETIONARY~~ WIRELESS FACILITY APPLICATION PROCESSING — NON-SCW APPLICATIONS

Although a tier may be assigned at project intake, a re-evaluation of the project tier may occur at any point in the process, including, but not limited to, review by the Planner, Environmental Analyst or Hearing Officer.

A. Applications will be processed based upon the following 4-tier permitting system, subject to the exceptions and general regulations found in Sections 6985 B and C:

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TIER 1 – ADMINISTRATIVE SITE PLAN

Facilities meeting any of the following criteria shall be processed as an ADMINISTRATIVE SITE PLAN:

Industrial and Commercial Zones

- Invisible facilities
- Facilities on:
  - CALTRANS structures, “cobra-style” streetlights and poles in the public right of way, or an existing park and ride light standard, when they meet all the following:
    - The antennas do not project more than 24 inches above the structure,
    - No more than a total of two antennas are located on a site
    - The equipment cabinet is no larger than 6 cubic feet.
    - The equipment cabinet is concealed from public view through the use of undergrounding or screening by means other than walls or fences.
- Façade mounted antennas integrated into the architecture in such a manner that no change to the architecture is apparent and no part of the facility can be seen from public view.
- Facilities not subject to the “B”, “D”, “H” or “J” Designators and are:
  - Hidden from public view through the use of architectural treatments (cupolas, etc.); and
  - Consistent with the existing building and community character.

Any Zone

- Antennas located on high voltage transmission towers if they increase the bulk and scale of the structure by less than 5 percent.

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TIER 2 – SITE PLAN WITH COMMUNITY REVIEW

Facilities meeting any of the following criteria shall be processed as a SITE PLAN WITH COMMUNITY REVIEW:

Commercial, Industrial and Special Purpose Zones

- Low visibility facilities.

All Zones

- Facilities covered by a Wireless Community Master Plan when the design and siting are consistent with the plan.

TIER 3 – MINOR USE PERMIT

Facilities meeting any of the following criteria shall be processed as a MINOR USE PERMIT:

- All facilities other than those meeting the criteria of Tiers 1, 2, or 4.

TIER 4 – MAJOR USE PERMIT

Facilities meeting the following criteria shall be processed as a MAJOR USE PERMIT:

- Non-camouflaged towers greater than 60 feet, or 15 feet above the maximum allowed height limit in the zone, whichever is lower, shall require a Major Use Permit in all zones (except where they are prohibited).
- All facilities in Residential and Rural zones except as specified in Tiers 1 and 2.

B. Exceptions

1. In addition to all other requirements in Sections 6980 through 6991, any proposed facility on a structure currently subject to a Major or Minor Use Permit shall obtain approval of the facility through the modification of the permit in accordance with Section 7378 of this Ordinance for a Use Permit or by Minor Deviation in accordance with Section 7609 of this Ordinance when the facility is invisible.

2. Major Use Permits for Wireless Telecommunications Facilities shall be under the original jurisdiction of the Planning Commission.

C. General Regulations

1. Non-camouflaged monopoles, lattice towers and guyed towers are prohibited in Residential and Rural zones.

2. All buildings and structures built to contain equipment accessory to a facility may not exceed 10 feet in height measured from the base of the foundation unless a greater height is necessary to maximize architectural integration and shall be screened by landscaping.

3. No more than three facilities are allowed on any site or parcel in commercial, industrial, rural or special purpose zones. No more than one facility is allowed on any parcel or site in a Residential zone. This requirement may be waived by the Director if a finding is made that co-location of more facilities is consistent with community character.

4. Telecommunications towers located adjacent to a residential use shall be set back from the nearest residential lot line by a distance at least equal to its total height or 50 feet, whichever is greater. The setback shall be measured from that part of the tower that is closest to the neighboring property (i.e., the setback for a faux tree would be measured from the end of the branch closest to the neighboring property).

5. No tower or equipment shall be located in a front, rear or side yard setback in any zone and no portion of any antenna array shall extend beyond the property lines.

6. Noise from any equipment supporting the facility shall meet the requirements of the County's Noise Ordinance on an average hourly basis.

7. The Director may grant an exemption from the requirement to process a Site Plan permit pursuant to Section 7156 of this Ordinance if he or she finds that all of the purposes and requirements of the Site Plan have been or will be fulfilled by another discretionary permit, or where the Director finds the proposed development or improvement is minor in nature and that the public purpose for which the Site Plan permit would normally be required will not be

harmed by granting a Site Plan permit exemption. The Director's decision may be appealed pursuant to Section 7200 of this Ordinance.

8. All facilities located on a utility pole shall be promptly removed at the operator's expense at the time a utility is scheduled to be undergrounded.

9. Maintenance vehicles servicing facilities located in the public or private right of way shall not park on the traveled way or in a manner that would obstruct traffic.

10. Equipment cabinets and antenna structures shall be secured to disallow unauthorized access.

11. Use Permits for high visibility facilities shall have a maximum term of 6 years for facilities valued at less than $10,000; 10 years for facilities valued from over

12. $10,000 to $500,000; and 15 years for facilities valued at $500,000 or more. This may be extended for an additional period of time by modifying the permit if it is found that no smaller or less visible technology is available or feasible to replace the facility.

13. As a condition of approval, prior to use of the facility, submit evidence, such as photos, to the satisfaction of the Director to show proof that the facility is in conformance with photo simulations provided pursuit to Section 6984 (B) of this Ordinance.

14. Applications will be processed pursuant to the shot clocks outlined in Federal and State regulations.

6986 PREFERRED SITES – NON-SCW APPLICATIONS

[NO CHANGES]

6987 DESIGN REGULATIONS – NON-SCW APPLICATIONS

[NO CHANGES]

6988 MAINTENANCE

[NO CHANGES]

6989 ABANDONMENT OR DISCONTINUATION OF USE

[NO CHANGES]

6990 REVOCATION

[NO CHANGES]

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6991 AMORTIZATION OF HIGH VISIBILITY FACILITIES IN RESIDENTIAL AND RURAL ZONES

[NO CHANGES]

6992 SMALL CELL WIRELESS FACILITY APPLICATION REQUIREMENTS

Wireless Telecommunication Facility permit applications which meet the Small Cell Wireless ~~facilities located within the public right-of-way or on private property and attached to new or existing utility poles~~ Facility (SCW) definition shall be processed ~~as non-discretionary permits. Plans submitted for non-discretionary review shall comply with the following requirements~~ according to the following standards:

A. Development Standards

1. Location. To better assist applicants, minimize clutter, and limit other impacts to aesthetics and community character, subsection A.2. below sets out listed preferences for locations of SCWs. Applications that involve least preferred locations may be approved so long as the applicant demonstrates either: 1) no most preferred locations exist within 1,000 feet from the proposed site; or 2) any available most preferred locations within 1,000 feet from the proposed site would be technically infeasible.

2. Location Preferences.

    i. Most Preferred Locations include:

        1. Industrial Zones
        2. Commercial Zones (except C34 & C35)
        3. Special Purpose Zones

    ii. Least Preferred Locations include:

        1. Rural Zones
        2. Commercial Zones C34 & C35
        3. Residential Zones

3. SCWs in the right-of-way shall not be located within 1,000 feet of schools, child care centers, hospitals, or religious facilities. Distance, without regard to intervening structures, shall be a straight line measured from the closest property lines.

4. In addition to the location preferences above, SCWs are encouraged to locate in the public right-of-way.

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5. SCWs with a proposed location in the public right-of-way shall be classified by the same zoning district as that of the nearest adjacent parcel. Form Based Code or Fallbrook Village Code Zoning Districts shall follow the most similar zoning district from lists above, based on the approved uses.

6. When located on private property, ~~small cell wireless facilities~~ SCWs shall comply with all minimum zoning setback requirements.

7. Configuration. To better assist applicants, minimize clutter, and limit other impacts to aesthetics and community character, subsection A.8. below sets out listed preferences for configurations of SCWs. Applications that involve configurations in subsections 8.i.4., 8.i.5., or 8.i.6. may be approved so long as the applicant demonstrates either: 1) no preferred configurations in subsection 2.i.1. or subsection 2.i.2. exist within 1,000 feet from the proposed site; or 2) any available structures in subsections 8.i.1., 8.i.2., or 8.i.3. within 1,000 feet from the proposed site would be technically infeasible.

8. Configuration Preferences.

    i. Wherever possible, a SCW shall be installed in one of the following configurations, ordered from most to least preferred.

        1. Co-location with an existing facility
        2. Existing or replacement utility poles
        3. Existing or replacement structure, or roof-mounted in Industrial & Commercial Zones only
        4. County-owned street light poles
        5. County-owned traffic signals
        6. New utility poles

    ii. SCWs shall not be placed on decorative poles.

    iii. SCWs permitted on existing structures shall be co-located where possible, provided, however, that no more than two (2) SCWs shall be co-located on the same structure. SCWs shall be constructed and sited to accommodate the future co-location of up to one (1) additional facilities.

9. Visual Separation Requirements for New Structures. Wherever possible, no two SCWs owned by the same provider shall be located within 500 feet of one another in Most Preferred Locations, or within 1,000 feet of one another in Least Preferred Locations in order to minimize clutter and other impacts to aesthetics and community character within the right of way.

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10. ~~Small cell wireless facility equipment on~~ new or ~~existing poles or~~ replacement structures required to support SCWs and related fixed equipment shall not be located within the recommended clear recovery zone alongside County roadways.

11. New structures and related fixed equipment ~~and~~ shall not impede sight distance at intersections or driveways for all roadway users based on County Public Road Standards ~~for these requirements~~.

12. ~~Small cell wireless facilities~~ SCWs on new ~~or existing poles or structures~~ and related ~~equipment~~ structures shall not impair pedestrian use of sidewalks or pathways, shall be designed and sited in compliance with all ADA (Americans with Disabilities Act) accessibility requirements, and shall not inhibit equestrian activities on designated public or private trail systems.

13. All SCWs shall be built in compliance with the Americans with Disabilities Act (ADA).

14. Height:

    i. ~~A small cell wireless facility shall comply with the following height requirements, whichever is least restrictive:~~ When a SCW is attached or mounted on a structure, the least restrictive of the following height requirements shall apply:

        1. ~~no taller than~~ The combined height of the structure and SCW shall not exceed 50 feet (including antennas),

        2. The combined height of the structure and SCW can be no more than 10 percent ~~taller~~ greater in height than other structures ~~in the area~~ located within 100 feet,

        3. ~~or, where the small cell wireless facility is affixed to an existing structure, that structure is not extended in height~~ The combined height of the structure and SCW shall not increase the height of the original structure by more than 10 percent ~~as a result of the deployment~~.

    ii. ~~A small cell wireless facility allowed by Section 6985.a~~ Any SCW shall not increase the height of an existing ~~telecommunications~~ facility.

15. Undergrounding. With the exception of antennas, electrical meters, and any other equipment that must be placed above ground to function, all SCW equipment must be undergrounded unless the applicant can demonstrate that undergrounding is technically infeasible.

16. Design.

i. ~~Small cell wireless facilities on existing poles or structures~~ SCWs shall be designed to visually and operationally blend into the surrounding area and shall be the same or similar color as the facility or structure to which they are attached. New structures are required to visually blend in and match existing poles in a neighborhood.

~~Small cell wireless facilities on new poles or structures shall be an earth tone color that blends with the surrounding environment and shall not be reflective or otherwise painted to attract attention.~~

~~No net loss in required parking spaces shall occur as a result of the installation of any small cell wireless facility.~~

ii. SCWs shall comply with the Design Regulations contained in Section 6987 of this Zoning Ordinance, Subsections C, D, E, F, G, H, J, and M.

B. Operational and Maintenance Standards

1. SCWs shall be placed in operation only after receipt of post-inspection approval.

2. Noise. Noise from any equipment supporting the SCW shall meet the requirements of the County's Noise Ordinance on an average hourly basis.

3. Plant Disturbance. The applicant shall avoid disturbance to the natural landscape and existing vegetation. All vegetation disturbed during project construction shall be replanted with compatible vegetation and soils disturbed by development shall be reseeded to control erosion.

4. Signage. No signs, striping, graphics or other attention getting devices are permitted on SCWs and supporting structures, except for warning and safety signage.

5. Compliance with Law. All SCWs must be designed and sited in compliance with all applicable federal, state and local laws, regulations, rules, restrictions and conditions, which includes without limitation the California Building Standards Code, General Plan and any applicable specific plan, the County of San Diego Municipal Code, the Federal Communications Commission Rules and Regulations, and any conditions or restrictions in any permit or other governmental approving issued by any public agency with jurisdiction over the facility.

6. Continuous Compliance. Wireless communications service providers and their operational SCWs must comply at all times with conditions of approval, this code, and all other applicable standards and laws. Failure to comply with a condition, standard or law is grounds for possible revocation pursuant to this code.

7. Removal. The removal of an existing SCW shall comply with Section 6989 of this ordinance. In addition, SCWs removed by the County shall be stored for no less than fifteen (15) days and thereafter may be disposed of by public auction, if deemed to be of value by the County, or otherwise permitted by law. The SCW provider shall provide the County with a copy of the discontinuation notice sent to the California Public Utilities Commission (CPUC) or Federal Communications Commission (FCC).

C. Small Cell Wireless Permit Application Contents

All SCW application requirements listed below shall be evaluated and signed by one or more of the following: Licensed Architect, Licensed Contractor, Licensed Engineer, and/or Licensed Surveyor.

1. ~~A detailed site plan~~ Scope of Work: Applicant shall submit a scope of work with sufficient detail to determine compliance with the requirements set forth below ~~shall be submitted~~.

2. Structural Evaluation: Applicant shall submit a structural pole evaluation completed by a Licensed Civil Engineer or Licensed Contractor prior to placing a SCW on any County-owned utility pole, street light, or traffic signal.

3. Site Agreement: Applicant shall submit a written authorization signed by the structure owner authorizing the applicant to place a SCW on the structure.

4. Traffic Control Plan: Applicant shall submit a traffic control plan completed by a Licensed Civil Engineer or Licensed Contractor prior to installing an aboveground SCW on any County-maintained road.

5. Fire Service. Applicant shall submit evidence of compliance with Fire Policy FP-2 or a service letter from the applicable fire district.

6. Notice. Any application for a new or co-located SCW shall include evidence of compliance with the following notice requirements:

    i. A notice of intent to request a permit for a new SCW shall be provided to all property owners within 500 feet of the proposed facility within 10 days of the submittal of a request.

    ii. A notice of intent to request a permit for a new SCW shall be provided to any applicable community planning or sponsor group where the proposed facility is within 10 days of the submittal of a request.

    iii. The notice contents shall comply with the requirements set forth by the County.

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6993 SCW APPLICATION PROCESSING

A. Any ~~small cell~~ SCW permit application that proposes to co-locate on an existing approved Tier 1, Tier 2, Tier 3, or Tier 4 facility described below shall not require any further discretionary review if it complies with the application requirements of Section ~~6984.A~~ 6992.

B. Applications will be processed pursuant to the shot clocks outlined in Federal and State regulations.

C. Any permit issued under this section is subject to the validity of the FCC Declaratory Ruling and Third Report and Order adopted September 26, 2018 (FCC 18-133). All SCWs shall be deactivated within 30 days from the date the FCC Ruling is repealed or overturned and shall be removed within 12 months.

D. Any permit issued under this section shall expire and become null and void if the work authorized by the permit is not completed within 90 days from the approval date. Upon permit expiration, the permit automatically terminates. An expiration extension may be issued for an additional 90 days with evidence that substantial progress has been made.

E. Prior to July 1 of every calendar year, each SCW provider shall submit documentation identifying the location of each SCW in the right-of-way of the unincorporated County. The documentation shall include SCWs that are approved, but not yet built, SCWs that are currently operating, and locations containing non-operating SCWs. A current certificate of insurance must be provided for all approved, built, and operating SCWs.

Attachment C – Implementation Options Summary Report

ATTACHMENT C

Implementation Options Summary Report

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Section 1: Location and Design

RESIDENTIAL AREAS

Location & Design

PROJECT OPTIONS

Consider establishing distance requirements from residential zones.

Staff Recommendation: Not Recommended

Option: Establish Distance Requirement from Residential

To address community concerns, establish distance requirements from residences.

LANGUAGE TO CONSIDER

Staff Recommendation

Not recommended.

Option (6992.A.2.iii)

SCWs located adjacent to a residential zone shall be set back from the nearest residential lot line by a distance of XXX feet. The setback shall be measured from that part of the SCW that is closest to the neighboring property.

DIRECTION REQUESTED

Adopt the staff recommendation.

ATTACHMENT C

SITE AVOIDANCE

Location & Design

PROJECT OPTIONS

Consider establishing distance requirements from certain sites due to safety and aesthetic concerns.

Staff Recommendation: Establish *1,000 ft.* Distance Requirement from Certain Areas
Proposed establishes distance requirements from schools, child care centers, hospitals, and religious facilities for facilities installed within the right-of-way.

Option: Modify Certain Areas to be Included
To address community concerns, proposed list of sites to avoid can be modified. This could include fire and Sheriff stations, shopping areas, and County Parks.

LANGUAGE TO CONSIDER

Staff Recommendation (6992.A.3.)

SCWs shall not be located within 1,000 feet of schools, child care centers, hospitals, or religious facilities.

Option (6992.A.3.)

SCWs shall not be located within 1,000 feet of XXX, XXX, XXX.

DIRECTION REQUESTED

Adopt the staff recommendation. Board could direct a different distance to be required.

ATTACHMENT C

VISUAL SEPARATION OF EXISTING STRUCTURES

Location & Design

PROJECT OPTIONS

Establish separation requirements for installations on existing structures and encourage co-location of facilities.

Staff Recommendation: Co-locate When Possible, Must Accommodate 2 Facilities
These preferences to minimize visual impacts in certain areas. They were established based on best practice review and wireless industry input.

Option 1: Establish Separation Requirements for Installations on Existing Structures Based on Provider
To address community concerns, SCWs *owned by the same provider* must be separated by 500 feet in most preferred zones, and 1,000 feet in least preferred zones, or at different distances.

Option 2: Establish Separation Requirements for Installations on Existing Structures, Regardless of Provider
To address community concerns, SCWs must be separated by 500 feet in most preferred zones, and 1,000 feet in least preferred zones, or at different distances.

LANGUAGE TO CONSIDER

Staff Recommendation (6992.A.8.iii.)
SCWs permitted on existing structures shall be co-located where possible, provided, however, that no more than two (2) SCWs shall be co-located on the same structure. SCWs shall be constructed and sited to accommodate the future co-location of up to one (1) additional facilities.

Option 1 (6992.A.8.iii.)
Wherever possible, no two SCWs shall be located within 500 feet of one another in Most Preferred Locations, or within 1,000 feet of one another in Least Preferred Locations in order to minimize clutter and other impacts to aesthetics and community character within the right of way.

Option 1 (6992.A.8.iii.)
Wherever possible, no two SCWs owned by the same provider shall be located within 500 feet of one another in Most Preferred Locations, or within 1,000 feet of one another in Least Preferred Locations in order to minimize clutter and other impacts to aesthetics and community character within the right of way.

DIRECTION REQUESTED
Adopt the staff recommendation. Board could direct a different distance to be required.

ATTACHMENT C

VISUAL SEPARATION OF NEW STRUCTURES

Location & Design

PROJECT OPTIONS

Establish separation requirements for new structures to minimize visual clutter.

Staff Recommendation: Establish Separation Requirements for Facilities Based on Provider
SCWs owned by the same provider must be separated by 500 feet in most preferred zones, and 1,000 feet in least preferred zones, or at different distances.

Option: Establish Separation Requirements for all New Facilities, Regardless of Provider
To address community concerns, SCWs must be separated by 500 feet in most preferred zones, and 1,000 feet in least preferred zones (regardless of provider), or at different distances.

LANGUAGE TO CONSIDER

Staff Recommendation (6992.A.9.)

Wherever possible, no two SCWs owned by the same provider shall be located within 500 feet of one another in Most Preferred Locations, or within 1,000 feet of one another in Least Preferred Locations in order to minimize clutter and other impacts to aesthetics and community character within the right of way.

Option (6992.A.9.)

Wherever possible, no two SCWs shall be located within 500 feet of one another in Most Preferred Locations, or within 1,000 feet of one another in Least Preferred Locations in order to minimize clutter and other impacts to aesthetics and community character within the right of way.

DIRECTION REQUESTED

Adopt the staff recommendation. Board could direct a different distance to be required.

Section 2: Compliance and Monitoring

ATTACHMENT C

SIGNAGE

Compliance & Monitoring

PROJECT OPTIONS

Establish signage requirements to reduce visual impacts.

Staff Recommendation: Warning and Safety Signage Only

No signs, striping, graphics or other attention getting devices are permitted on SCWs and supporting structures, except for warning and safety signage. Signage should be limited to reduce visual impacts.

Option: Establish Additional Signage Requirements

To address community concerns, require additional signage requirements with RF emissions levels posted on structure.

LANGUAGE TO CONSIDER

Staff Recommendation (6992.B.4.)

No signs, striping, graphics or other attention getting devices are permitted on SCWs and supporting structures, except for warning and safety signage.

Option (6992.B.4.)

All small wireless facilities must include signage that accurately identifies the site owner/operator, the owner/operator's site name or project number, a toll-free number to the owner/operator's network operations center, and the most recently recorded RF emission levels. No other signs, striping, graphics or other attention getting devices are permitted on SCWs and supporting structures, except for warning and safety signage.

DIRECTION REQUESTED

Adopt the staff recommendation.

ATTACHMENT C

BONDING

Compliance & Monitoring

PROJECT OPTIONS

Establish requirements for bonding.

Staff Recommendation: Not Recommended

Option: Require Bonding

To address community concerns, establish minimum bonding assurances.

LANGUAGE TO CONSIDER

Staff Recommendation

Not recommended.

Option (6992.B.8.)

Prior to permit issuance, the applicant or owner/operator of the SCW must pay for and provide a performance bond, which shall be in effect until all facilities are fully and completely removed and the site is reasonably returned to its original condition. The purpose of the bond is to cover the applicant's or owner/operator obligation under the conditions of approval. The bond coverage must include, but not be limited to, removal of the SCW, which includes without limitation all antennas, radios, batteries, generators, utilities, cabinets, mounts, brackets, hardware, cables, wires, conduits, structures, shelters, towers, poles, footings and foundations, whether above ground or below ground, constructed or installed in connection with the SCW, plus the cost to completely restore any areas affected by the removal work to a standard compliant with applicable laws. (The amount of the performance bond shall be set by the Director on a case-by case basis and in an amount reasonably related to the obligations required under this Chapter and all conditions of approval, and must be specified in the conditions of approval.)

DIRECTION REQUESTED

Adopt the staff recommendation.

ATTACHMENT C

MASTER PLAN INCENTIVE

Compliance & Monitoring

PROJECT OPTIONS

Establish expiration incentives for providers that provide a Master Plan.

Staff Recommendation: Not Recommended

Option: Incentivize Master Plans

To address community concerns, providers can provide a Master Plan which outlines the planned development pattern of SCWs. Current permits will expire in 10 years, this option would increase the expiration date to 15 years.

LANGUAGE TO CONSIDER

Staff Recommendation

Not recommended.

Option 1 (6993)

Permit terms shall be extended to 15 years for all sites included within a Master Plan provided by the applicant.

DIRECTION REQUESTED

Adopt the staff recommendation.

ATTACHMENT C

RF EMISSIONS CHECK

Compliance & Monitoring

PROJECT OPTIONS

Establish requirements for RF emissions report.

Staff Recommendation: Not Recommended

Option: Require RF Emissions Check

To address community concerns, require wireless providers to submit a RF emissions report with the permit application; provide funding for additional staff time and independent consultant review. This option would require additional staff time and funding.

LANGUAGE TO CONSIDER

Staff Recommendation

Not recommended.

Option 1 (6992.C.7.)

Documentation to verify that a SCW is operating in compliance with federal standards for radio frequency radiation in accordance with the Telecommunication Act of 1996 and subsequent amendments and any other requirements imposed by state or federal regulatory agencies shall be provided.

DIRECTION REQUESTED

Adopt the staff recommendation.

ATTACHMENT C

ANNUAL REPORTING

Compliance & Monitoring

PROJECT OPTIONS

Establish requirements for annual reports.

Staff Recommendation: Establish Annual Reporting for Site Locations and Insurance
Annual reporting allows the County to determine if facilities have been abandoned and ensures insurance is current.

Option: Establish Additional Annual Reporting Requirements
To address community concerns, require annual reporting of RF emissions.

LANGUAGE TO CONSIDER

Staff Recommendation (6993.E.)

Prior to July 1 of every calendar year, each SCW provider shall submit documentation identifying the location of each SCW in the unincorporated County. The documentation shall include SCWs that are approved, but not yet built, SCWs that are currently operating, and locations containing non-operating SCWs. A current certificate of insurance must be provided for all approved, but not yet built, and currently operating SCWs.

Option (6993.E.)

Prior to July 1 of every calendar year, each SCW provider shall submit documentation identifying the location of each SCW in the unincorporated County. The documentation shall include SCWs that are approved, but not yet built, SCWs that are currently operating, and locations containing non-operating SCWs. A current certificate of insurance must be provided for all approved, but not yet built, and currently operating SCWs. A RF emissions report must be provided for all currently operating SCWs.

DIRECTION REQUESTED

Adopt the staff recommendation.

Section 3: Public Input

ATTACHMENT C

PUBLIC NOTICING

Public Input

PROJECT OPTIONS

Establish public noticing requirements for installation of new facilities.

Staff Recommendation: Require Notification of CPGs and Neighbors within 500 feet
Wireless providers must send a notice of application to the corresponding CPSG and property owners within 500 feet, or at a different distance.

Option: Modify Distance of Notification
To address industry and community concerns, notification to property owners in proximity to the proposed site should be required at a modified the distance.

LANGUAGE TO CONSIDER

Staff Recommendation (6992.C.6.)

Any application for a new or co-located SCW shall include evidence of compliance with the following notice requirements:

i. A notice of application for a new SCW shall be provided to all property owners within 500 feet of the proposed facility within 10 days of the submittal of a request.

ii. A notice of intent to request a permit for a new SCW shall be provided to any applicable community planning or sponsor group where the proposed facility within 10 days of the submittal of a request.

iii. The notice contents shall comply with the requirements set forth by the County.

Option (6992.C.6.)

Any application for a new or co-located SCW shall include evidence of compliance with the following notice requirements:

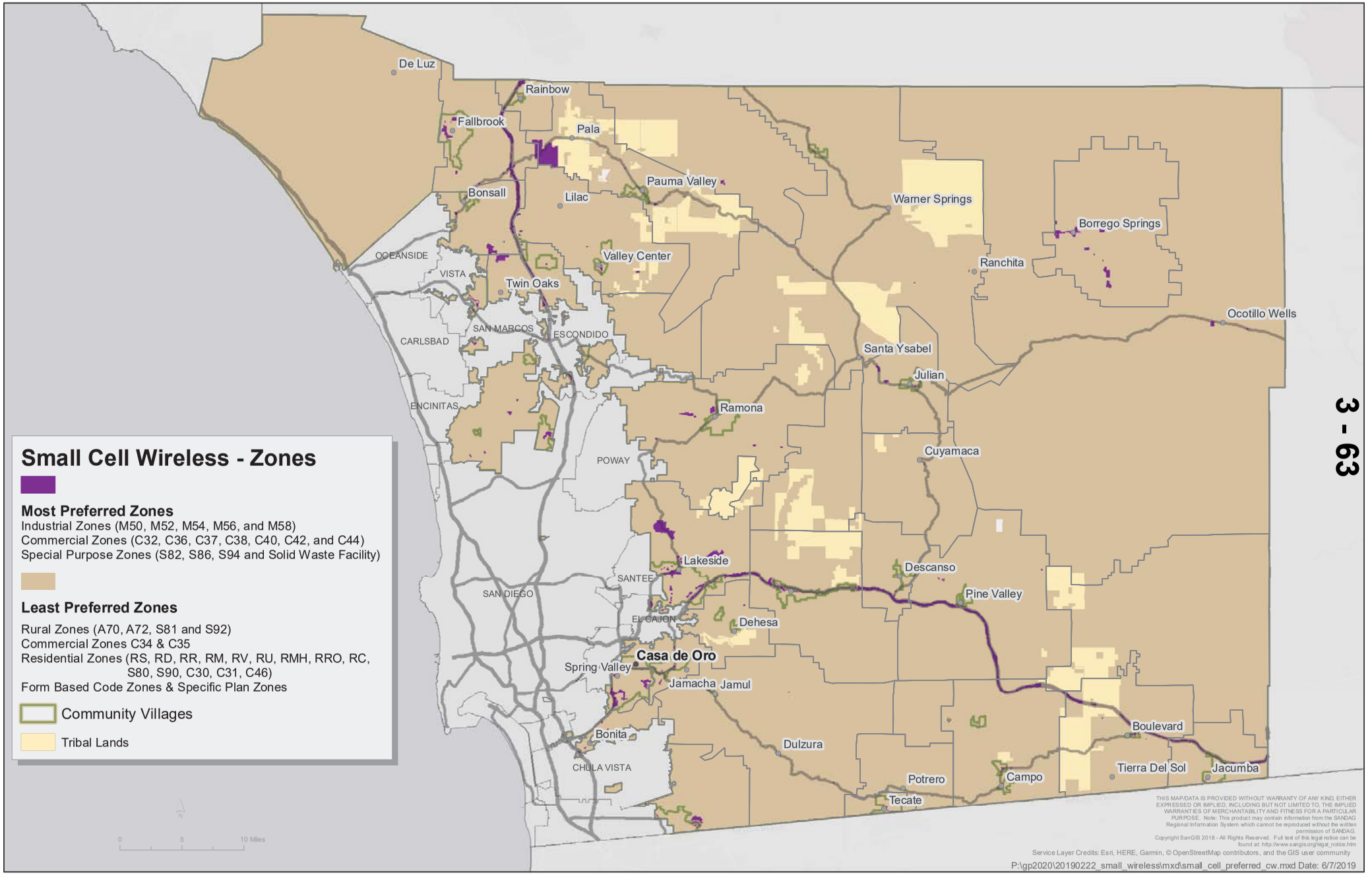
i. A notice of application for a new SCW shall be provided to all property owners within XXX feet of the proposed facility within 10 days of the submittal of a request.

DIRECTION REQUESTED

Adopt the staff recommendation.

Attachment D – Visual Analysis of Recommended and Requested Requirements

Location Preference (LD-1)


De Luz
Rainbow
Fallbrook
Pala
Pauma Valley
Bonsall
Lilac
Warner Springs
Borrego Springs
OCEANSIDE
VISTA
Valley Center
Twin Oaks
Ranchita
Ocotillo Wells
SAN MARCOS
ESCONDIDO
CARLSBAD
Santa Ysabel
Julian
ENCINITAS
Ramona
Cuyamaca
POWAY
Lakeside
Descanso
SANTEE
SAN DIEGO
Pine Valley
EL CAJON
Dehesa
Casa de Oro
Spring Valley
Jamacha
Jamul
Boulevard
Bonita
Dulzura
CHULA VISTA
Tierra Del Sol
Jacumba
Potrero
Campo
Tecate
Small Cell Wireless - Zones
Most Preferred Zones
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Form Based Code Zones & Specific Plan Zones
Community Villages
Tribal Lands
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10 Miles
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Small Cell Wireless

Zones - Alpine

Legend

Most Preferred Zones

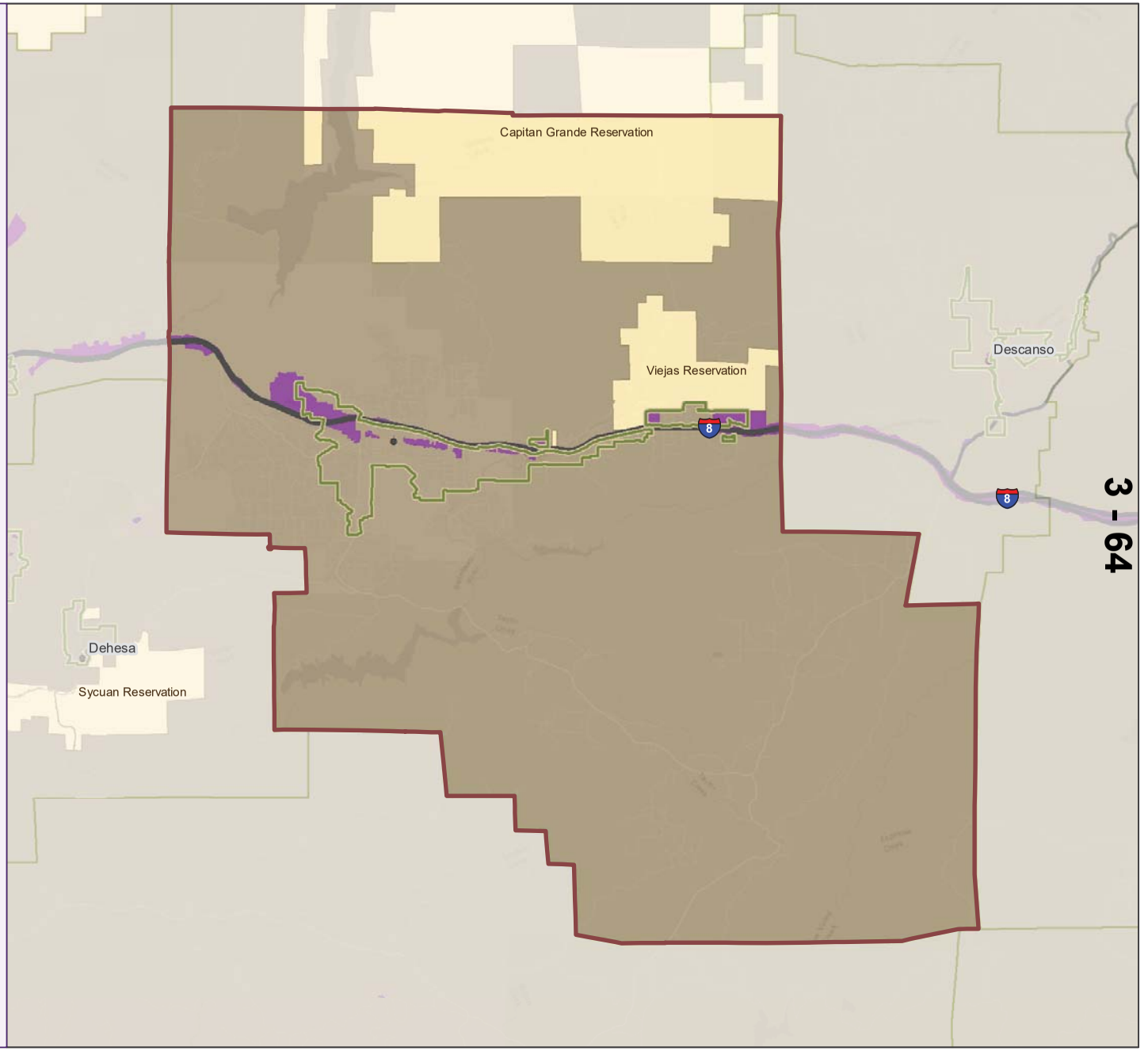
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Tribal Lands



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Small Cell Wireless

Zones - Bonsall

Legend

Most Preferred Zones

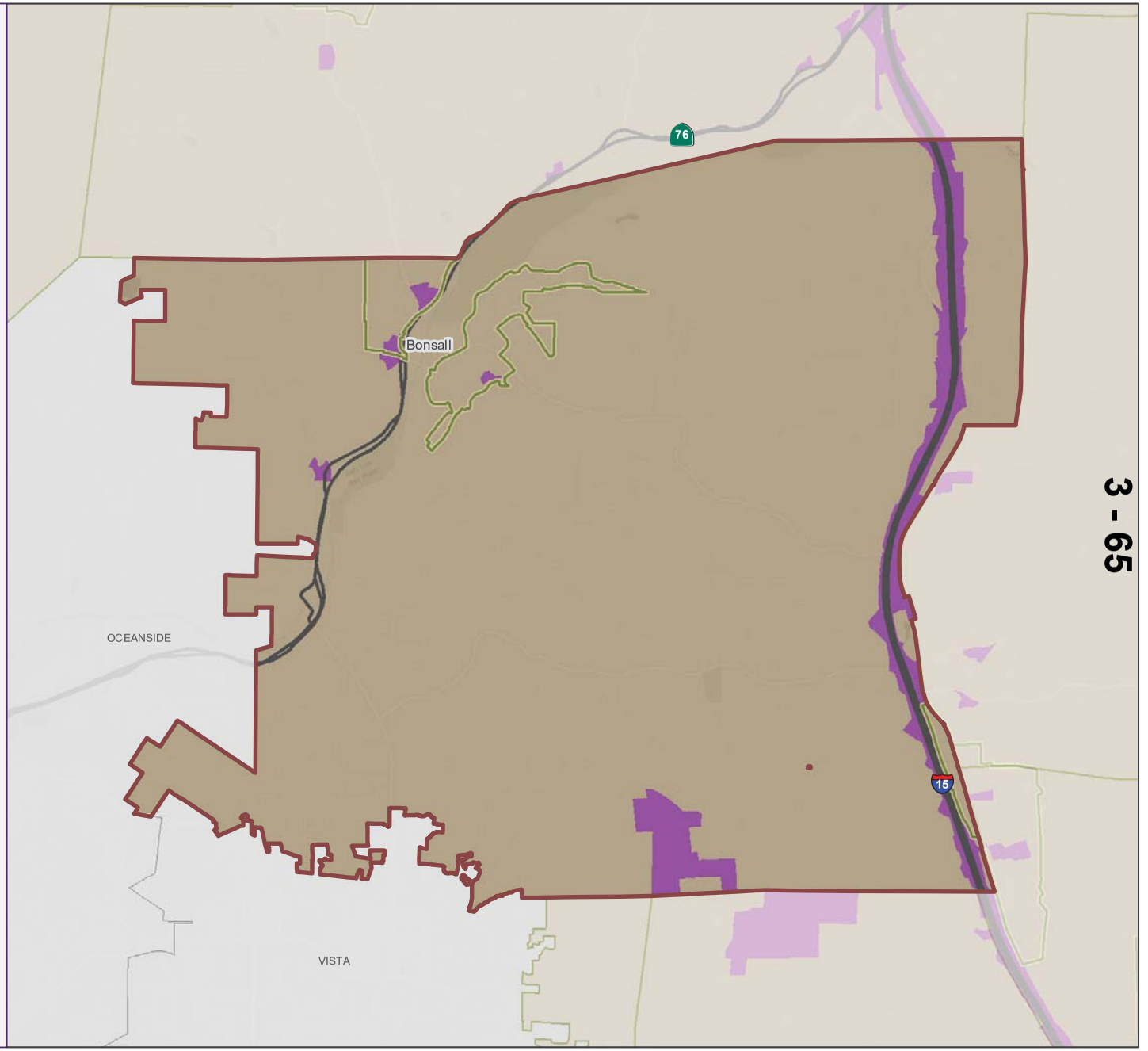
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Community Villages

Tribal Lands



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Small Cell Wireless

Zones - Casa De Oro

Legend

Most Preferred Zones

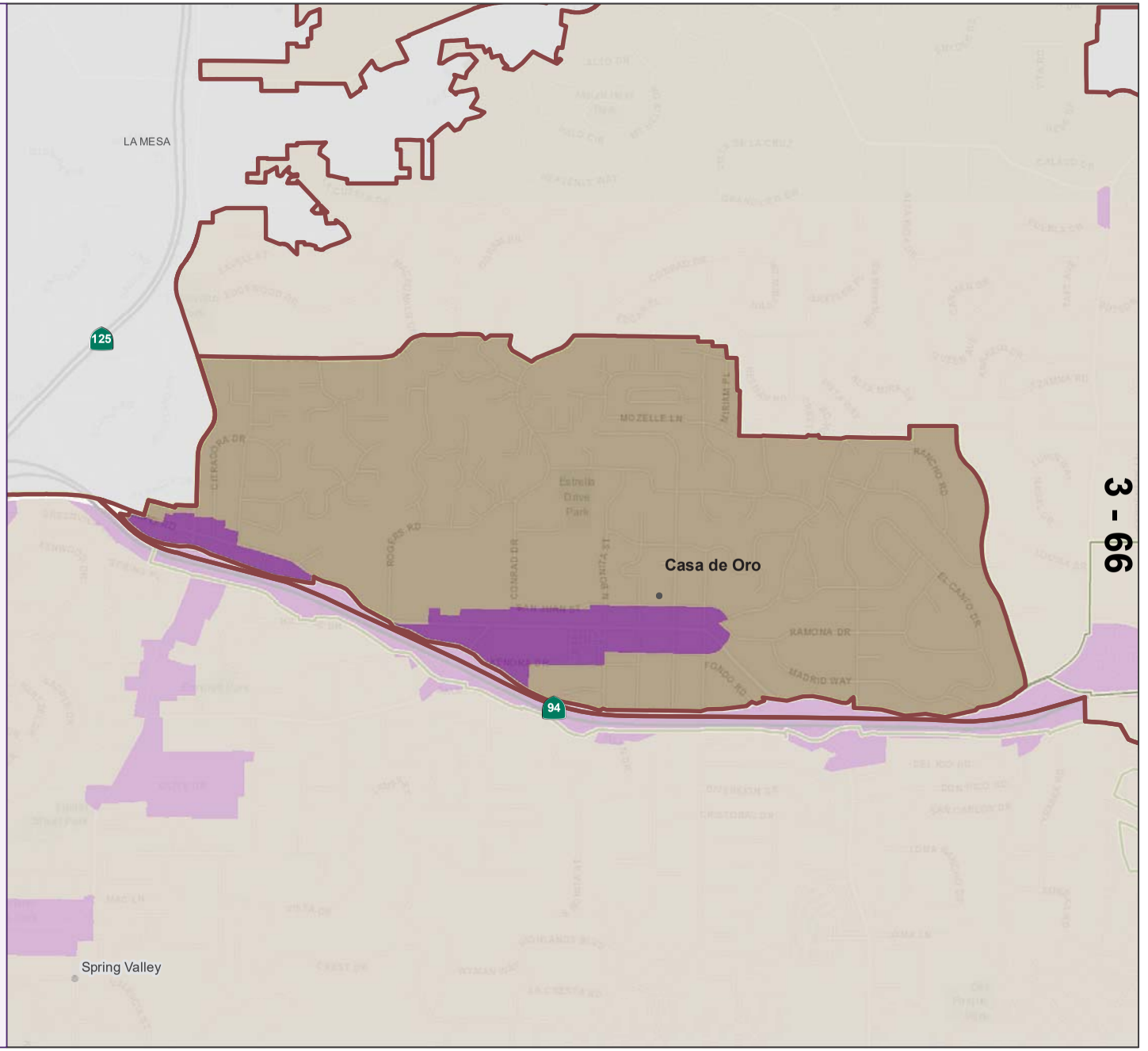
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Community Villages

Tribal Lands



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Small Cell Wireless

Zones - Crest - Dehesa

Legend

Most Preferred Zones

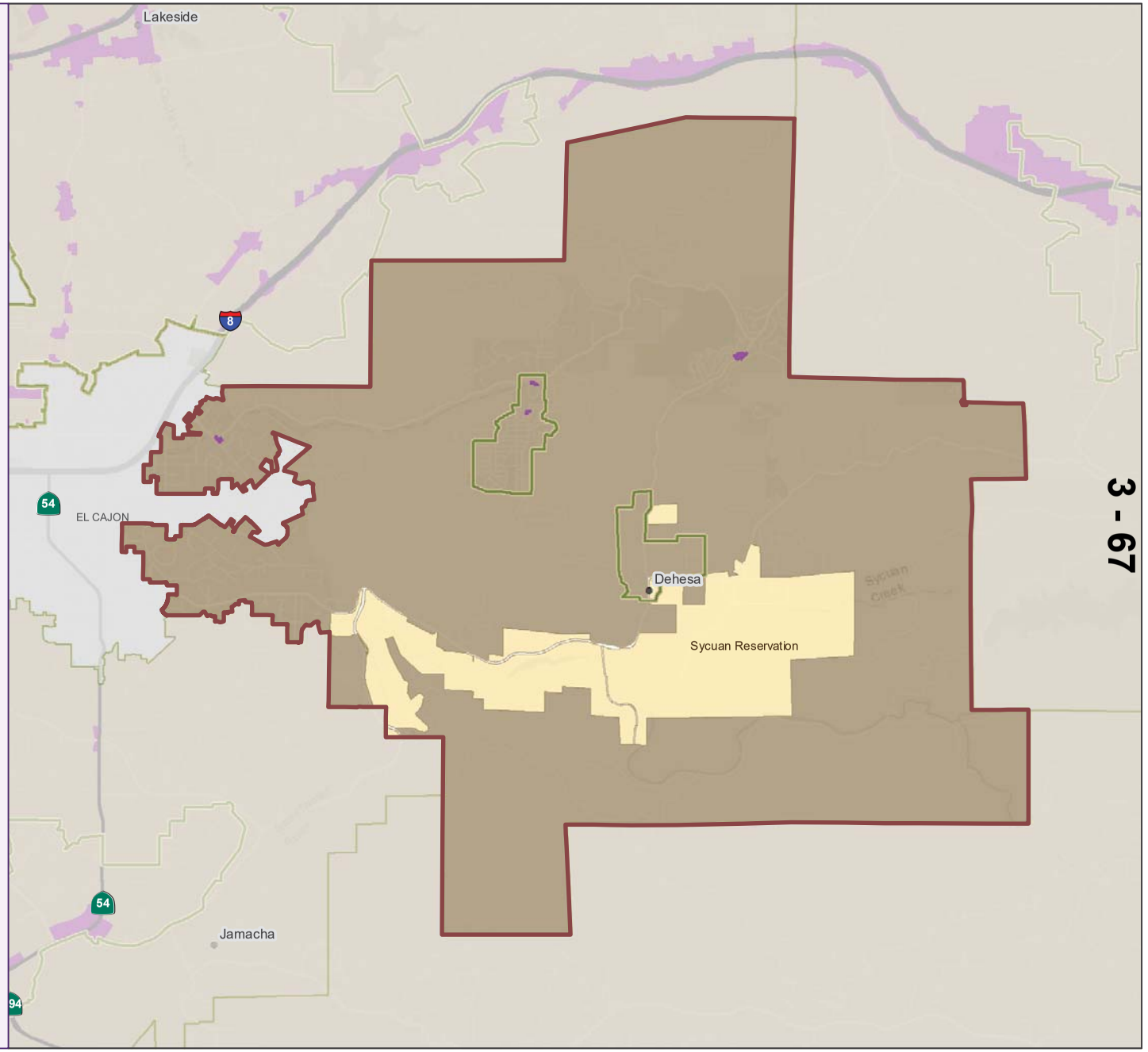
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Community Villages

Tribal Lands



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Zones - Fallbrook

Legend

Most Preferred Zones

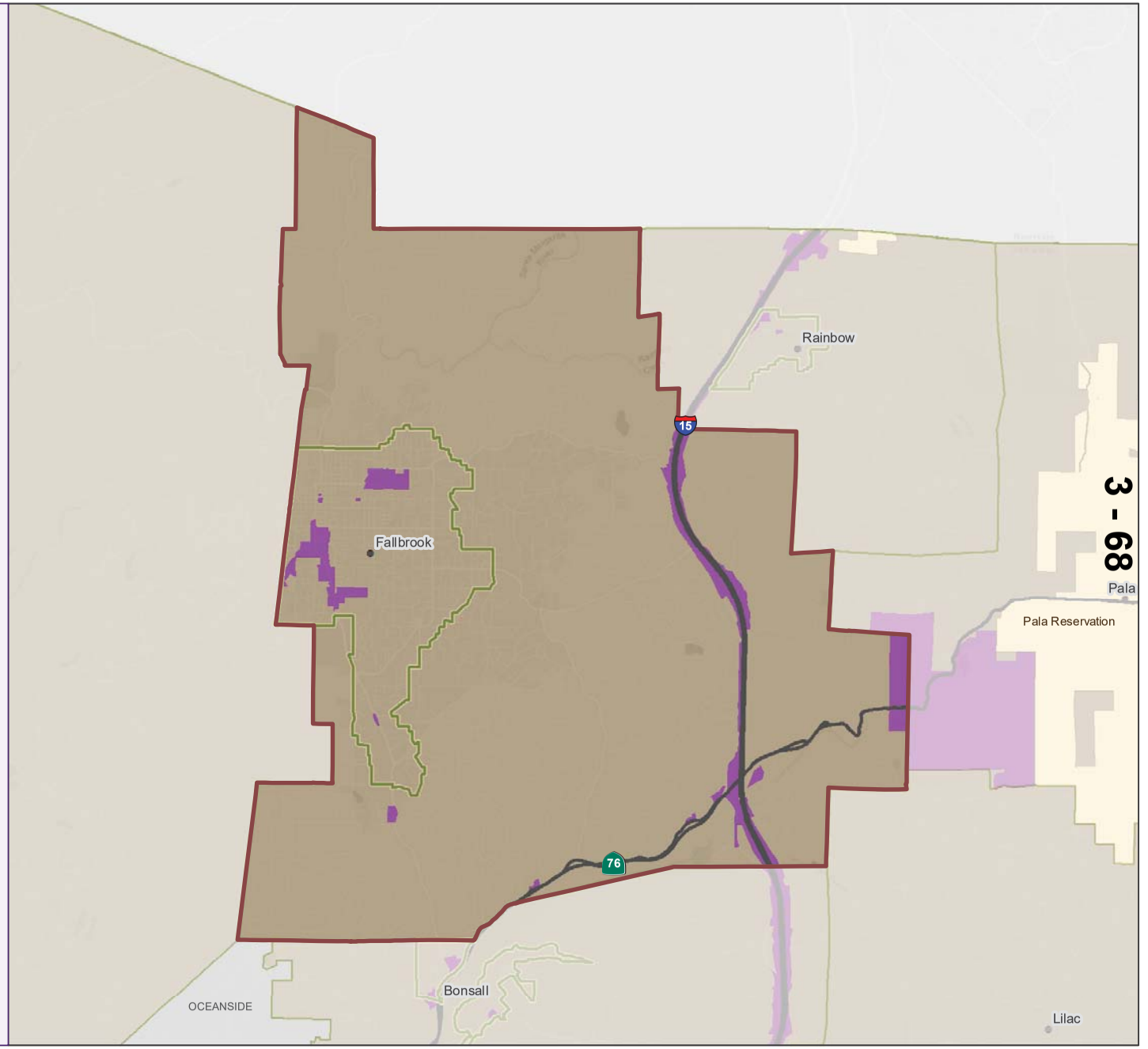
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Community Villages

Tribal Lands



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Zones - Jamul

Legend

Most Preferred Zones

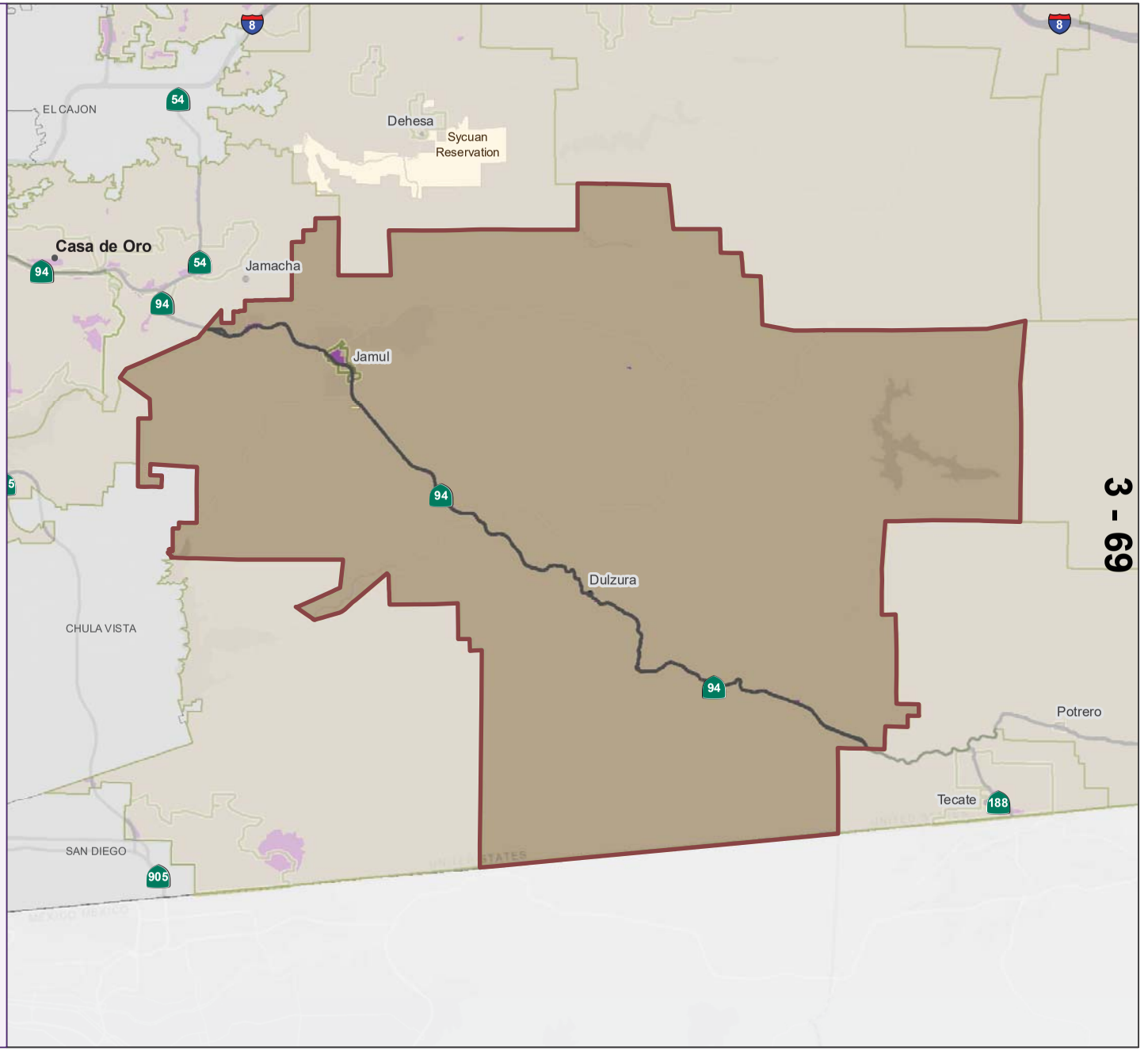
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Community Villages

Tribal Lands



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Zones - Lake Morena / Campo

Legend

Most Preferred Zones

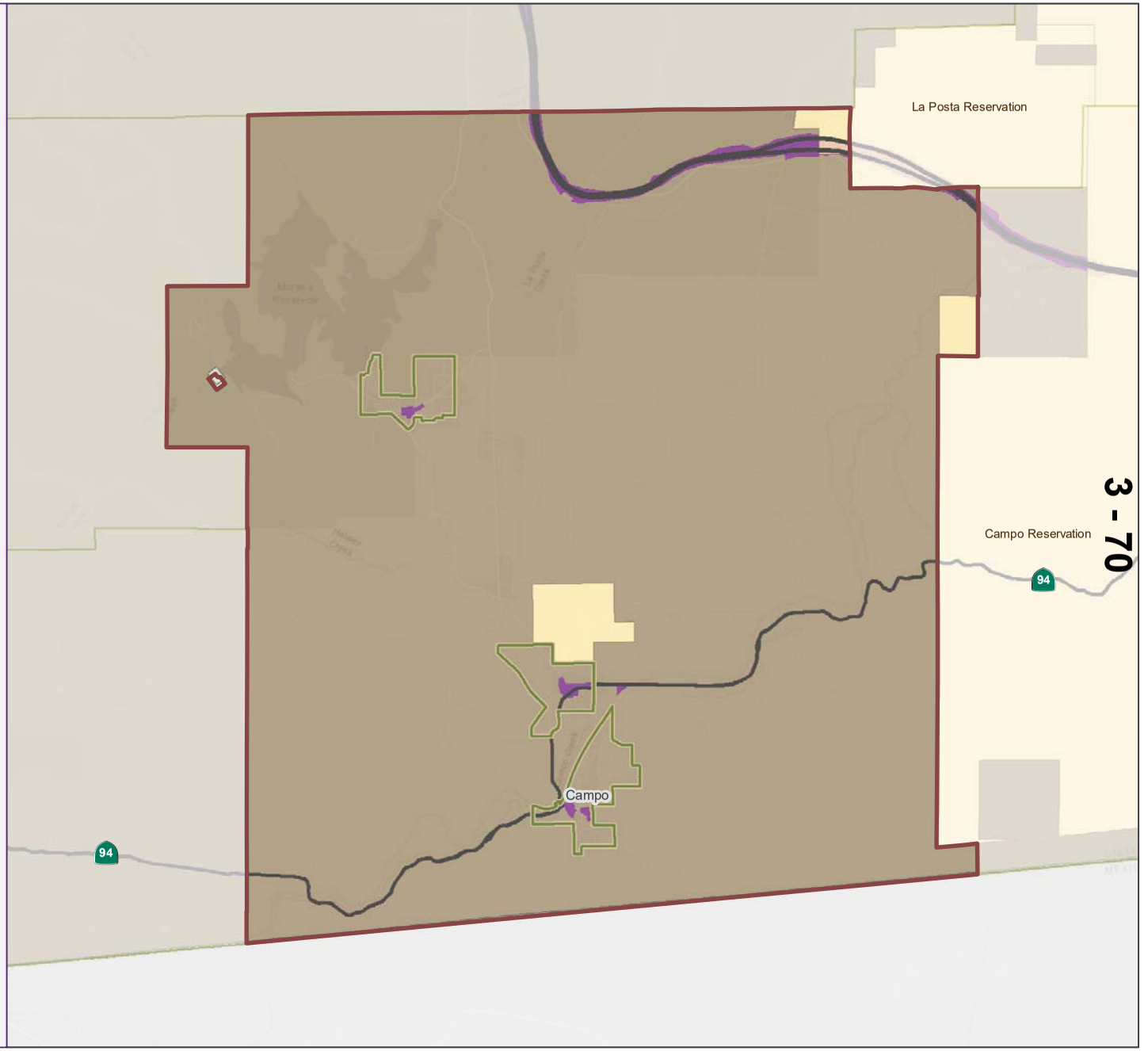
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Zones - Lakeside

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Most Preferred Zones

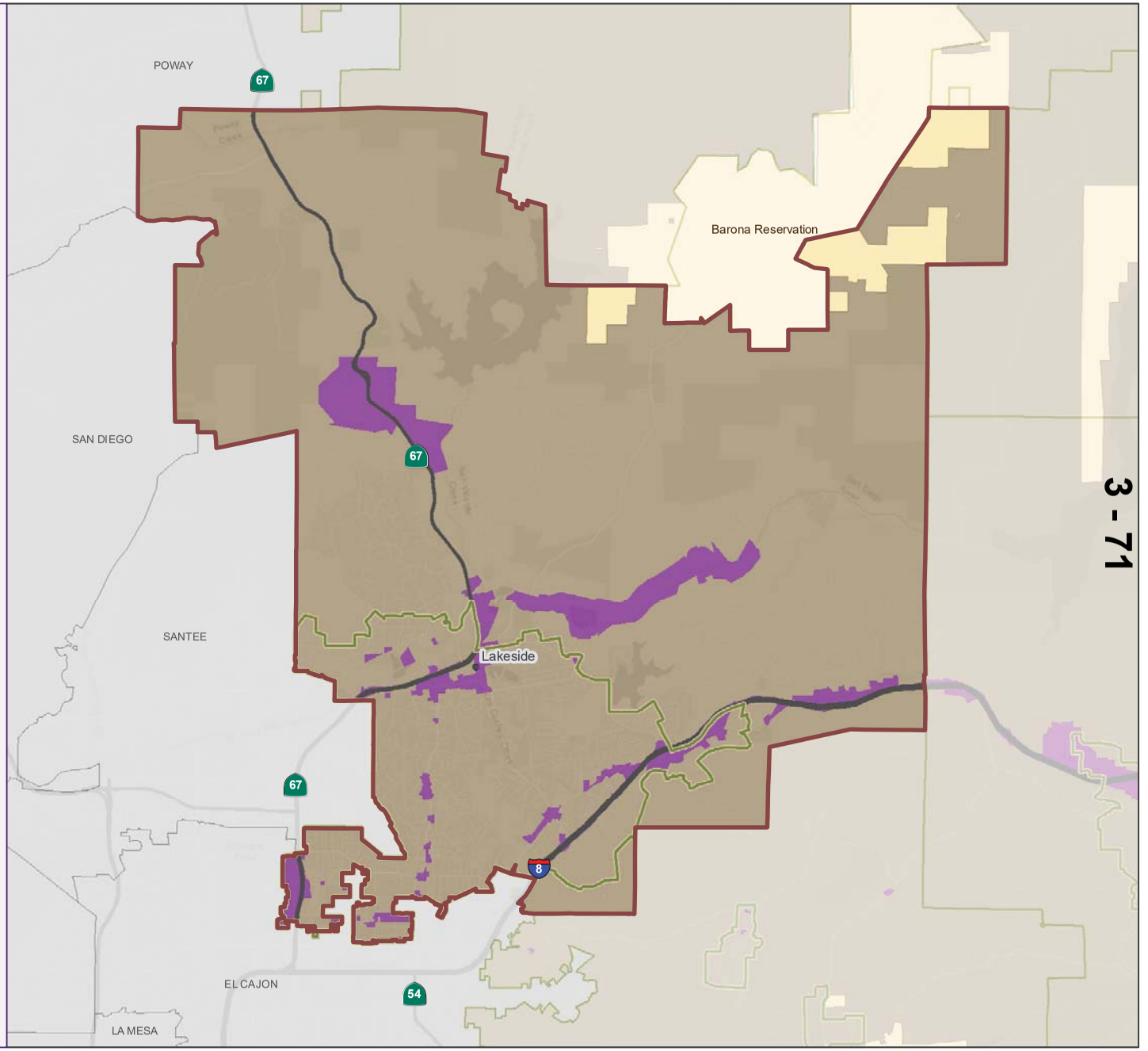
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Community Villages

Tribal Lands



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Small Cell Wireless

Zones - Spring Valley

Legend

Most Preferred Zones

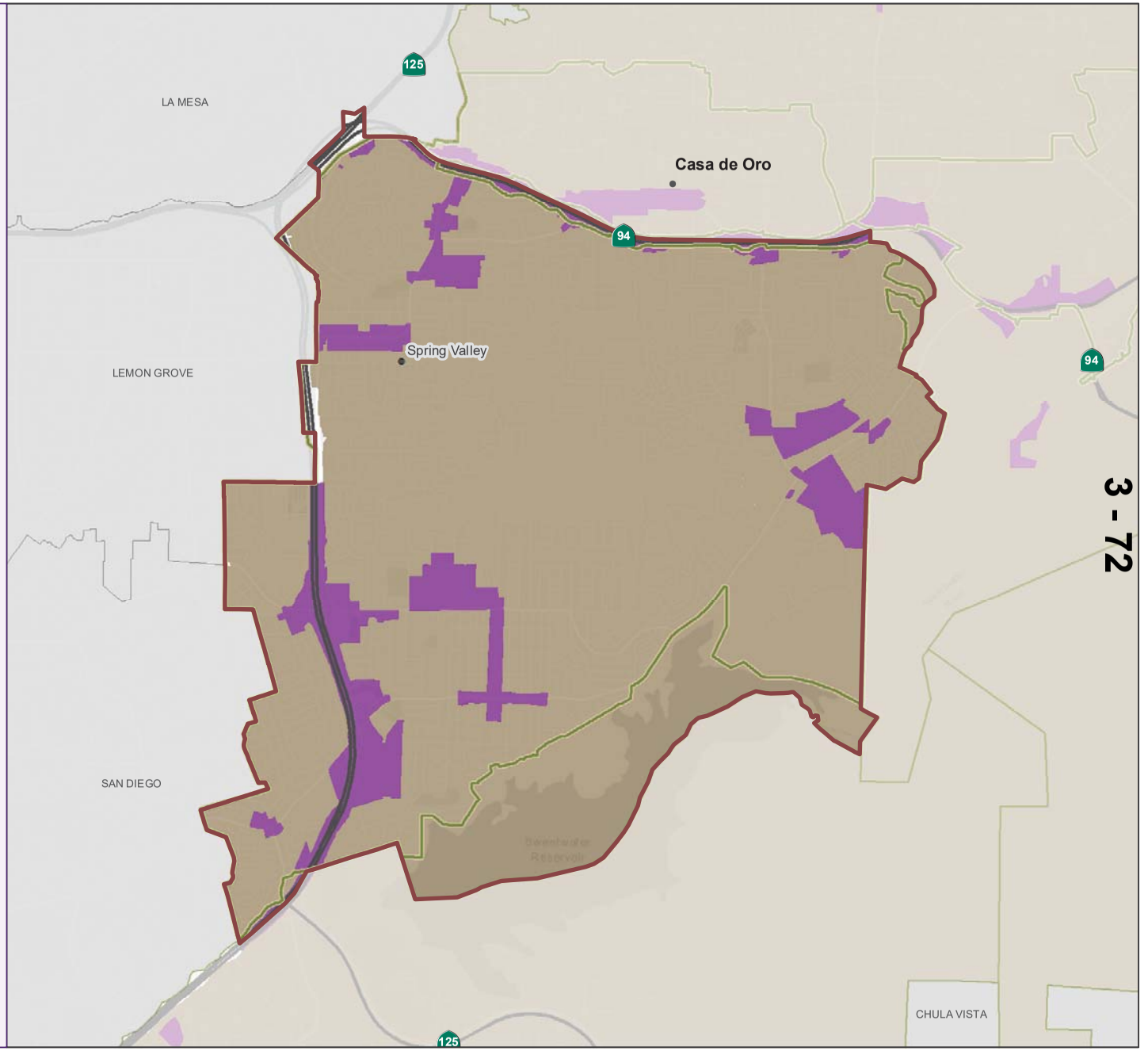
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Community Villages

Tribal Lands



N 0 1 Miles

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Small Cell Wireless

Zones - Sweetwater

Legend

Most Preferred Zones

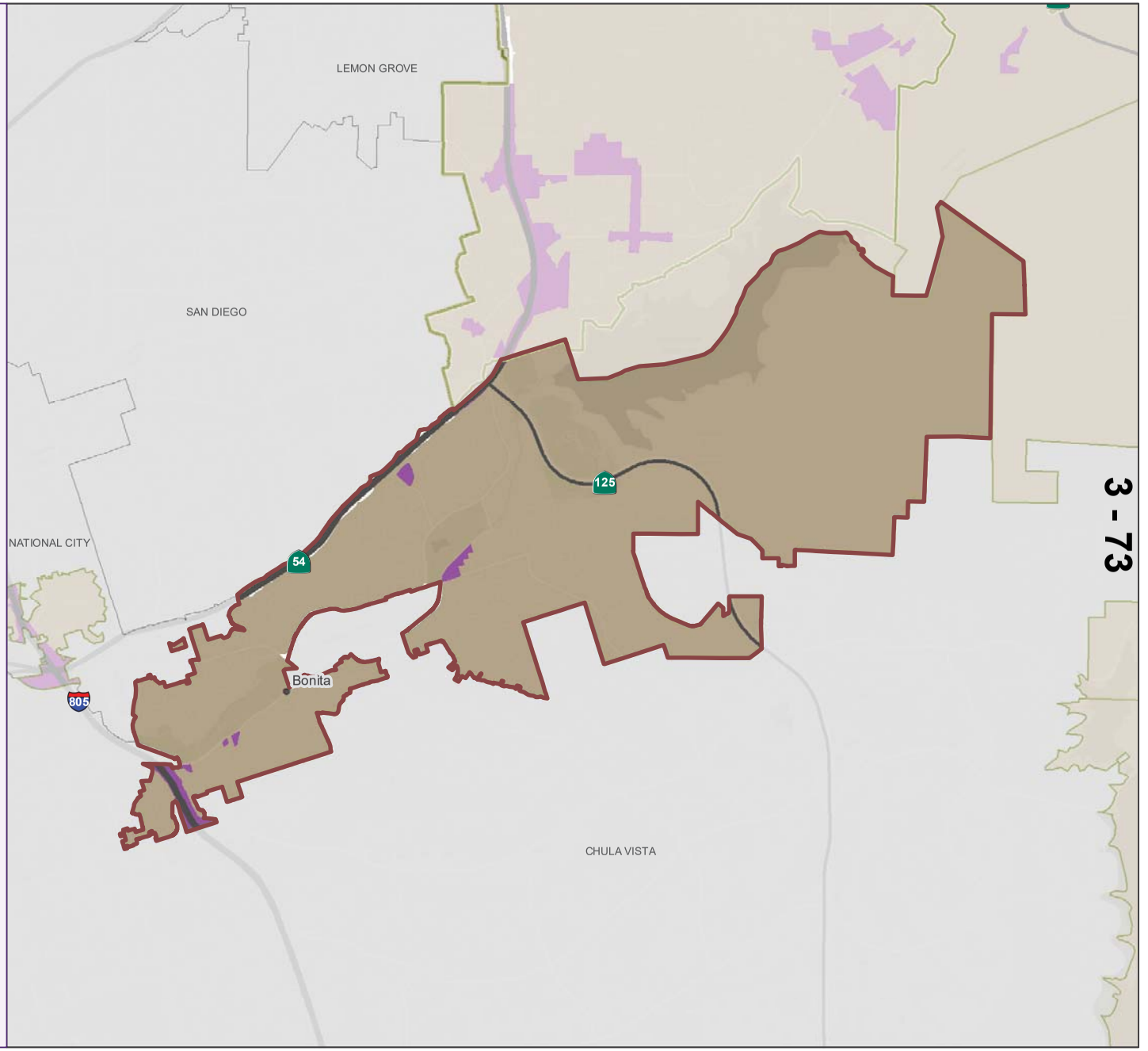
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Small Cell Wireless

Zones - Valle De Oro

Legend

Most Preferred Zones

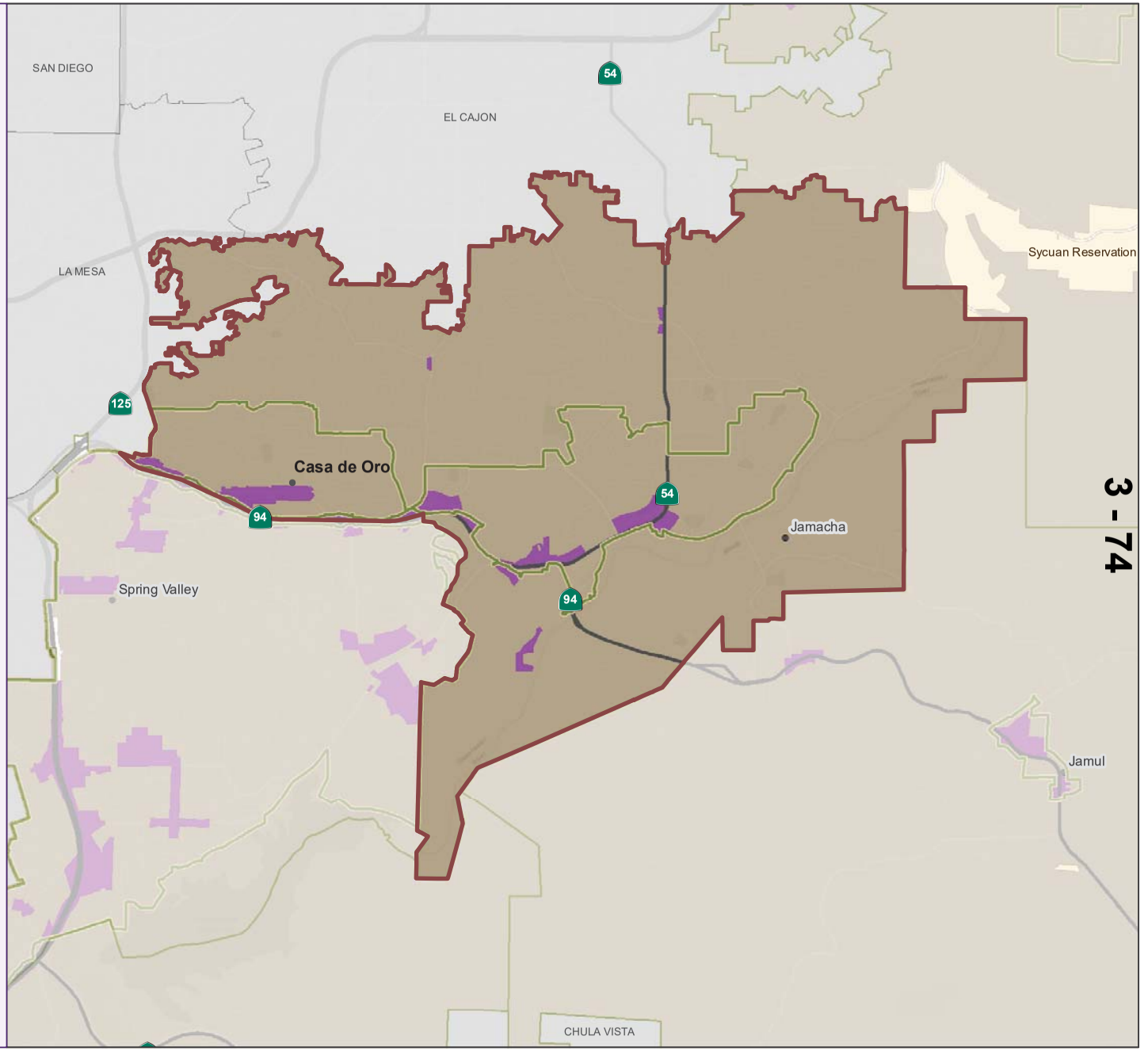
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0 1 Miles

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Small Cell Wireless

Zones - Valley Center

Legend

Most Preferred Zones

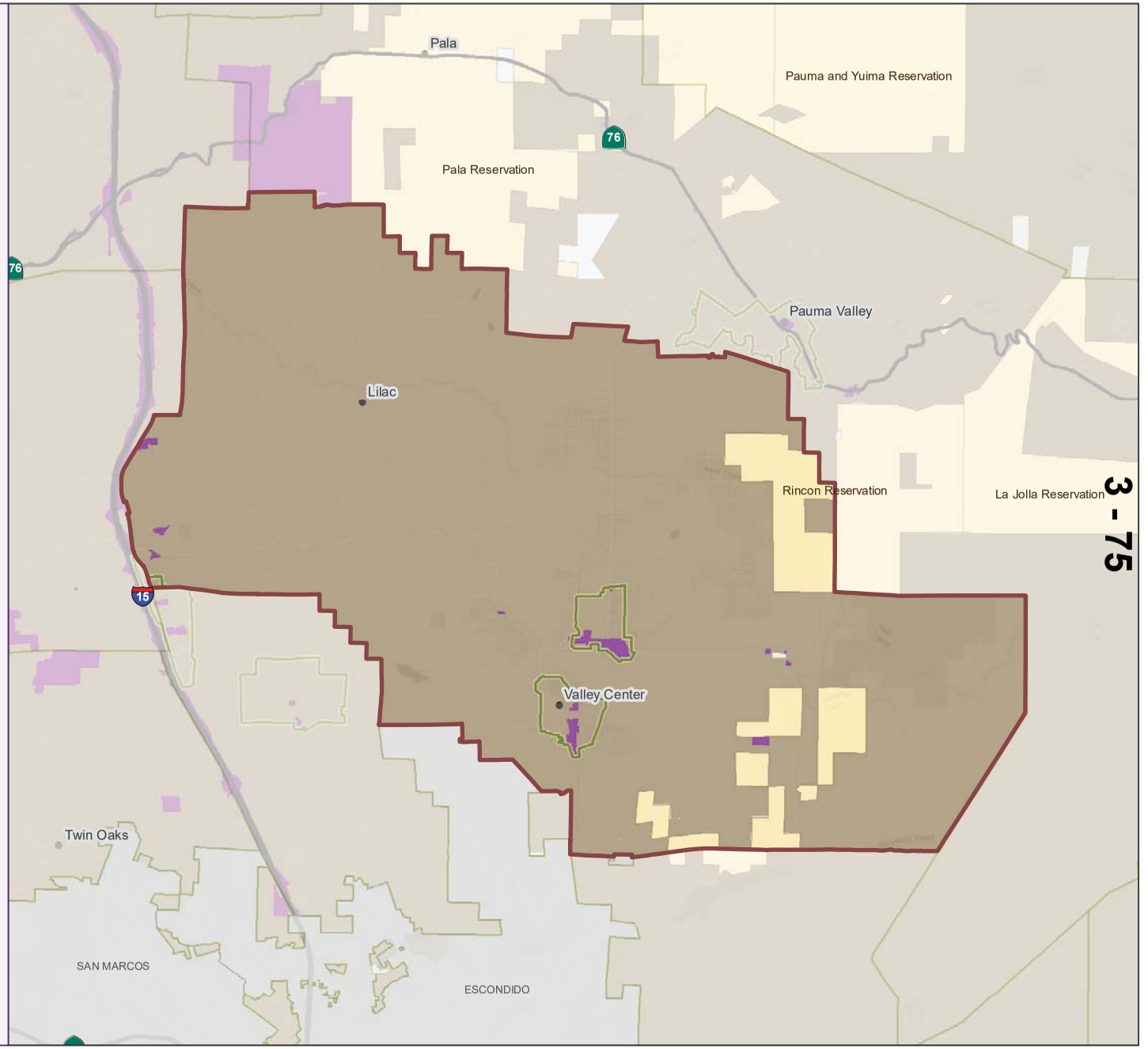
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Community Villages

Tribal Lands



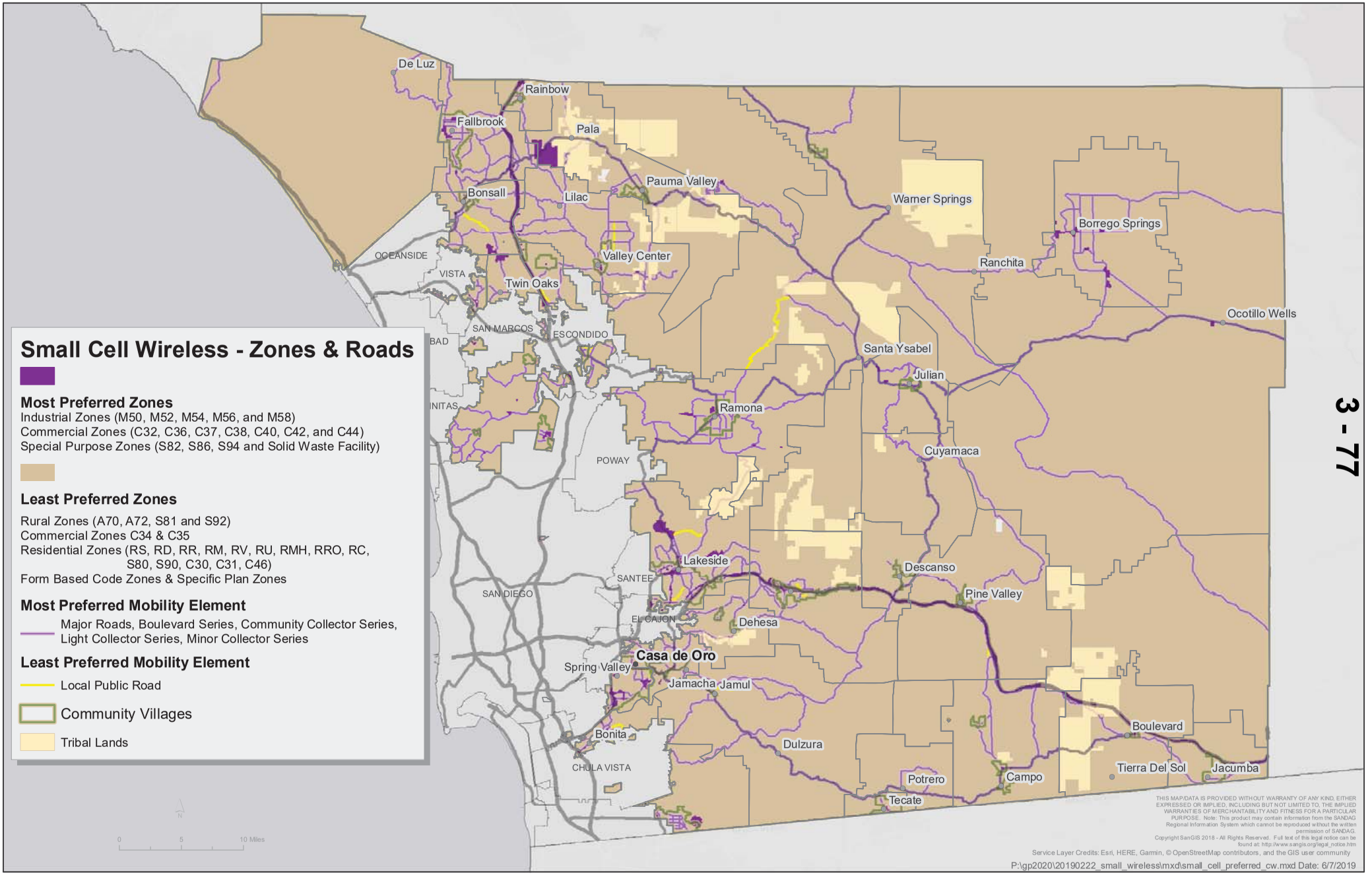
0 1 2 3 Miles

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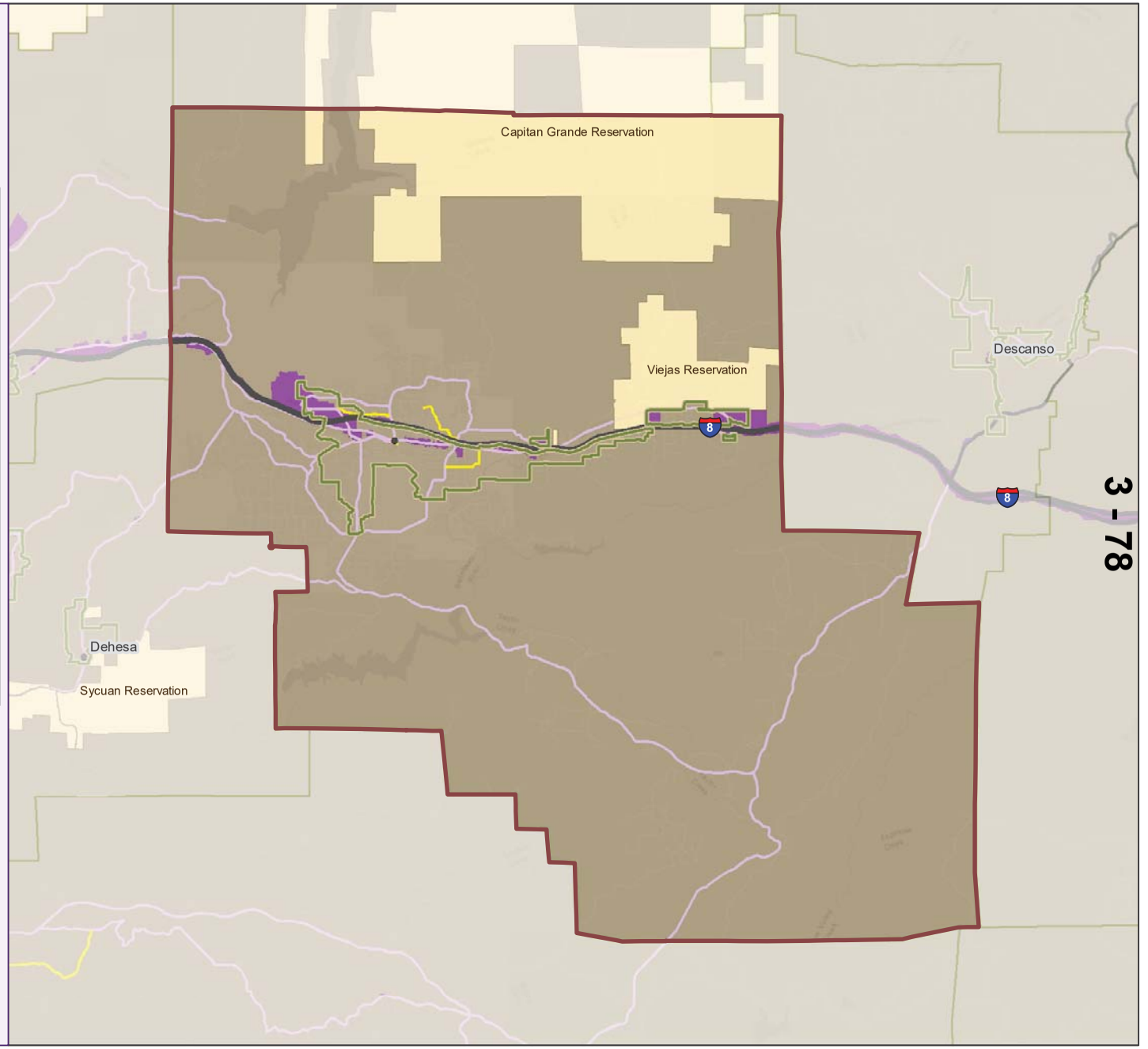
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Right-of-Way Preference (LD-2)


De Luz
Rainbow
Fallbrook
Pala
Pauma Valley
Bonsall
Lilac
Warner Springs
Borrego Springs
OCEANSIDE
VISTA
Valley Center
Twin Oaks
Ranchita
Ocotillo Wells
SAN MARCOS
ESCONDIDO
Santa Ysabel
Julian
Ramona
POWAY
Cuyamaca
Lakeside
Descanso
SANTEE
SAN DIEGO
Pine Valley
EL CAJON
Dehesa
Casa de Oro
Spring Valley
Jamacha Jamul
Boulevard
Bonita
Dulzura
CHULA VISTA
Tierra Del Sol
Jacumba
Potrero
Campo
Tecate
Small Cell Wireless - Zones & Roads
Most Preferred Zones
Industrial Zones (M50, M52, M54, M56, and M58)
Commercial Zones (C32, C36, C37, C38, C40, C42, and C44)
Special Purpose Zones (S82, S86, S94 and Solid Waste Facility)
Least Preferred Zones
Rural Zones (A70, A72, S81 and S92)
Commercial Zones C34 & C35
Residential Zones (RS, RD, RR, RM, RV, RU, RMH, RRO, RC, S80, S90, C30, C31, C46)
Form Based Code Zones & Specific Plan Zones
Most Preferred Mobility Element
Major Roads, Boulevard Series, Community Collector Series, Light Collector Series, Minor Collector Series
Least Preferred Mobility Element
Local Public Road
Community Villages
Tribal Lands
0
5
10 Miles
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Small Cell Wireless

Zones & Roads - Alpine



Legend

Most Preferred Zones

Industrial Zones (M50, M52, M54, M56, and M58)
Commercial Zones (C32, C36, C37, C38, C40, C42, and C44)
Special Purpose Zones (S82, S86, S94 and Solid Waste Facility)

Least Preferred Zones

Rural Zones (A70, A72, S81 and S92)
Commercial Zones C34 & C35
Residential Zones (RS, RD, RR, RM, RV, RU, RMH, RRO, RC, S80, S90, C30, C31, C46)
Form Based Code Zones & Specific Plan Zones

Most Preferred Mobility Element

Major Roads, Boulevard Series, Community Collector Series, Light Collector Series, Minor Collector Series

Least Preferred Mobility Element

Local Public Road

Community Villages

Tribal Lands

Community of Alpine

1.5% Most Preferred Zones

52 Most Preferred Mobility Element Miles

N 0 1 2 3 Miles

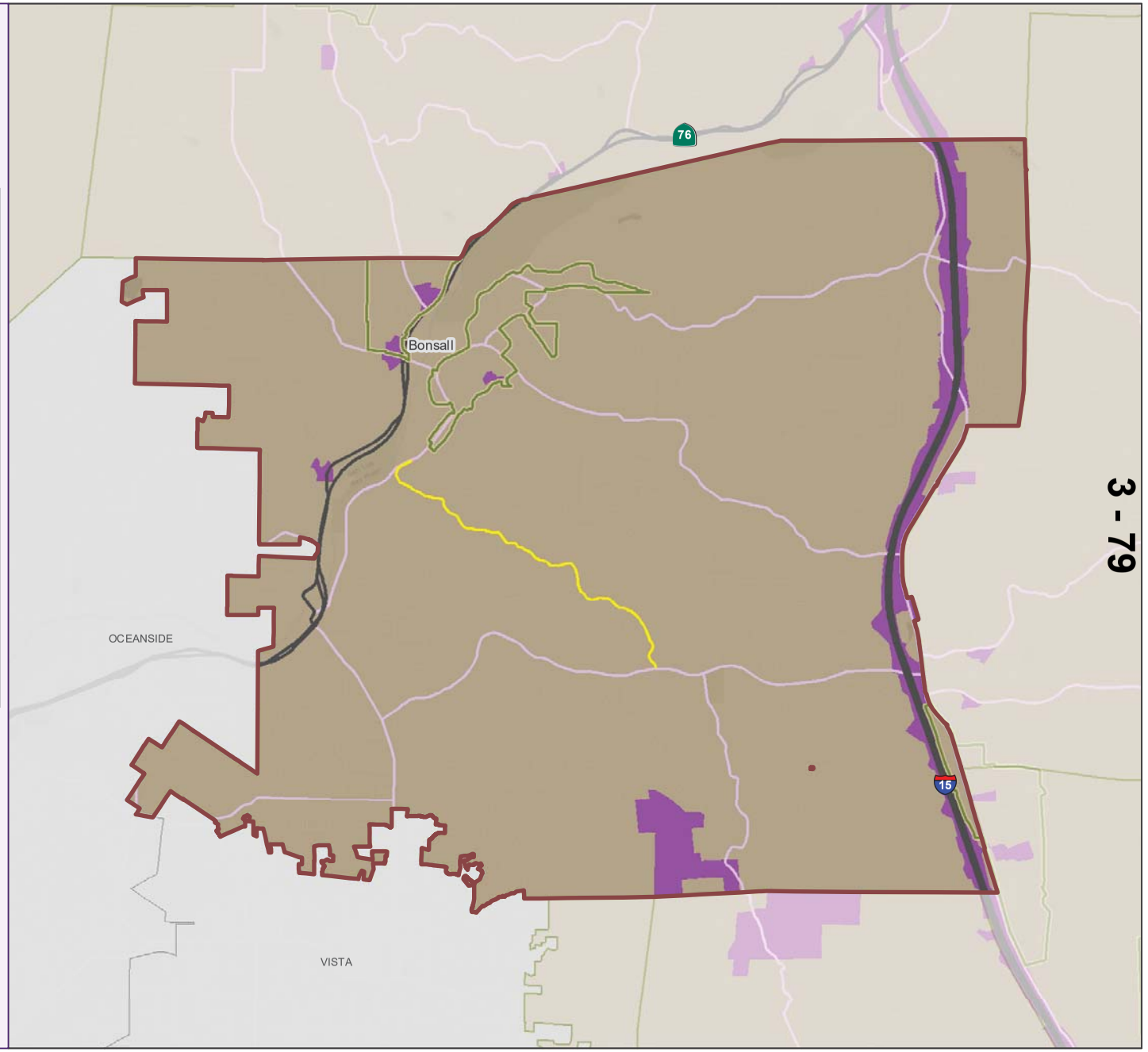
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Zones & Roads - Bonsall



Legend

Most Preferred Zones

Industrial Zones (M50, M52, M54, M56, and M58)
Commercial Zones (C32, C36, C37, C38, C40, C42, and C44)
Special Purpose Zones (S82, S86, S94 and Solid Waste Facility)

Least Preferred Zones

Rural Zones (A70, A72, S81 and S92)
Commercial Zones C34 & C35
Residential Zones (RS, RD, RR, RM, RV, RU, RMH, RRO, RC, S80, S90, C30, C31, C46)
Form Based Code Zones & Specific Plan Zones

Most Preferred Mobility Element

Major Roads, Boulevard Series, Community Collector Series, Light Collector Series, Minor Collector Series

Least Preferred Mobility Element

Local Public Road

Community Villages

Tribal Lands

Community of Bonsall

4.4% Most Preferred Zones

37 Most Preferred Mobility Element Miles

N 0 1 Miles

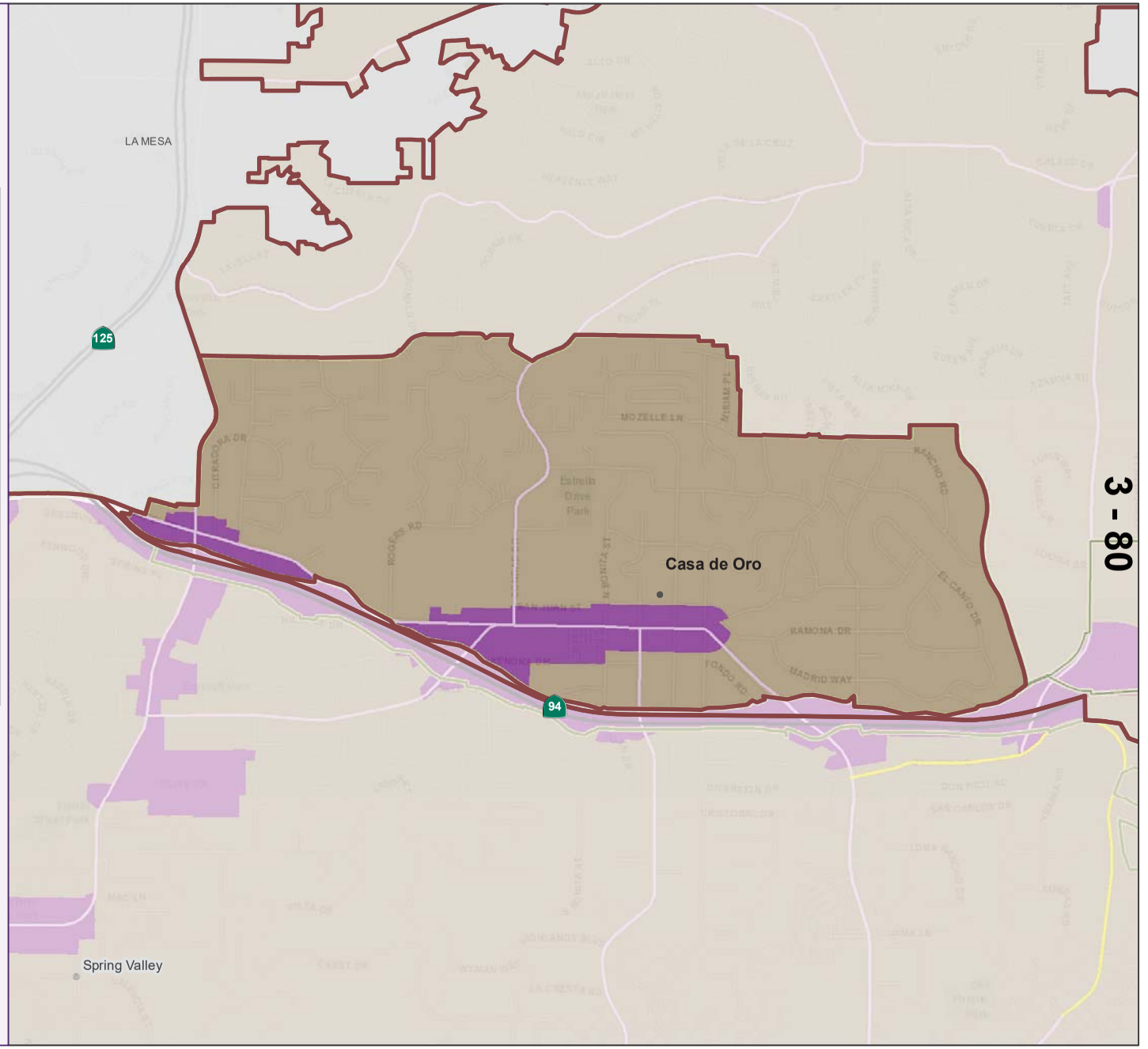
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Zones & Roads - Casa De Oro



Legend

Most Preferred Zones

Industrial Zones (M50, M52, M54, M56, and M58)
Commercial Zones (C32, C36, C37, C38, C40, C42, and C44)
Special Purpose Zones (S82, S86, S94 and Solid Waste Facility)

Least Preferred Zones

Rural Zones (A70, A72, S81 and S92)
Commercial Zones C34 & C35
Residential Zones (RS, RD, RR, RM, RV, RU, RMH, RRO, RC, S80, S90, C30, C31, C46)
Form Based Code Zones & Specific Plan Zones

Most Preferred Mobility Element

Major Roads, Boulevard Series, Community Collector Series, Light Collector Series, Minor Collector Series

Least Preferred Mobility Element

Local Public Road

Community Villages

Tribal Lands

Community of Casa De Oro

6.5% Most Preferred Zones

8 Most Preferred Mobility Element Miles

N

0 0.5 Miles

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Small Cell Wireless

Zones & Roads - Crest - Dehesa

Legend

Most Preferred Zones

Industrial Zones (M50, M52, M54, M56, and M58)
Commercial Zones (C32, C36, C37, C38, C40, C42, and C44)
Special Purpose Zones (S82, S86, S94 and Solid Waste Facility)

Least Preferred Zones

Rural Zones (A70, A72, S81 and S92)
Commercial Zones C34 & C35
Residential Zones (RS, RD, RR, RM, RV, RU, RMH, RRO, RC, S80, S90, C30, C31, C46)
Form Based Code Zones & Specific Plan Zones

Most Preferred Mobility Element

Major Roads, Boulevard Series, Community Collector Series, Light Collector Series, Minor Collector Series

Least Preferred Mobility Element

Local Public Road

Community Villages

Tribal Lands

Community of Crest - Dehesa

0.04% Most Preferred Zones

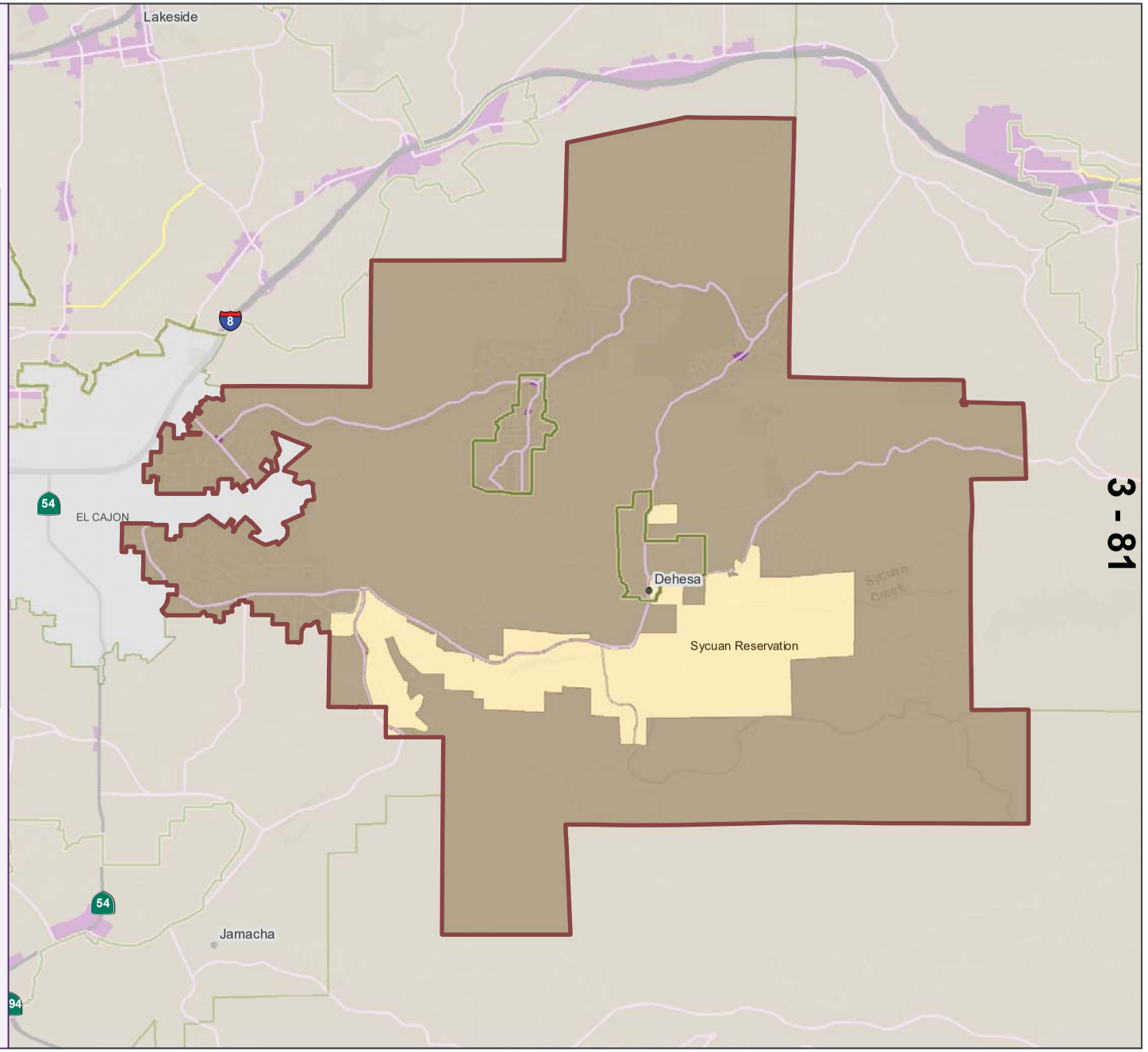
22 Most Preferred Mobility Element Miles



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Zones & Roads - Fallbrook

Legend

Most Preferred Zones

Industrial Zones (M50, M52, M54, M56, and M58)
Commercial Zones (C32, C36, C37, C38, C40, C42, and C44)
Special Purpose Zones (S82, S86, S94 and Solid Waste Facility)

Least Preferred Zones

Rural Zones (A70, A72, S81 and S92)
Commercial Zones C34 & C35
Residential Zones (RS, RD, RR, RM, RV, RU, RMH, RRO, RC, S80, S90, C30, C31, C46)
Form Based Code Zones & Specific Plan Zones

Most Preferred Mobility Element

Major Roads, Boulevard Series, Community Collector Series, Light Collector Series, Minor Collector Series

Least Preferred Mobility Element

Local Public Road

Community Villages

Tribal Lands

Community of Fallbrook

3% Most Preferred Zones

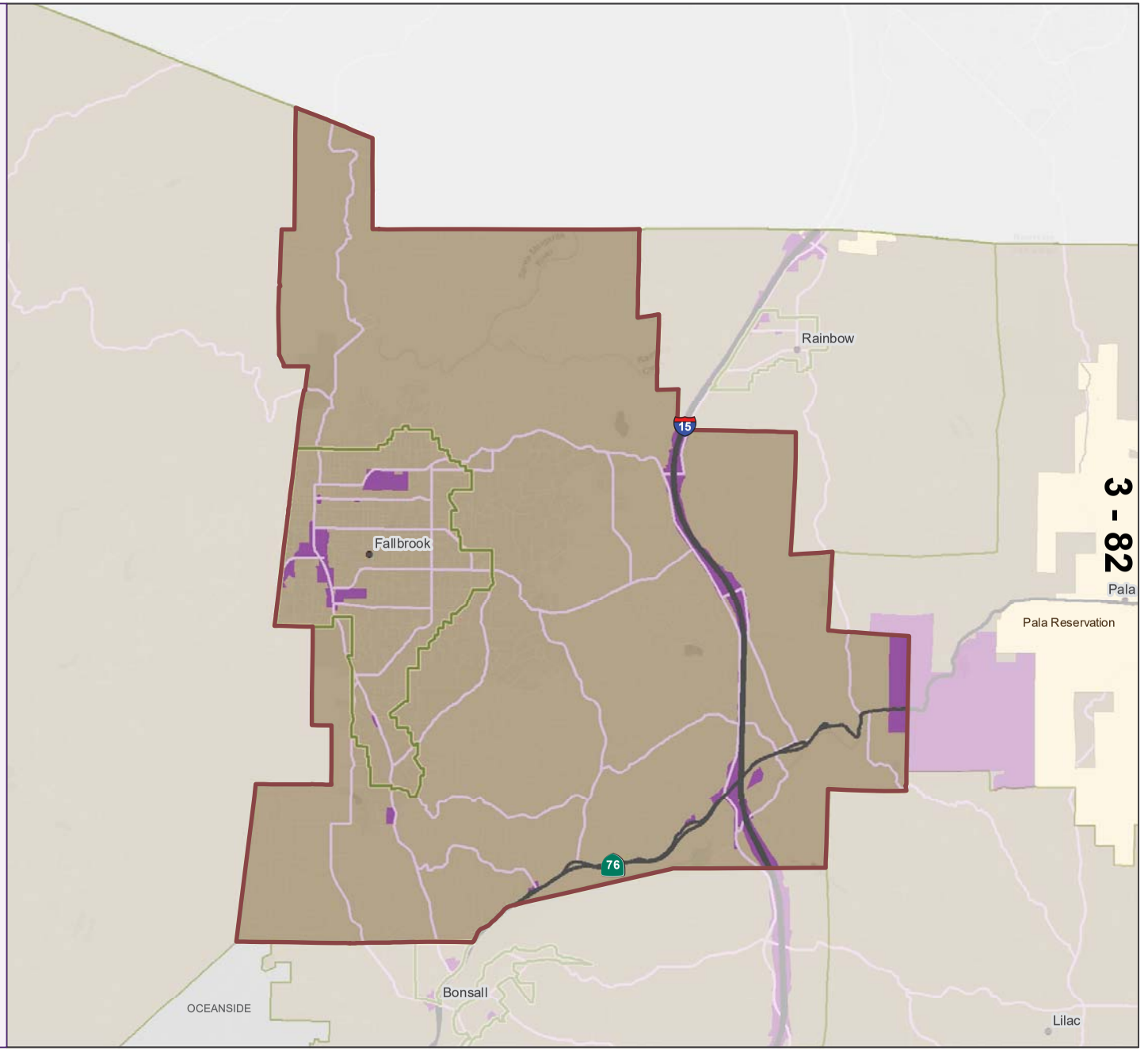
72 Most Preferred Mobility Element Miles

N 0 1 2 3 Miles

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Zones & Roads - Jamul

Legend

Most Preferred Zones

Industrial Zones (M50, M52, M54, M56, and M58)
Commercial Zones (C32, C36, C37, C38, C40, C42, and C44)
Special Purpose Zones (S82, S86, S94 and Solid Waste Facility)

Least Preferred Zones

Rural Zones (A70, A72, S81 and S92)
Commercial Zones C34 & C35
Residential Zones (RS, RD, RR, RM, RV, RU, RMH, RRO, RC, S80, S90, C30, C31, C46)
Form Based Code Zones & Specific Plan Zones

Most Preferred Mobility Element

Major Roads, Boulevard Series, Community Collector Series, Light Collector Series, Minor Collector Series

Least Preferred Mobility Element

Local Public Road

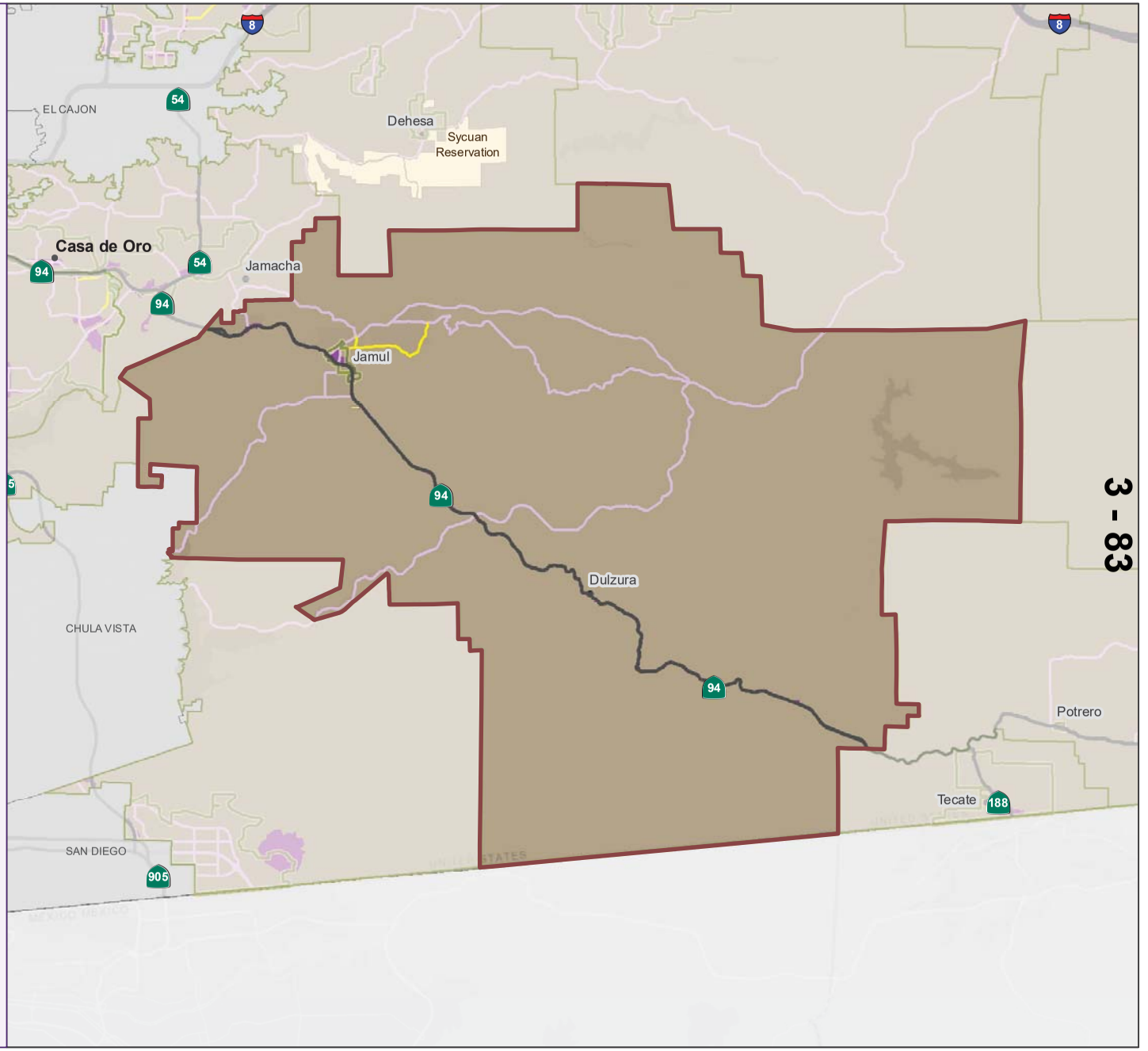
Community Villages

Tribal Lands

Community of Jamul

0.1% Most Preferred Zones

63 Most Preferred Mobility Element Miles



0 1 2 3 4 5 Miles

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Zones & Roads - Lake Morena / Campo

Legend

Most Preferred Zones

Industrial Zones (M50, M52, M54, M56, and M58)
Commercial Zones (C32, C36, C37, C38, C40, C42, and C44)
Special Purpose Zones (S82, S86, S94 and Solid Waste Facility)

Least Preferred Zones

Rural Zones (A70, A72, S81 and S92)
Commercial Zones C34 & C35
Residential Zones (RS, RD, RR, RM, RV, RU, RMH, RRO, RC, S80, S90, C30, C31, C46)
Form Based Code Zones & Specific Plan Zones

Most Preferred Mobility Element

Major Roads, Boulevard Series, Community Collector Series, Light Collector Series, Minor Collector Series

Least Preferred Mobility Element

Local Public Road

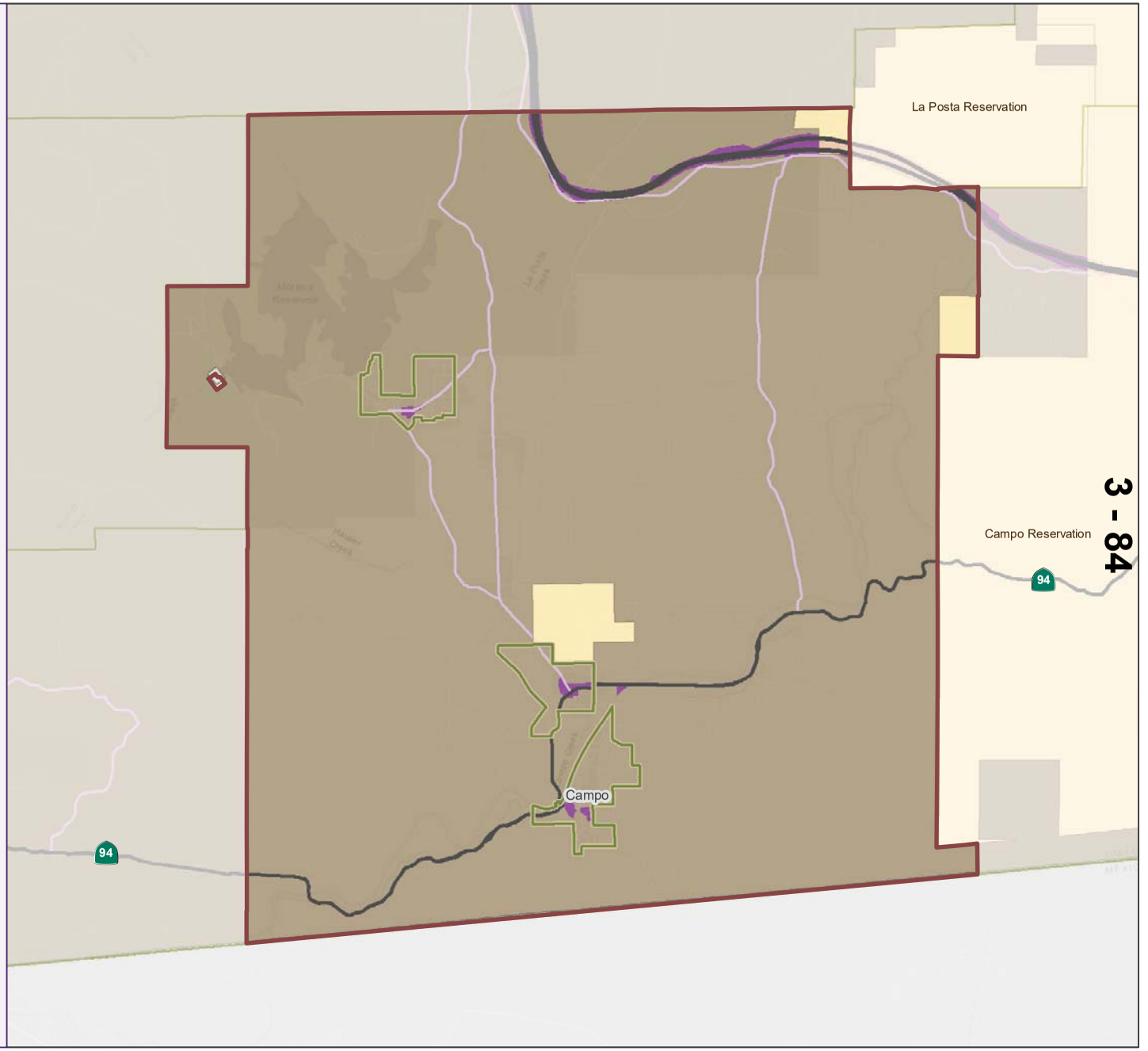
Community Villages

Tribal Lands

Community of Lake Morena / Campo

1% Most Preferred Zones

36 Most Preferred Mobility Element Miles



N 0 1 2 Miles

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Zones & Roads - Lakeside

Legend

Most Preferred Zones

Industrial Zones (M50, M52, M54, M56, and M58)
Commercial Zones (C32, C36, C37, C38, C40, C42, and C44)
Special Purpose Zones (S82, S86, S94 and Solid Waste Facility)

Least Preferred Zones

Rural Zones (A70, A72, S81 and S92)
Commercial Zones C34 & C35
Residential Zones (RS, RD, RR, RM, RV, RU, RMH, RRO, RC, S80, S90, C30, C31, C46)
Form Based Code Zones & Specific Plan Zones

Most Preferred Mobility Element

Major Roads, Boulevard Series, Community Collector Series, Light Collector Series, Minor Collector Series

Least Preferred Mobility Element

Local Public Road

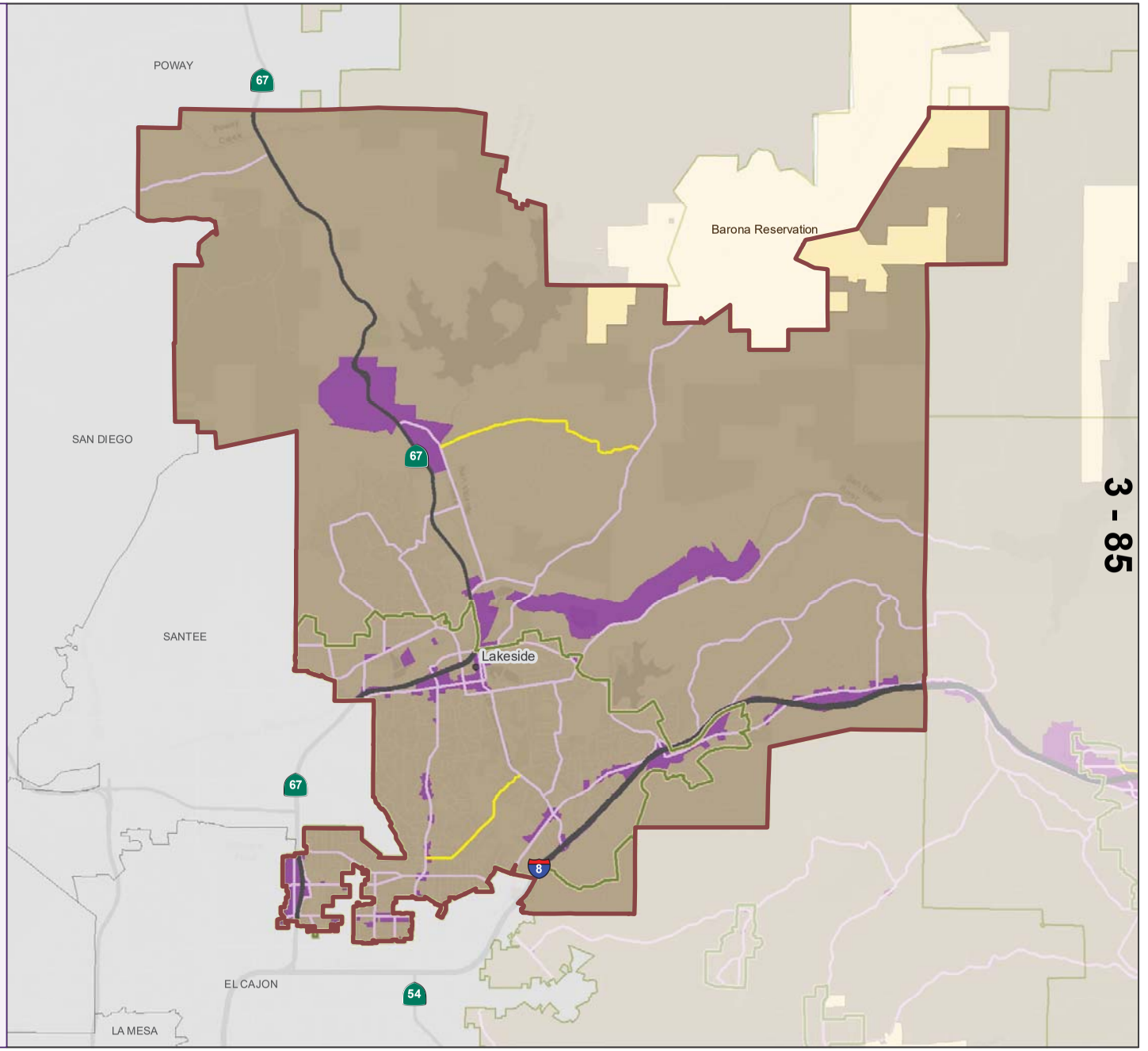
Community Villages

Tribal Lands

Community of Lakeside

5.5% Most Preferred Zones

74 Most Preferred Mobility Element Miles



0 1 2 3 Miles

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Zones & Roads - Spring Valley

Legend

Most Preferred Zones

Industrial Zones (M50, M52, M54, M56, and M58)
Commercial Zones (C32, C36, C37, C38, C40, C42, and C44)
Special Purpose Zones (S82, S86, S94 and Solid Waste Facility)

Least Preferred Zones

Rural Zones (A70, A72, S81 and S92)
Commercial Zones C34 & C35
Residential Zones (RS, RD, RR, RM, RV, RU, RMH, RRO, RC, S80, S90, C30, C31, C46)
Form Based Code Zones & Specific Plan Zones

Most Preferred Mobility Element

Major Roads, Boulevard Series, Community Collector Series, Light Collector Series, Minor Collector Series

Least Preferred Mobility Element

Local Public Road

Community Villages

Tribal Lands

Community of Spring Valley

10% Most Preferred Zones

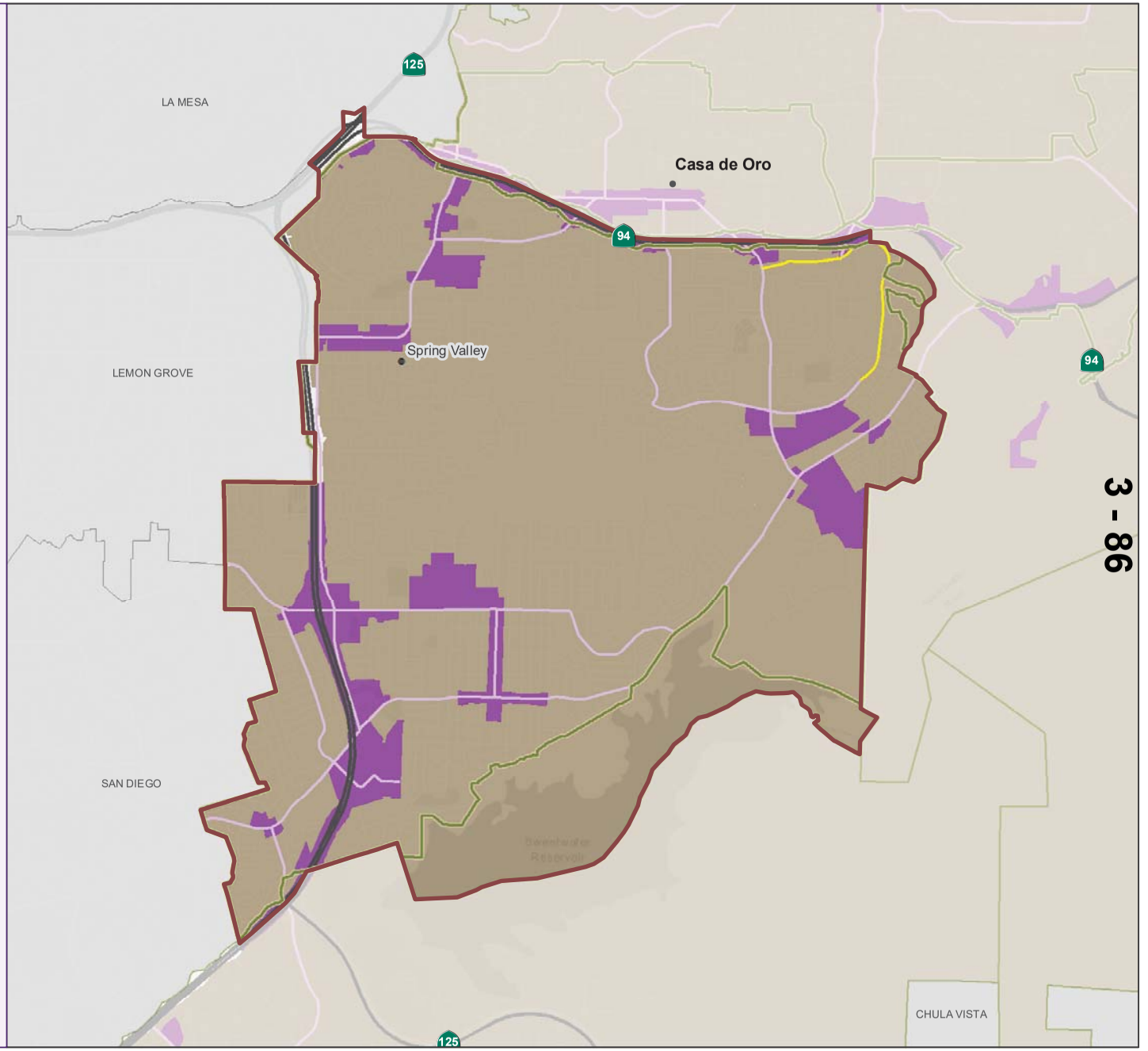
21 Most Preferred Mobility Element Miles

N 0 1 Miles

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Zones & Roads - Sweetwater

Legend

Most Preferred Zones

Industrial Zones (M50, M52, M54, M56, and M58)
Commercial Zones (C32, C36, C37, C38, C40, C42, and C44)
Special Purpose Zones (S82, S86, S94 and Solid Waste Facility)

Least Preferred Zones

Rural Zones (A70, A72, S81 and S92)
Commercial Zones C34 & C35
Residential Zones (RS, RD, RR, RM, RV, RU, RMH, RRO, RC, S80, S90, C30, C31, C46)
Form Based Code Zones & Specific Plan Zones

Most Preferred Mobility Element

Major Roads, Boulevard Series, Community Collector Series, Light Collector Series, Minor Collector Series

Least Preferred Mobility Element

Local Public Road

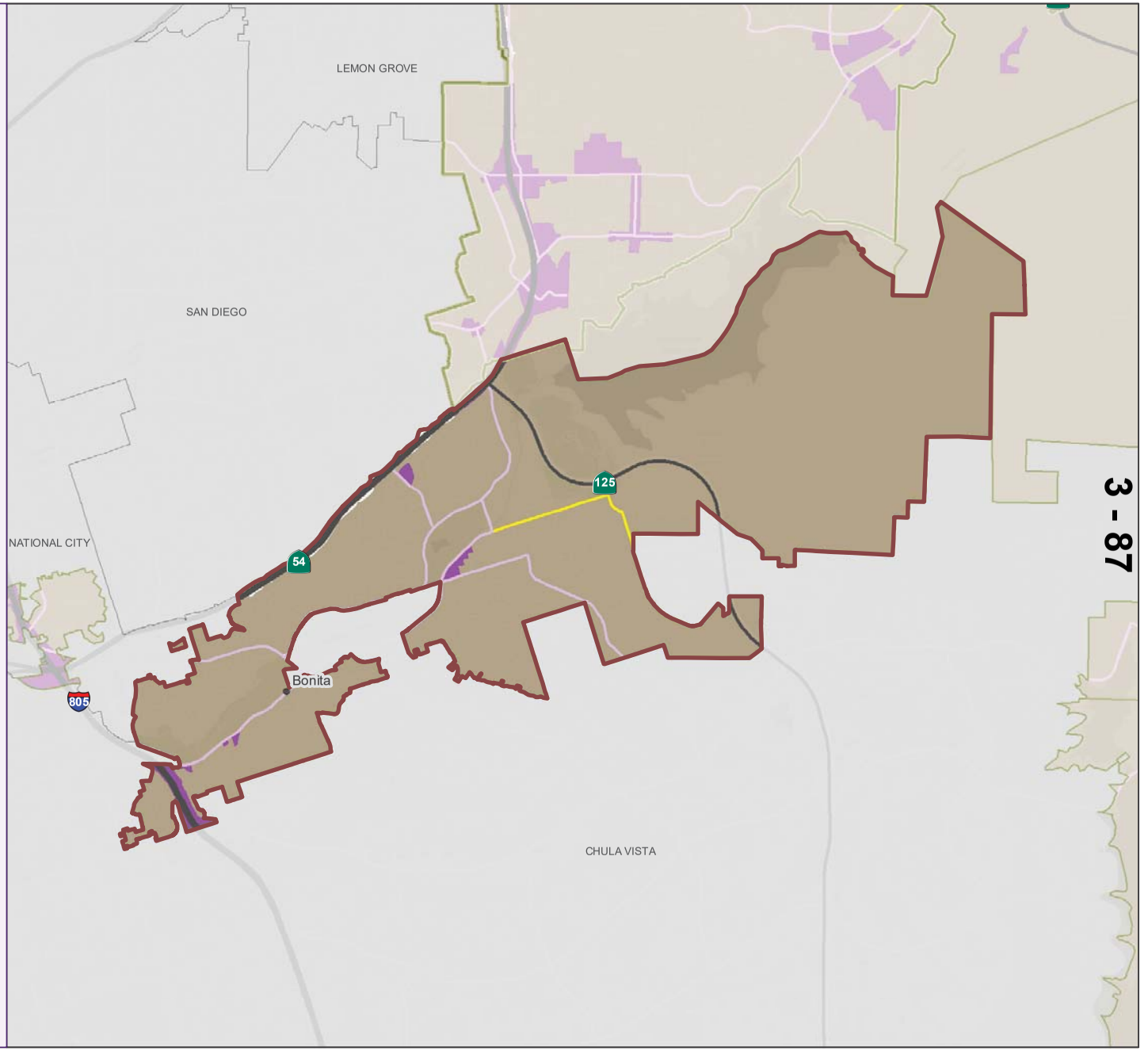
Community Villages

Tribal Lands

Community of Sweetwater

1.1% Most Preferred Zones

9 Most Preferred Mobility Element Miles



0 1 Miles

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Small Cell Wireless

Zones & Roads - Valle De Oro

Legend

Most Preferred Zones

Industrial Zones (M50, M52, M54, M56, and M58)
Commercial Zones (C32, C36, C37, C38, C40, C42, and C44)
Special Purpose Zones (S82, S86, S94 and Solid Waste Facility)

Least Preferred Zones

Rural Zones (A70, A72, S81 and S92)
Commercial Zones C34 & C35
Residential Zones (RS, RD, RR, RM, RV, RU, RMH, RRO, RC, S80, S90, C30, C31, C46)
Form Based Code Zones & Specific Plan Zones

Most Preferred Mobility Element

Major Roads, Boulevard Series, Community Collector Series, Light Collector Series, Minor Collector Series

Least Preferred Mobility Element

Local Public Road

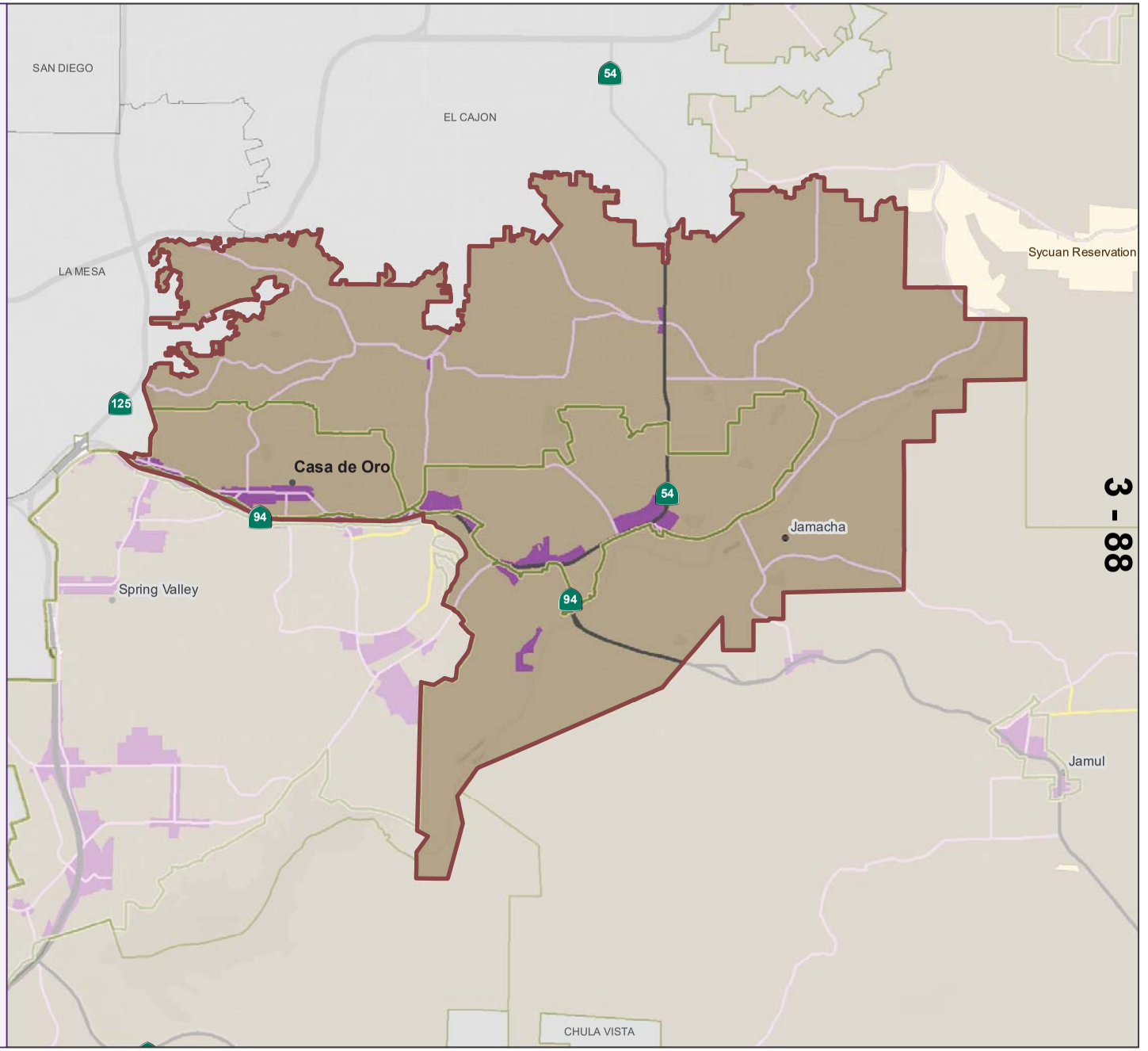
Community Villages

Tribal Lands

Community of Valle De Oro

16.5% Most Preferred Zones

34 Most Preferred Mobility Element Miles



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Small Cell Wireless

Zones & Roads - Valley Center

Legend

Most Preferred Zones

Industrial Zones (M50, M52, M54, M56, and M58)
Commercial Zones (C32, C36, C37, C38, C40, C42, and C44)
Special Purpose Zones (S82, S86, S94 and Solid Waste Facility)

Least Preferred Zones

Rural Zones (A70, A72, S81 and S92)
Commercial Zones C34 & C35
Residential Zones (RS, RD, RR, RM, RV, RU, RMH, RRO, RC, S80, S90, C30, C31, C46)
Form Based Code Zones & Specific Plan Zones

Most Preferred Mobility Element

Major Roads, Boulevard Series, Community Collector Series, Light Collector Series, Minor Collector Series

Least Preferred Mobility Element

Local Public Road

Community Villages

Tribal Lands

Community of Valley Center

0.5% Most Preferred Zones

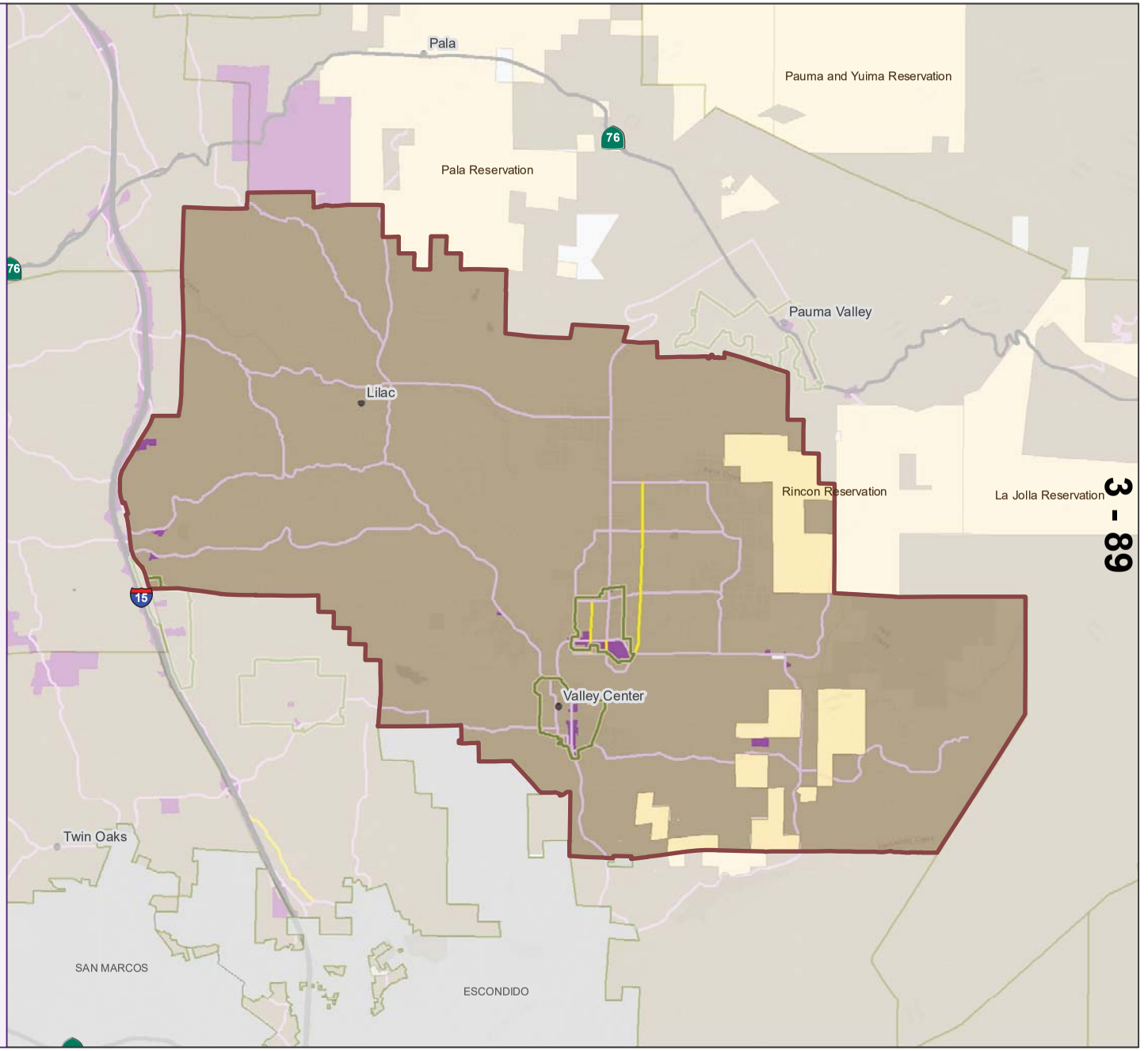
74 Most Preferred Mobility Element Miles

N 0 1 2 3 Miles

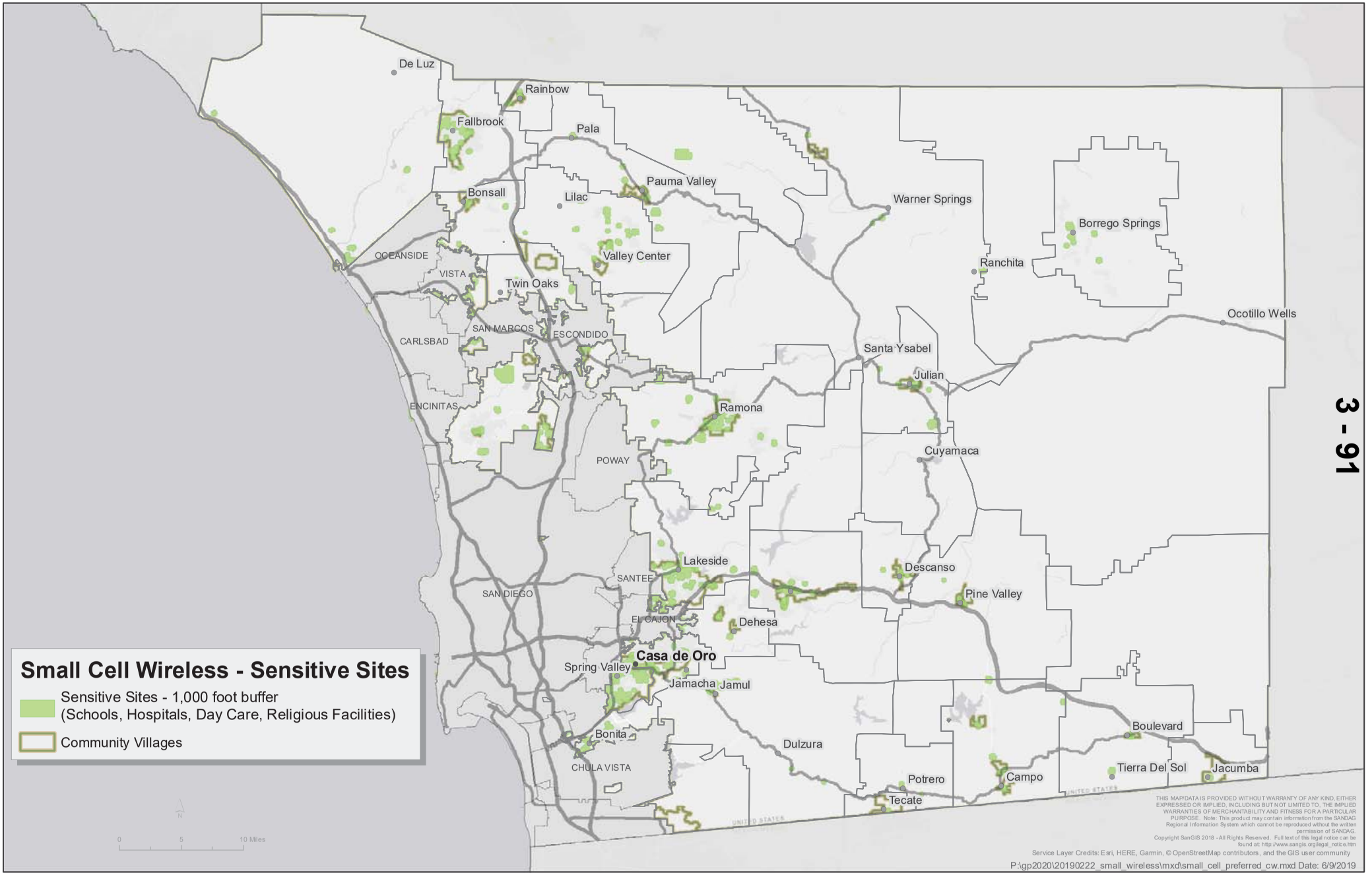
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Site Avoidance (LD-3)
Staff Recommendation - 1,000 feet

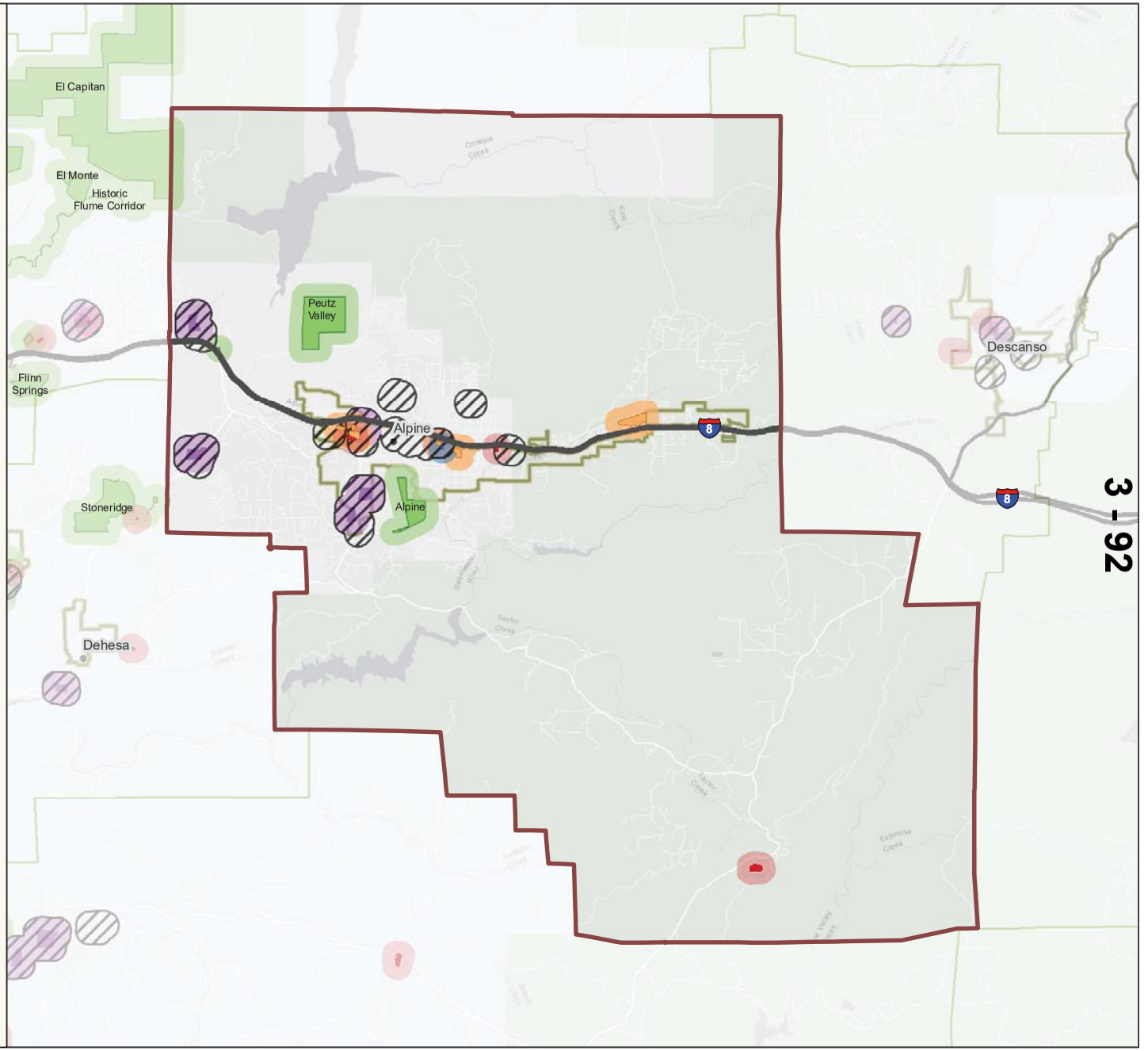

De Luz
Rainbow
Fallbrook
Pala
Pauma Valley
Bonsall
Lilac
Warner Springs
Borrego Springs
OCEANSIDE
Valley Center
Ranchita
VISTA
Twin Oaks
Ocotillo Wells
SAN MARCOS
ESCONDIDO
CARLSBAD
Santa Ysabel
Julian
ENCINITAS
Ramona
Cuyamaca
POWAY
Lakeside
Descanso
SANTEE
SAN DIEGO
Pine Valley
EL CAJON
Dehesa
Casa de Oro
Spring Valley
Jamacha
Jamul
Boulevard
Bonita
Dulzura
CHULA VISTA
Tierra Del Sol
Jacumba
Potrero
Campo
Tecate
Small Cell Wireless - Sensitive Sites
Sensitive Sites - 1,000 foot buffer
(Schools, Hospitals, Day Care, Religious Facilities)
Community Villages
0
5
10 Miles
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Small Cell Wireless

Avoidance 1,000 feet - Alpine

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 1,000 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 3 Miles

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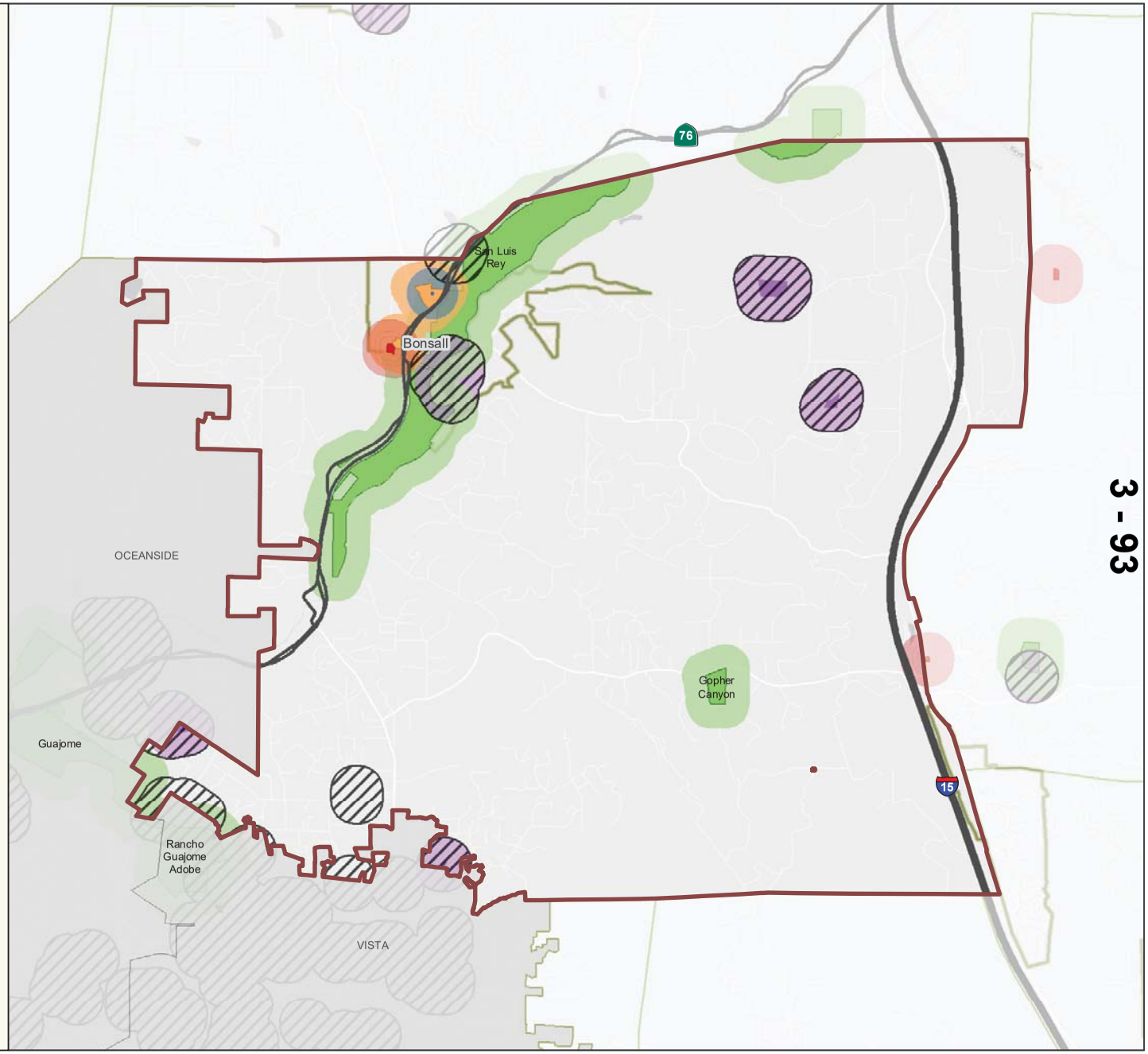
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Small Cell Wireless

Avoidance 1,000 feet - Bonsall

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 1,000 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 Miles

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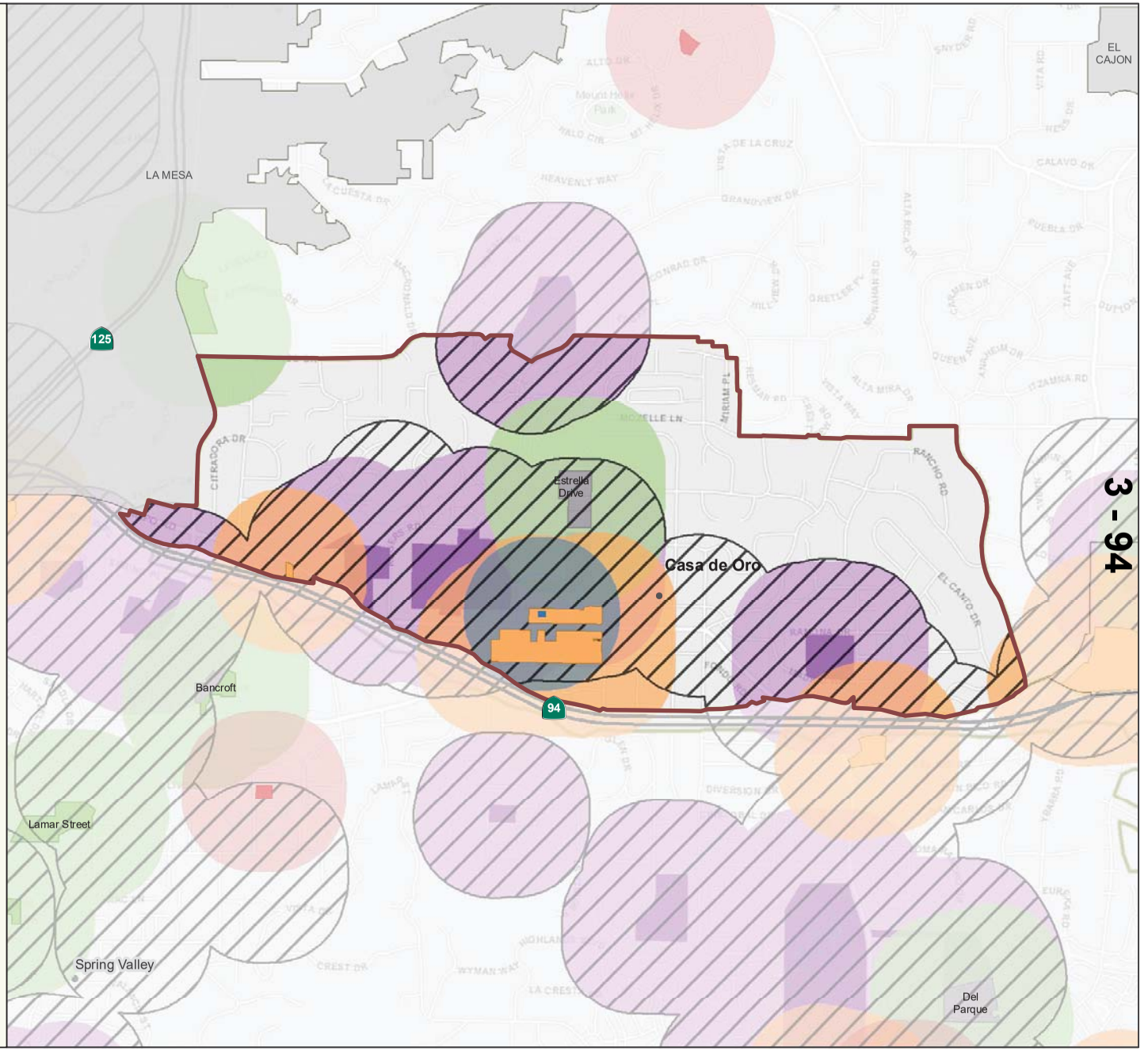
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Small Cell Wireless

Avoidance 1,000 feet - Casa De Oro

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 1,000 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



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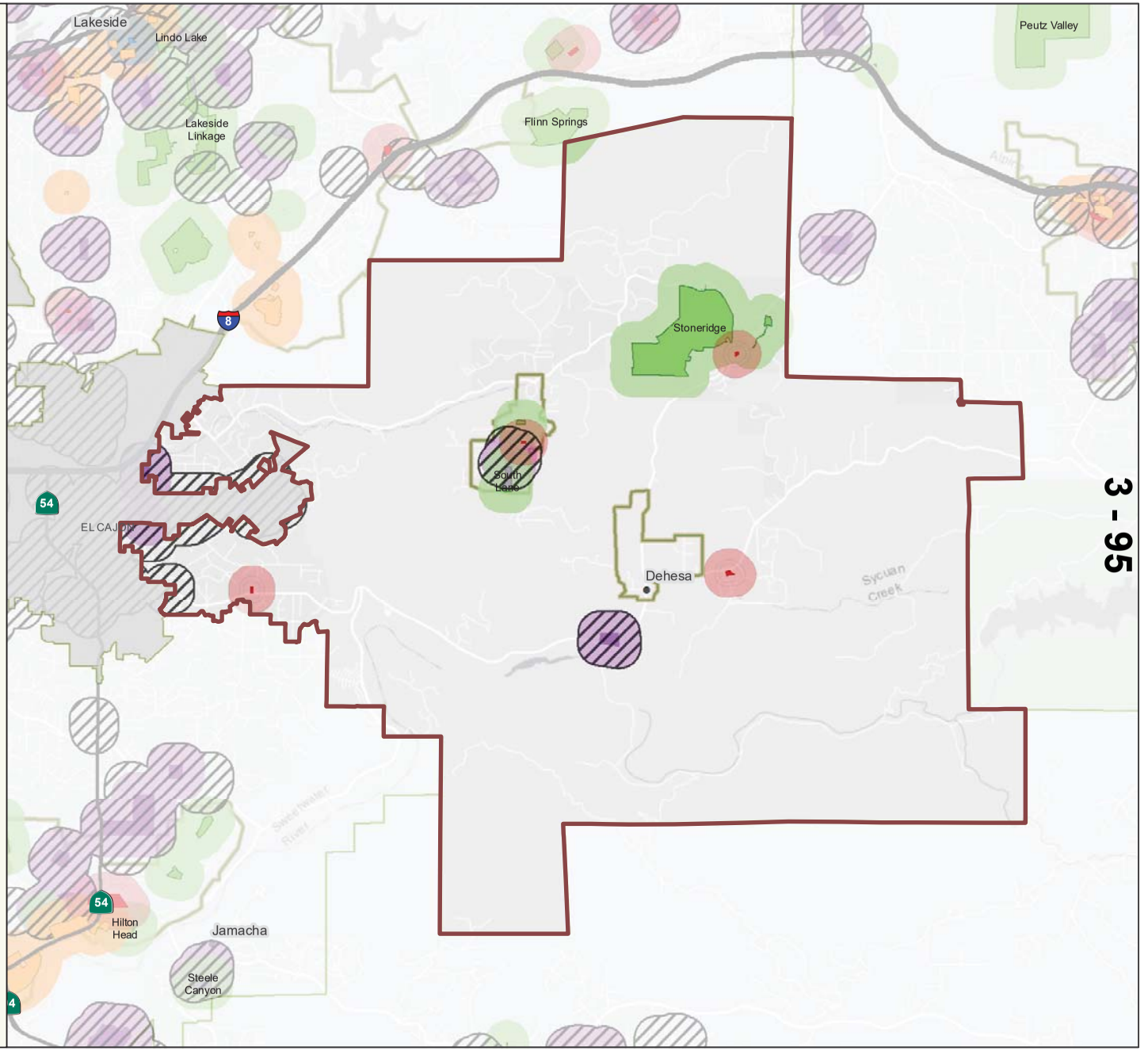
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Small Cell Wireless

Avoidance 1,000 feet - Crest - Dehesa

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 1,000 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 Miles

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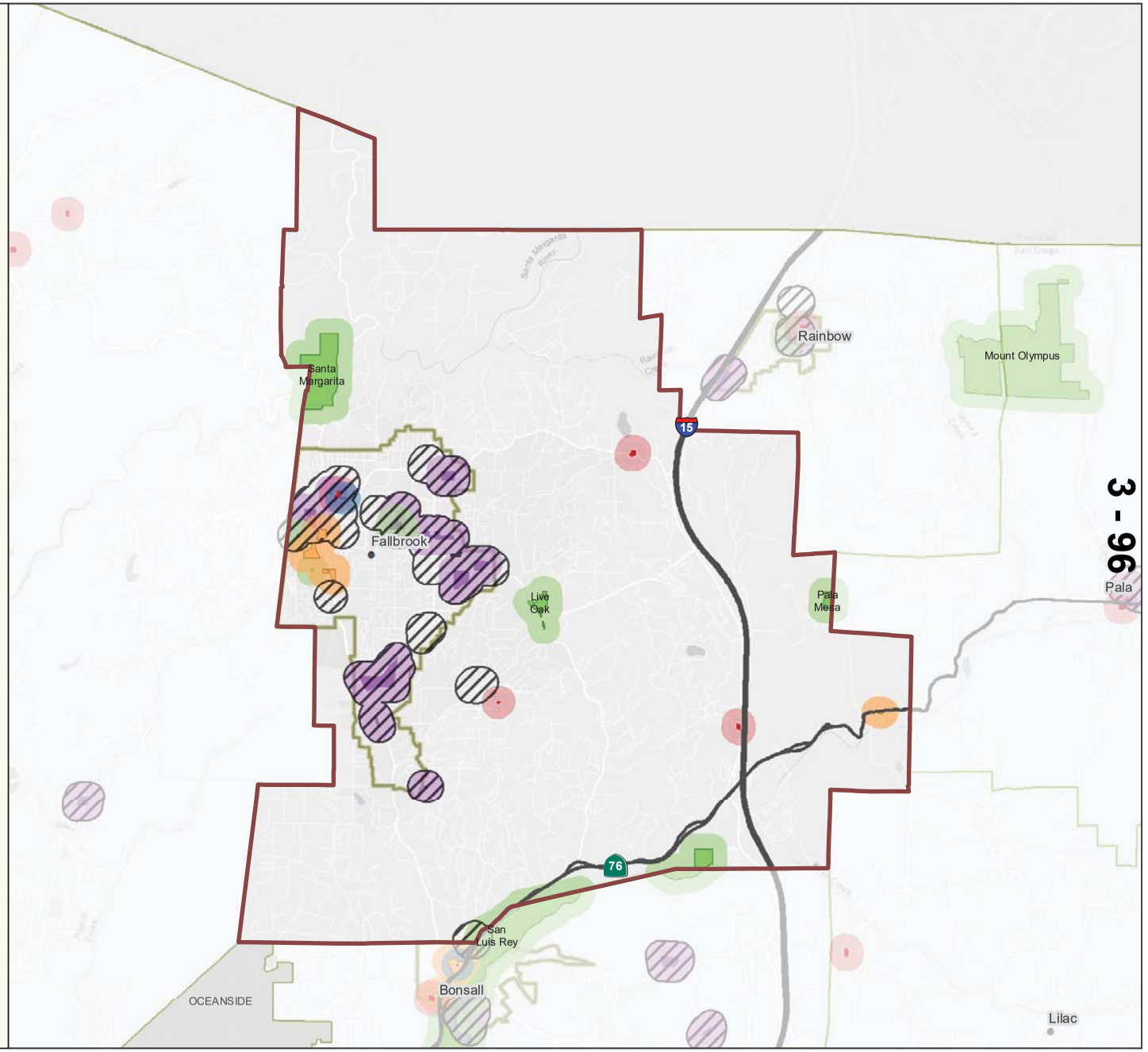
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Small Cell Wireless

Avoidance 1,000 feet - Fallbrook

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 1,000 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 3 Miles

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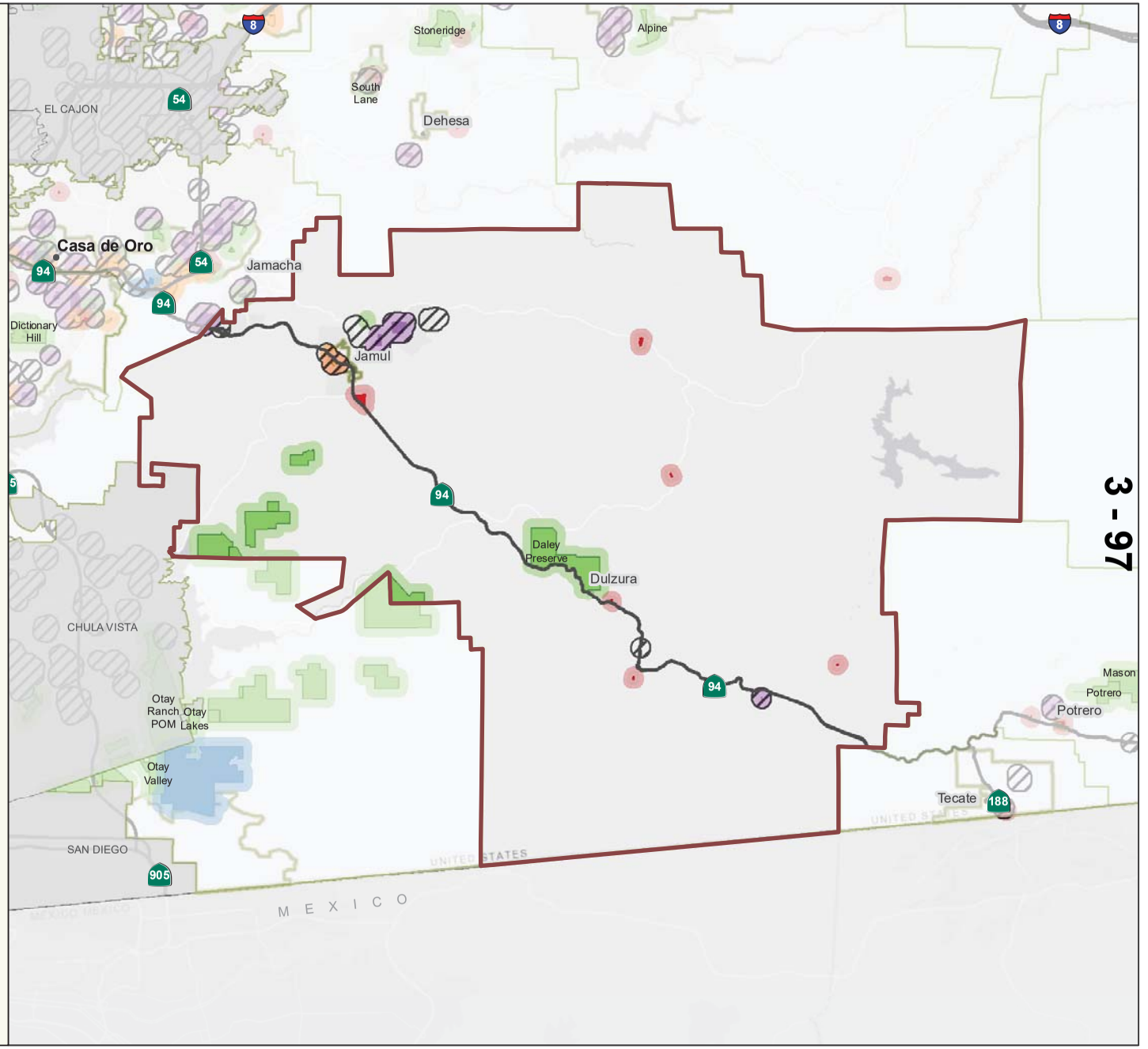
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Small Cell Wireless

Avoidance 1,000 feet - Jamul

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 1,000 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 3 4 5 Miles

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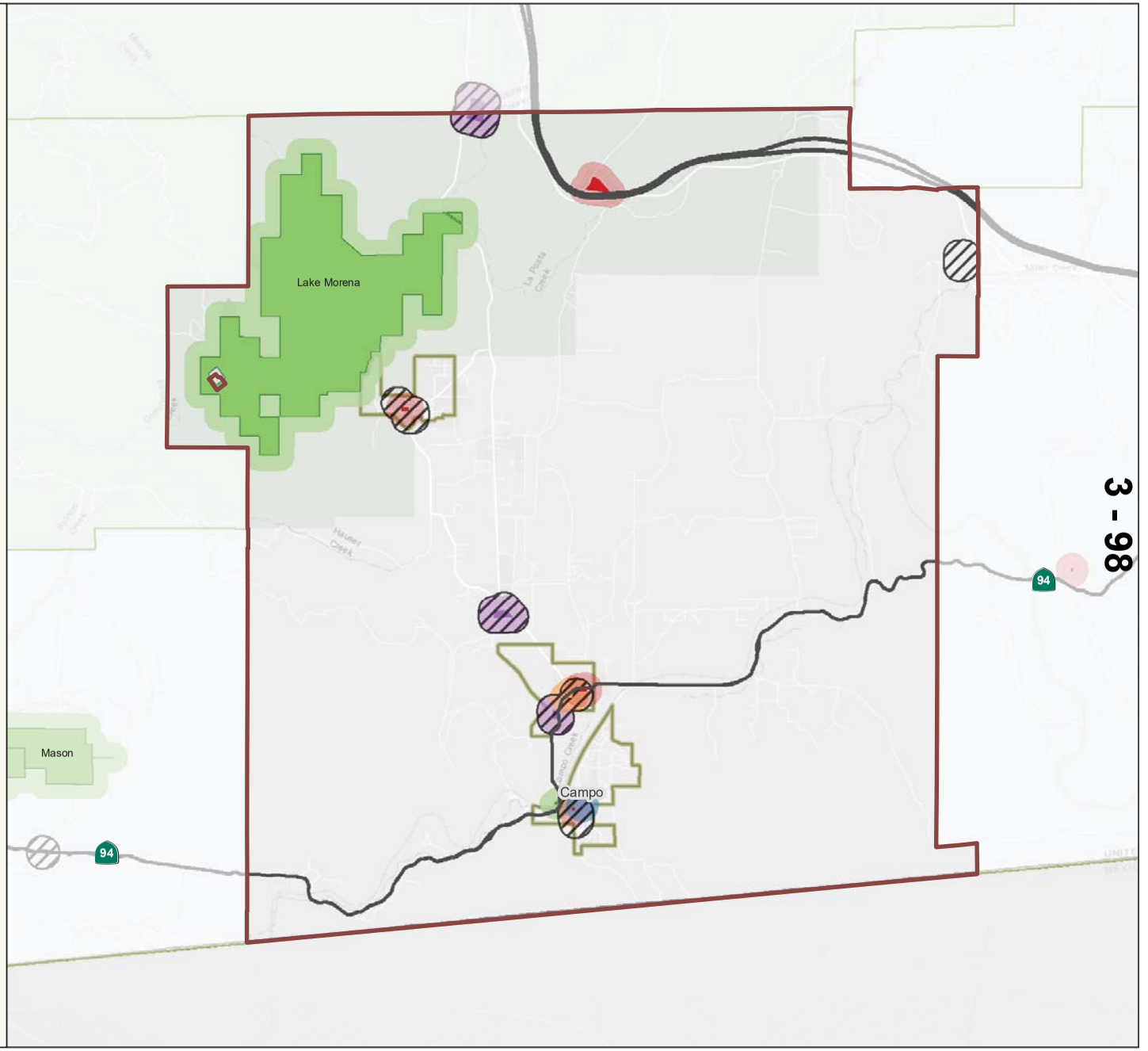
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Small Cell Wireless

Avoidance 1,000 feet - Lake Morena / Campo

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 1,000 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 Miles

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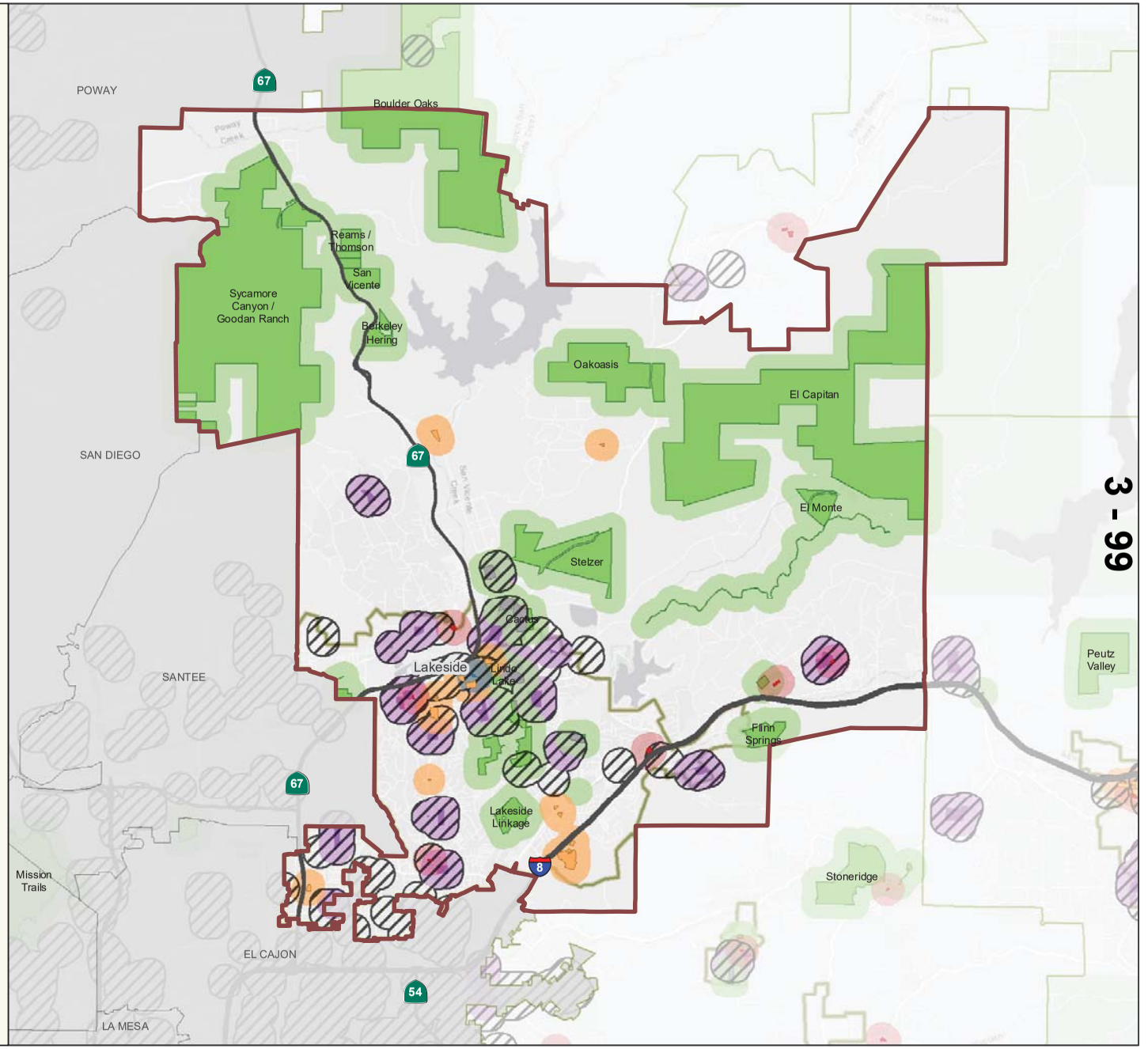
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Small Cell Wireless

Avoidance 1,000 feet - Lakeside

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 1,000 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 3 Miles

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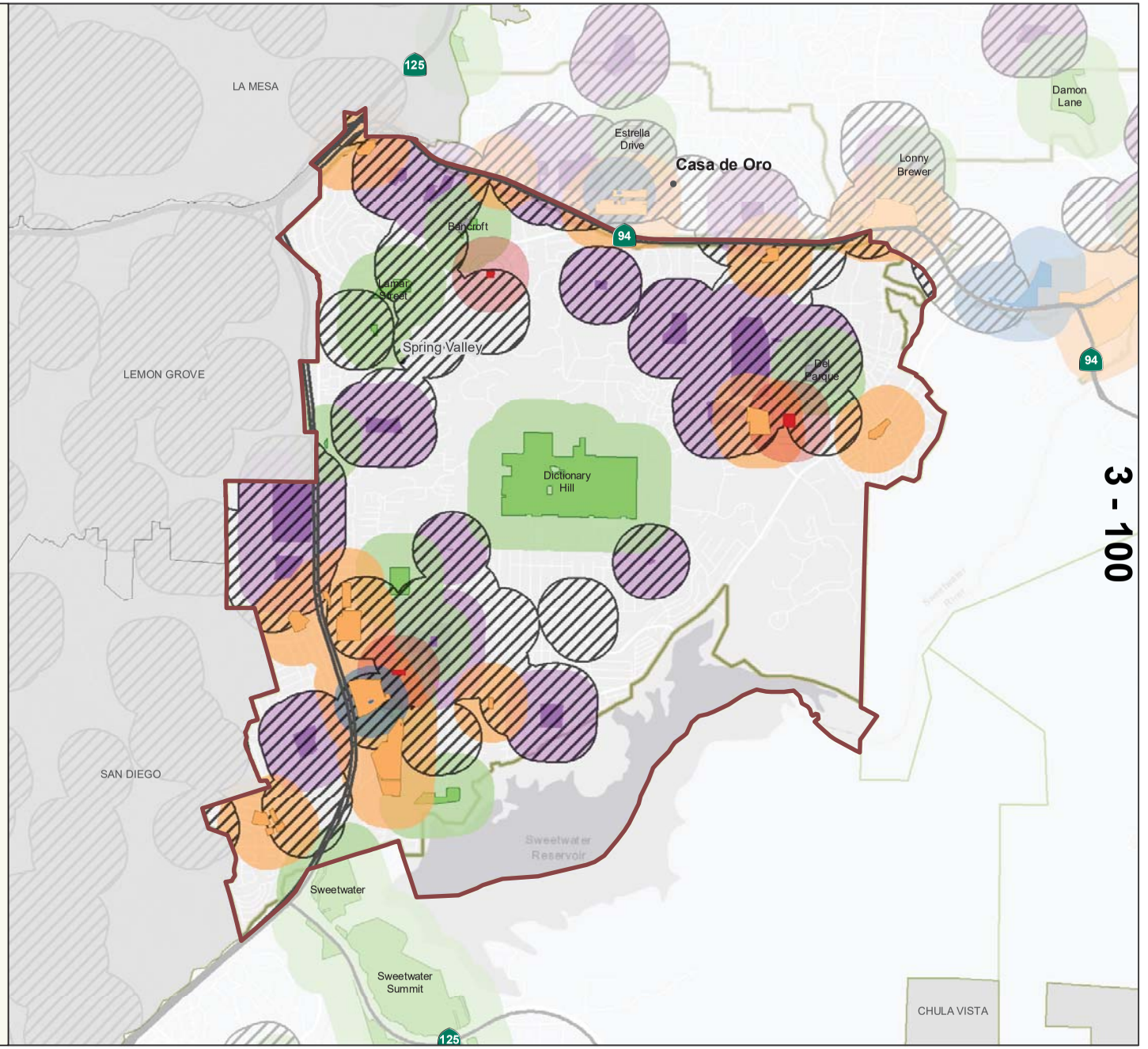
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Small Cell Wireless

Avoidance 1,000 feet - Spring Valley

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 1,000 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 Miles

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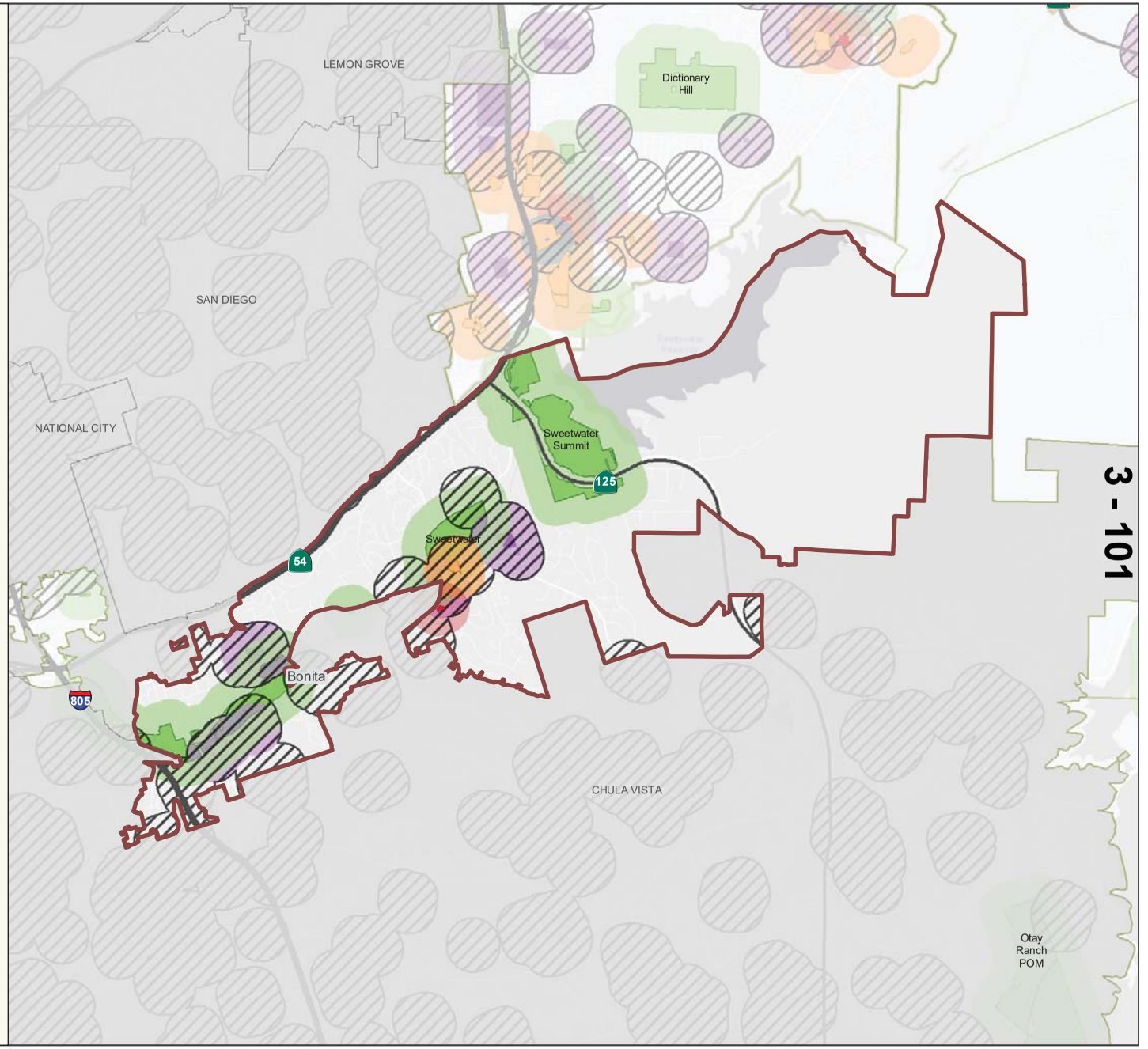
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Small Cell Wireless

Avoidance 1,000 feet - Sweetwater

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 1,000 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



N

0 1 Miles

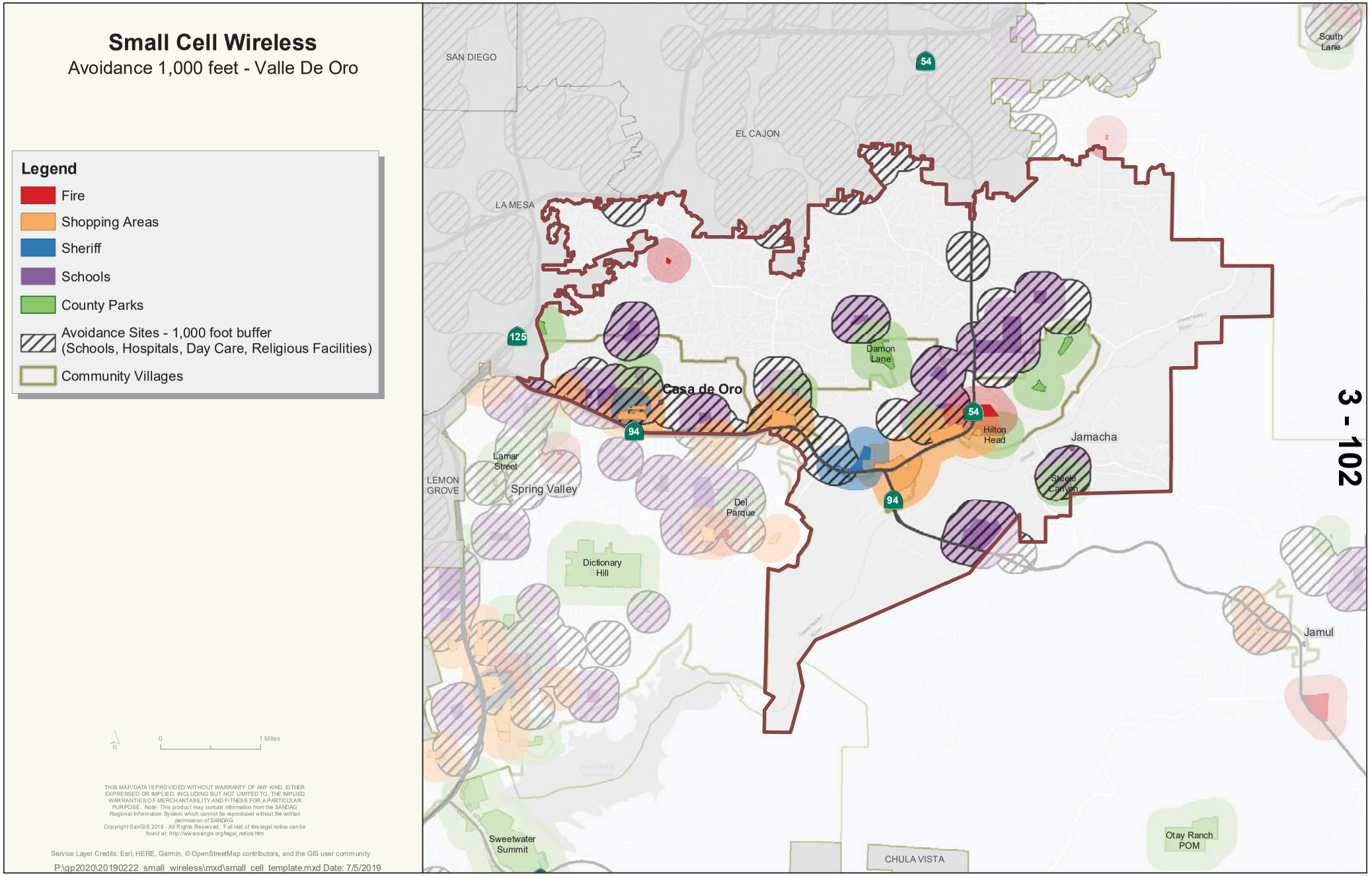
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Small Cell Wireless

Avoidance 1,000 feet - Valle De Oro



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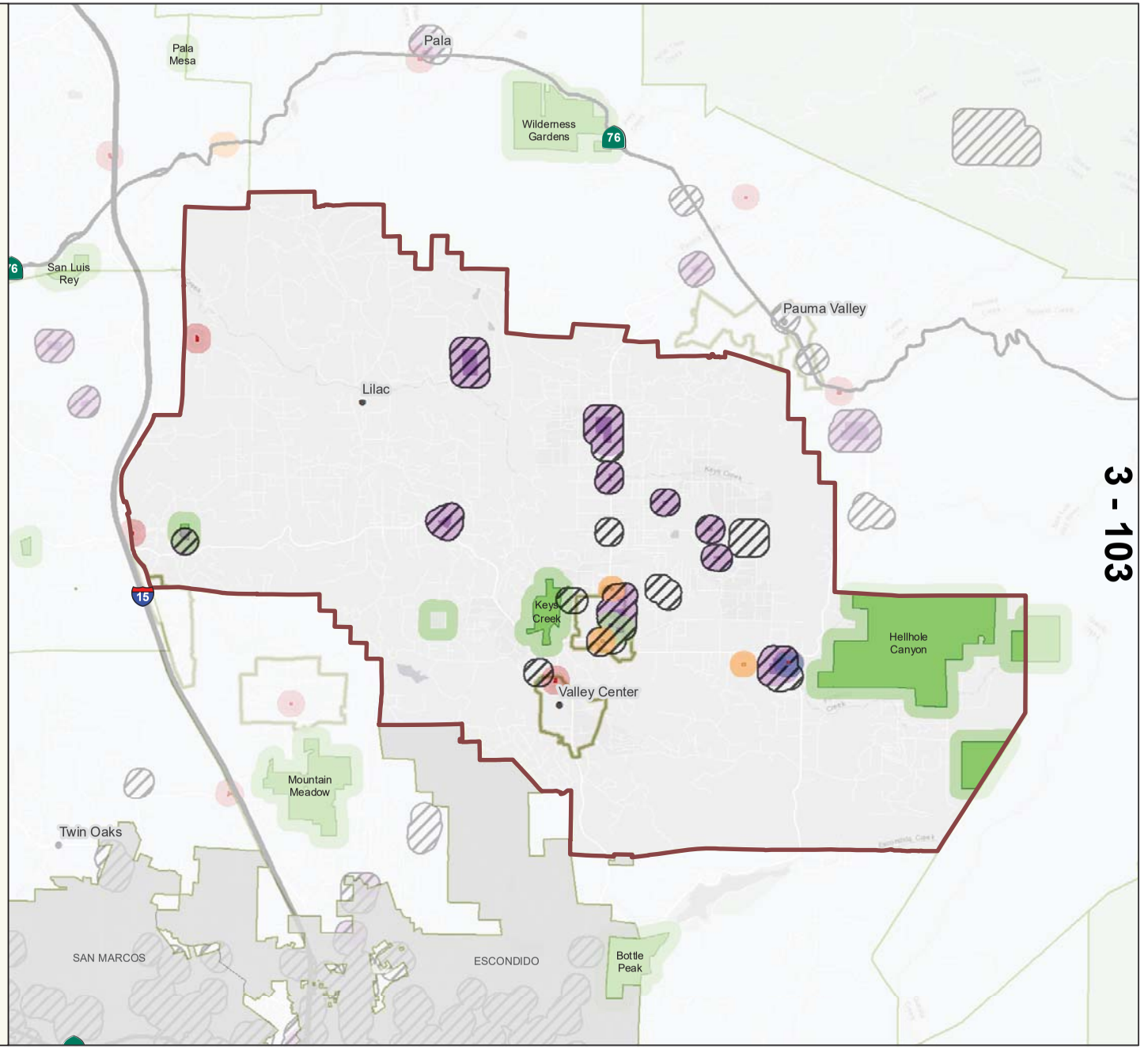
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Small Cell Wireless

Avoidance 1,000 feet - Valley Center

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 1,000 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



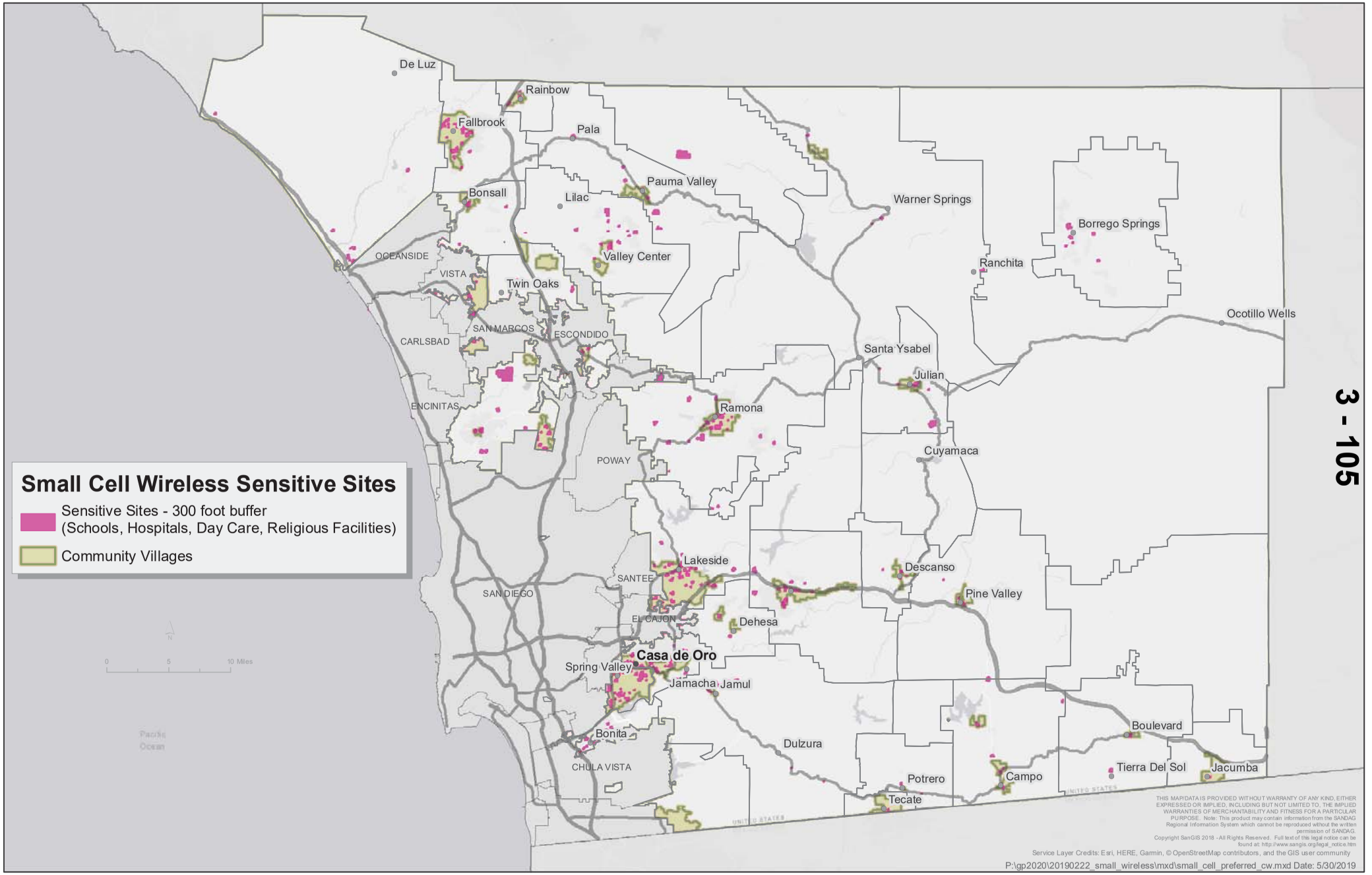
N 0 1 2 3 Miles

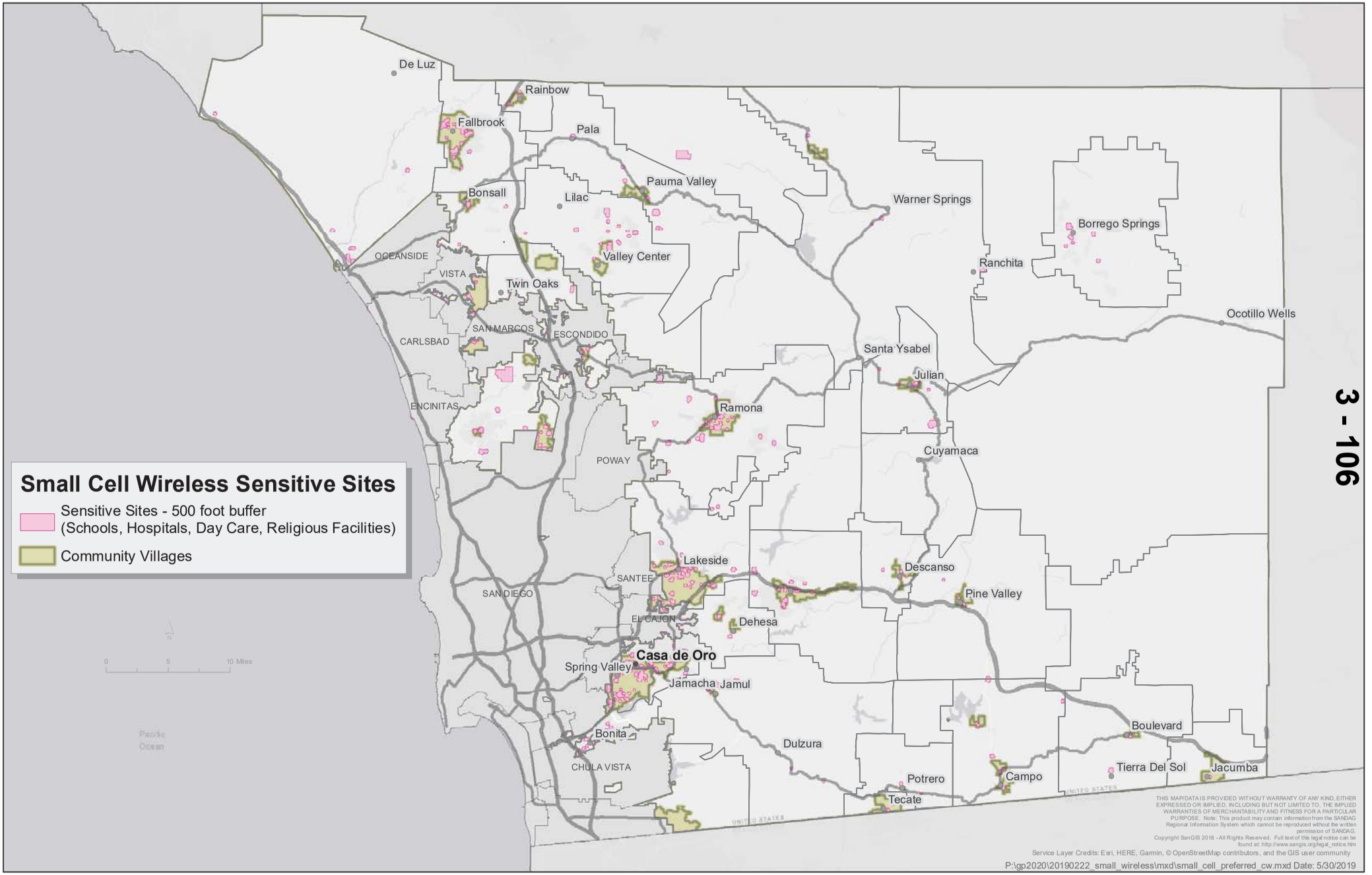
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Site Avoidance (LD-3)
Distance Options - 300 & 500 feet


Small Cell Wireless Sensitive Sites
Sensitive Sites - 300 foot buffer
(Schools, Hospitals, Day Care, Religious Facilities)
Community Villages
De Luz
Rainbow
Fallbrook
Pala
Pauma Valley
Bonsall
Lilac
Warner Springs
Borrego Springs
OCEANSIDE
VISTA
Valley Center
Twin Oaks
Ranchita
Ocotillo Wells
SAN MARCOS
ESCONDIDO
CARLSBAD
Santa Ysabel
Julian
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POWAY
Lakeside
Descanso
SANTEE
SAN DIEGO
Pine Valley
EL CAJON
Dehesa
Casa de Oro
Spring Valley
Jamacha
Jamul
Boulevard
Bonita
Dulzura
CHULA VISTA
Tierra Del Sol
Jacumba
Potrero
Campo
Tecate
0
5
10 Miles
Pacific Ocean
UNITED STATES
UNITED STATES
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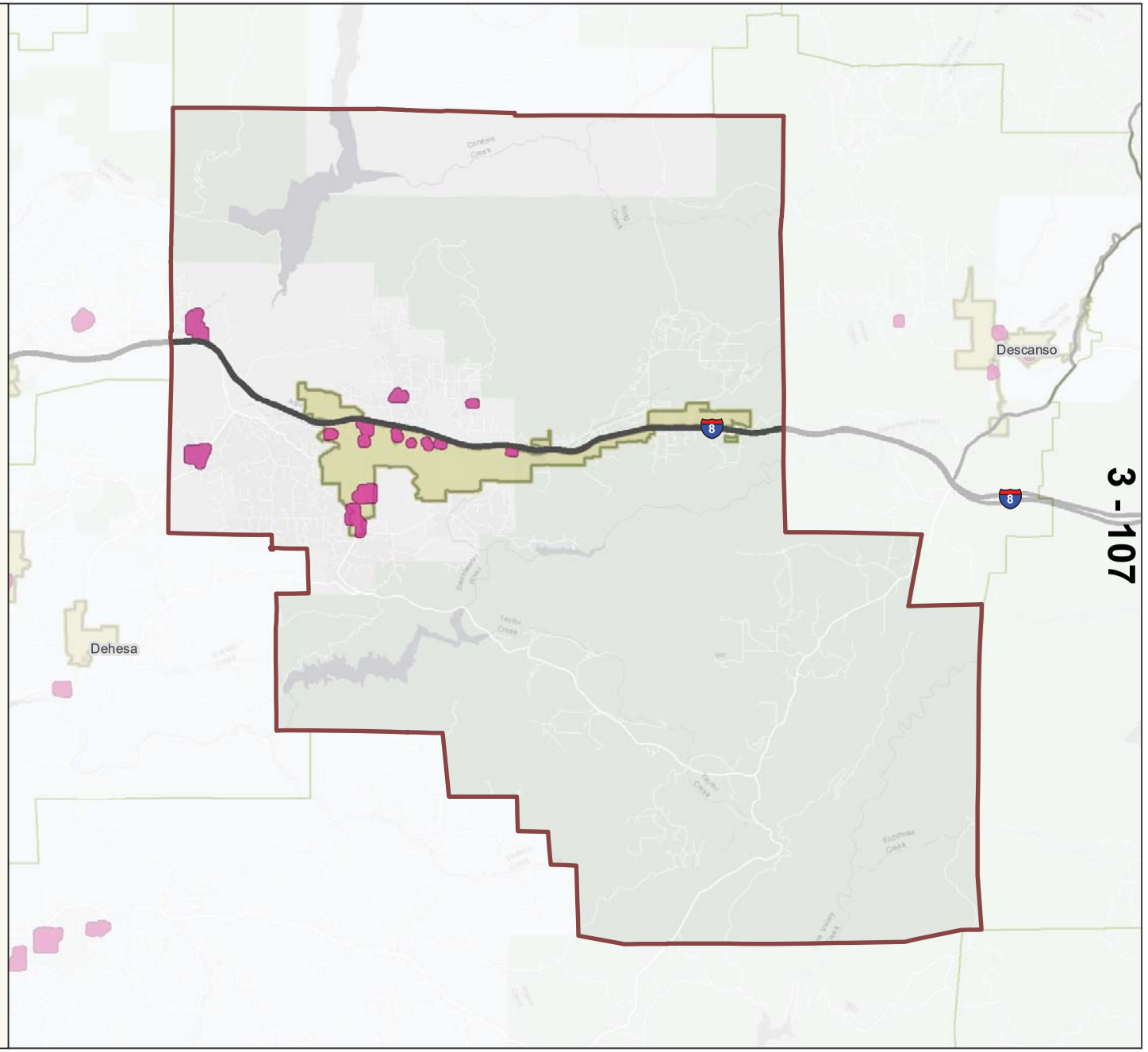

De Luz
Rainbow
Fallbrook
Pala
Pauma Valley
Bonsall
Lilac
Warner Springs
Borrego Springs
OCEANSIDE
VISTA
Valley Center
Twin Oaks
Ranchita
Ocotillo Wells
SAN MARCOS
ESCONDIDO
CARLSBAD
Santa Ysabel
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ENCINITAS
Ramona
Cuyamaca
POWAY
Small Cell Wireless Sensitive Sites
Sensitive Sites - 500 foot buffer
(Schools, Hospitals, Day Care, Religious Facilities)
Community Villages
Lakeside
Descanso
SANTEE
SAN DIEGO
Pine Valley
EL CAJON
Dehesa
Casa de Oro
Spring Valley
Jamacha
Jamul
Boulevard
Bonita
Dulzura
CHULA VISTA
Tierra Del Sol
Jacumba
Potrero
Campo
Tecate
0 5 10 Miles
Pacific Ocean
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Small Cell Wireless

Sensitive Sites - Alpine

Legend

- Sensitive Sites - 300 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



N

0 1 2 3 Miles

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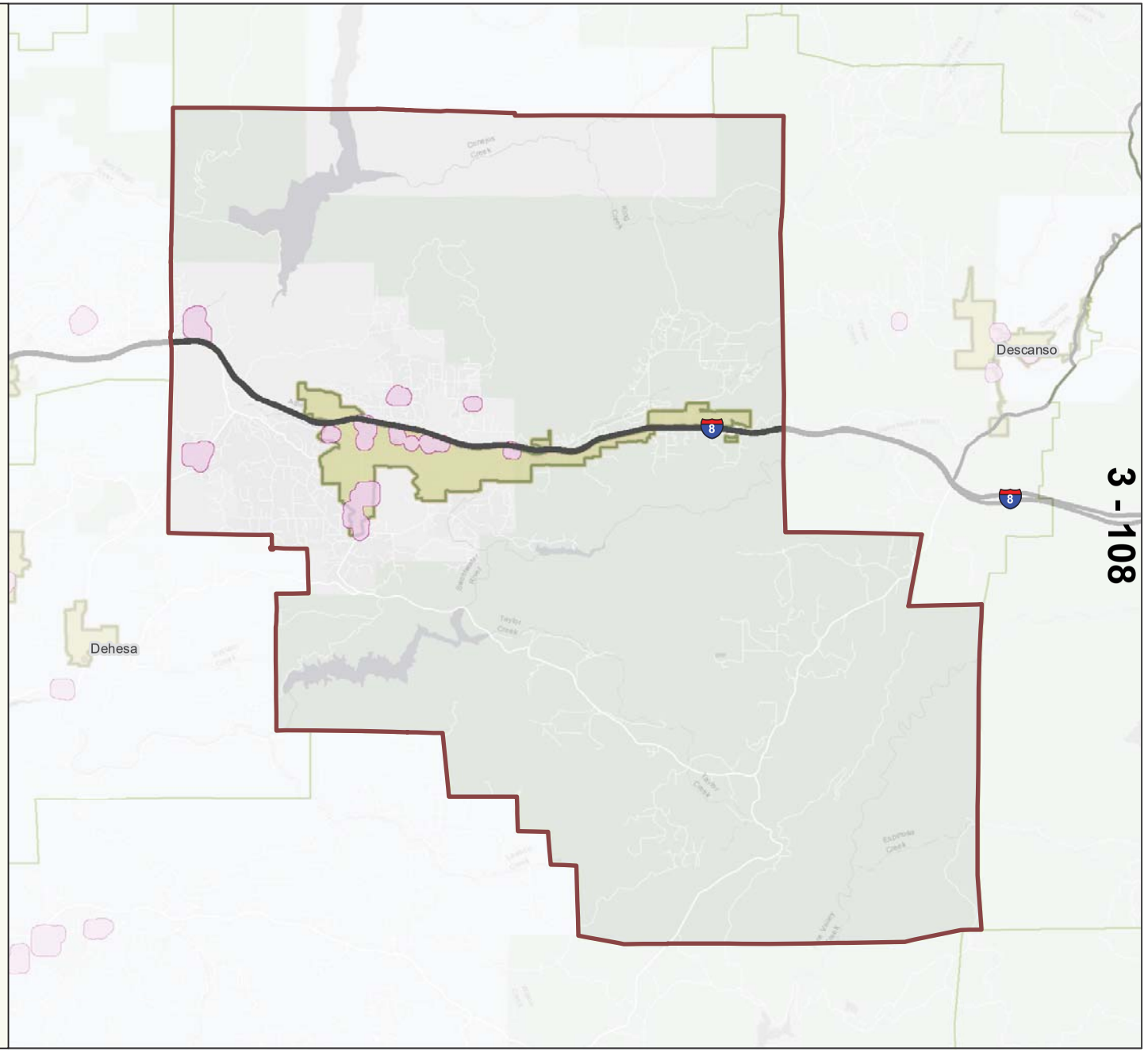
P:\gp2020\20190222_small_wireless\mxd\small_cell_template.mxd Date: 6/7/2019

Small Cell Wireless

Sensitive Sites - Alpine

Legend

- Sensitive Sites - 500 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



N 0 1 2 3 Miles

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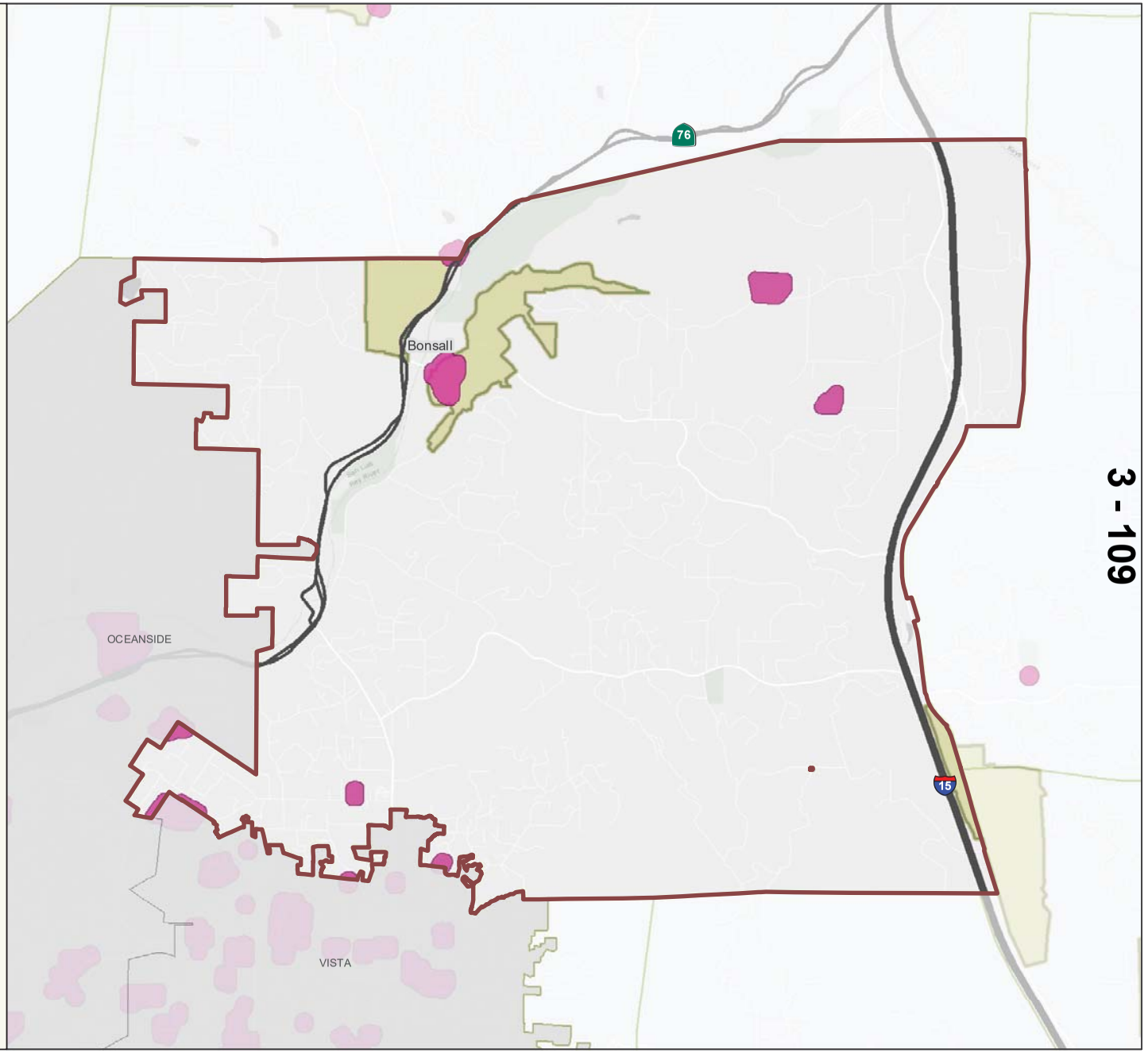
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Small Cell Wireless

Sensitive Sites - Bonsall

Legend

- Sensitive Sites - 300 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



N

0 1 Miles

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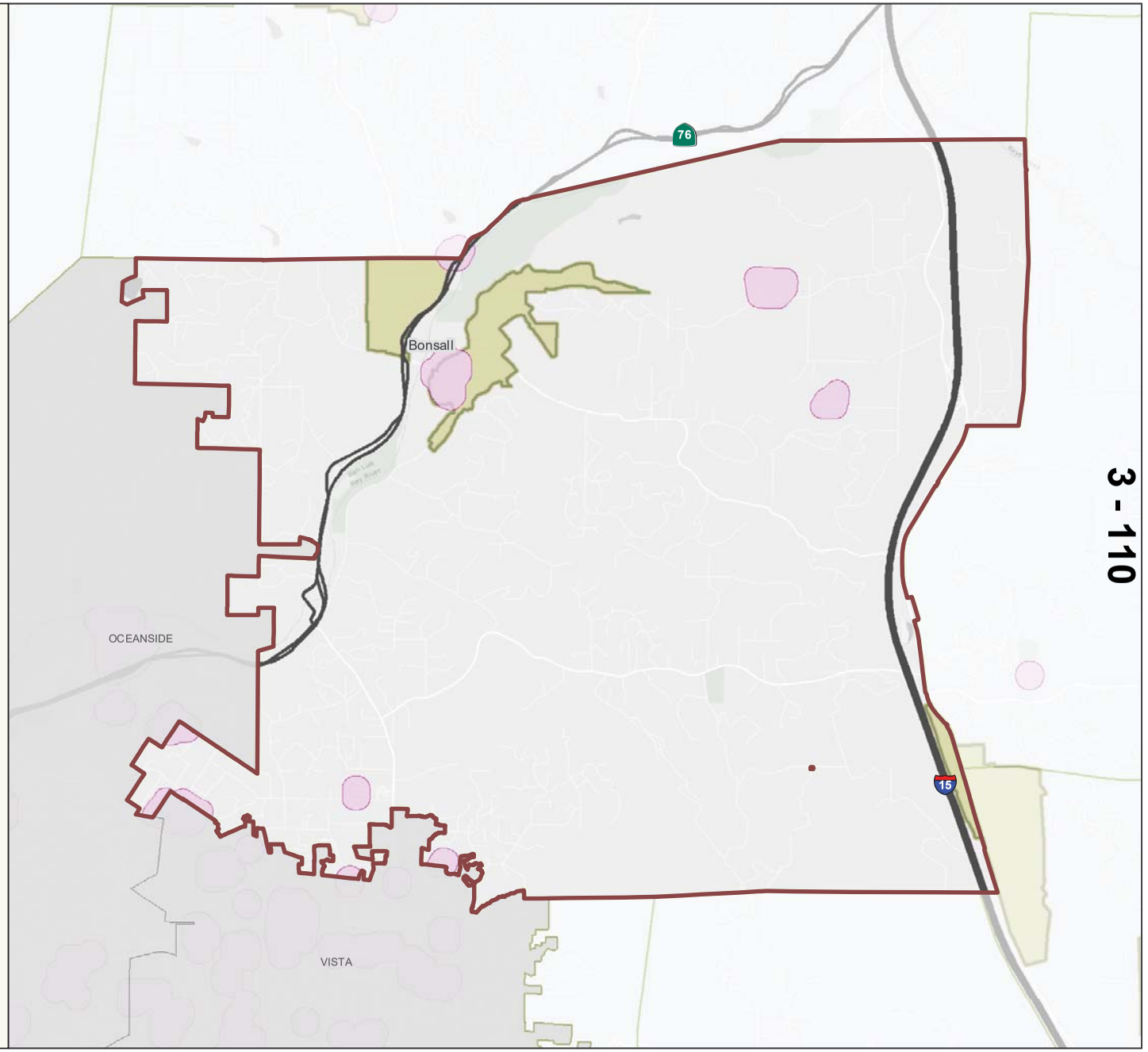
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Small Cell Wireless

Sensitive Sites - Bonsall

Legend

- Sensitive Sites - 500 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



N

0 1 Miles

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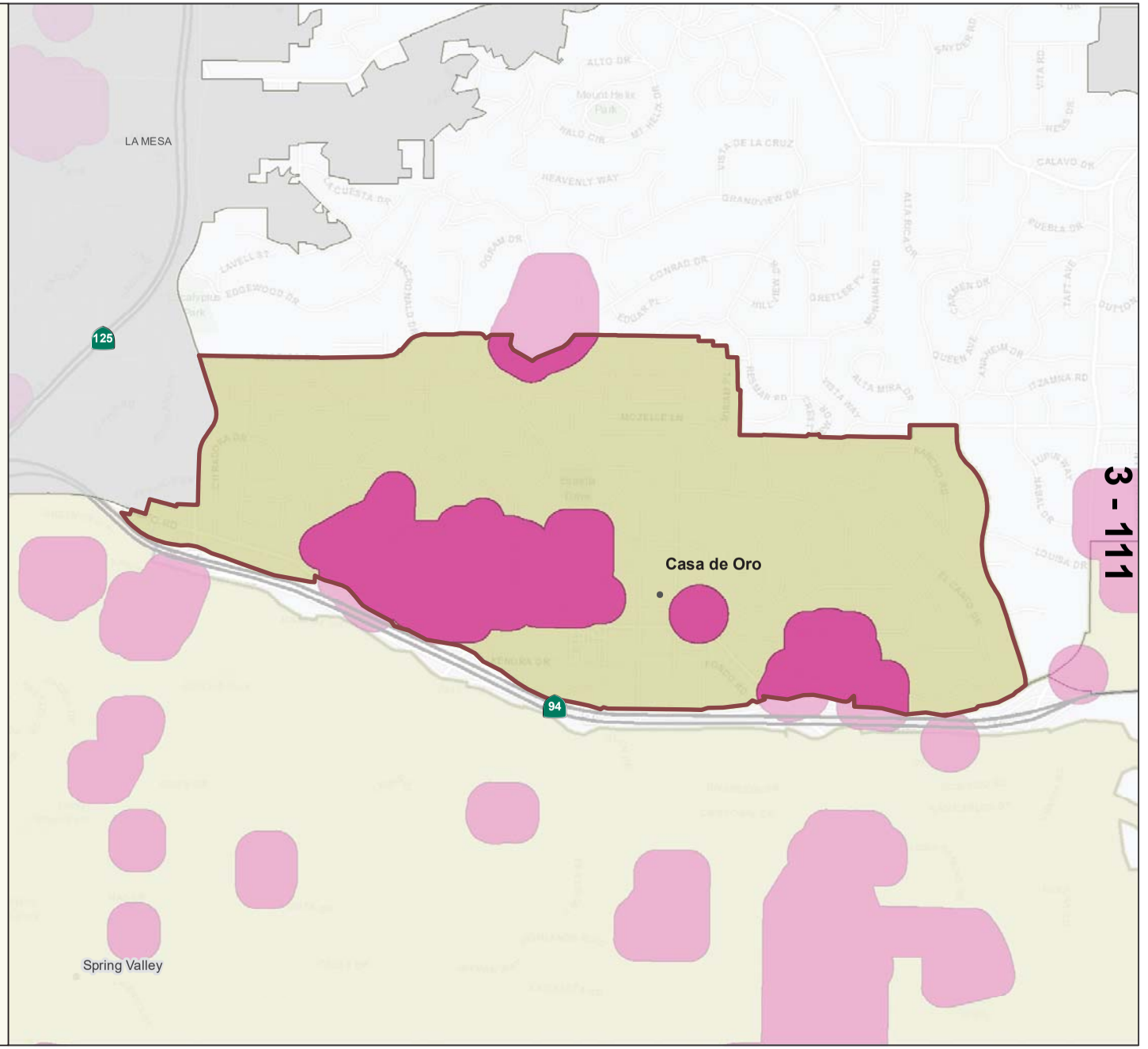
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Small Cell Wireless

Sensitive Sites - Casa De Oro

Legend

- Sensitive Sites - 300 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 0.5 Miles

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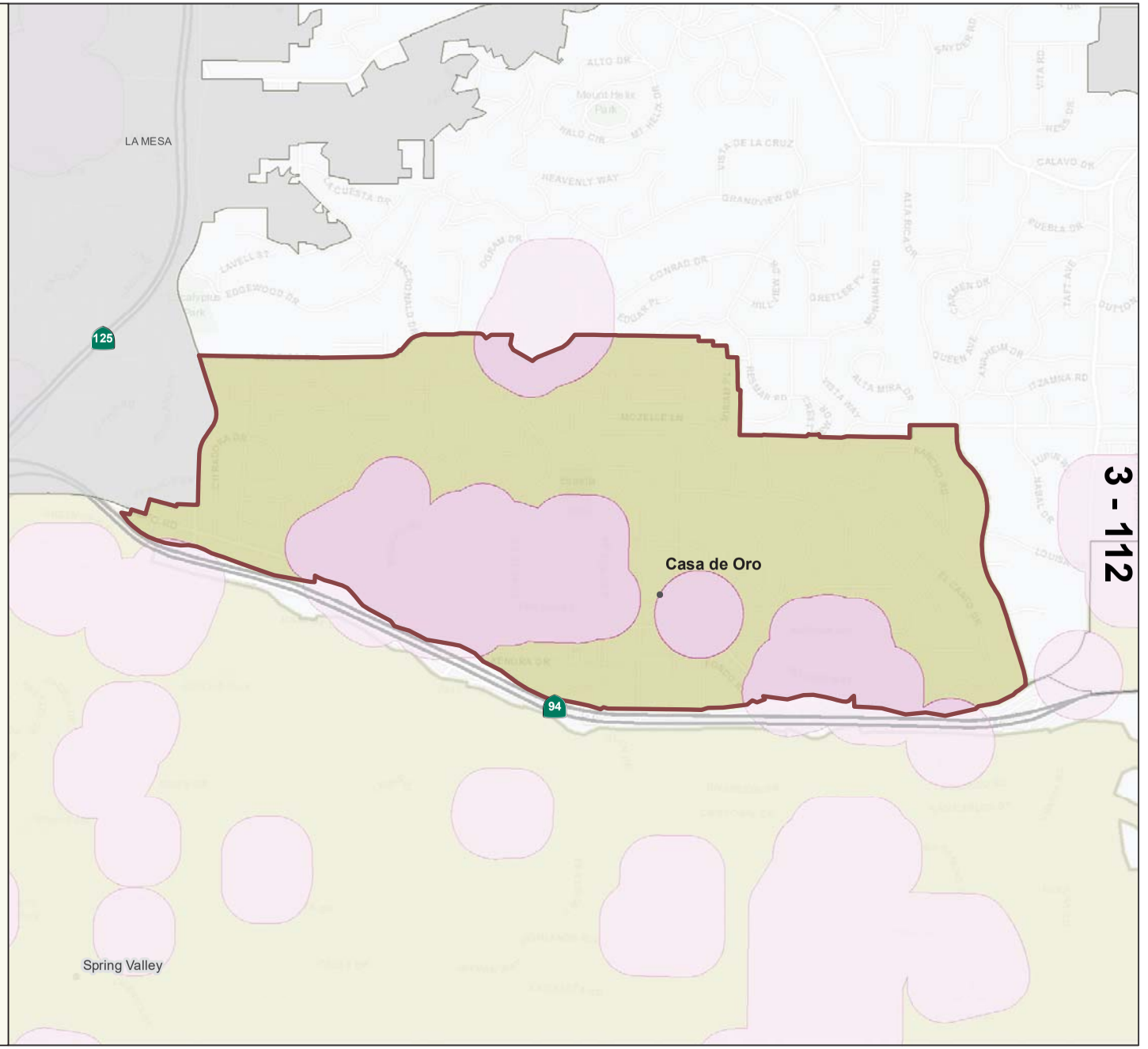
P:\gp2020\20190222_small_wireless\mxd\small_cell_template.mxd Date: 6/7/2019

Small Cell Wireless

Sensitive Sites - Casa De Oro

Legend

- Sensitive Sites - 500 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 0.5 Miles

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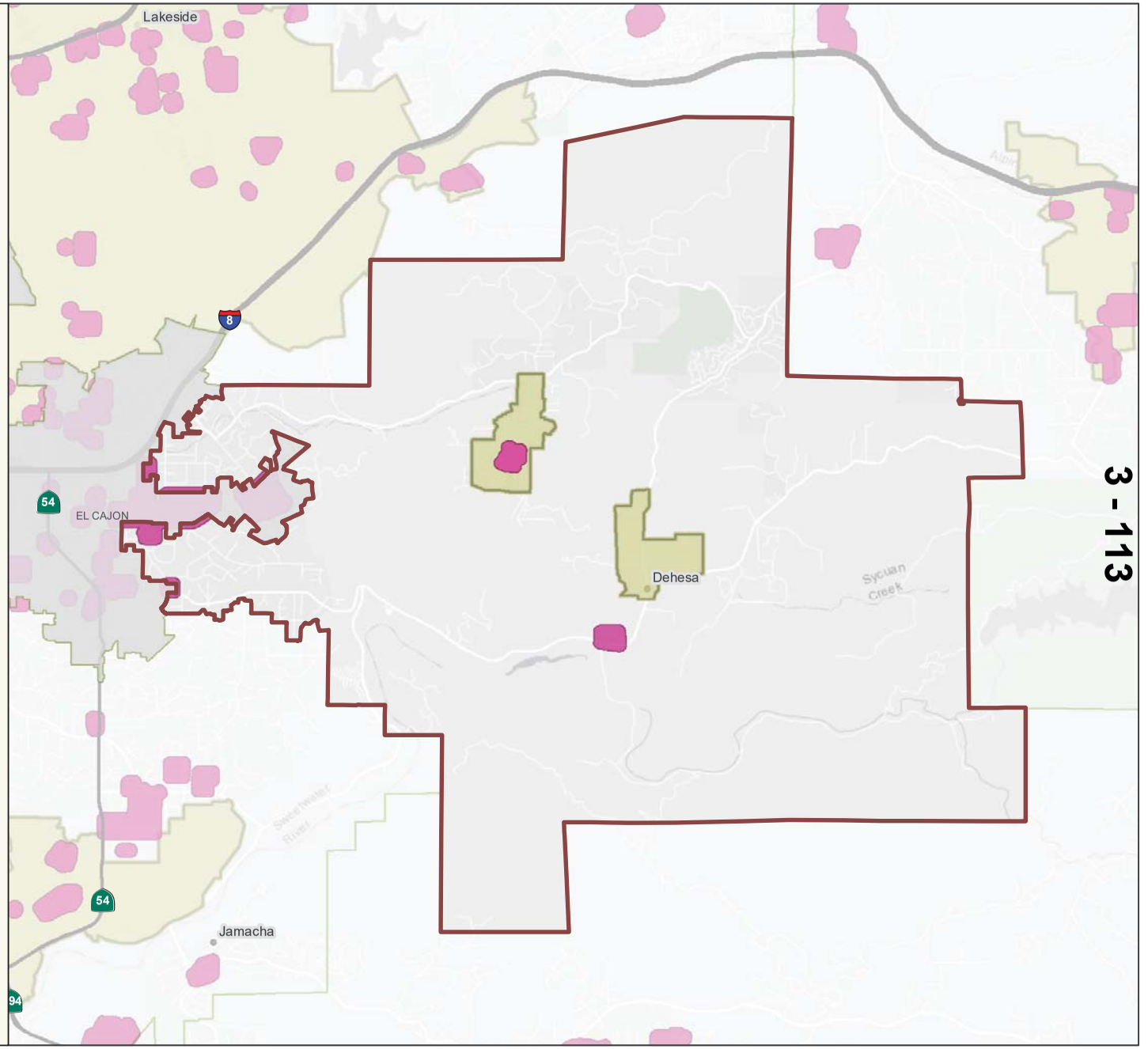
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Small Cell Wireless

Sensitive Sites - Crest - Dehesa

Legend

- Sensitive Sites - 300 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 Miles

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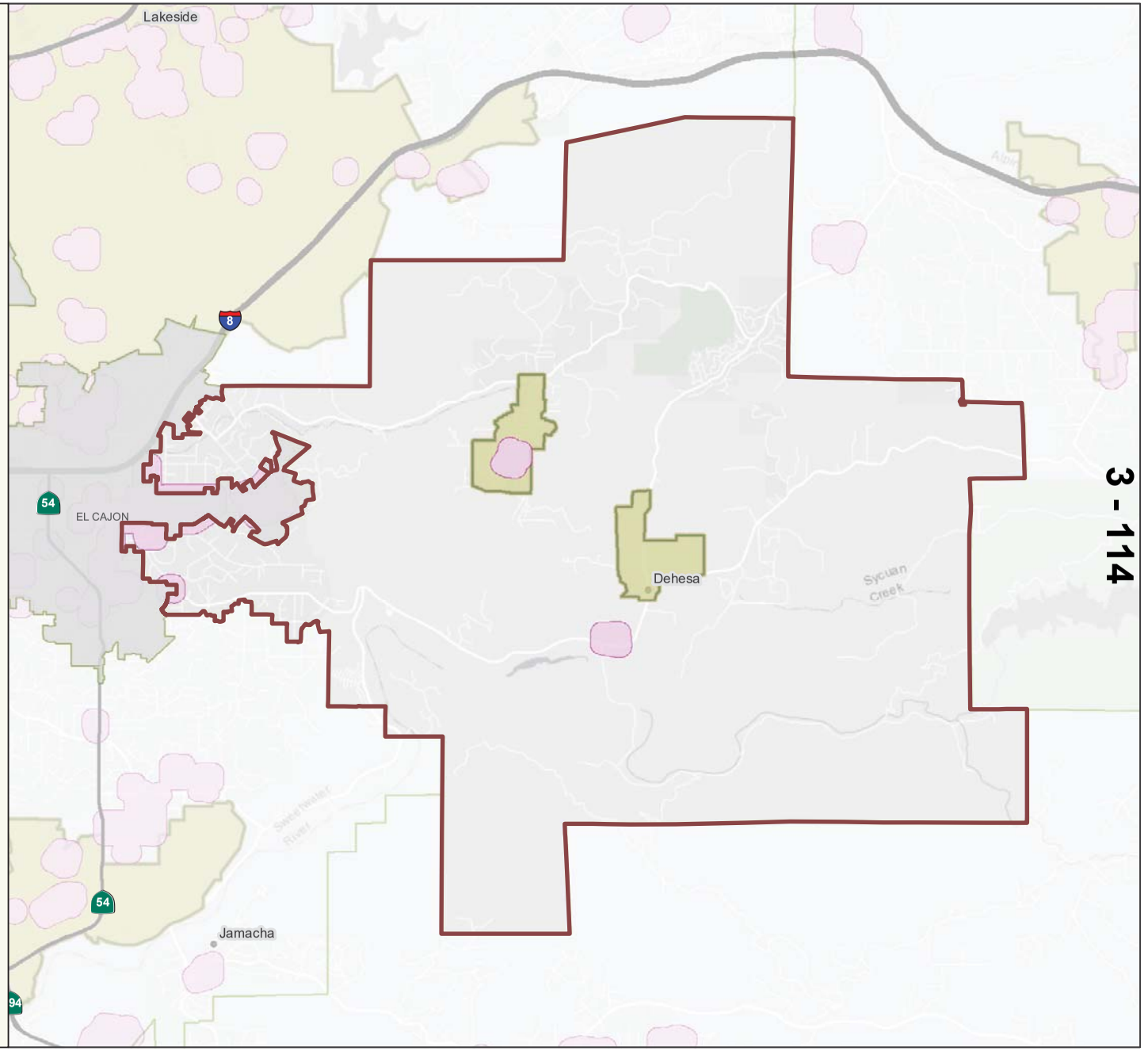
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Small Cell Wireless

Sensitive Sites - Crest - Dehesa

Legend

- Sensitive Sites - 500 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 Miles

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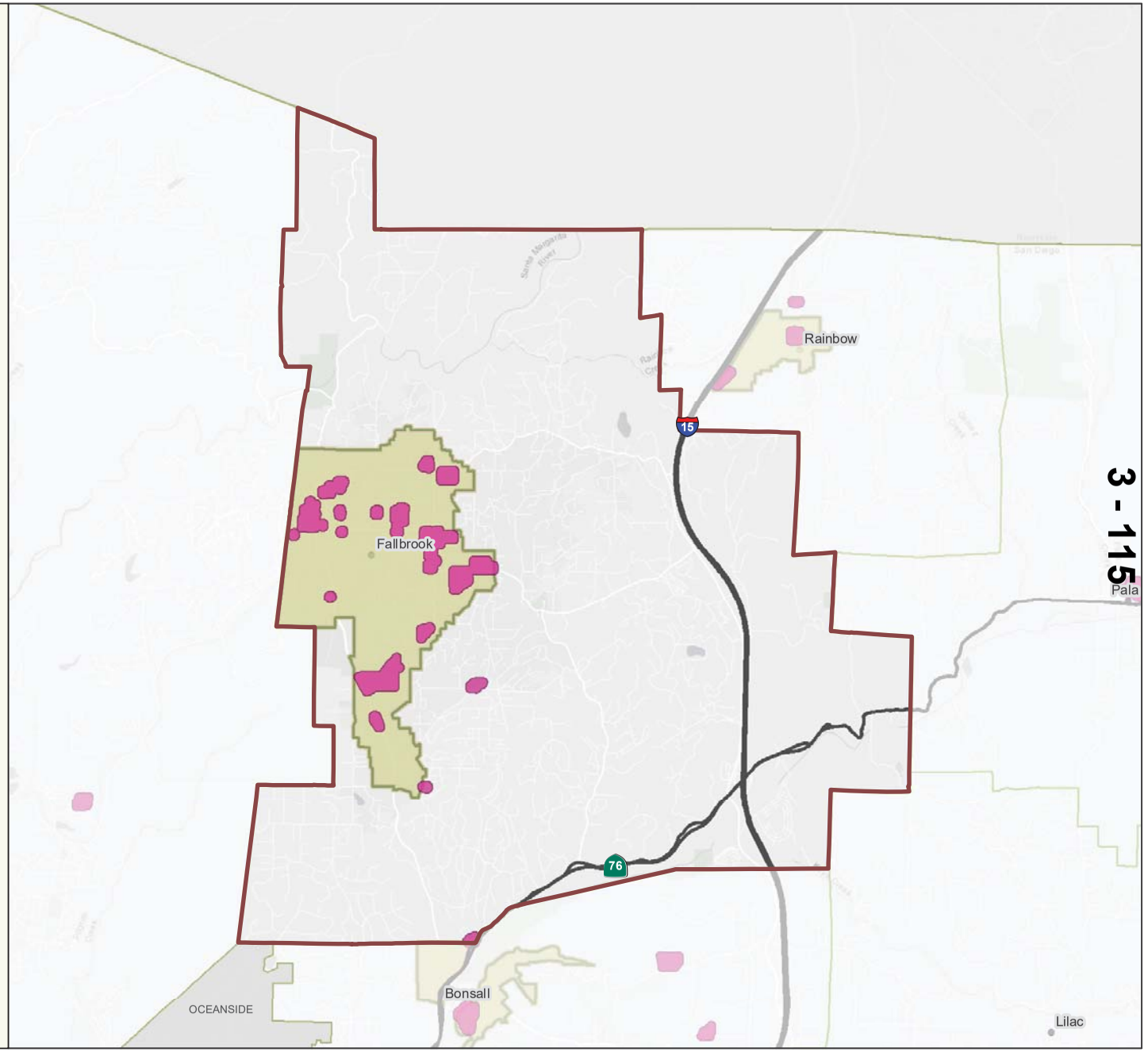
P:\gp2020\20190222_small_wireless\mxd\small_cell_template.mxd Date: 6/7/2019

Small Cell Wireless

Sensitive Sites - Fallbrook

Legend

- Sensitive Sites - 300 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



N

0 1 2 3 Miles

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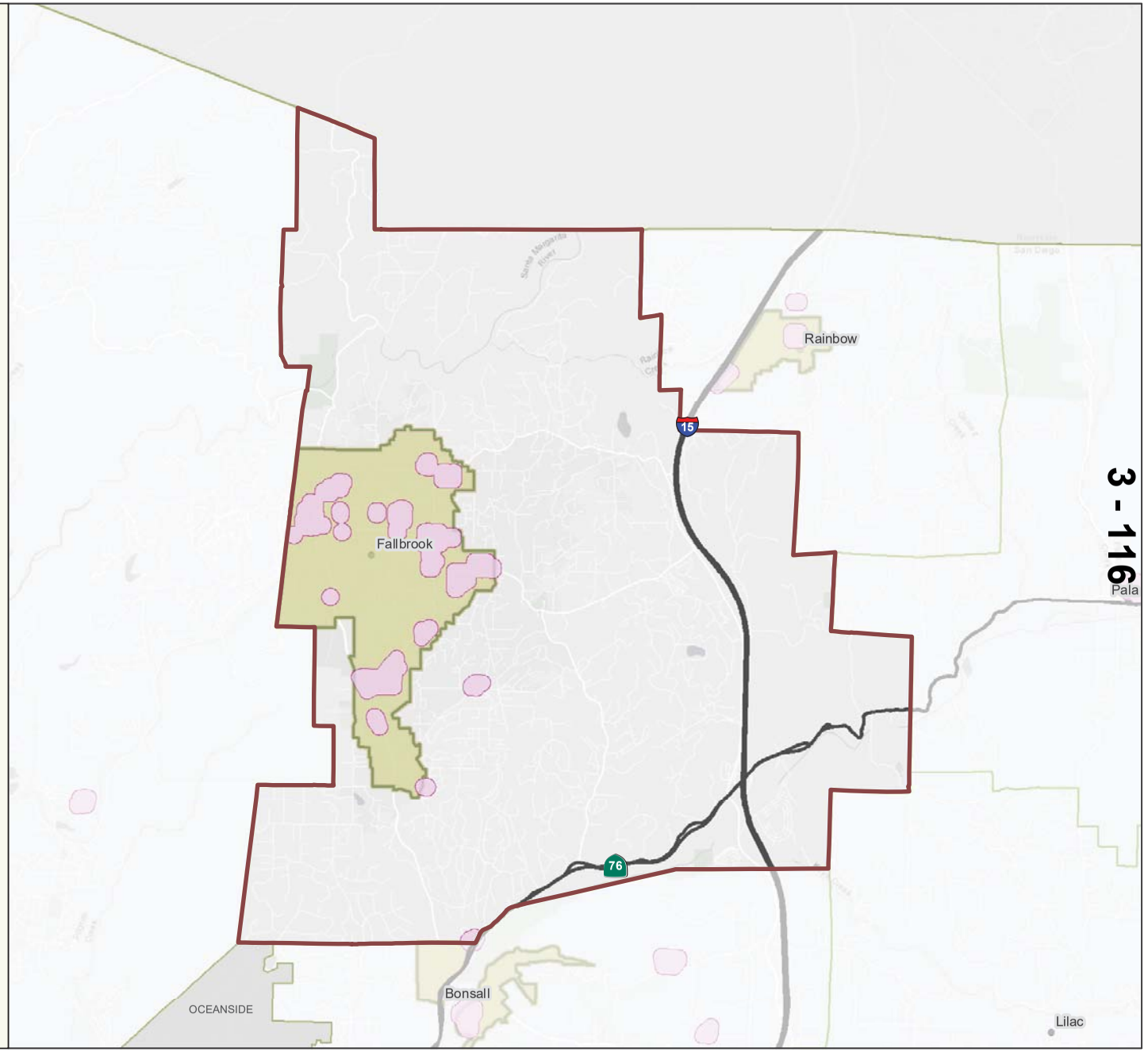
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Small Cell Wireless

Sensitive Sites - Fallbrook

Legend

- Sensitive Sites - 500 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 3 Miles

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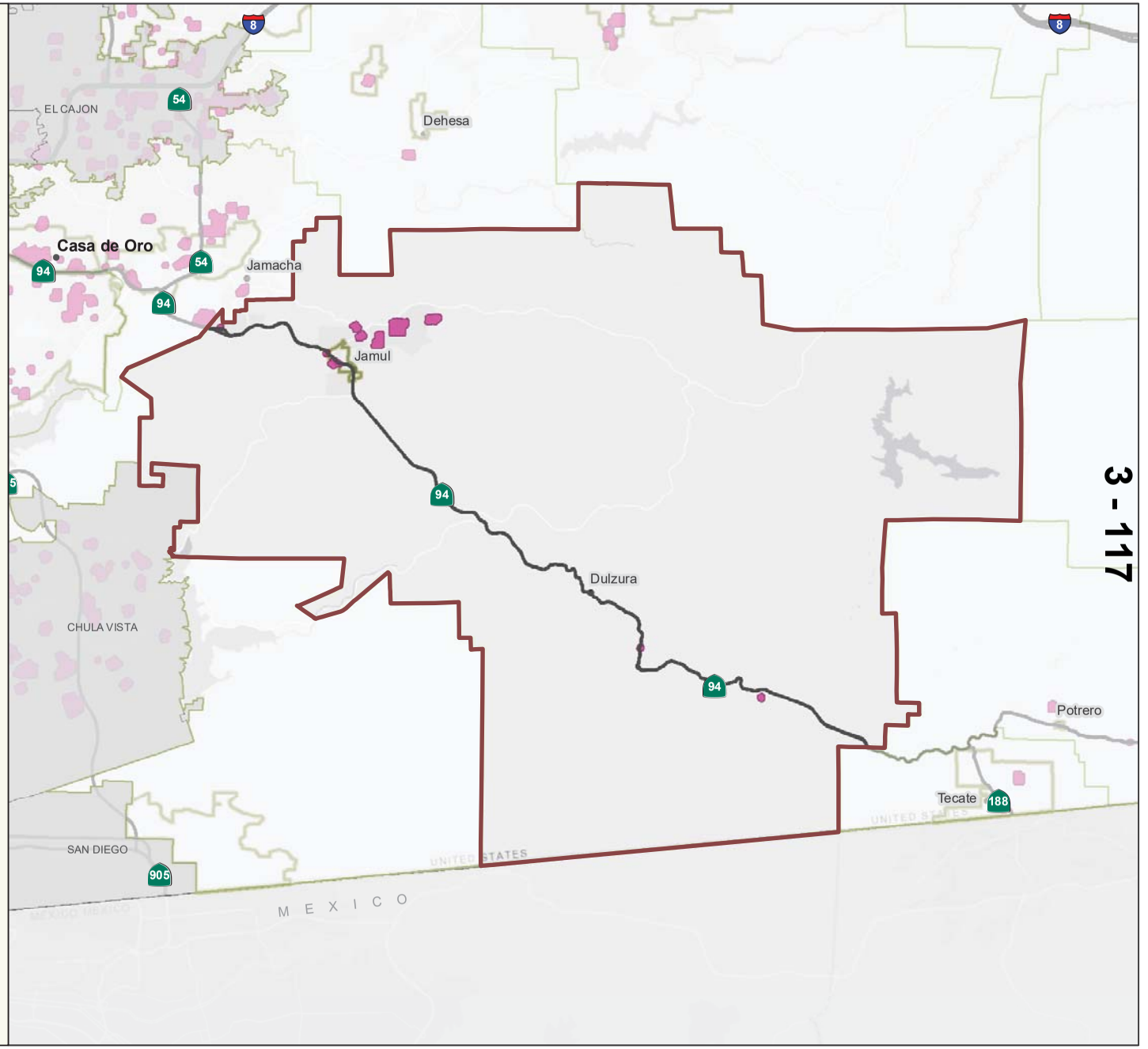
P:\gp2020\20190222_small_wireless\mxd\small_cell_template.mxd Date: 6/7/2019

Small Cell Wireless

Sensitive Sites - Jamul

Legend

- Sensitive Sites - 300 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 3 4 5 Miles

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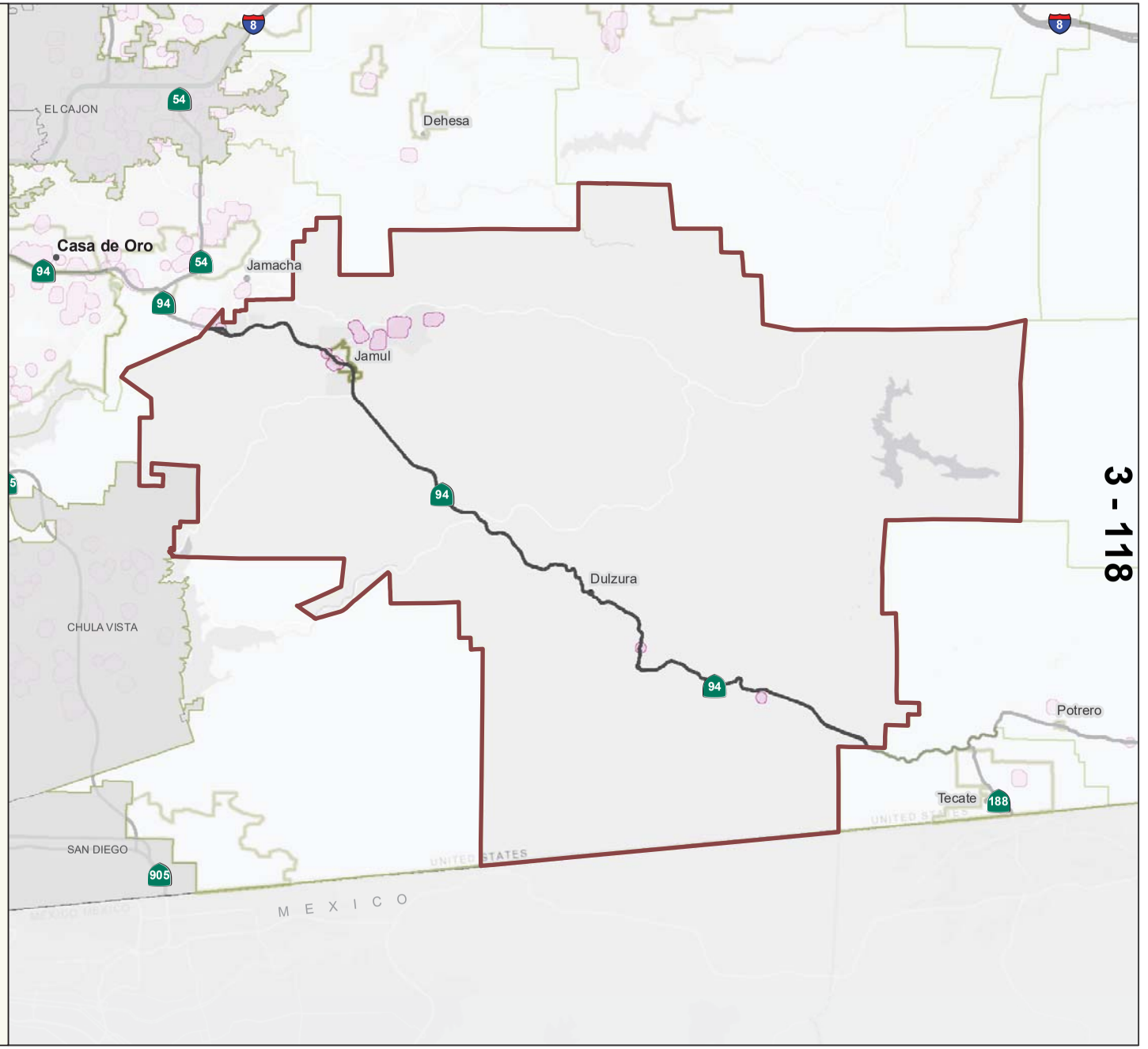
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Small Cell Wireless

Sensitive Sites - Jamul

Legend

- Sensitive Sites - 500 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 3 4 5 Miles

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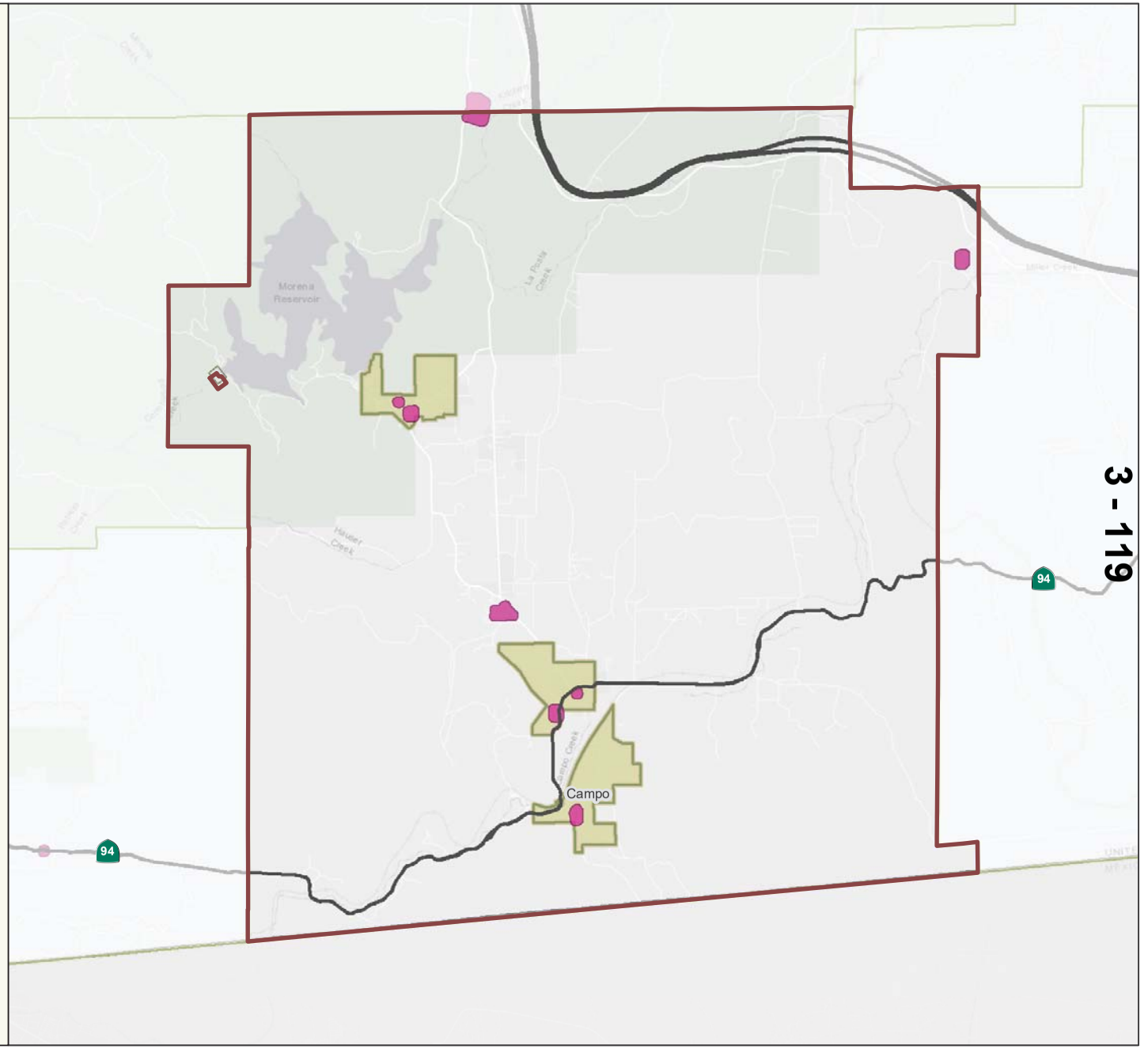
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Small Cell Wireless

Sensitive Sites - Lake Morena / Campo

Legend

- Sensitive Sites - 300 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



N

0 1 2 Miles

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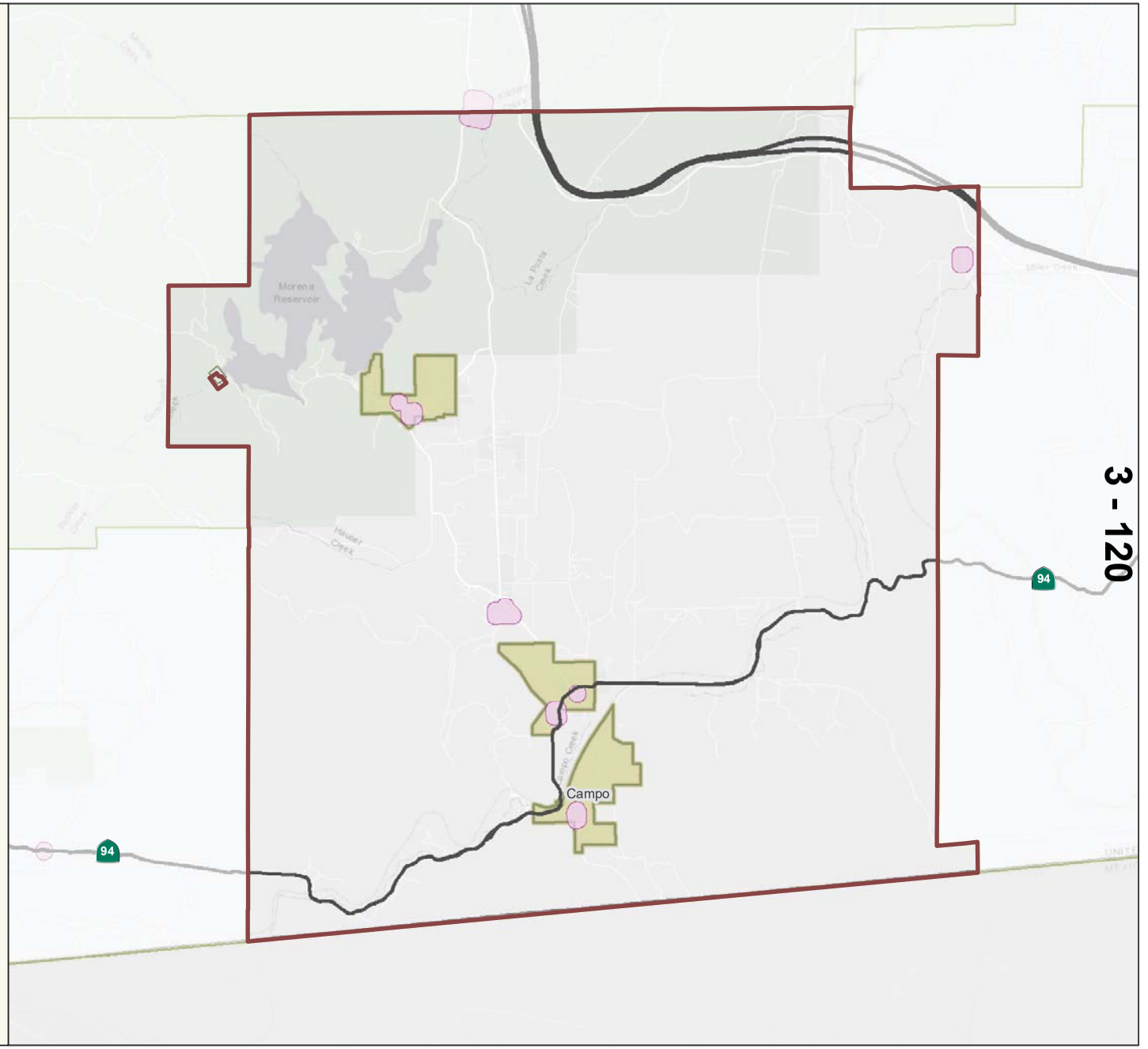
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Small Cell Wireless

Sensitive Sites - Lake Morena / Campo

Legend

- Sensitive Sites - 500 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



N

0 1 2 Miles

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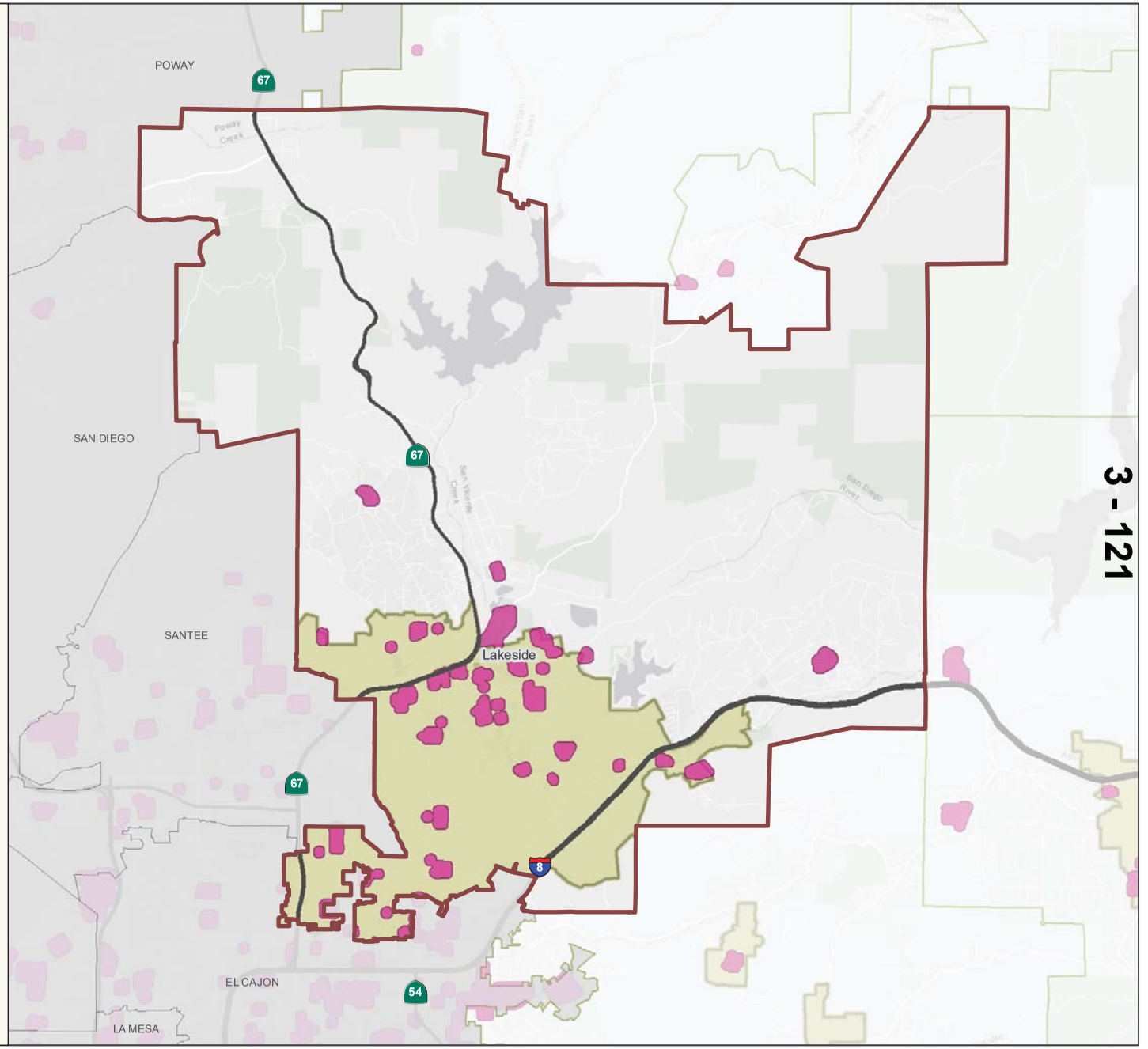
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Small Cell Wireless

Sensitive Sites - Lakeside

Legend

- Sensitive Sites - 300 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



N 0 1 2 3 Miles

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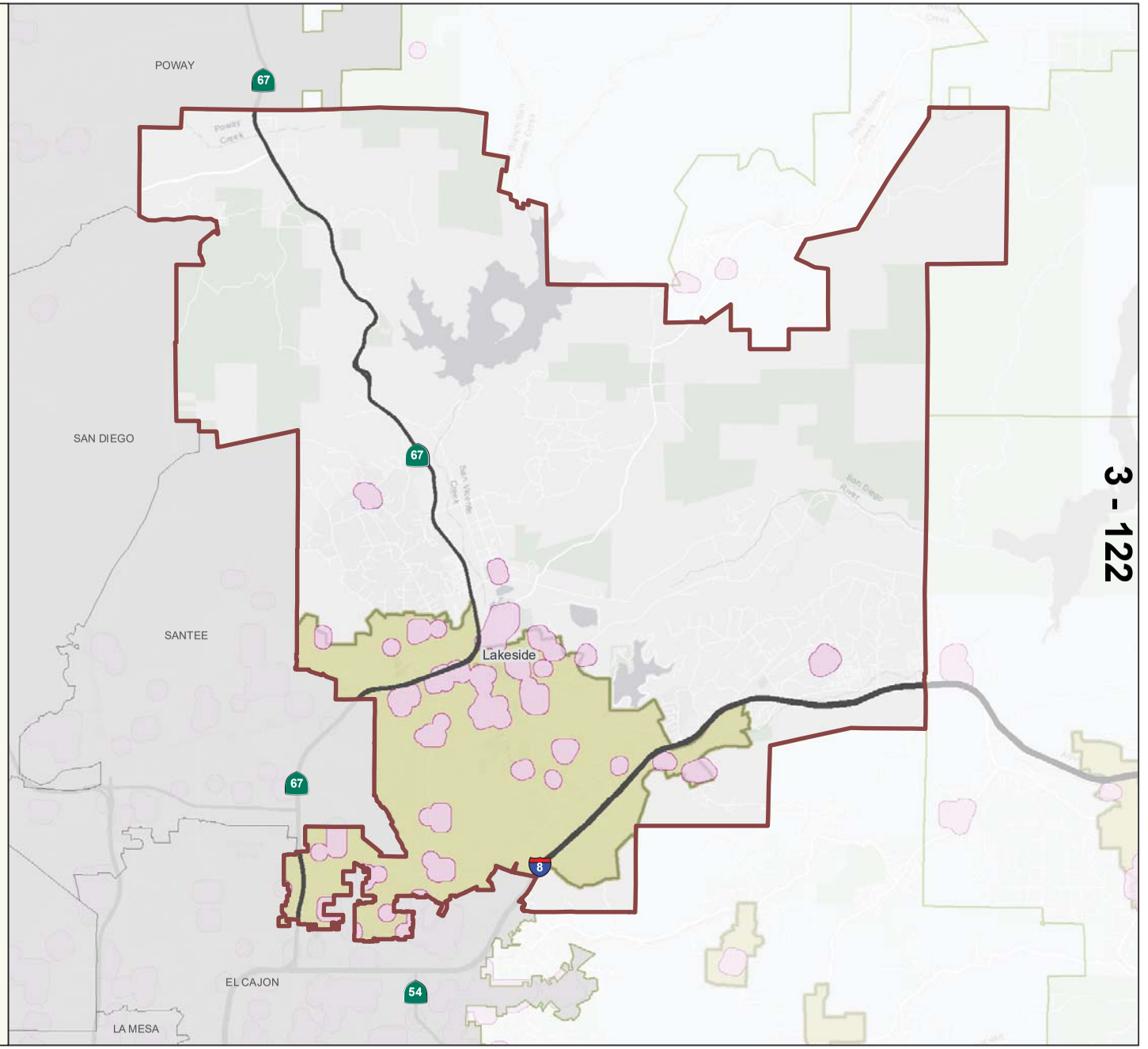
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Small Cell Wireless

Sensitive Sites - Lakeside

Legend

- Sensitive Sites - 500 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 3 Miles

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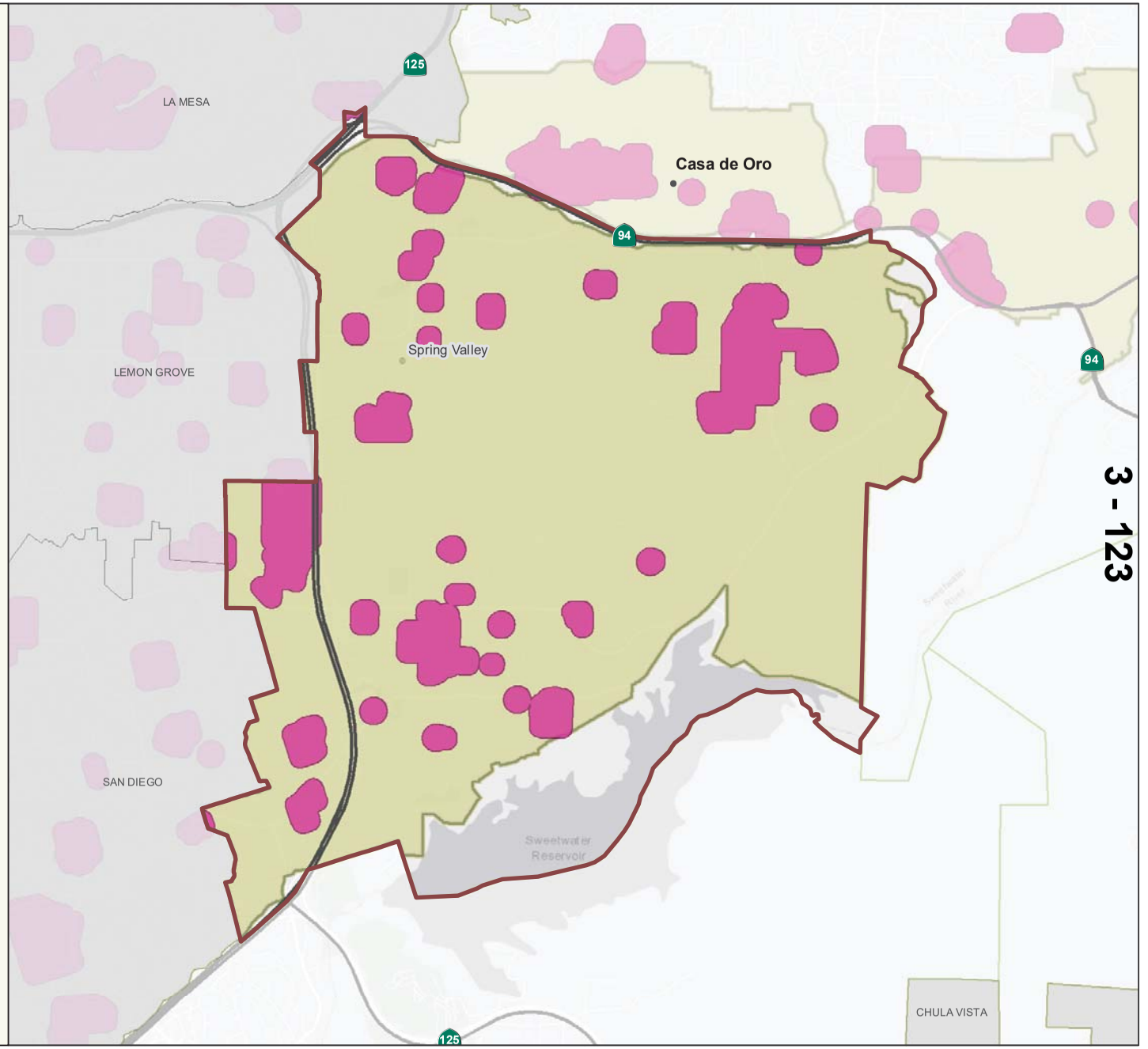
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Small Cell Wireless

Sensitive Sites - Spring Valley

Legend

- Sensitive Sites - 300 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



N

0 1 Miles

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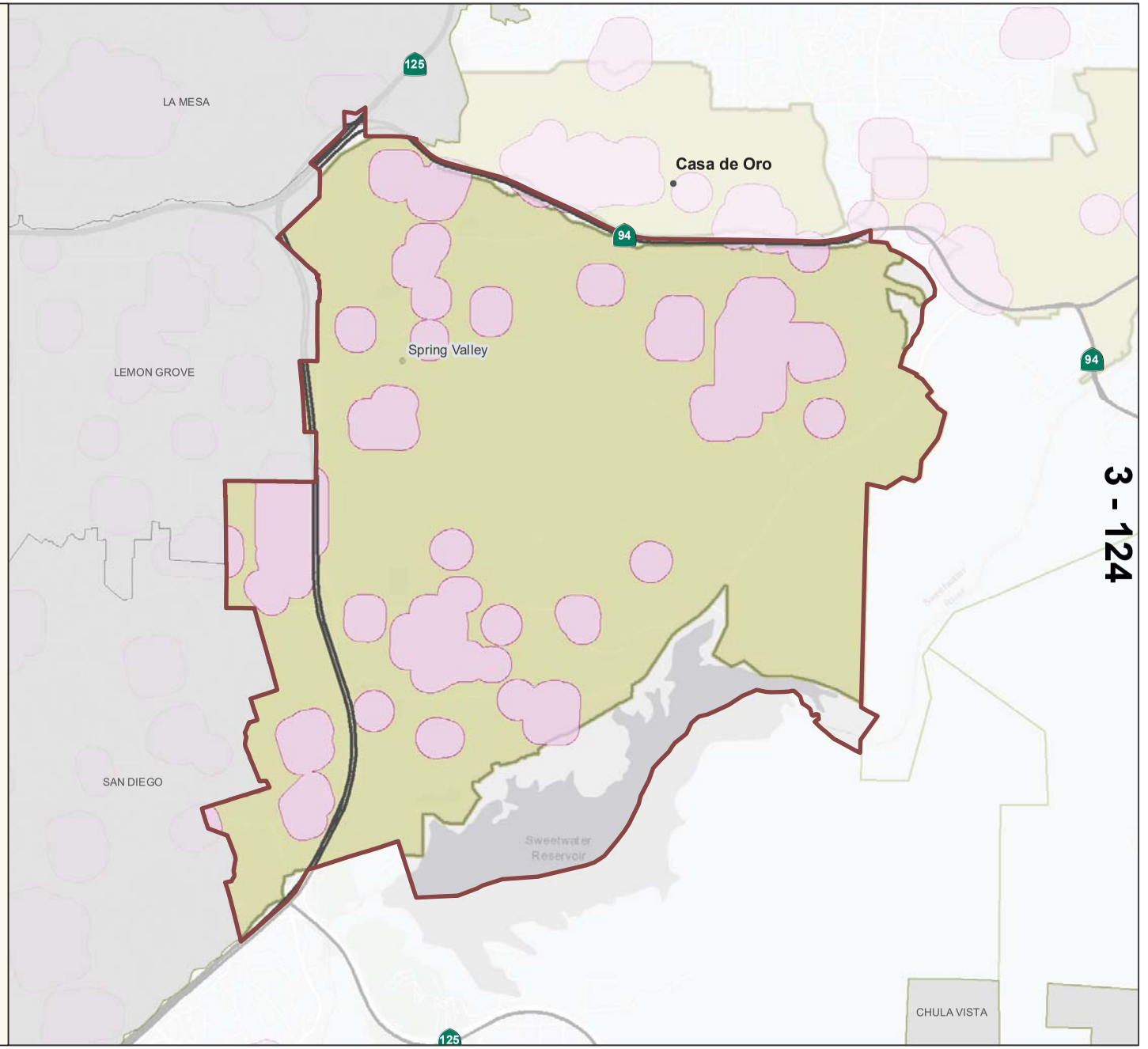
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Small Cell Wireless

Sensitive Sites - Spring Valley

Legend

- Sensitive Sites - 500 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



N

0 1 Miles

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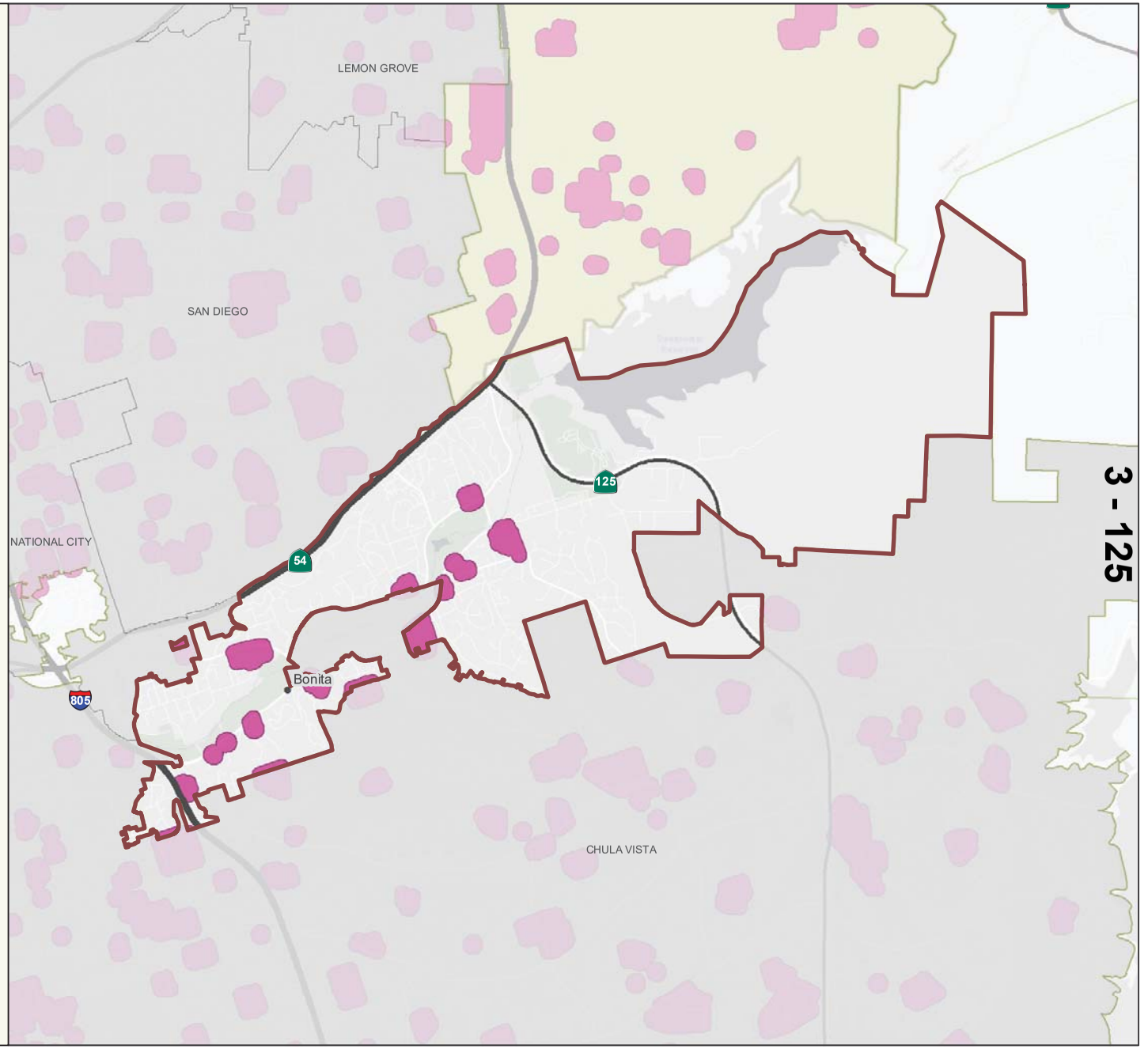
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Small Cell Wireless

Sensitive Sites - Sweetwater

Legend

- Sensitive Sites - 300 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



3 - 125

0 1 Miles

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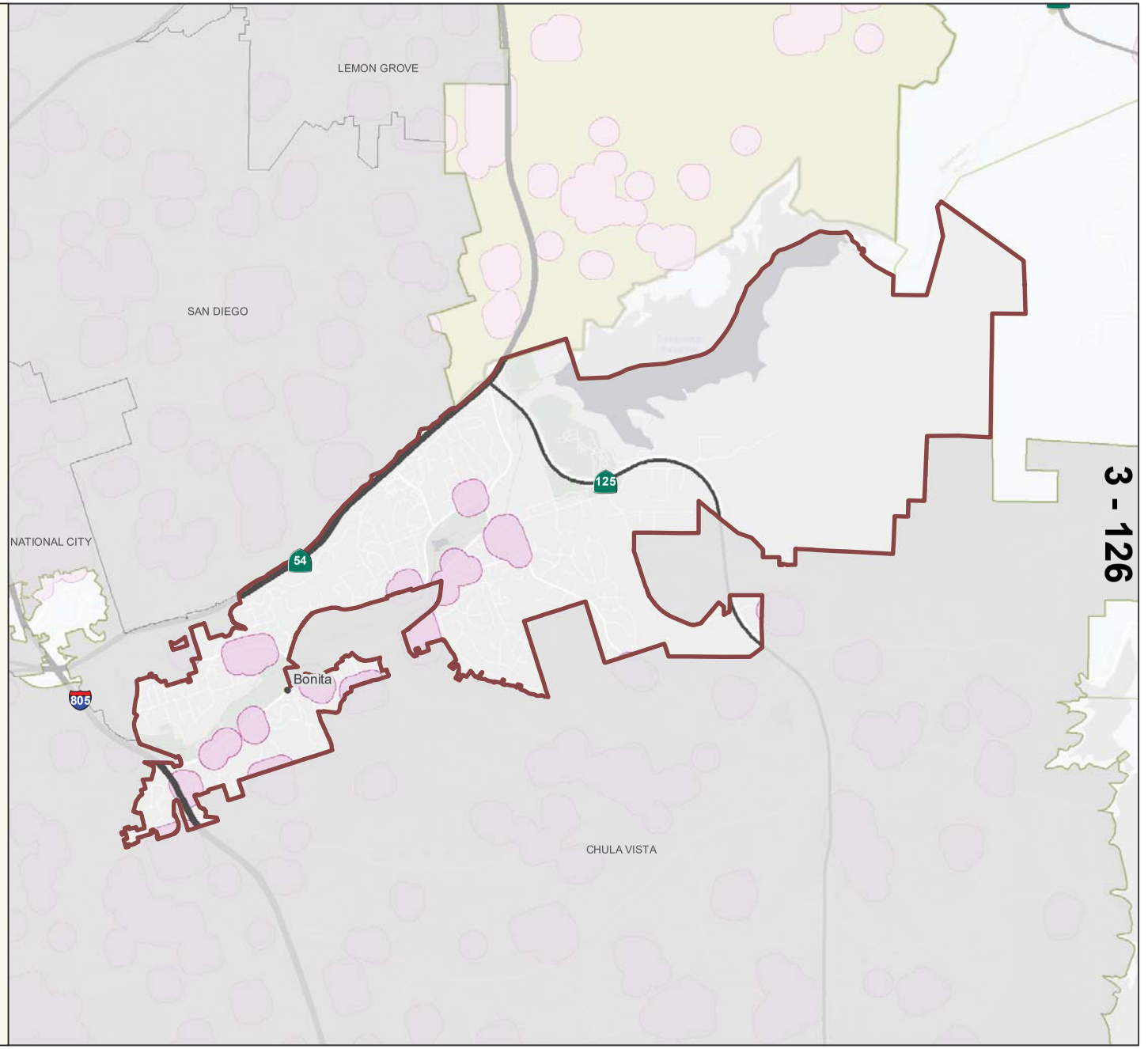
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Small Cell Wireless

Sensitive Sites - Sweetwater

Legend

- Sensitive Sites - 500 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 Miles

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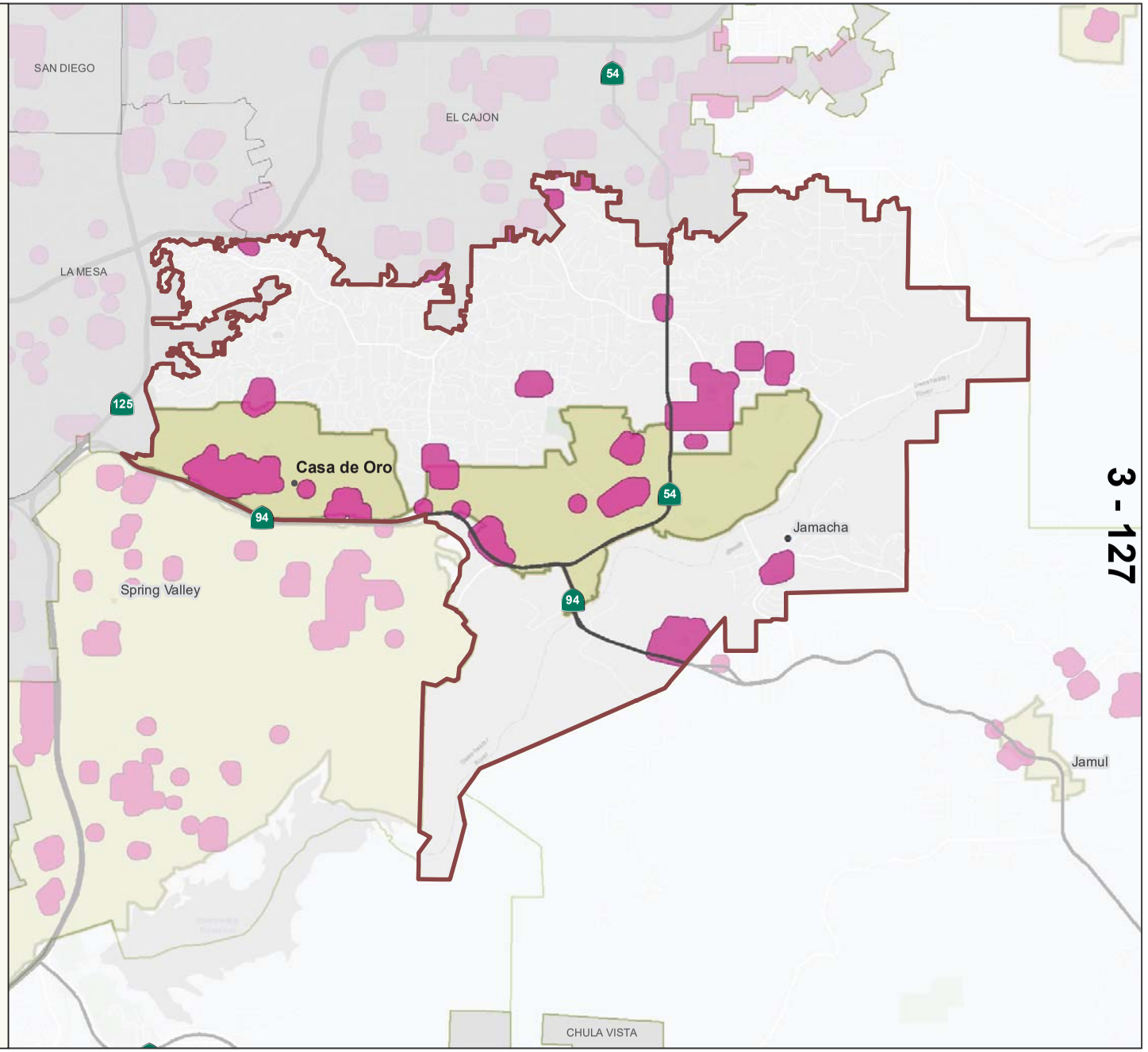
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Small Cell Wireless

Sensitive Sites - Valle De Oro

Legend

- Sensitive Sites - 300 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 Miles

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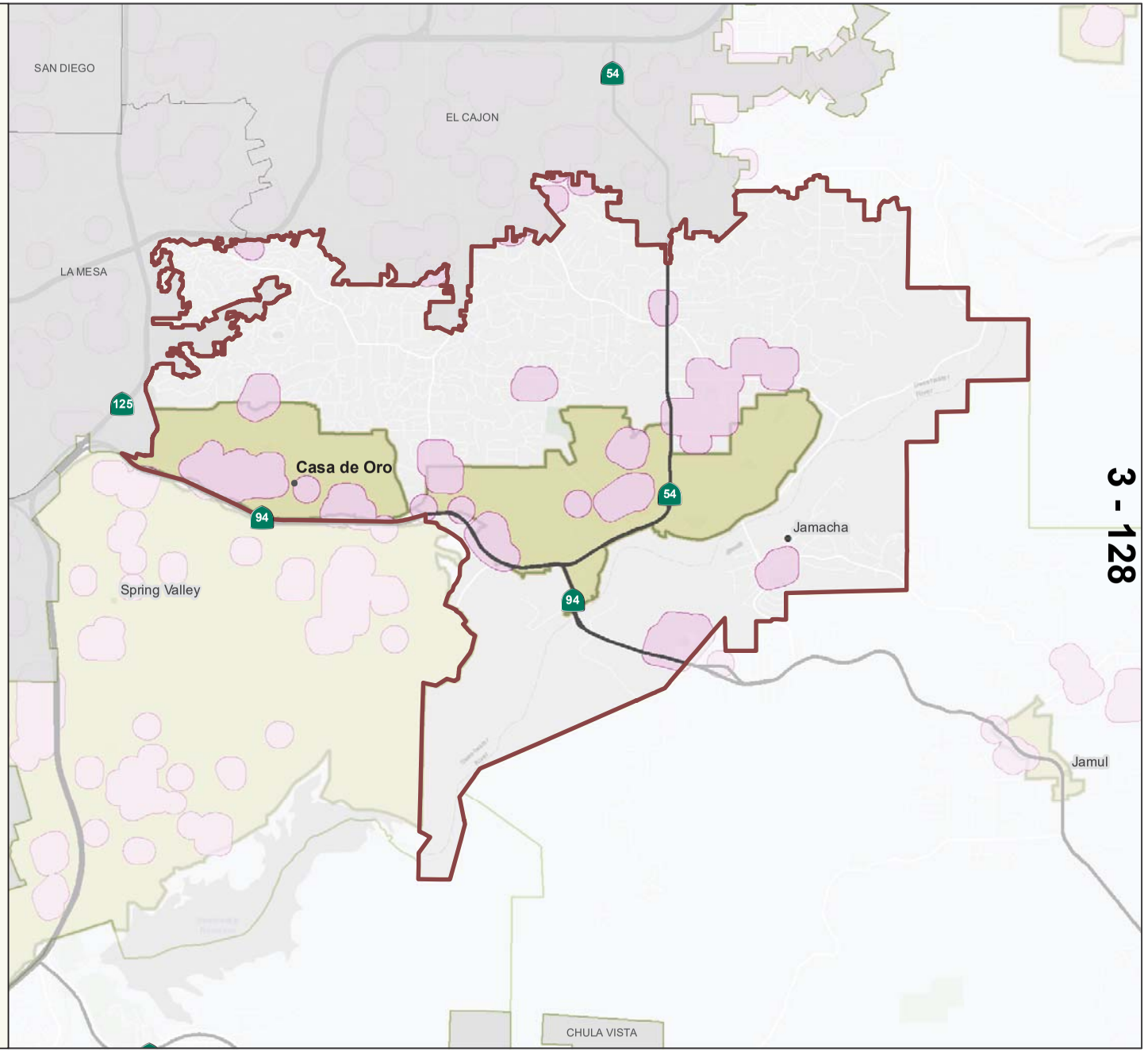
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Small Cell Wireless

Sensitive Sites - Valle De Oro

Legend

- Sensitive Sites - 500 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 Miles

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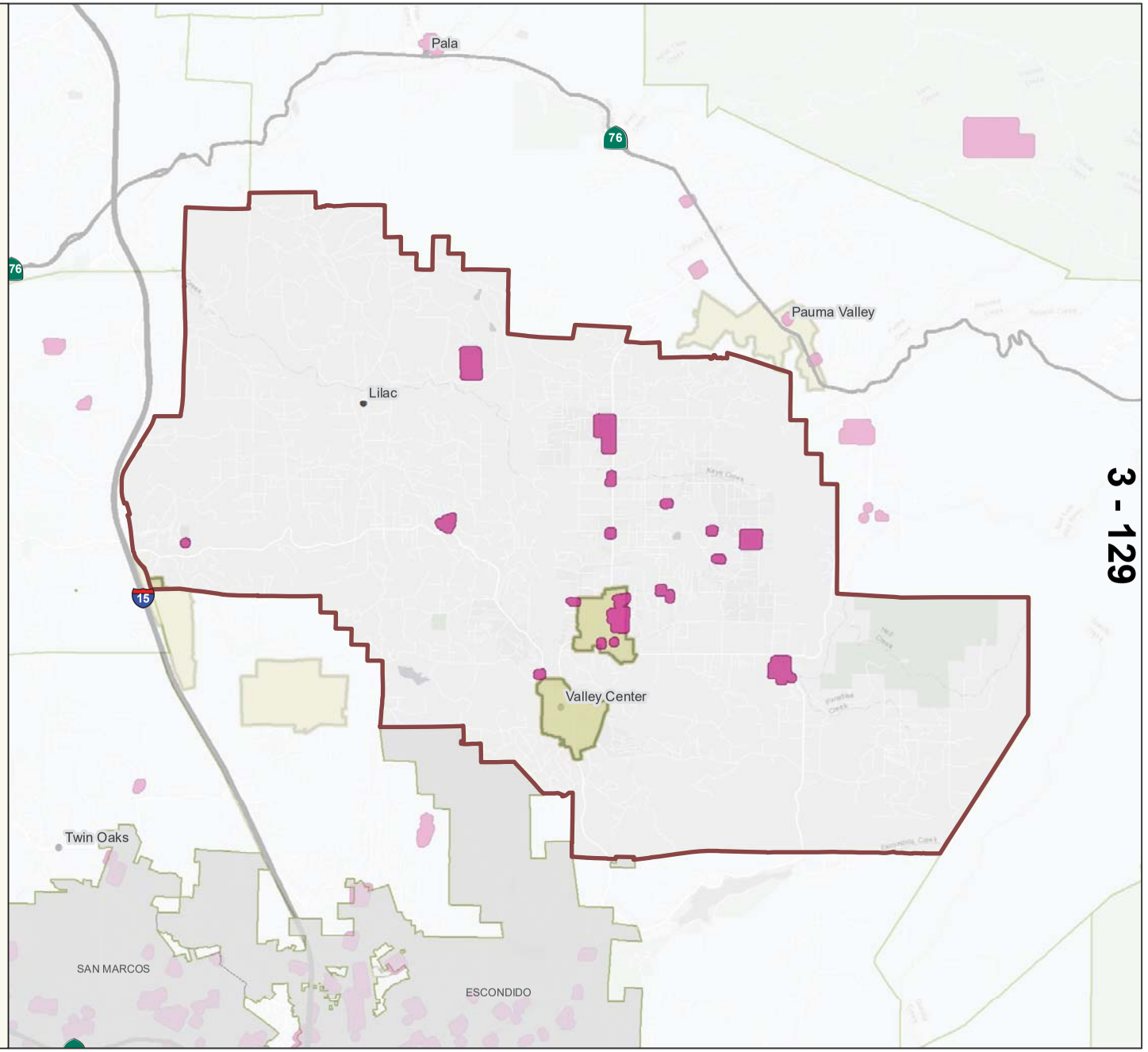
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Small Cell Wireless

Sensitive Sites - Valley Center

Legend

- Sensitive Sites - 300 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 3 Miles

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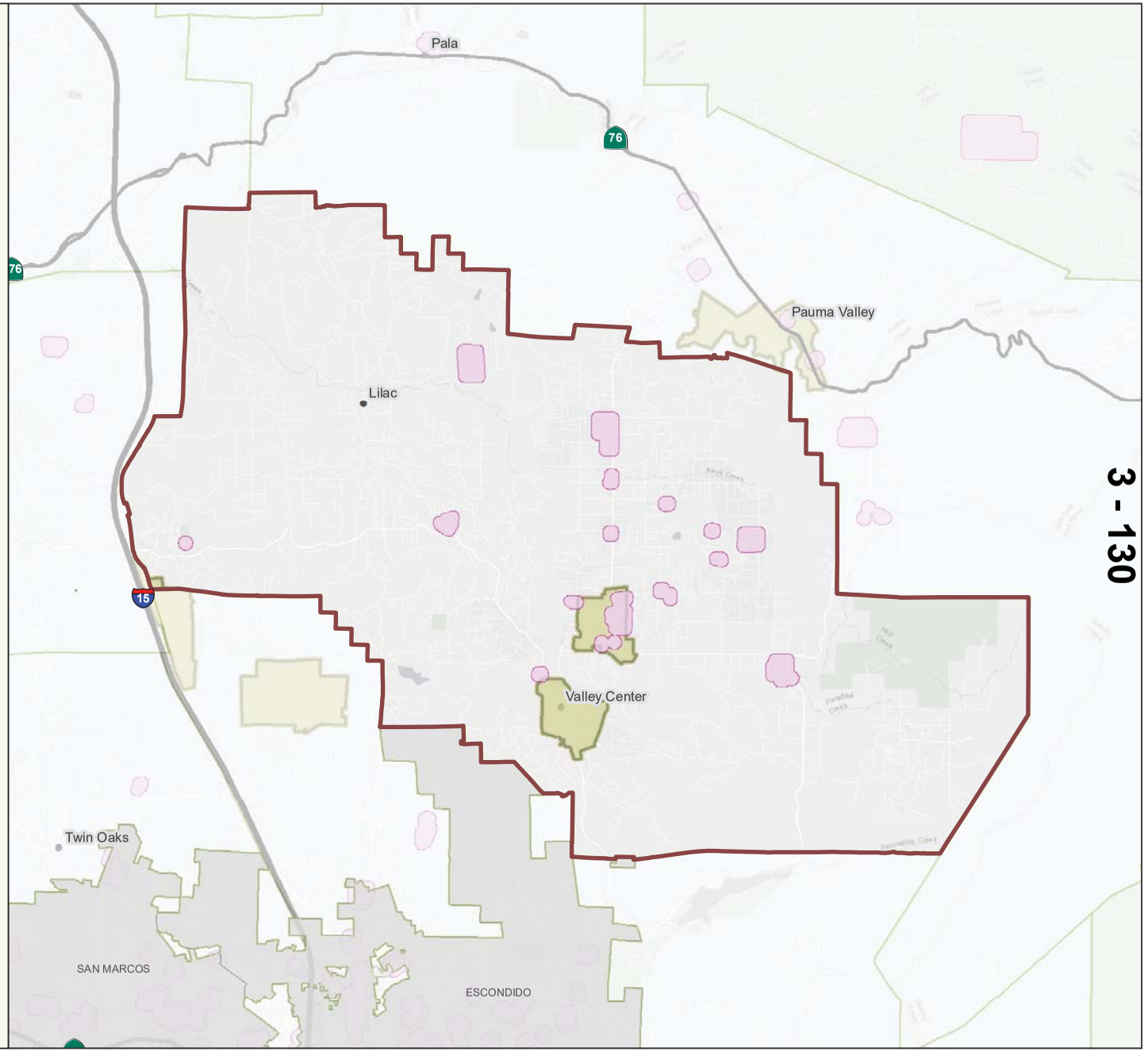
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Small Cell Wireless

Sensitive Sites - Valley Center

Legend

- Sensitive Sites - 500 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



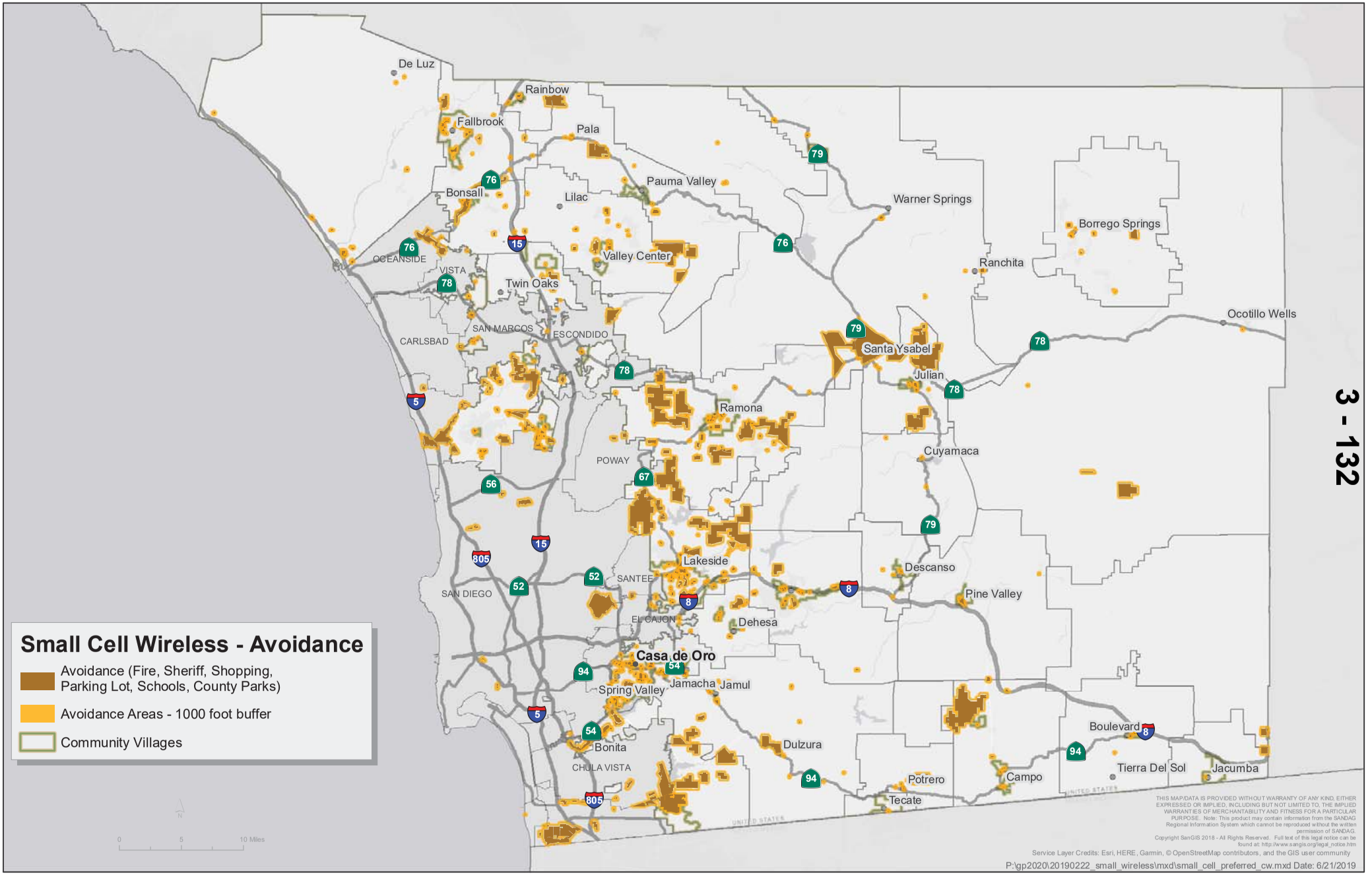
N 0 1 2 3 Miles

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Additional Avoidance Sites (LD-3)

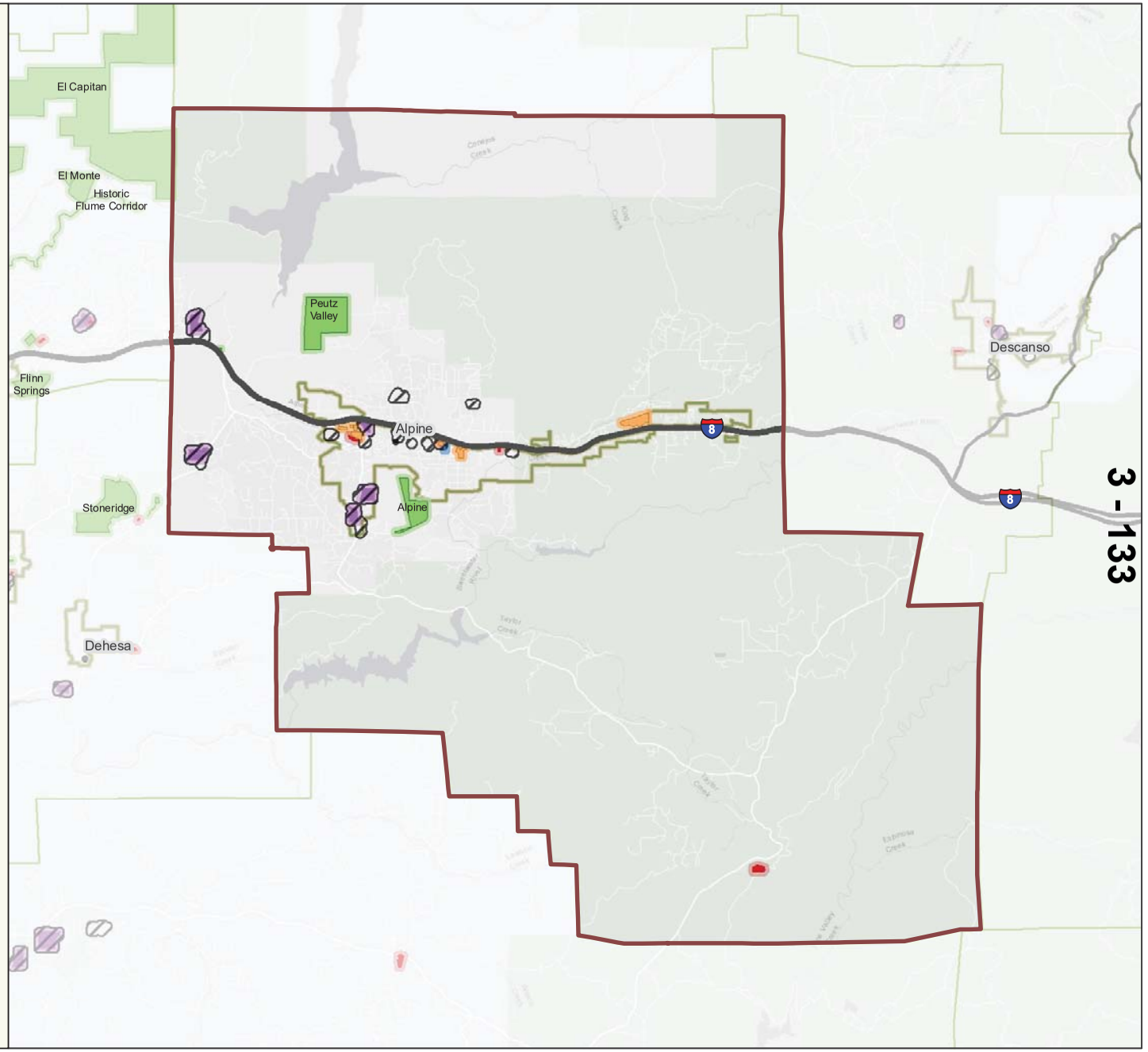

De Luz
Rainbow
Fallbrook
Pala
Pauma Valley
Bonsall
Lilac
Warner Springs
Borrego Springs
OCEANSIDE
VISTA
Valley Center
Twin Oaks
Ranchita
Ocotillo Wells
SAN MARCOS
ESCONDIDO
CARLSBAD
Santa Ysabel
Julian
Ramona
Cuyamaca
POWAY
Lakeside
Descanso
SANTEE
SAN DIEGO
Pine Valley
EL CAJON
Dehesa
Casa de Oro
Jamacha
Jamul
Spring Valley
Boulevard
Bonita
Dulzura
CHULA VISTA
Tierra Del Sol
Jacumba
Potrero
Campo
Tecate
Small Cell Wireless - Avoidance
Avoidance (Fire, Sheriff, Shopping, Parking Lot, Schools, County Parks)
Avoidance Areas - 1000 foot buffer
Community Villages
0
5
10 Miles
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Small Cell Wireless

Avoidance 300 feet - Alpine

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 300 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 3 Miles

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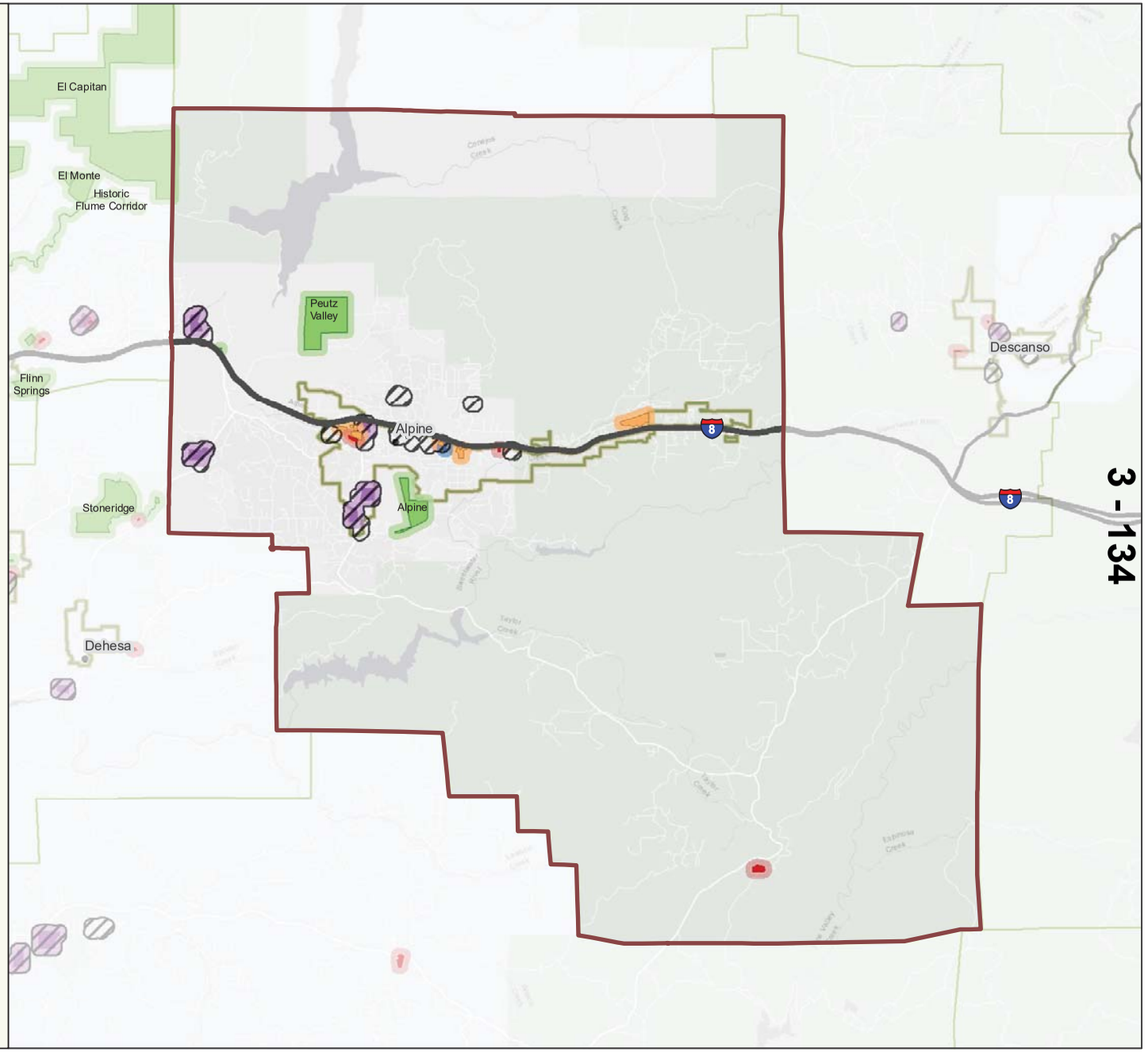
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Small Cell Wireless

Avoidance 500 feet - Alpine

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 500 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 3 Miles

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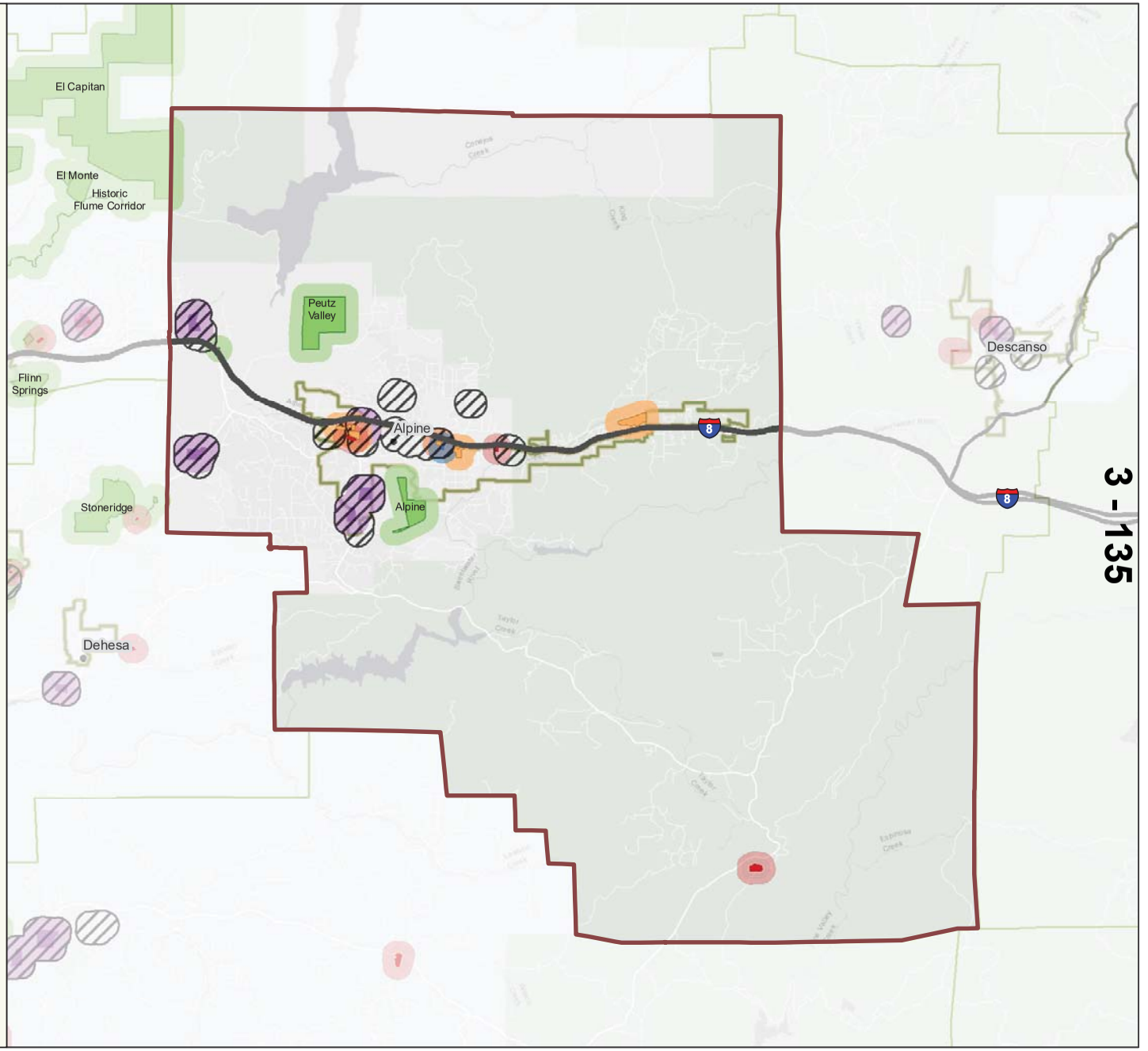
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Small Cell Wireless

Avoidance 1,000 feet - Alpine

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 1,000 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 3 Miles

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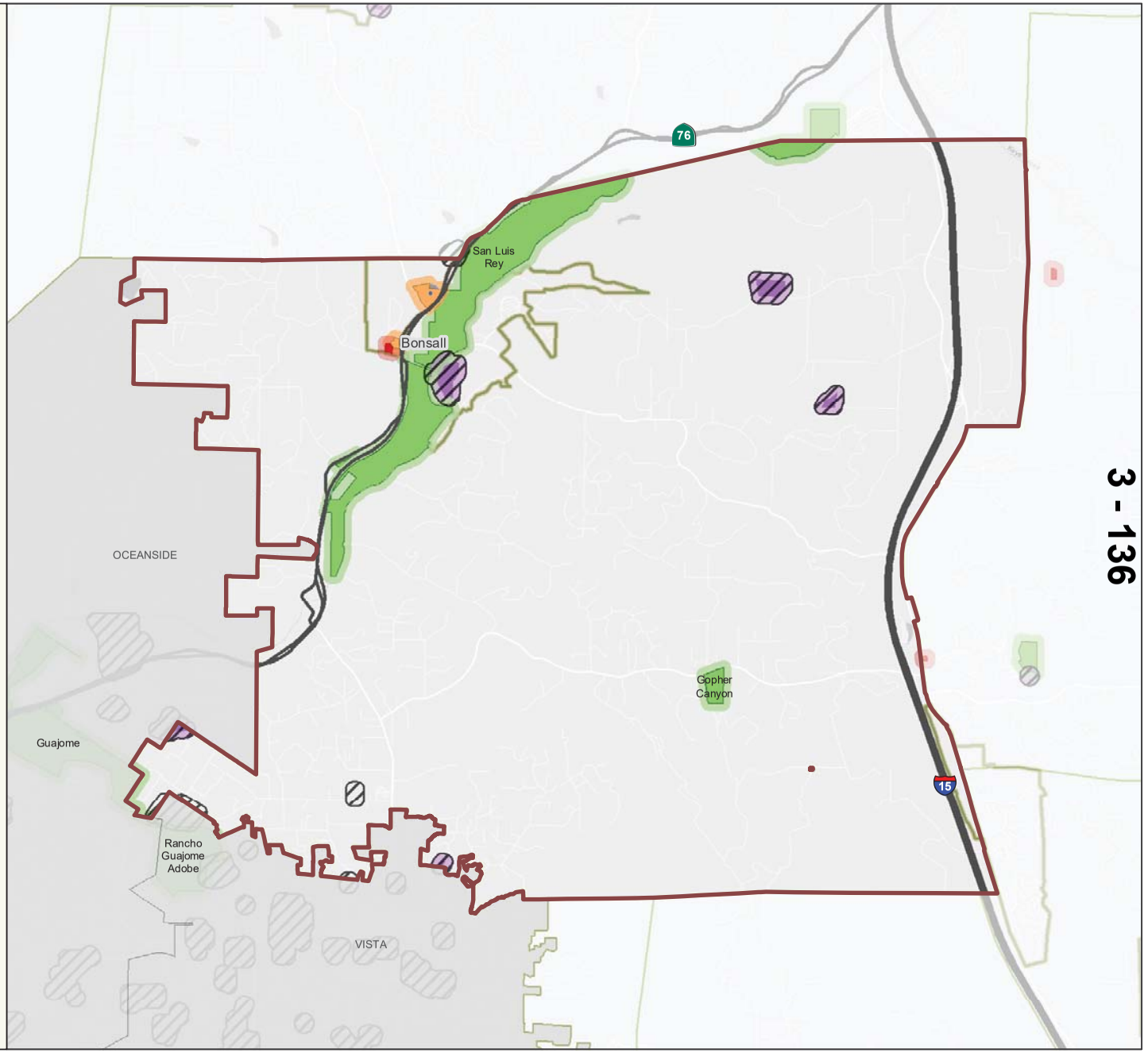
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Small Cell Wireless

Avoidance 300 feet - Bonsall

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 300 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 Miles

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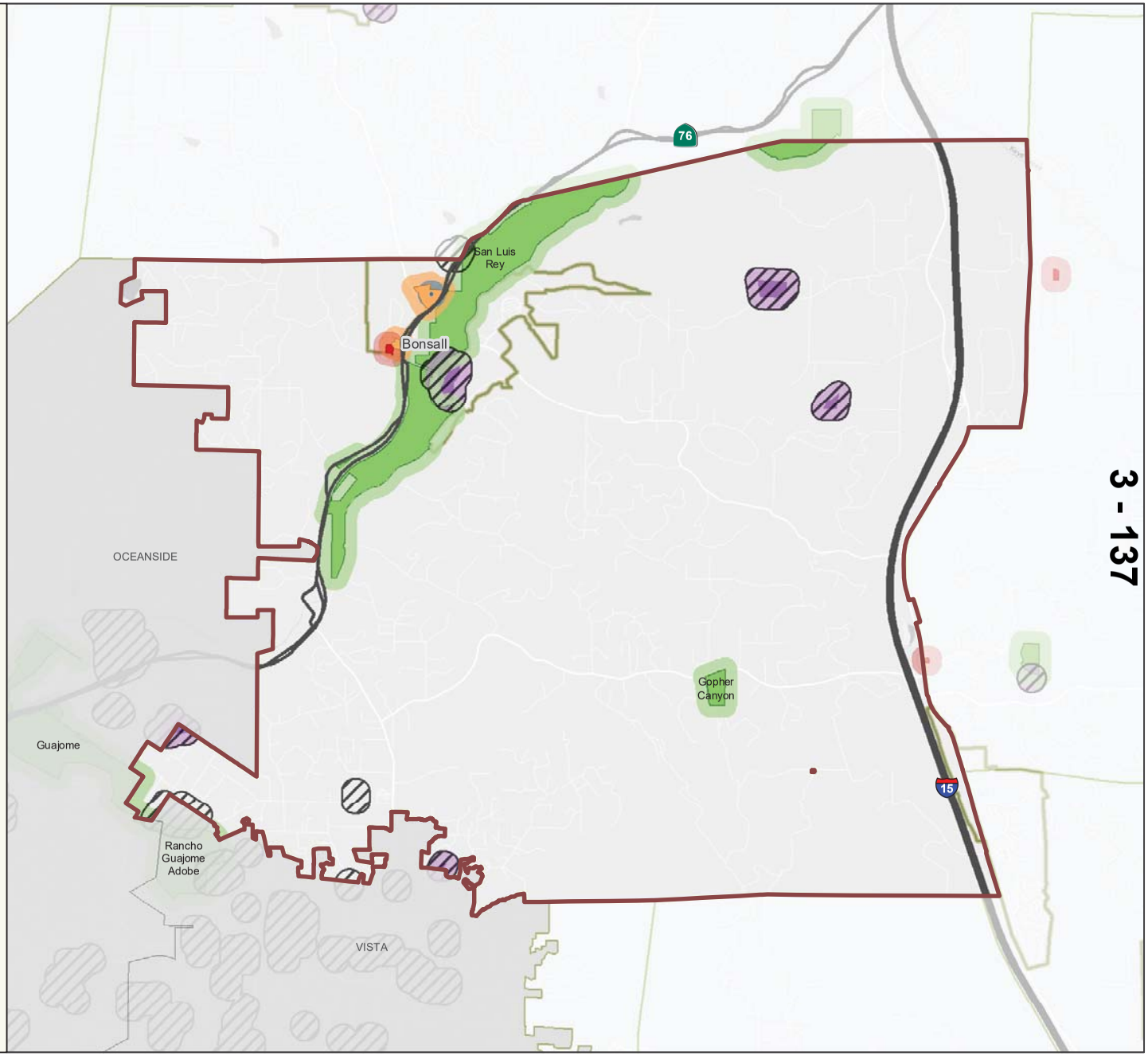
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Small Cell Wireless

Avoidance 500 feet - Bonsall

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 500 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



N

0 1 Miles

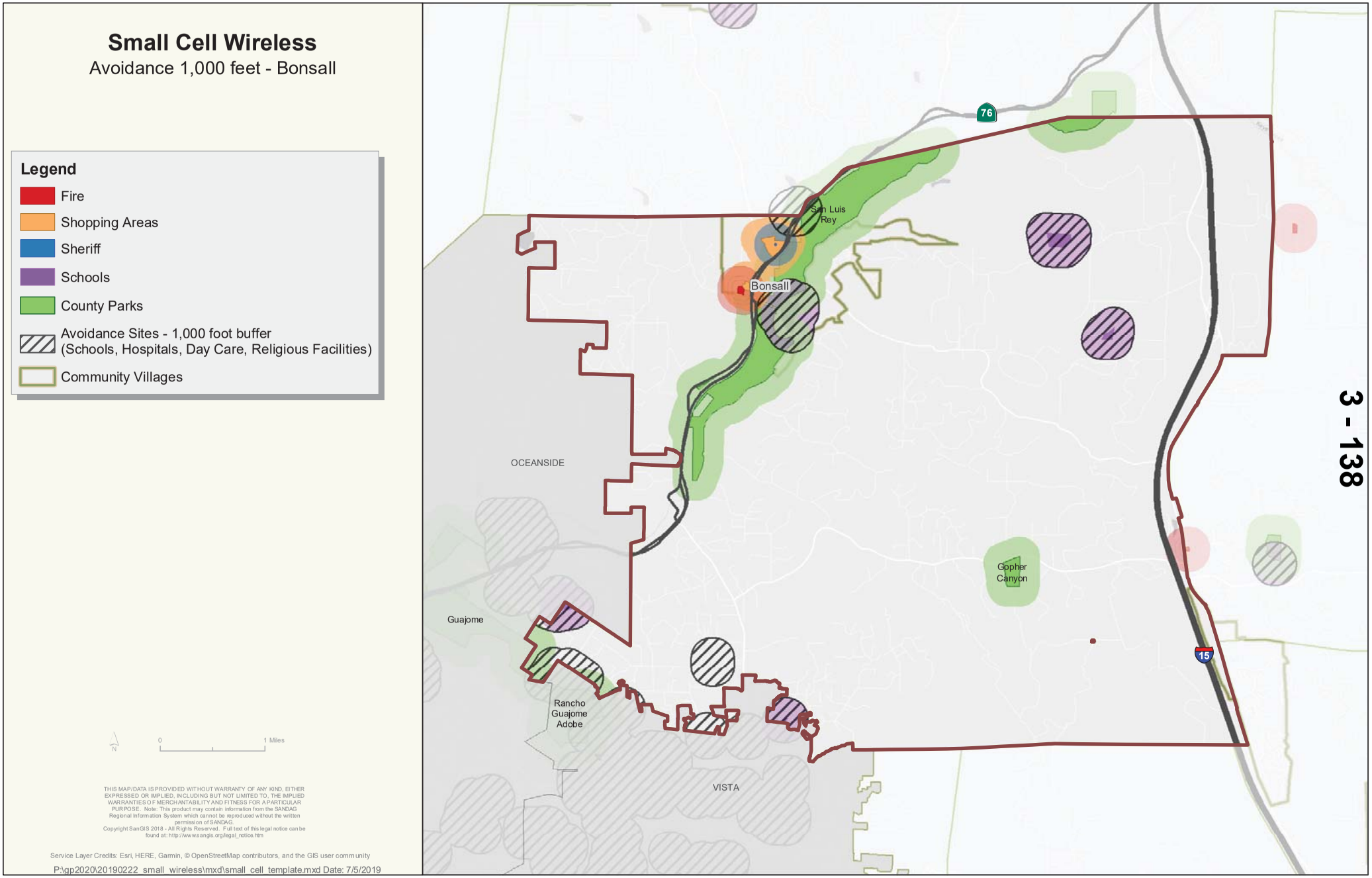
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Small Cell Wireless

Avoidance 1,000 feet - Bonsall



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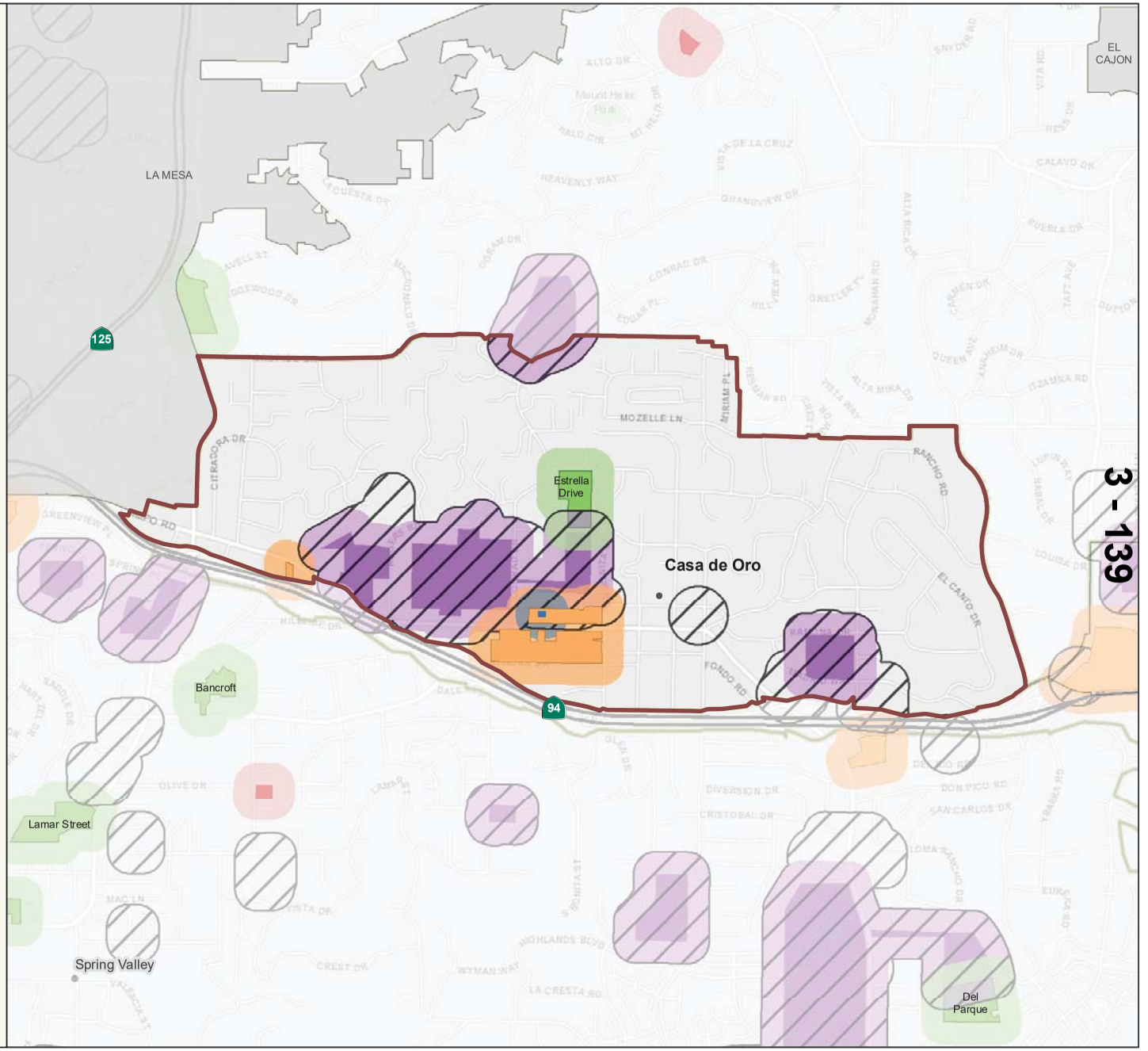
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Small Cell Wireless

Avoidance 300 feet - Casa De Oro

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 300 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



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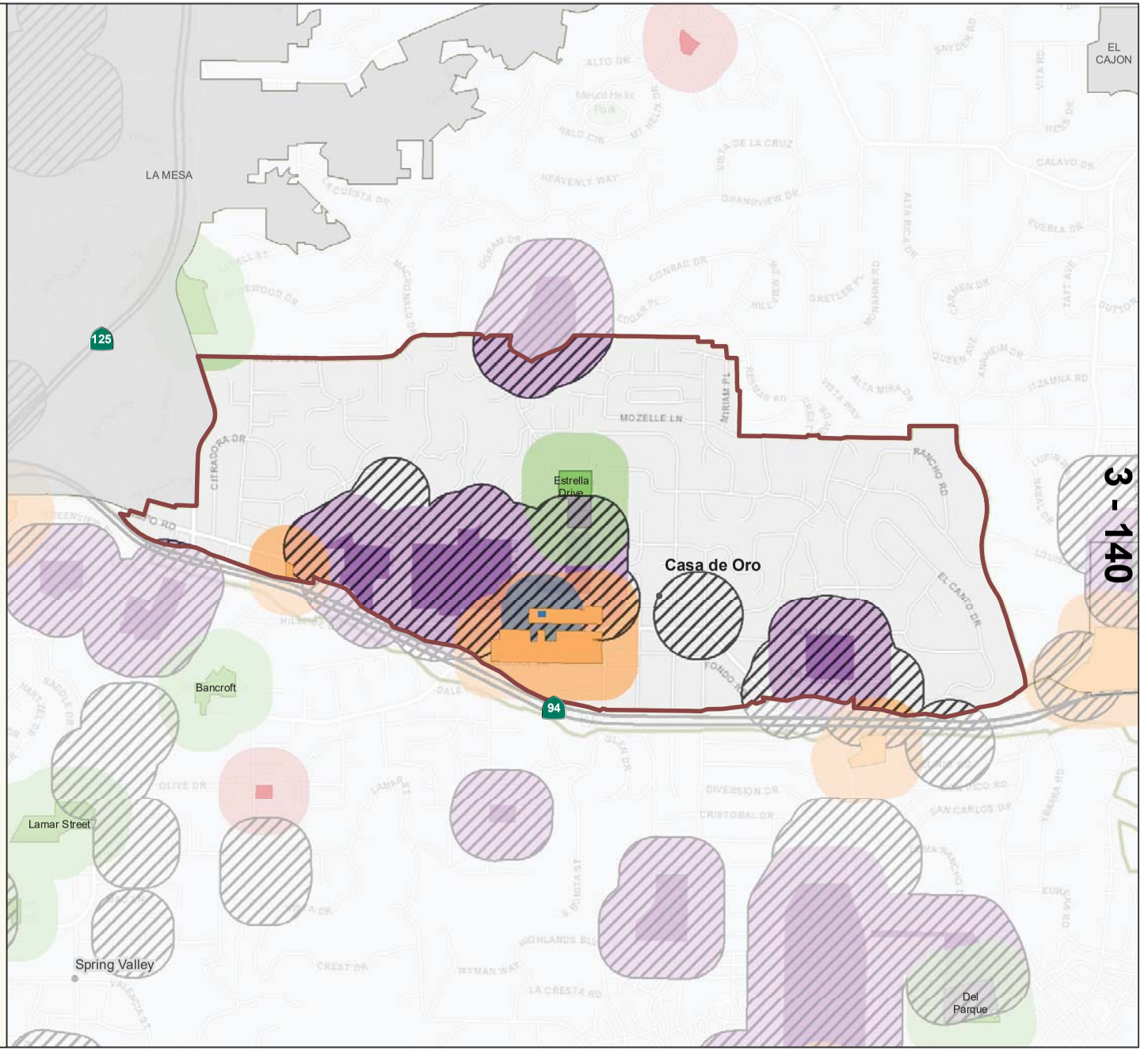
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Small Cell Wireless

Avoidance 500 feet - Casa De Oro

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 500 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 0.5 Miles

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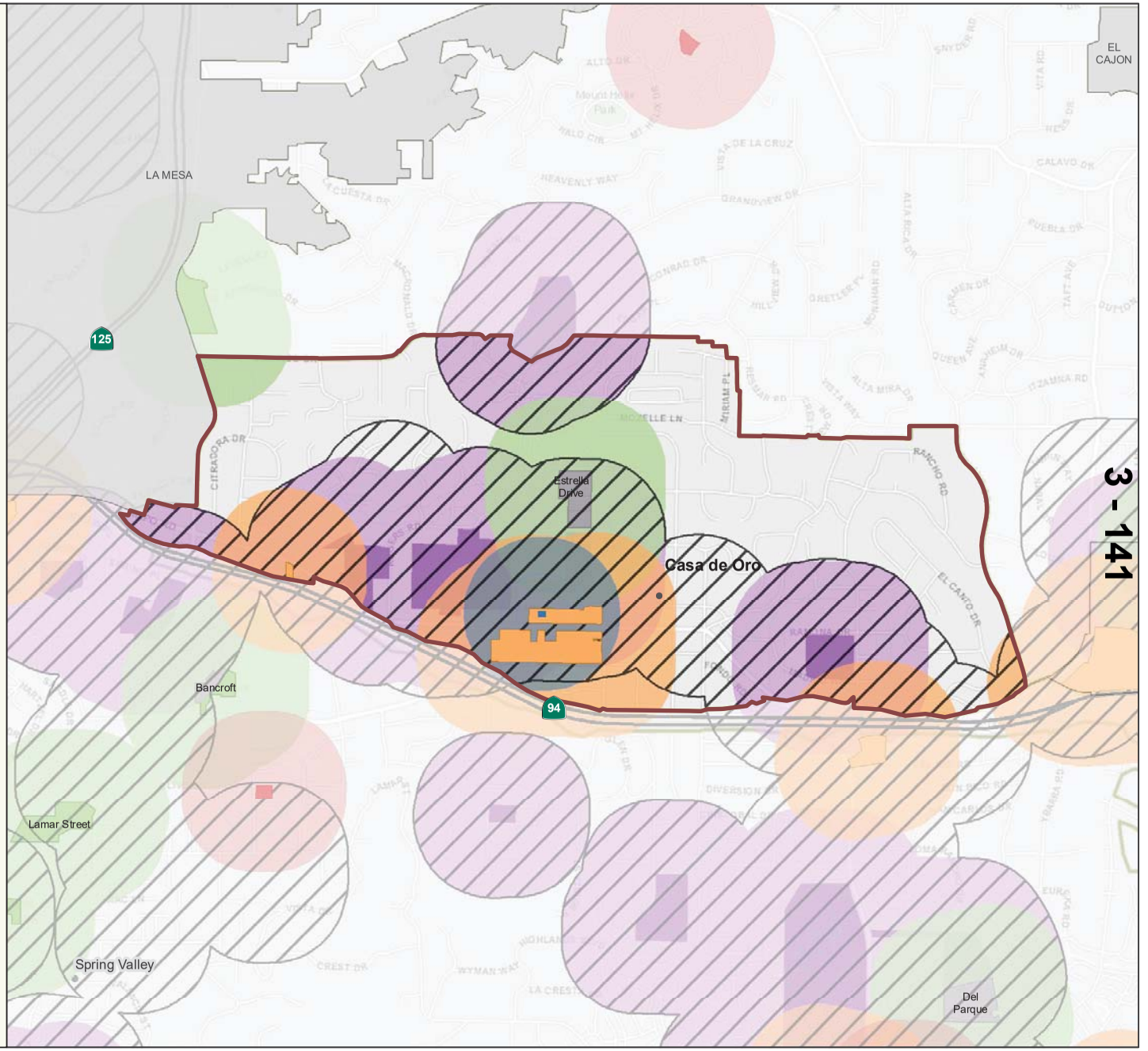
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Small Cell Wireless

Avoidance 1,000 feet - Casa De Oro

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 1,000 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 0.5 Miles

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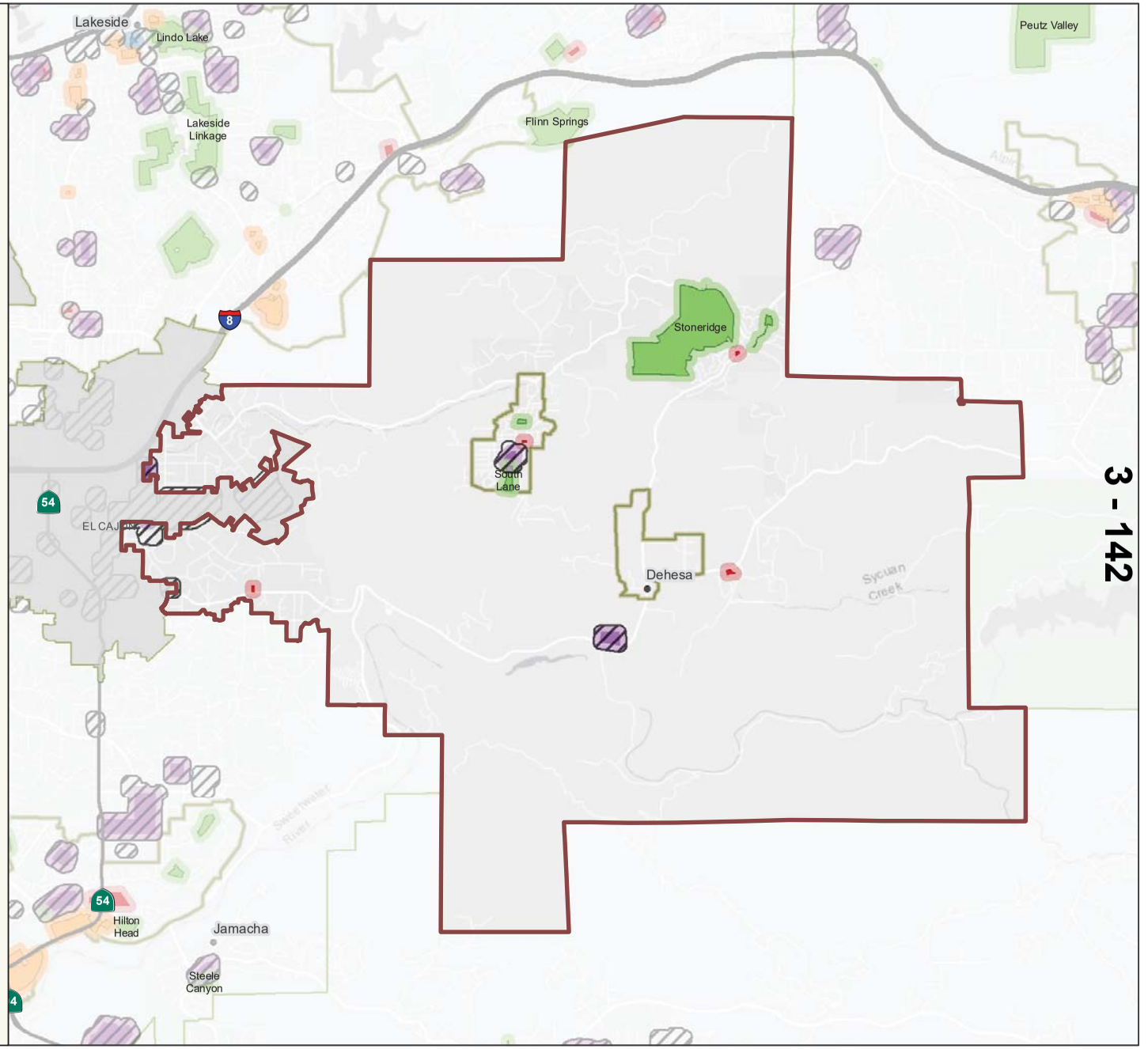
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Small Cell Wireless

Avoidance 300 feet - Crest - Dehesa

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 300 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



N 0 1 2 Miles

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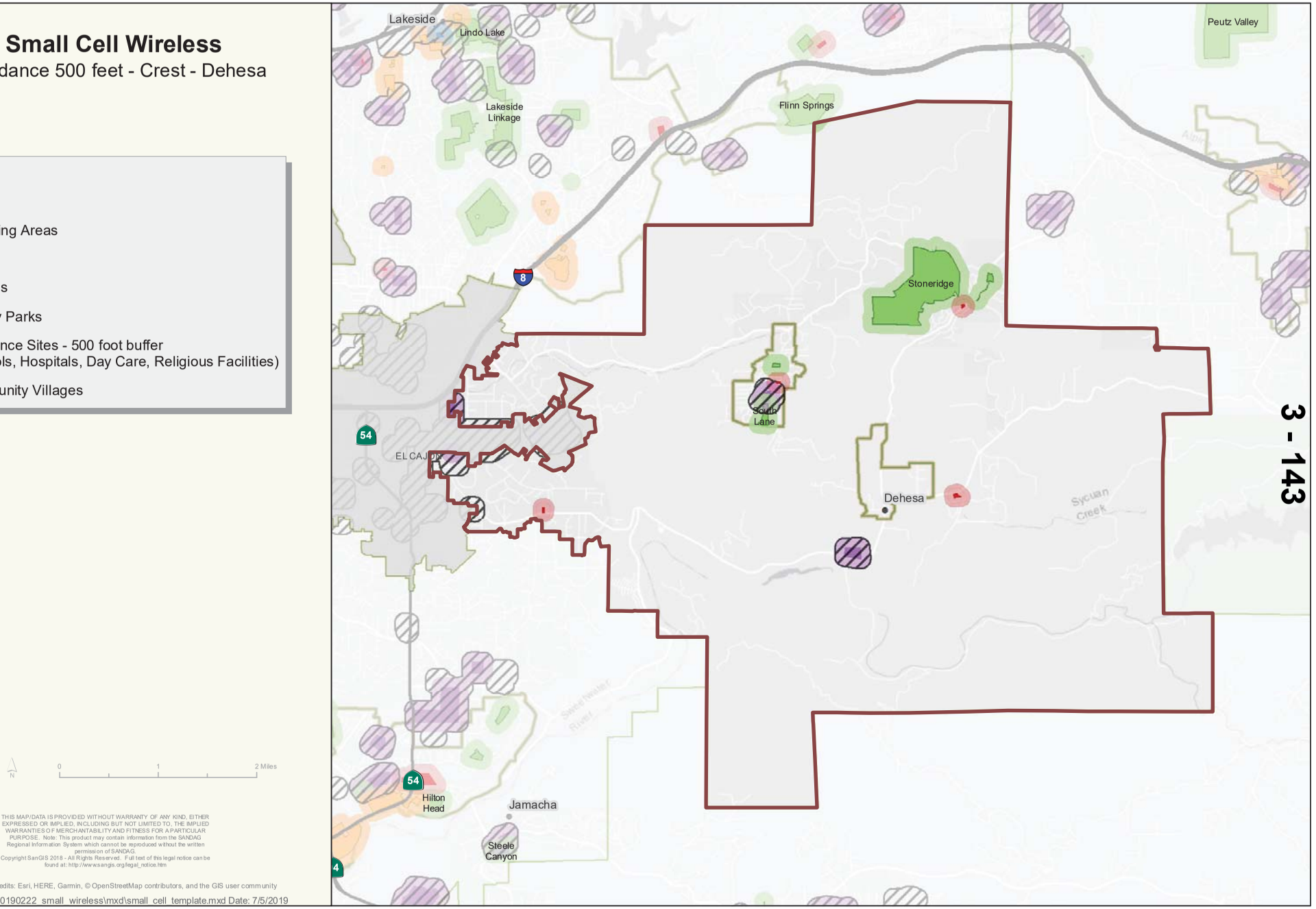
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Small Cell Wireless

Avoidance 500 feet - Crest - Dehesa

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 500 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 Miles

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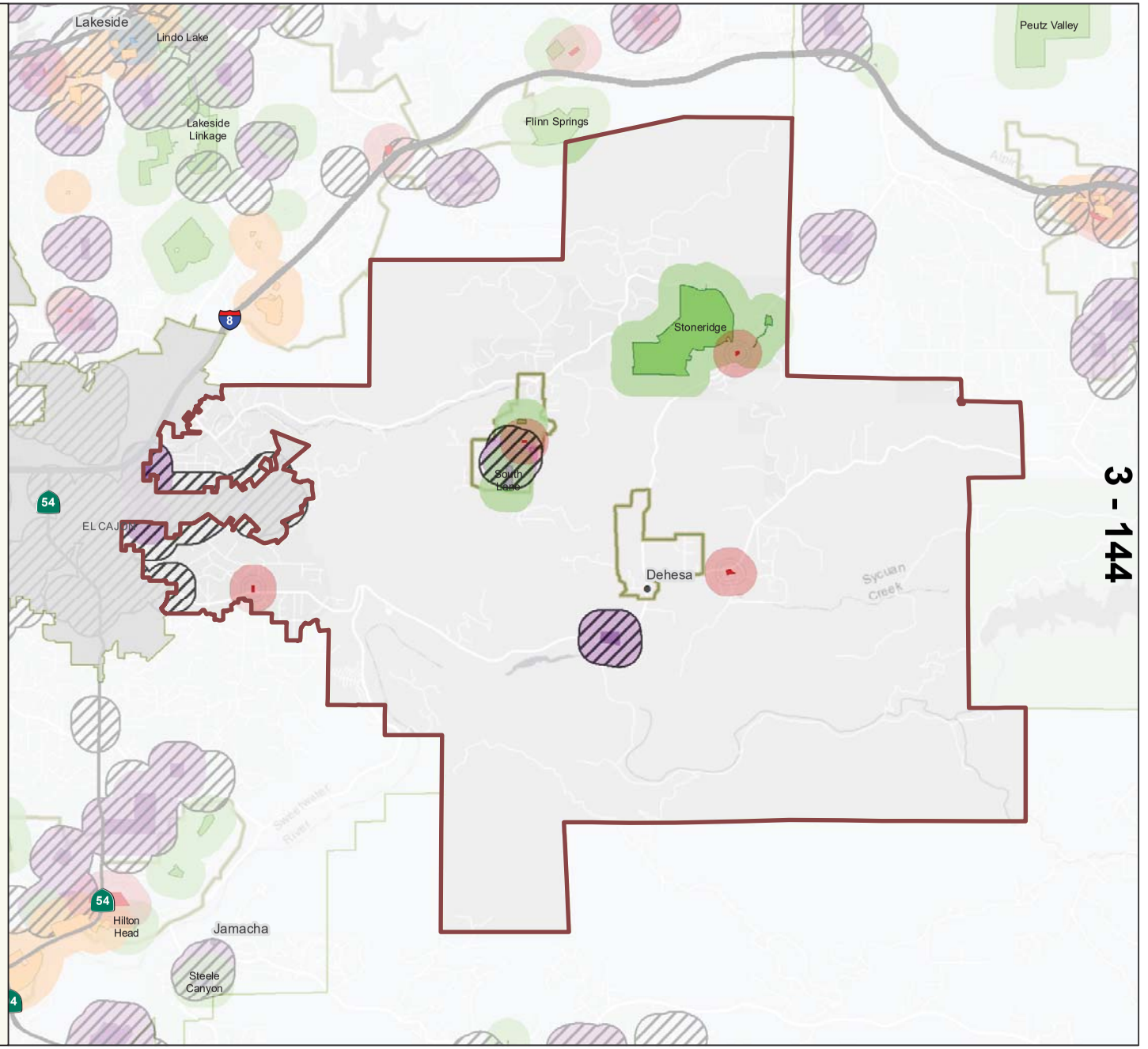
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Small Cell Wireless

Avoidance 1,000 feet - Crest - Dehesa

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 1,000 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 Miles

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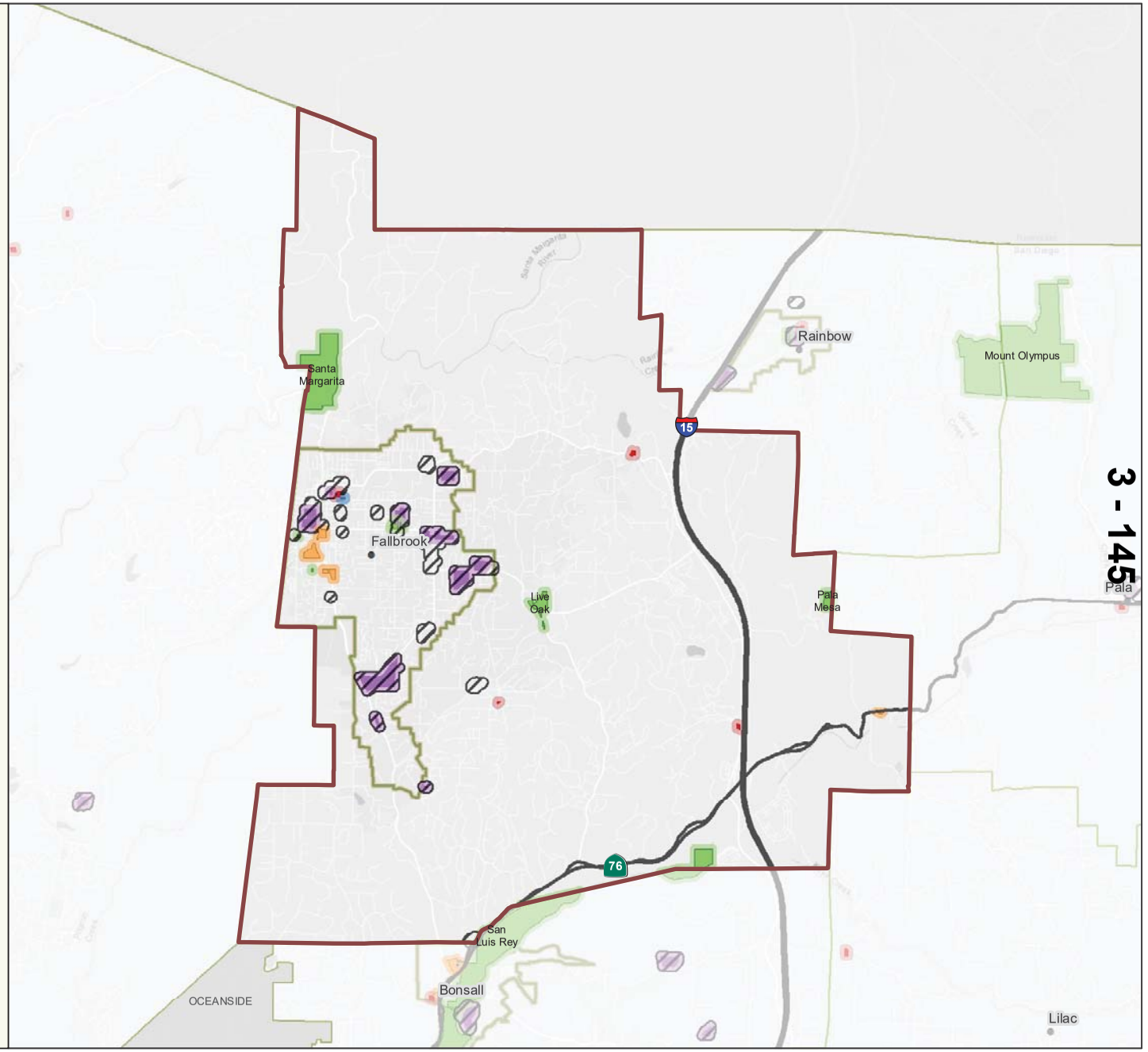
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Small Cell Wireless

Avoidance 300 feet - Fallbrook

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 300 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 3 Miles

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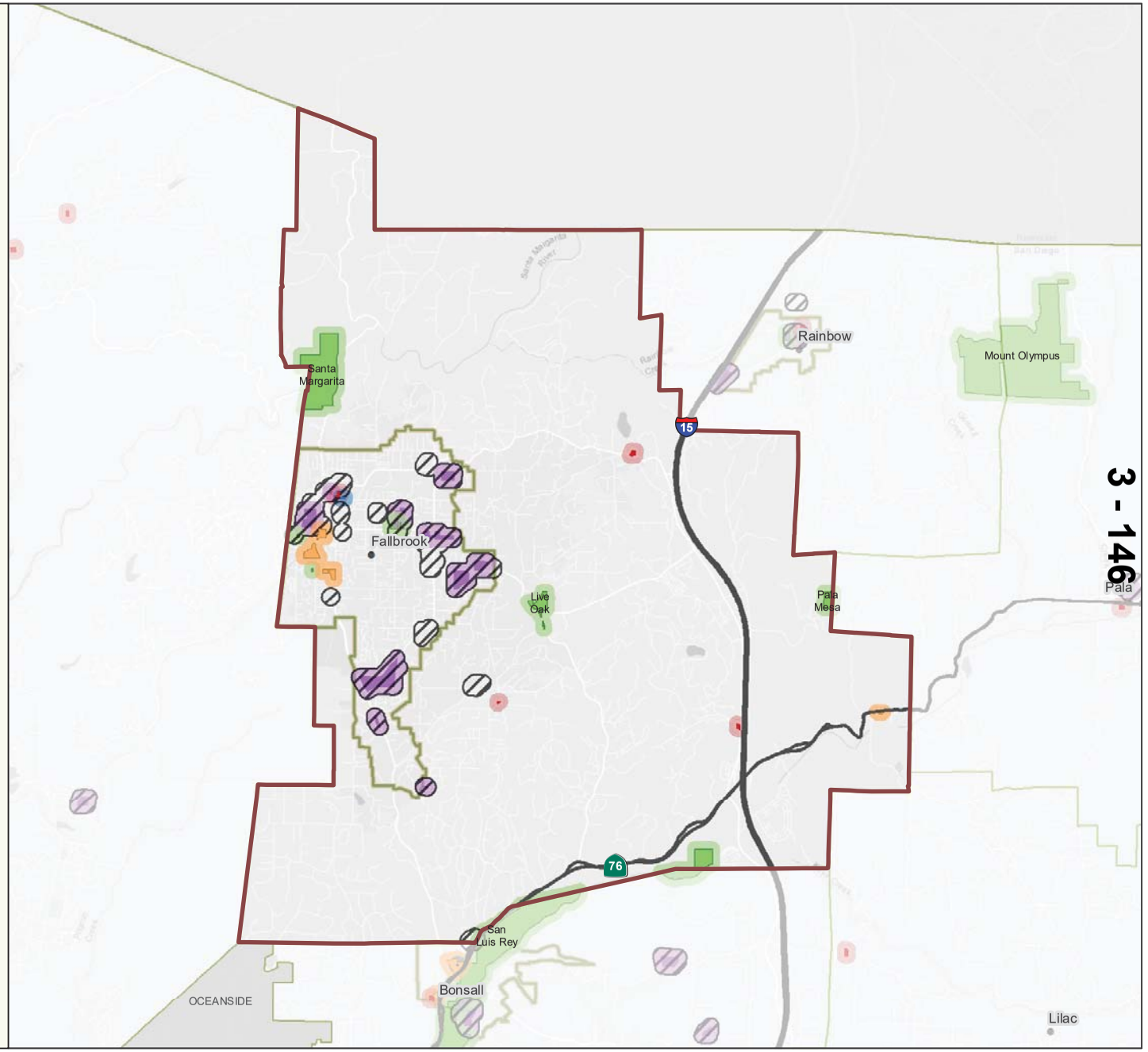
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Small Cell Wireless

Avoidance 500 feet - Fallbrook

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 500 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 3 Miles

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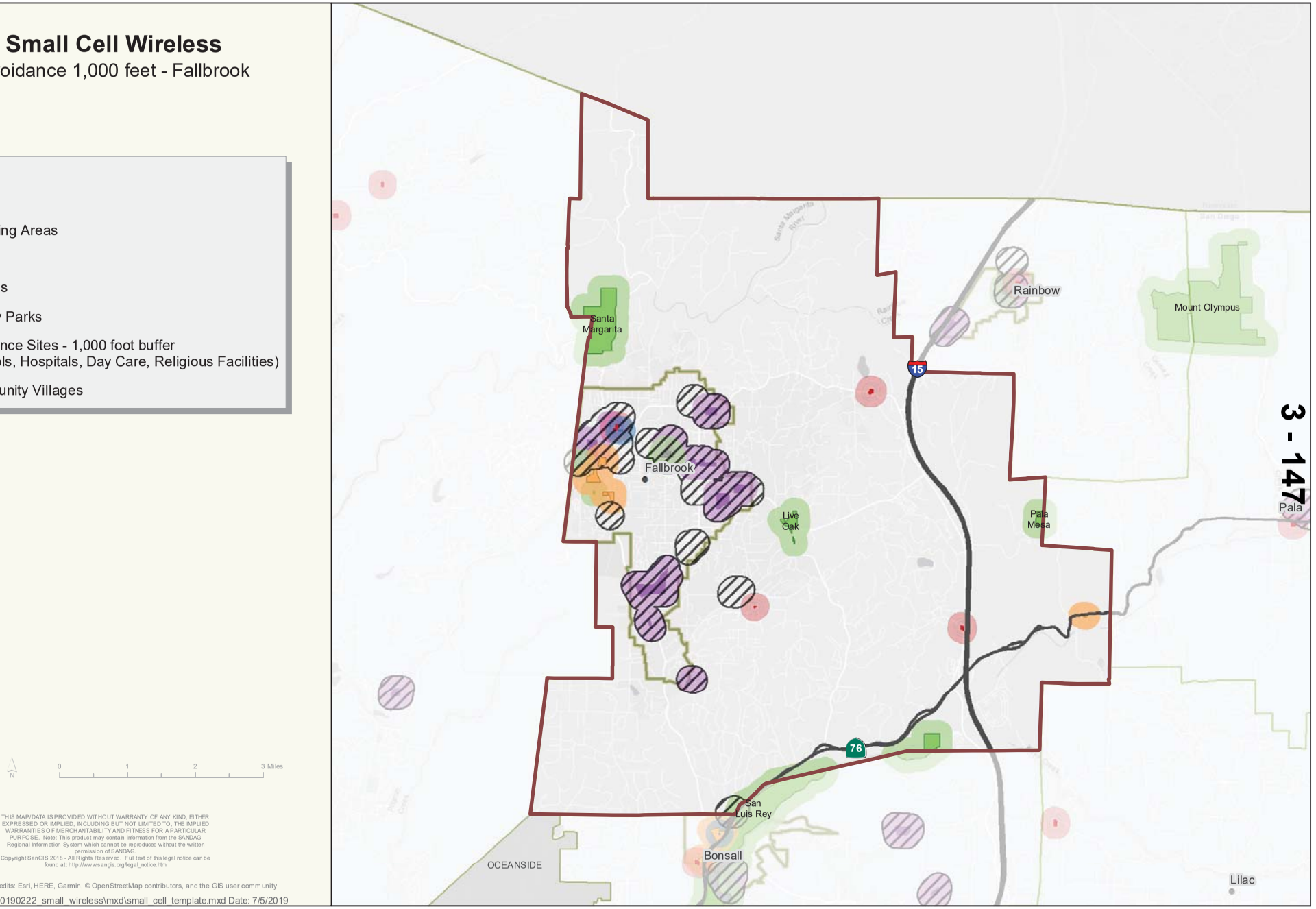
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Small Cell Wireless

Avoidance 1,000 feet - Fallbrook

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 1,000 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 3 Miles

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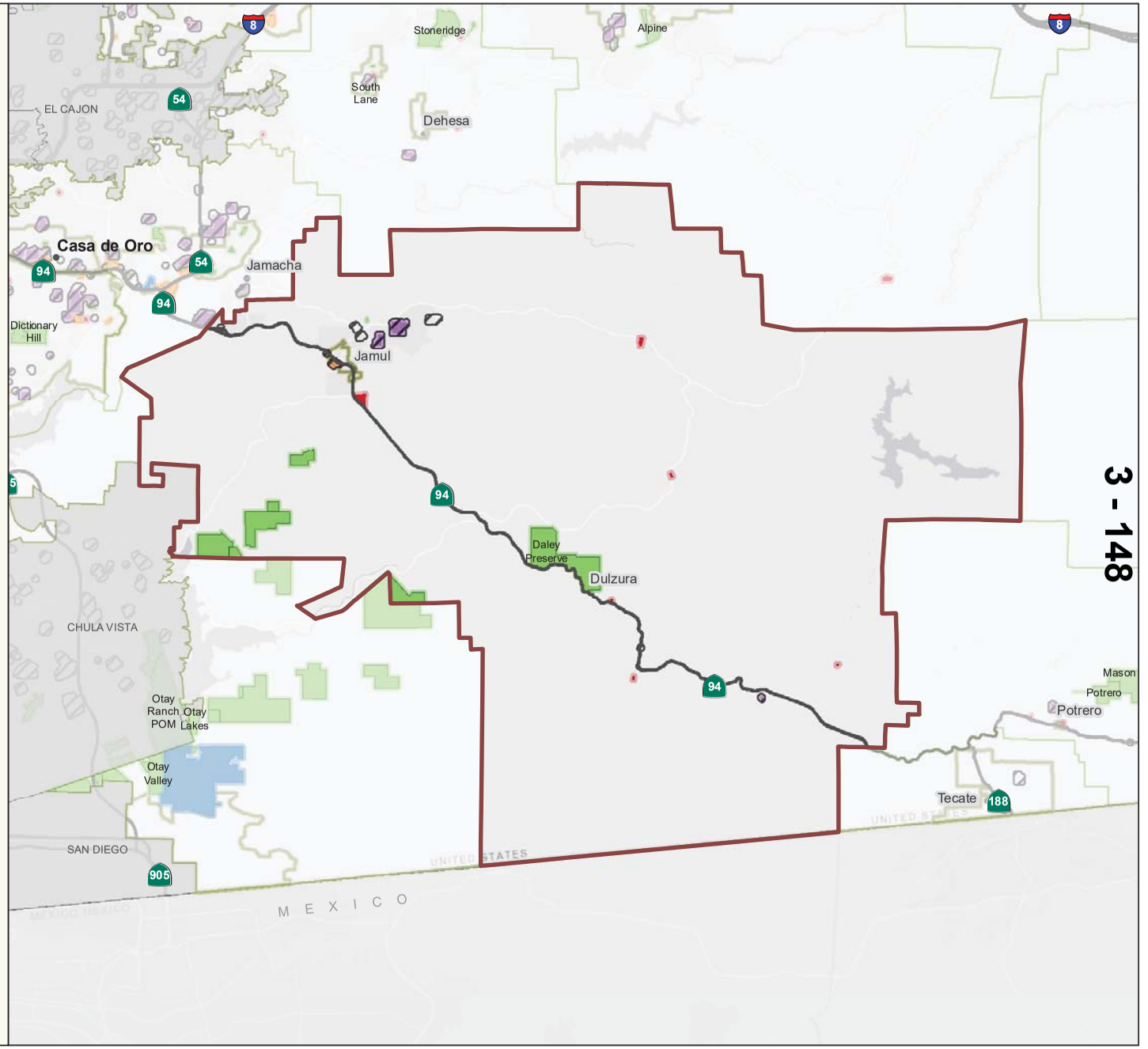
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Small Cell Wireless

Avoidance 300 feet - Jamul

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 300 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 3 4 5 Miles

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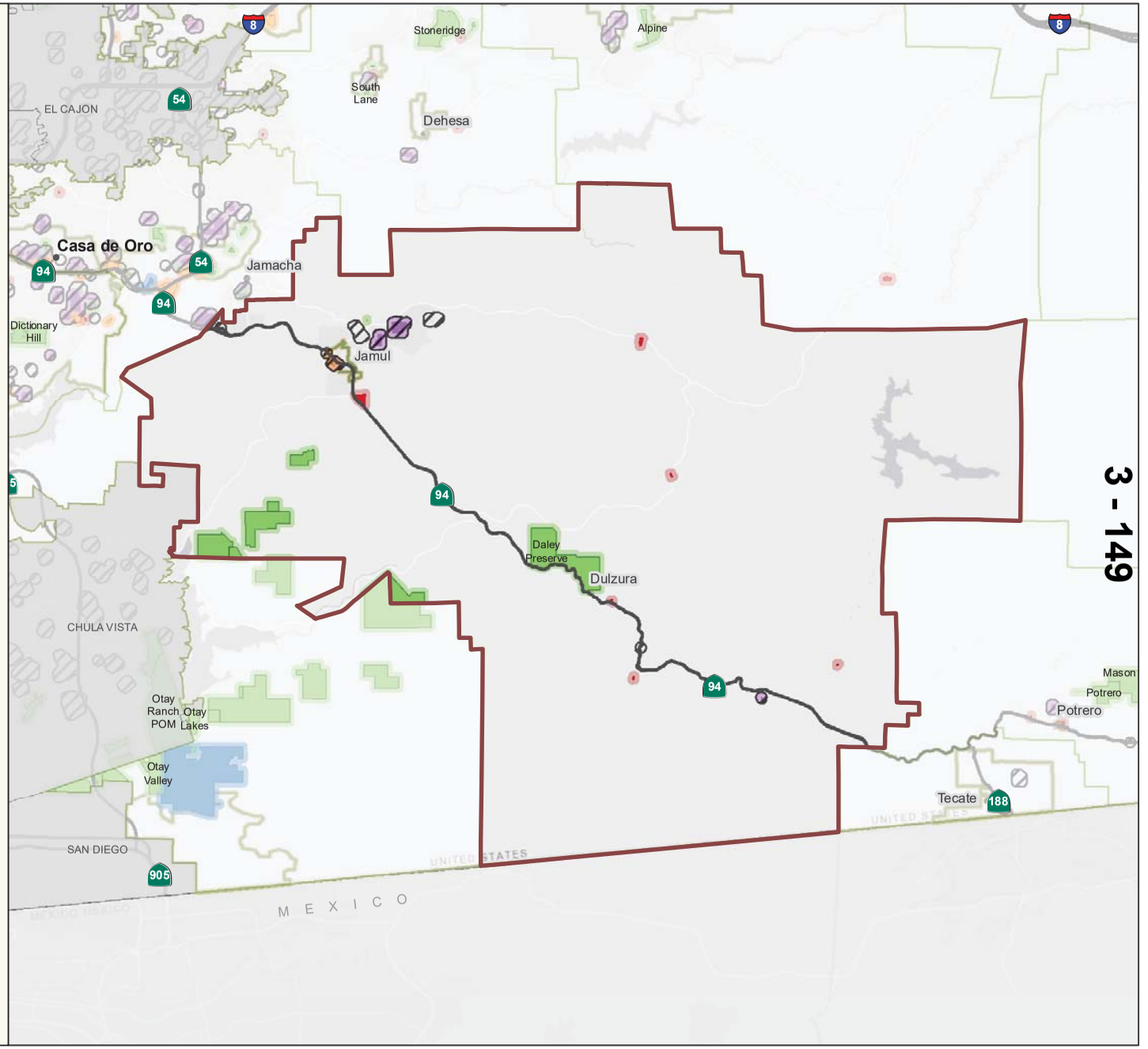
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Small Cell Wireless

Avoidance 500 feet - Jamul

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 500 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 3 4 5 Miles

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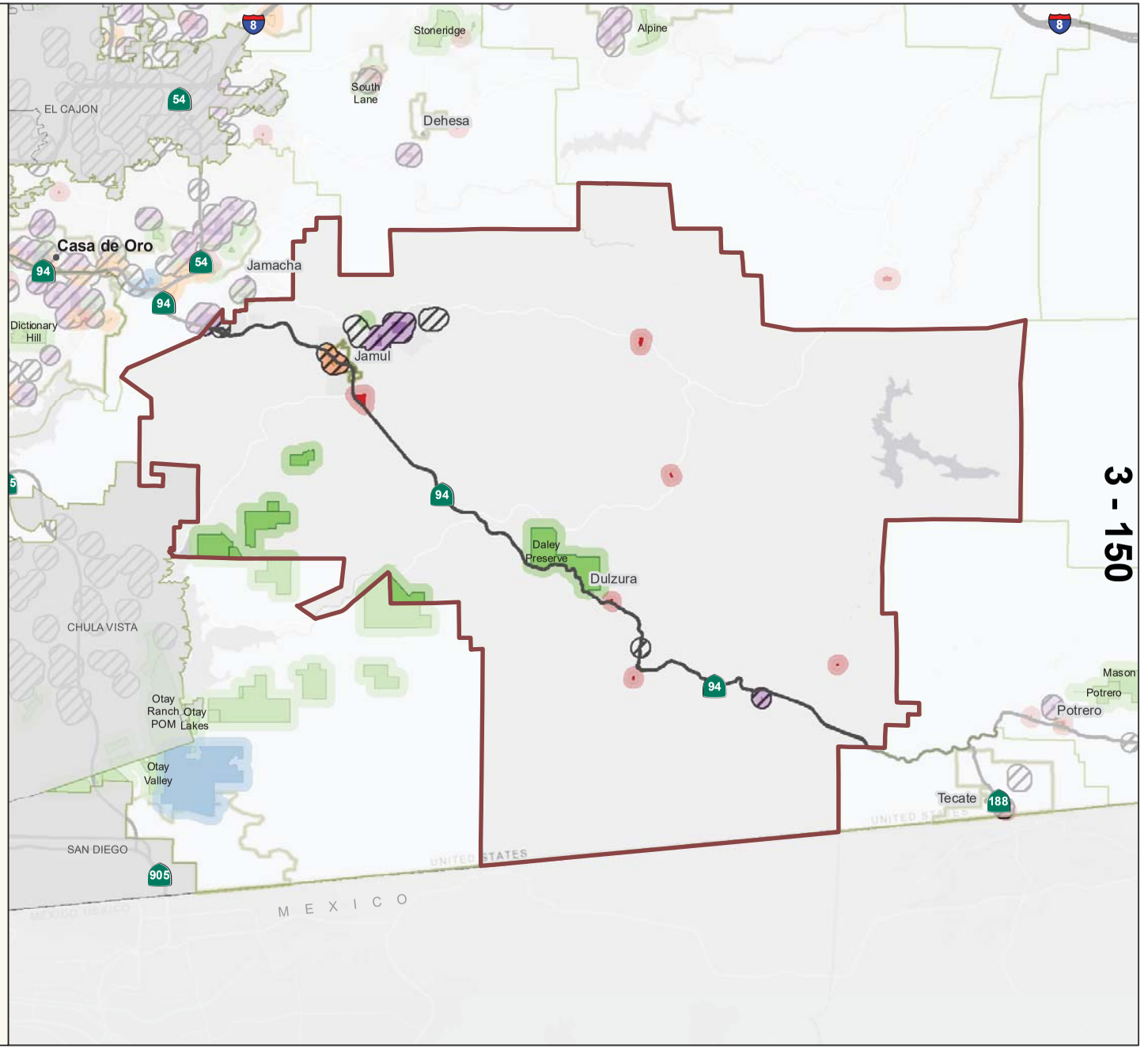
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Small Cell Wireless

Avoidance 1,000 feet - Jamul

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 1,000 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 3 4 5 Miles

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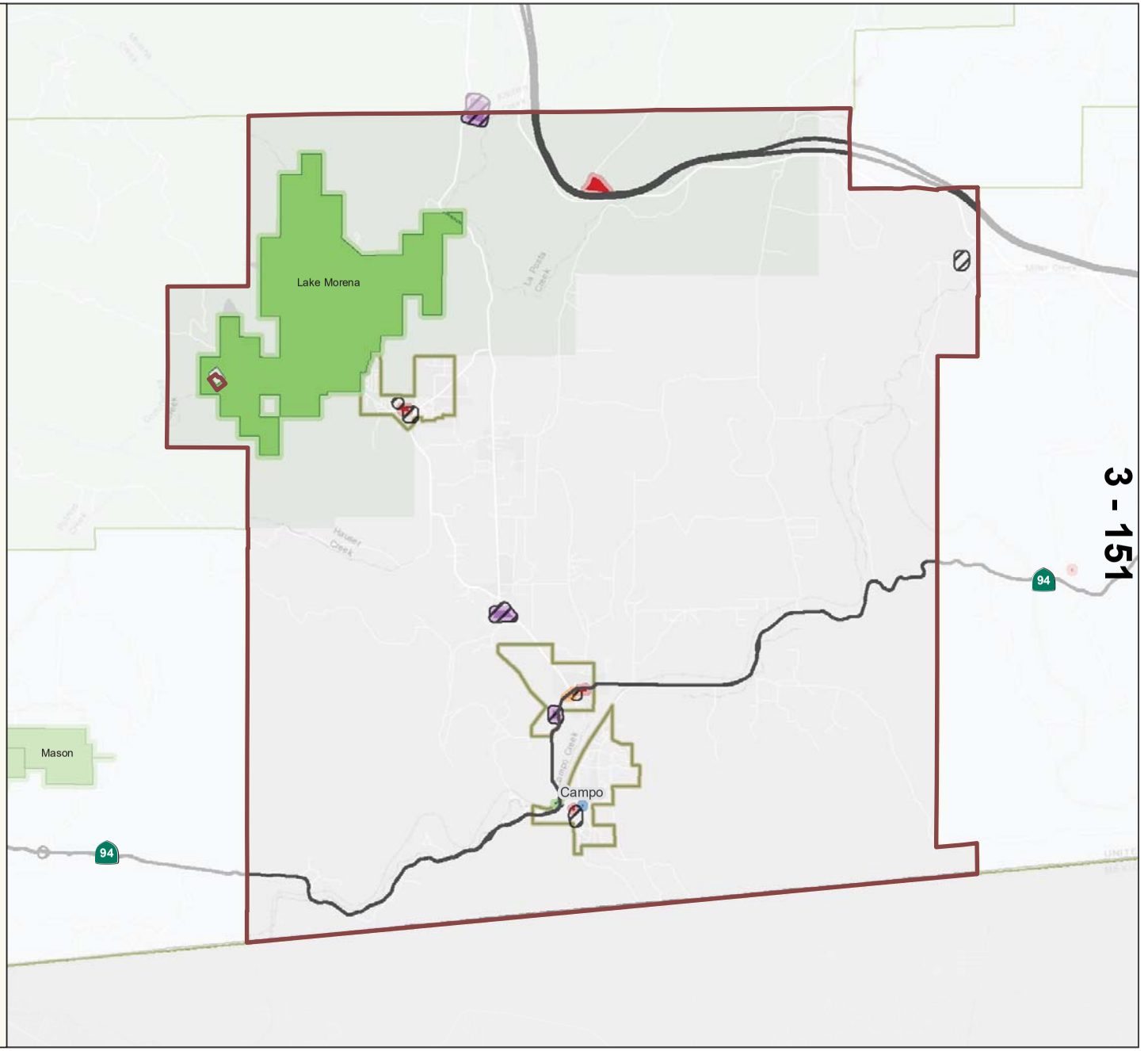
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Small Cell Wireless

Avoidance 300 feet - Lake Morena / Campo

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 300 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



N

0 1 2 Miles

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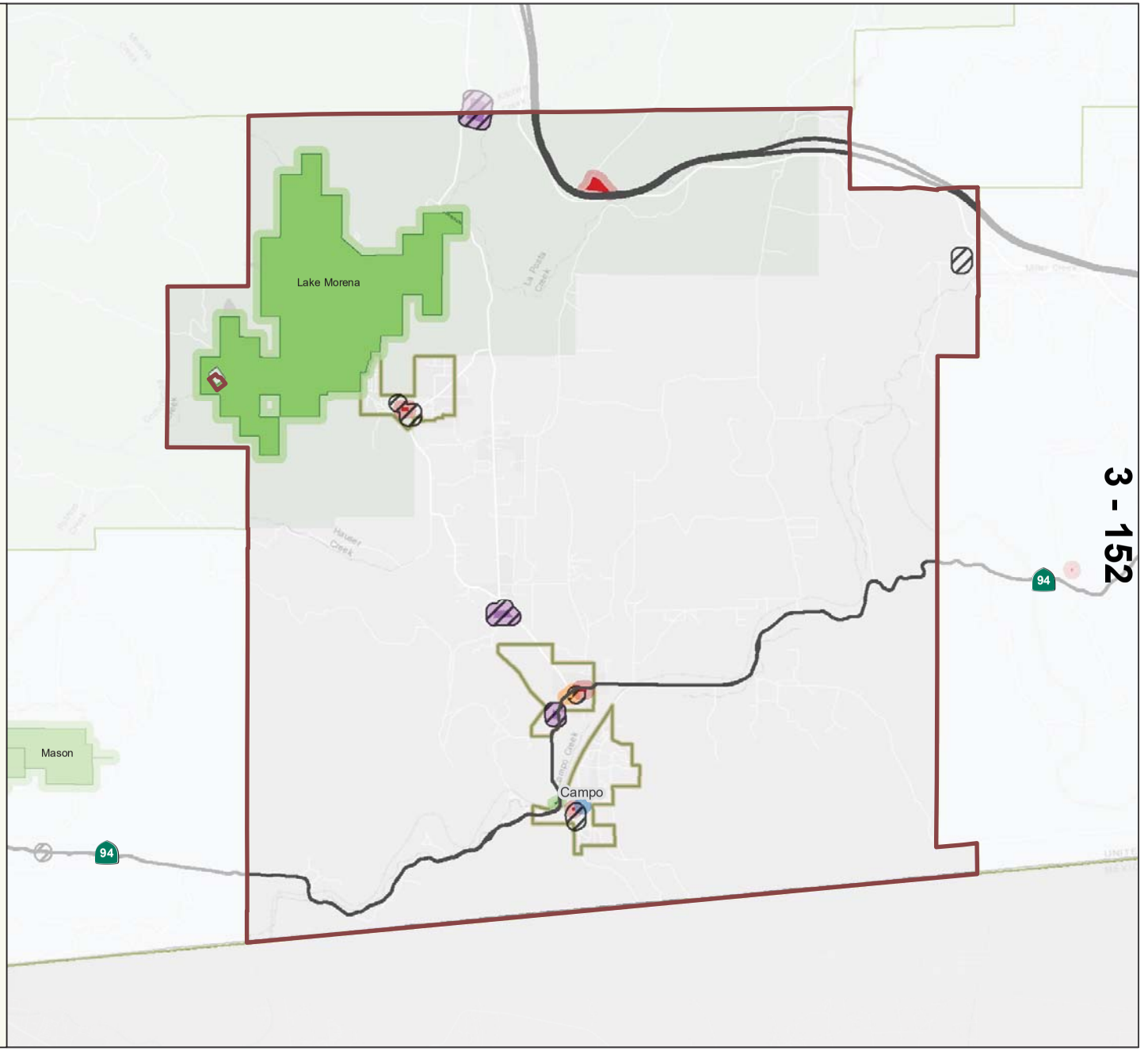
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Small Cell Wireless

Avoidance 500 feet - Lake Morena / Campo

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 500 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



N

0 1 2 Miles

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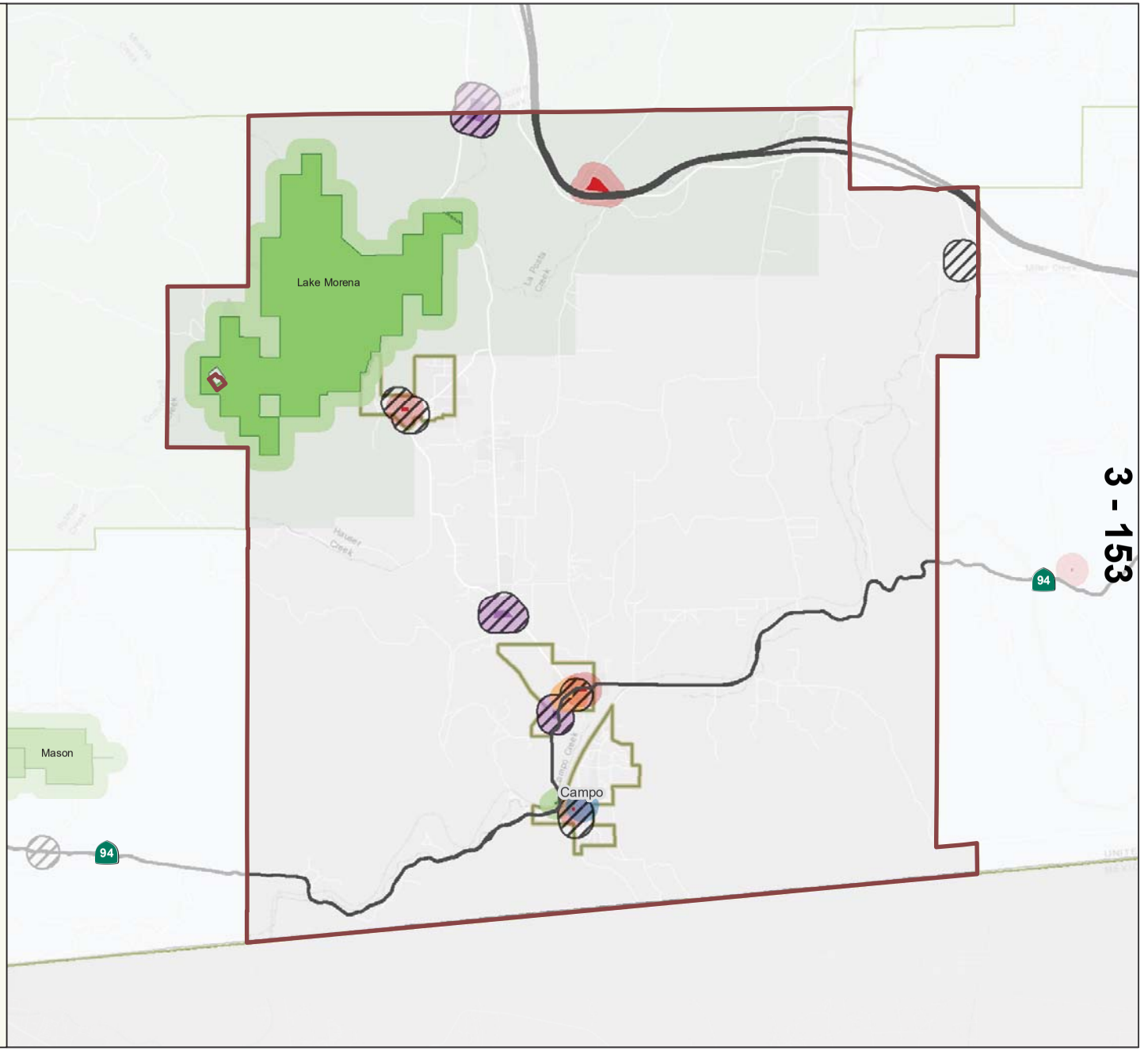
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Small Cell Wireless

Avoidance 1,000 feet - Lake Morena / Campo

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 1,000 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



N 0 1 2 Miles

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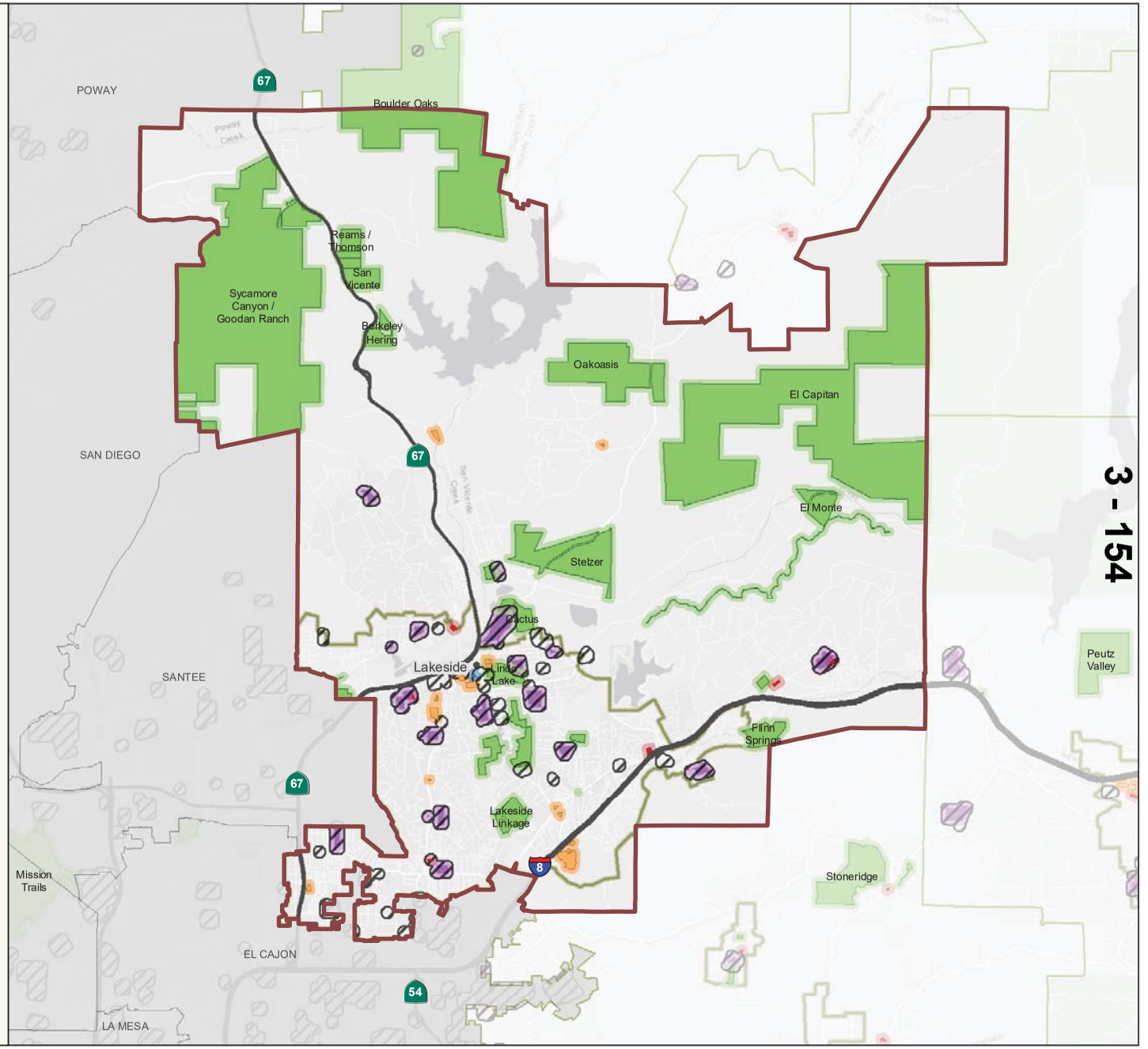
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Small Cell Wireless

Avoidance 300 feet - Lakeside

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 300 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 3 Miles

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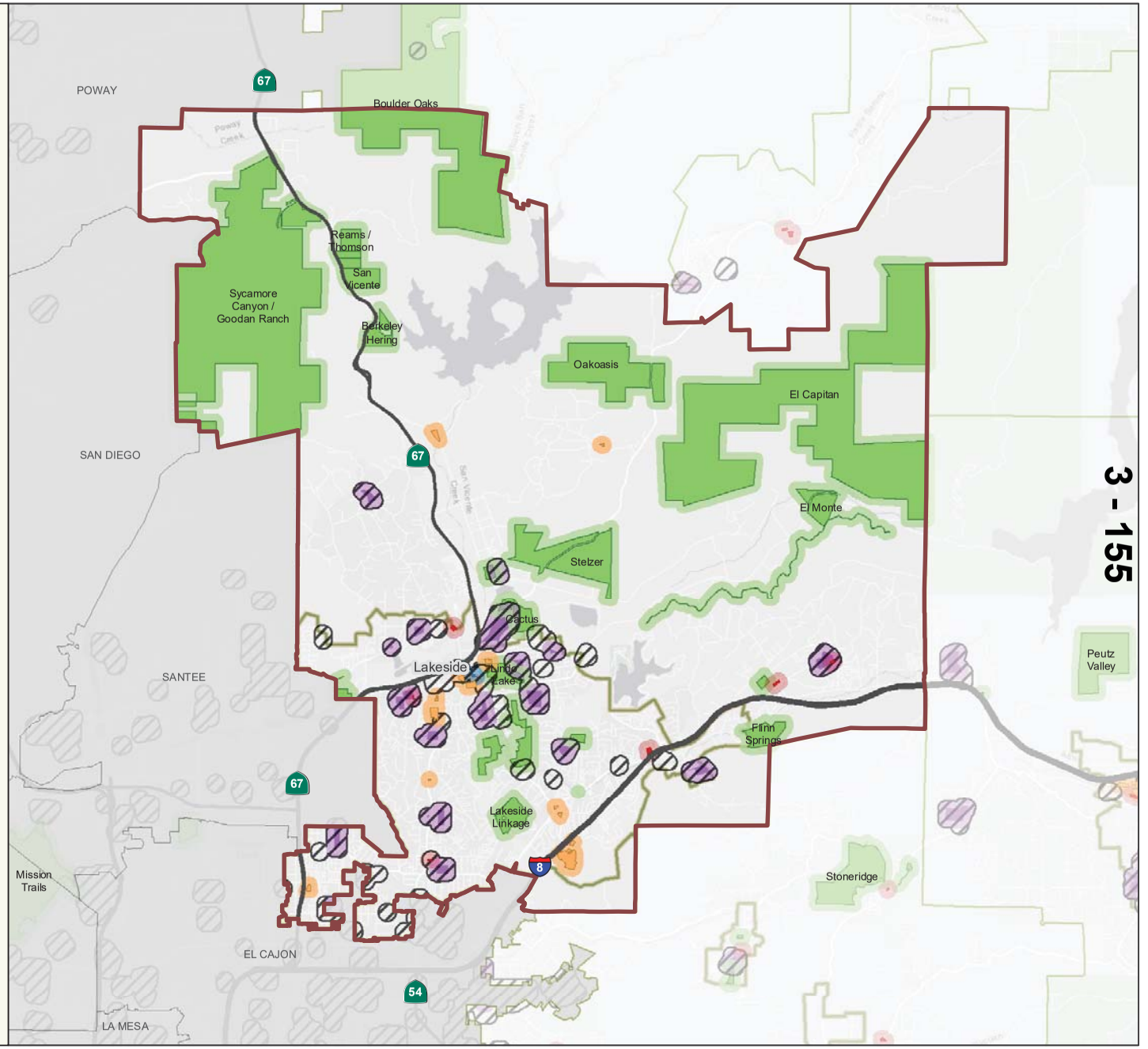
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Small Cell Wireless

Avoidance 500 feet - Lakeside

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 500 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 3 Miles

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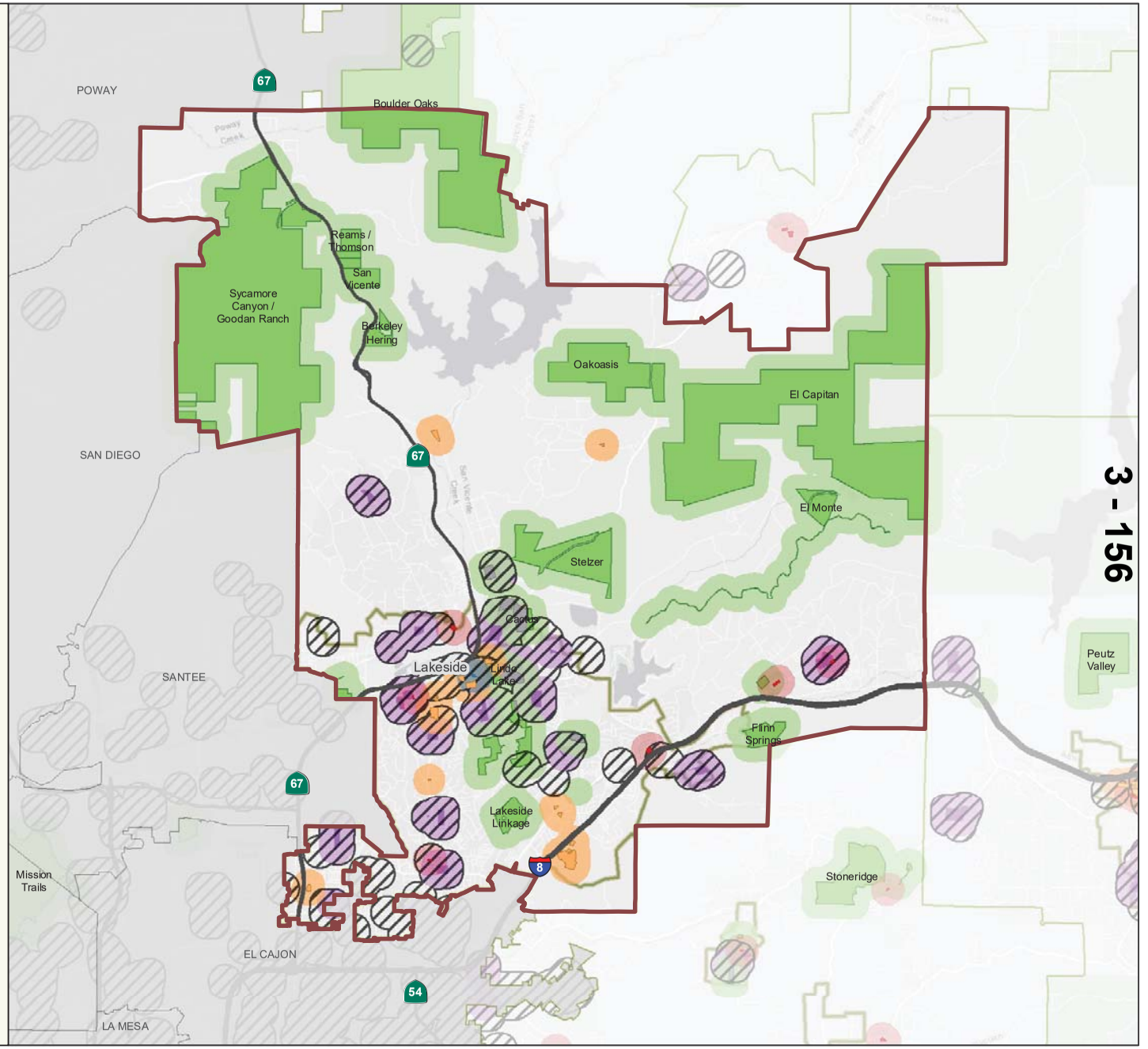
P:\gp2020\20190222_small_wireless\mxd\small_cell_template.mxd Date: 7/5/2019

Small Cell Wireless

Avoidance 1,000 feet - Lakeside

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 1,000 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 3 Miles

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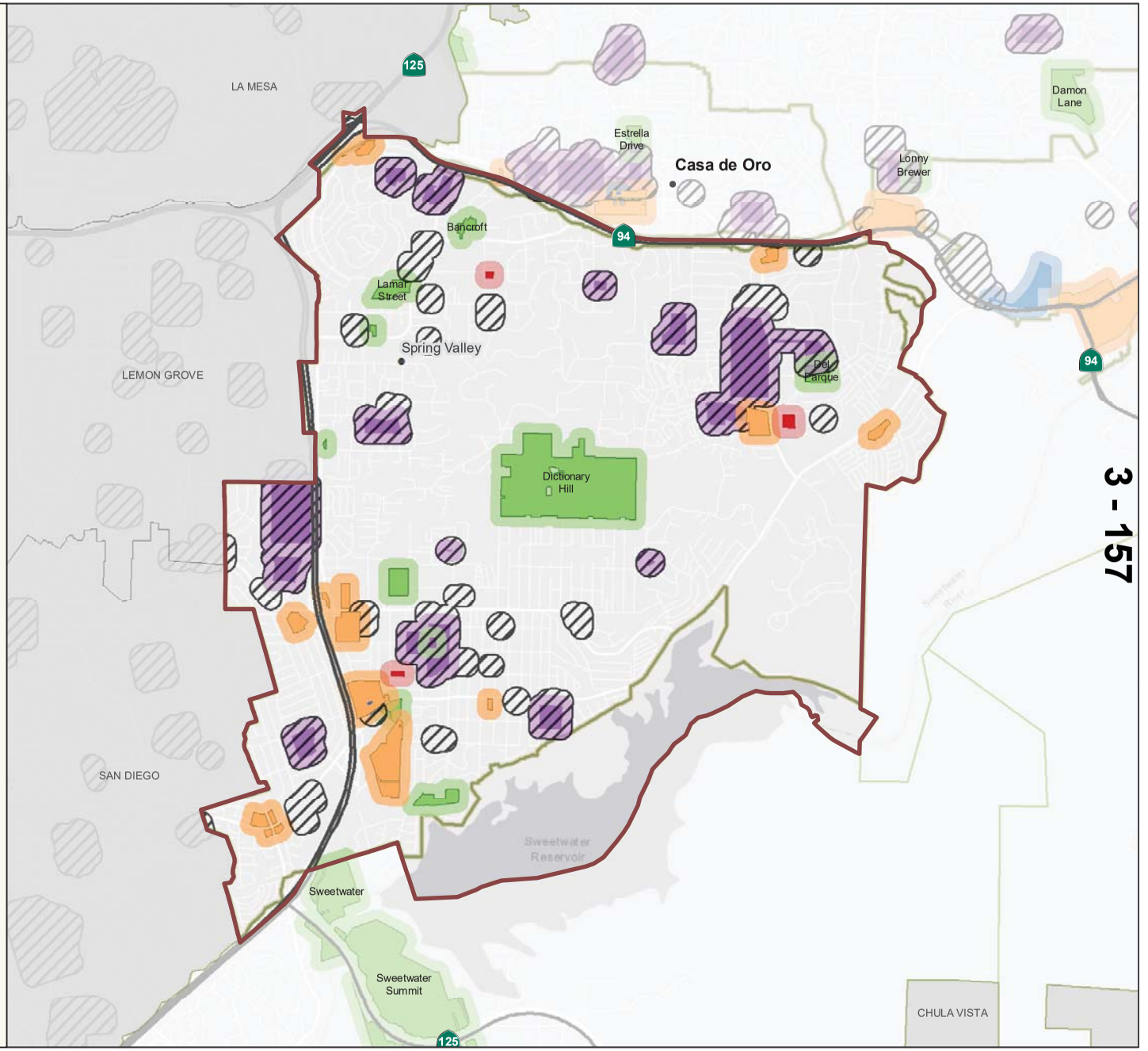
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Small Cell Wireless

Avoidance 300 feet - Spring Valley

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 300 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 Miles

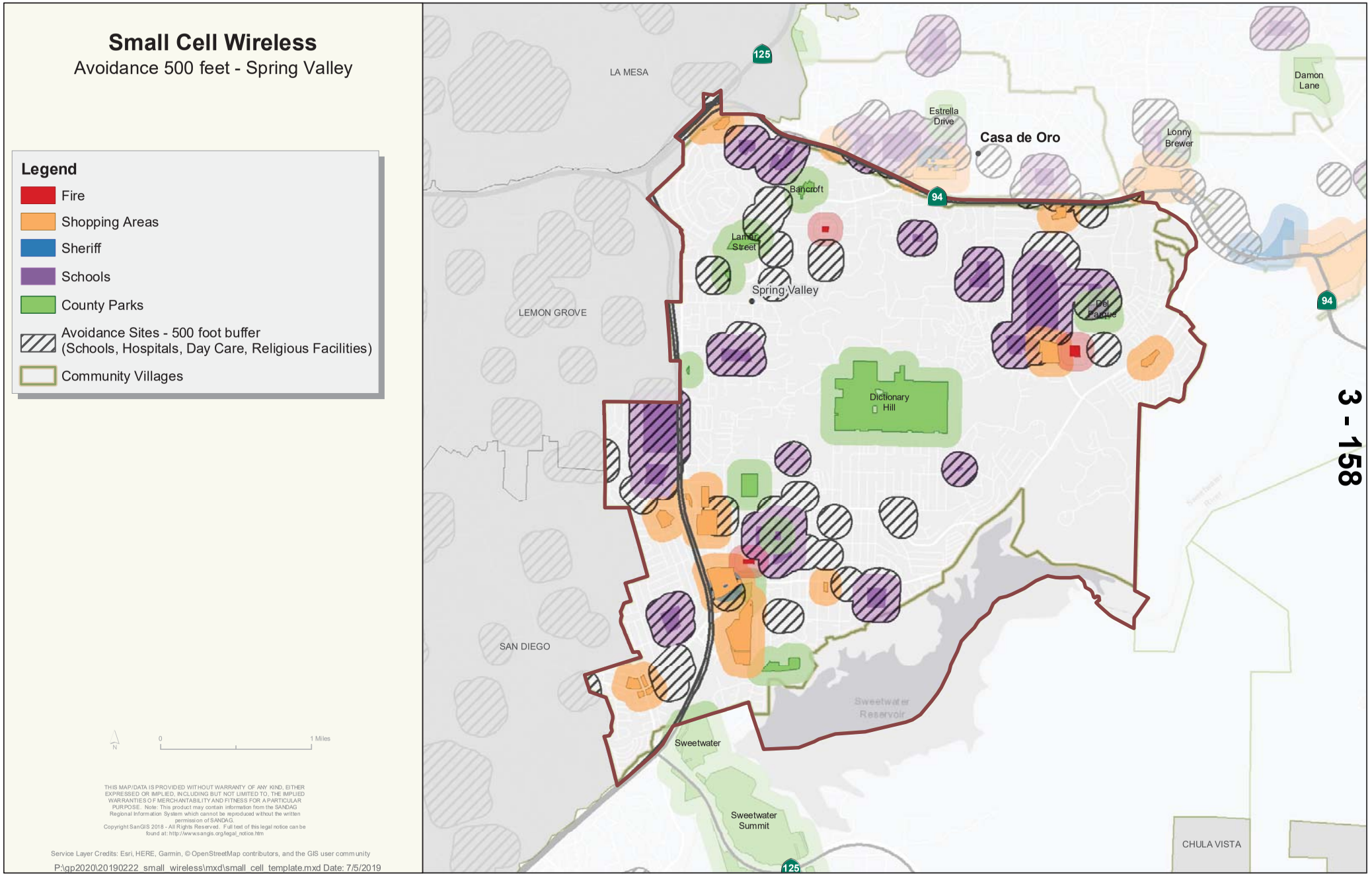
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Small Cell Wireless

Avoidance 500 feet - Spring Valley



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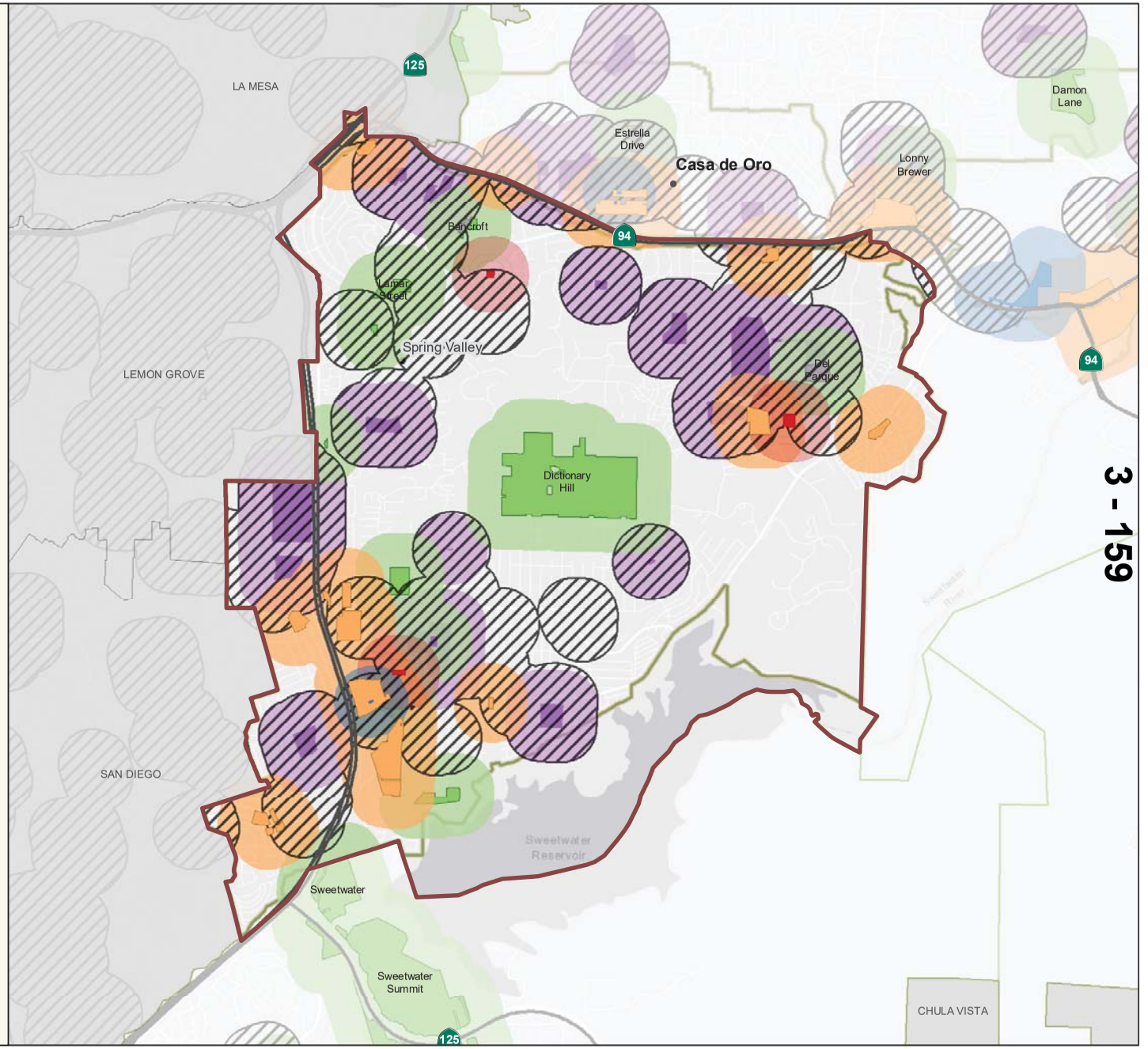
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Small Cell Wireless

Avoidance 1,000 feet - Spring Valley

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 1,000 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



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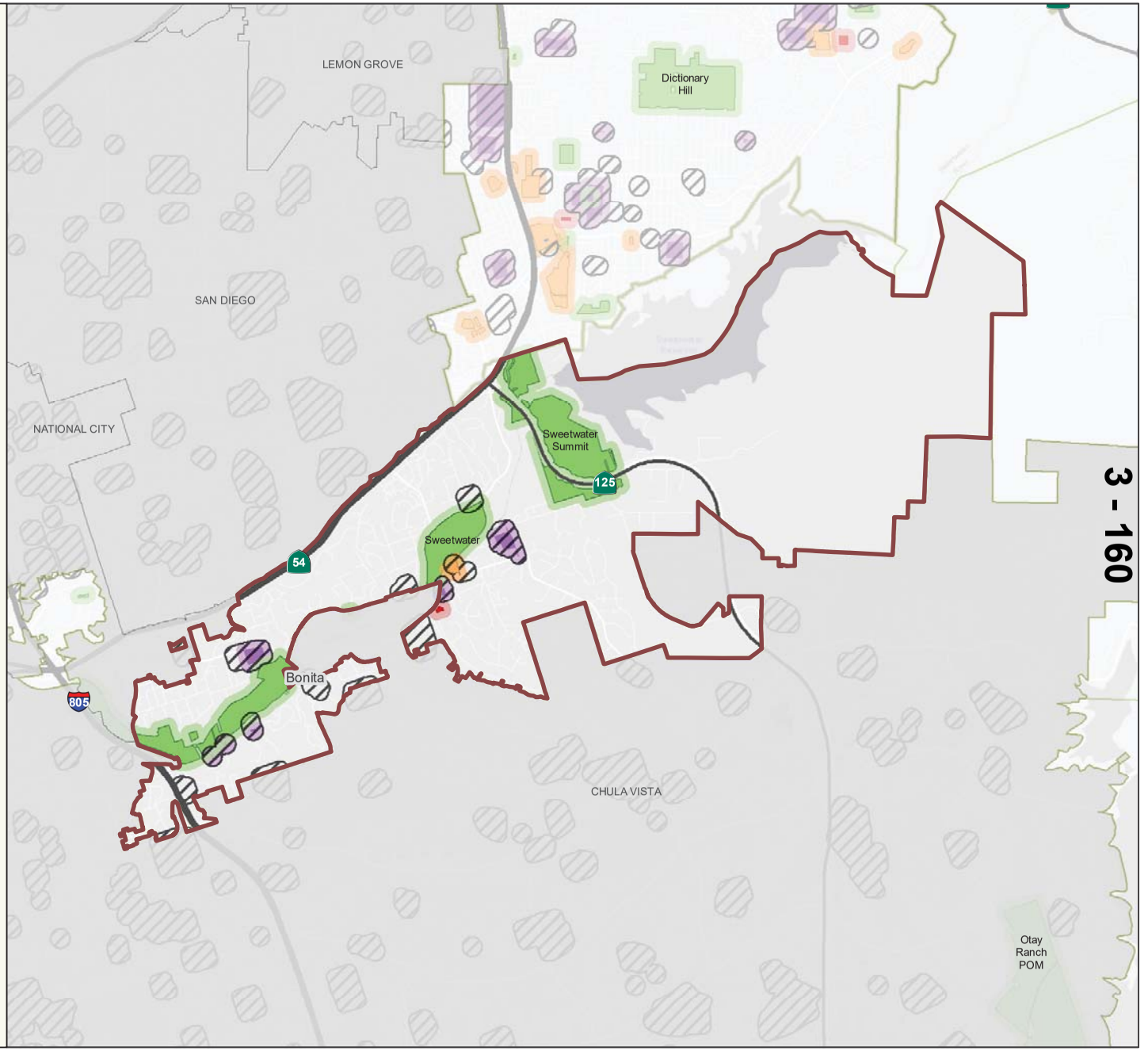
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Small Cell Wireless

Avoidance 300 feet - Sweetwater

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 300 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 Miles

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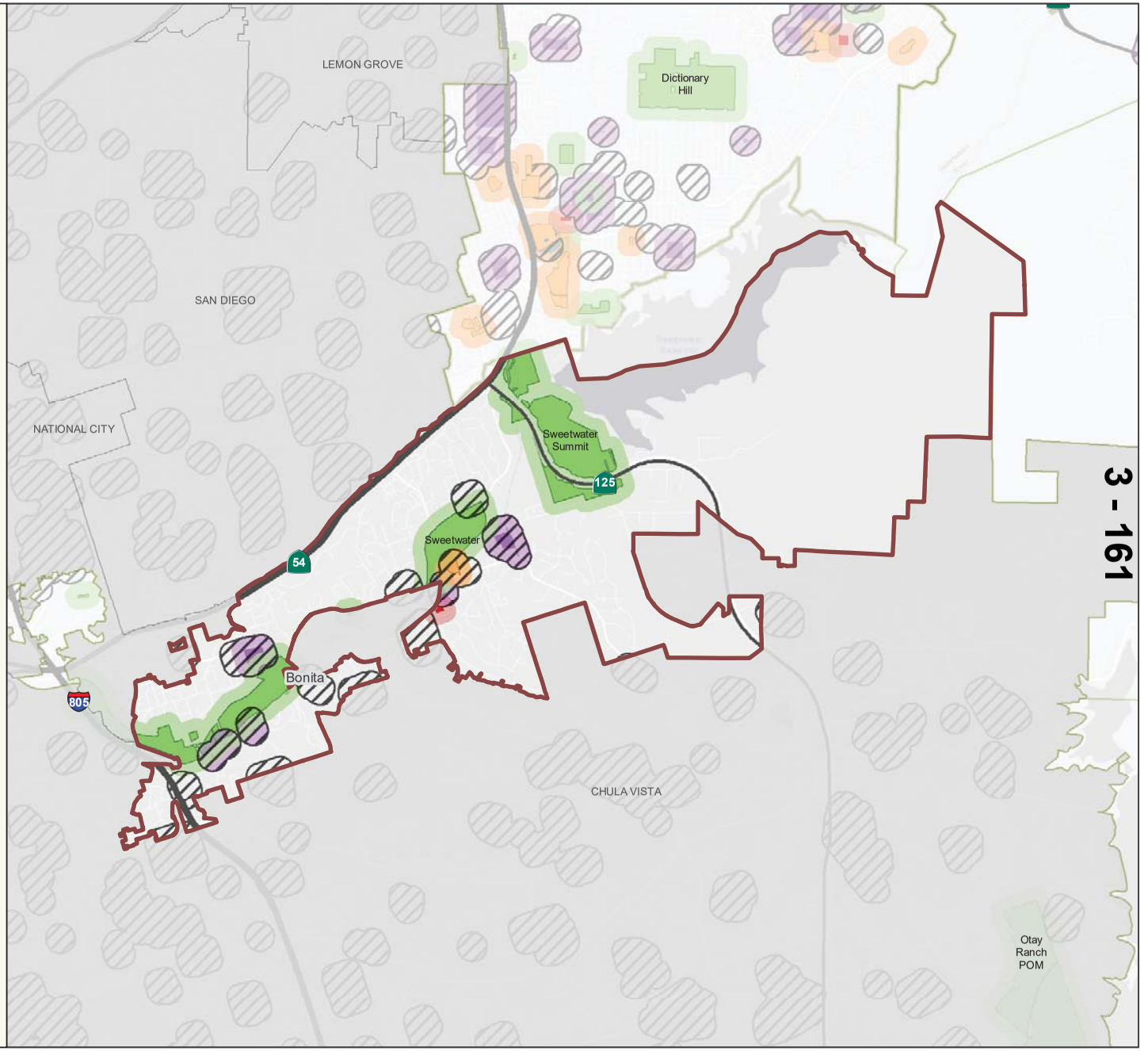
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Small Cell Wireless

Avoidance 500 feet - Sweetwater

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 500 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 Miles

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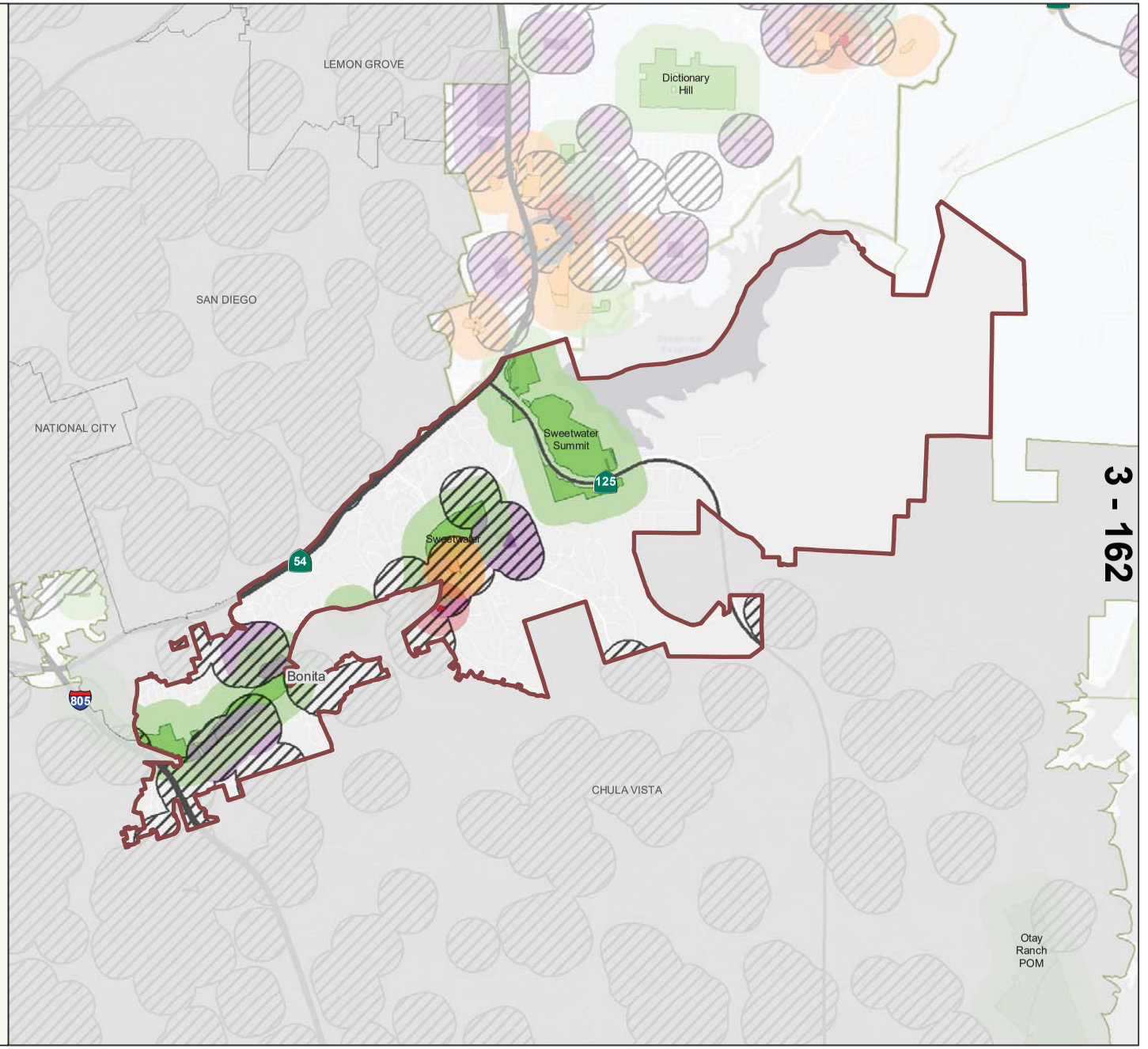
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Small Cell Wireless

Avoidance 1,000 feet - Sweetwater

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 1,000 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 Miles

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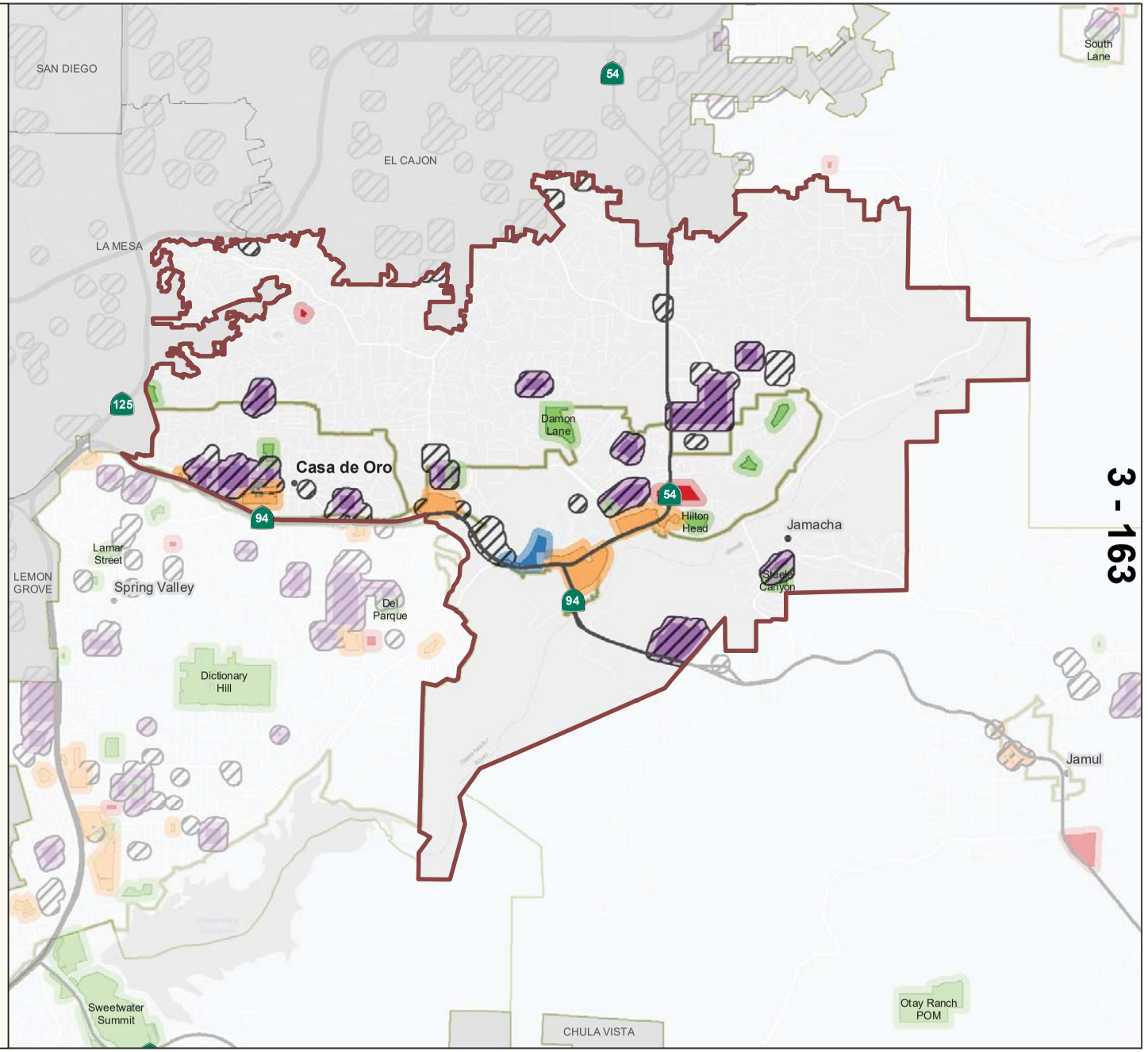
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Small Cell Wireless

Avoidance 300 feet - Valle De Oro

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 300 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



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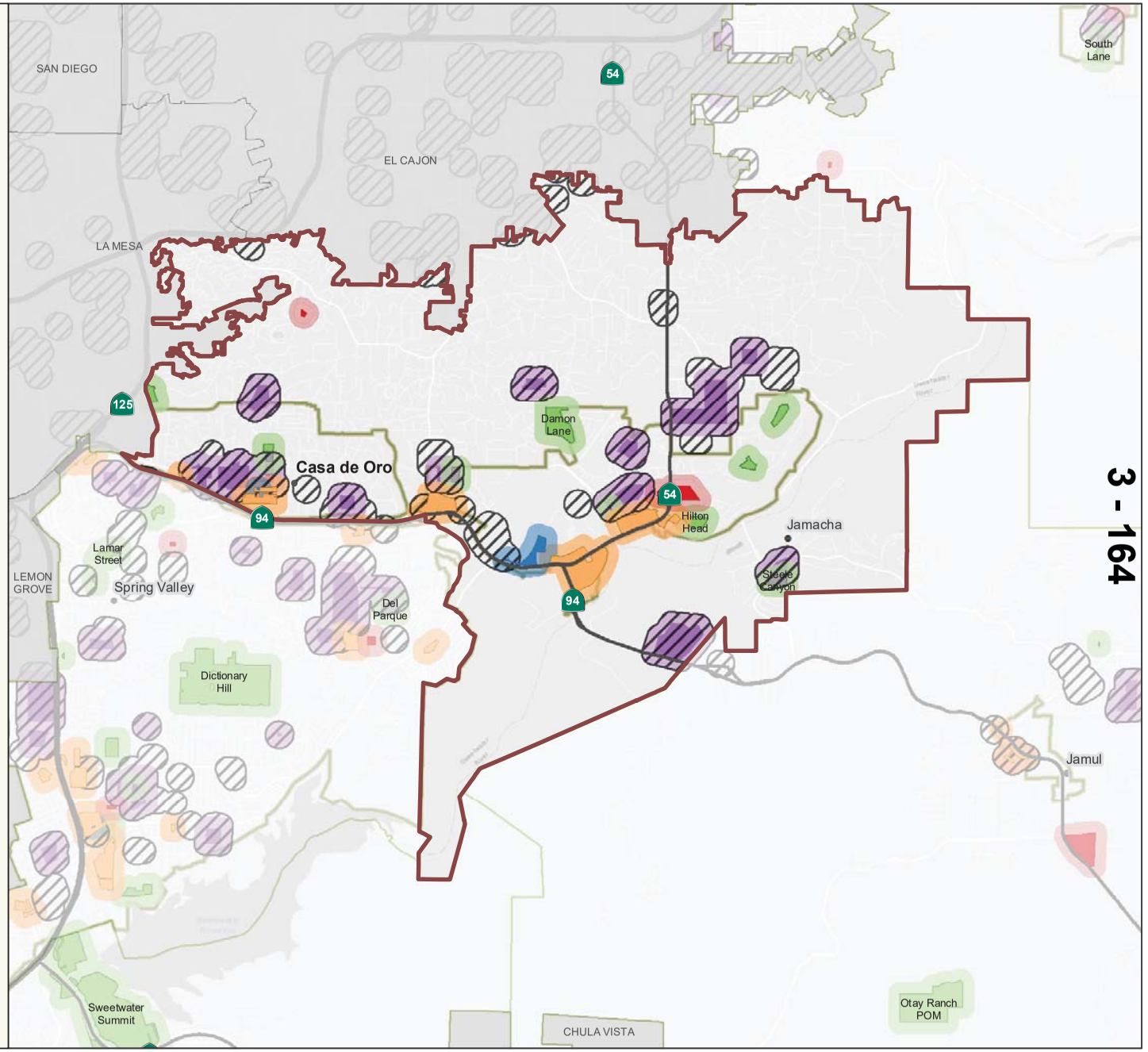
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Small Cell Wireless

Avoidance 500 feet - Valle De Oro

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 500 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



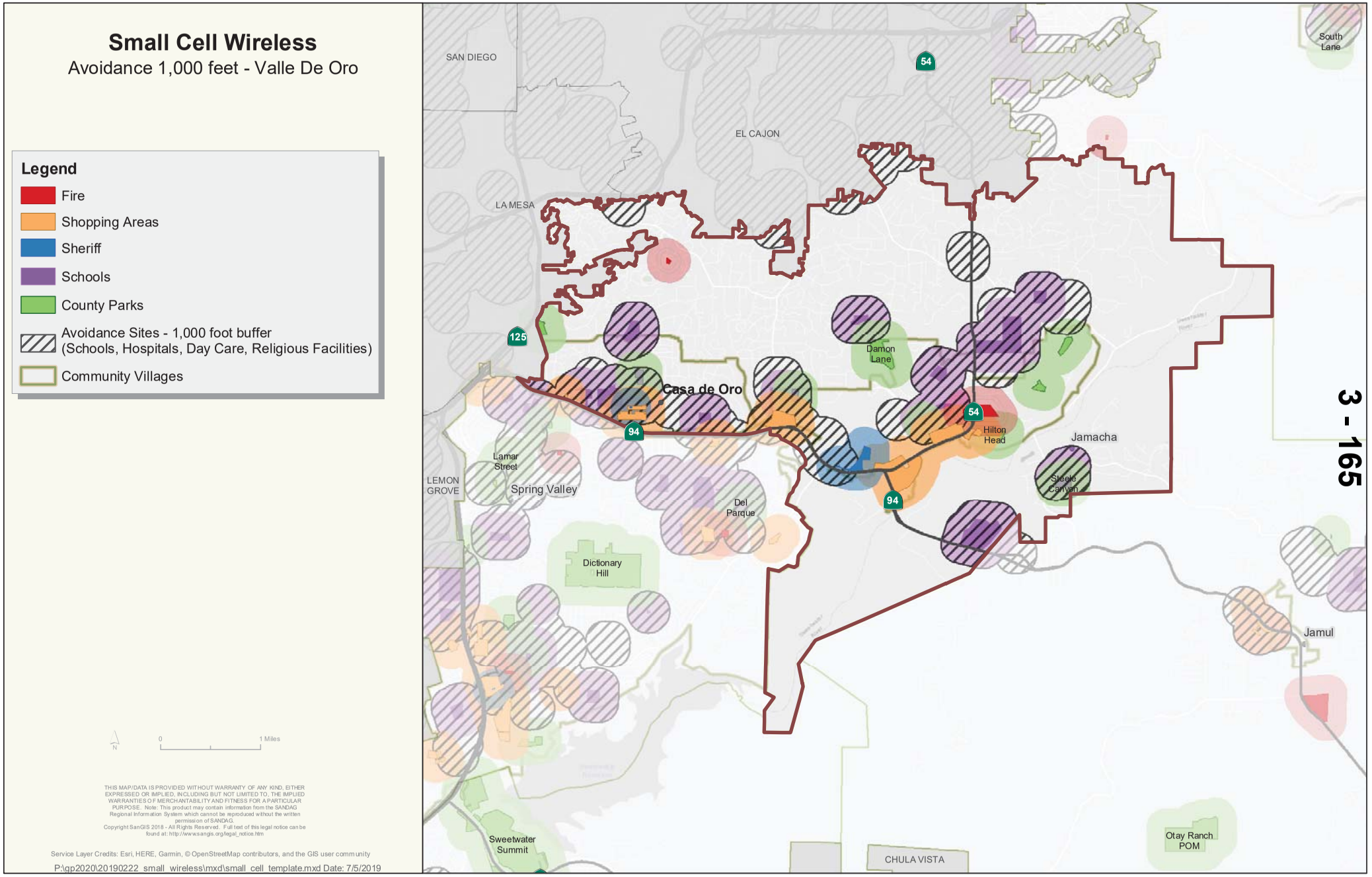
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Small Cell Wireless

Avoidance 1,000 feet - Valle De Oro



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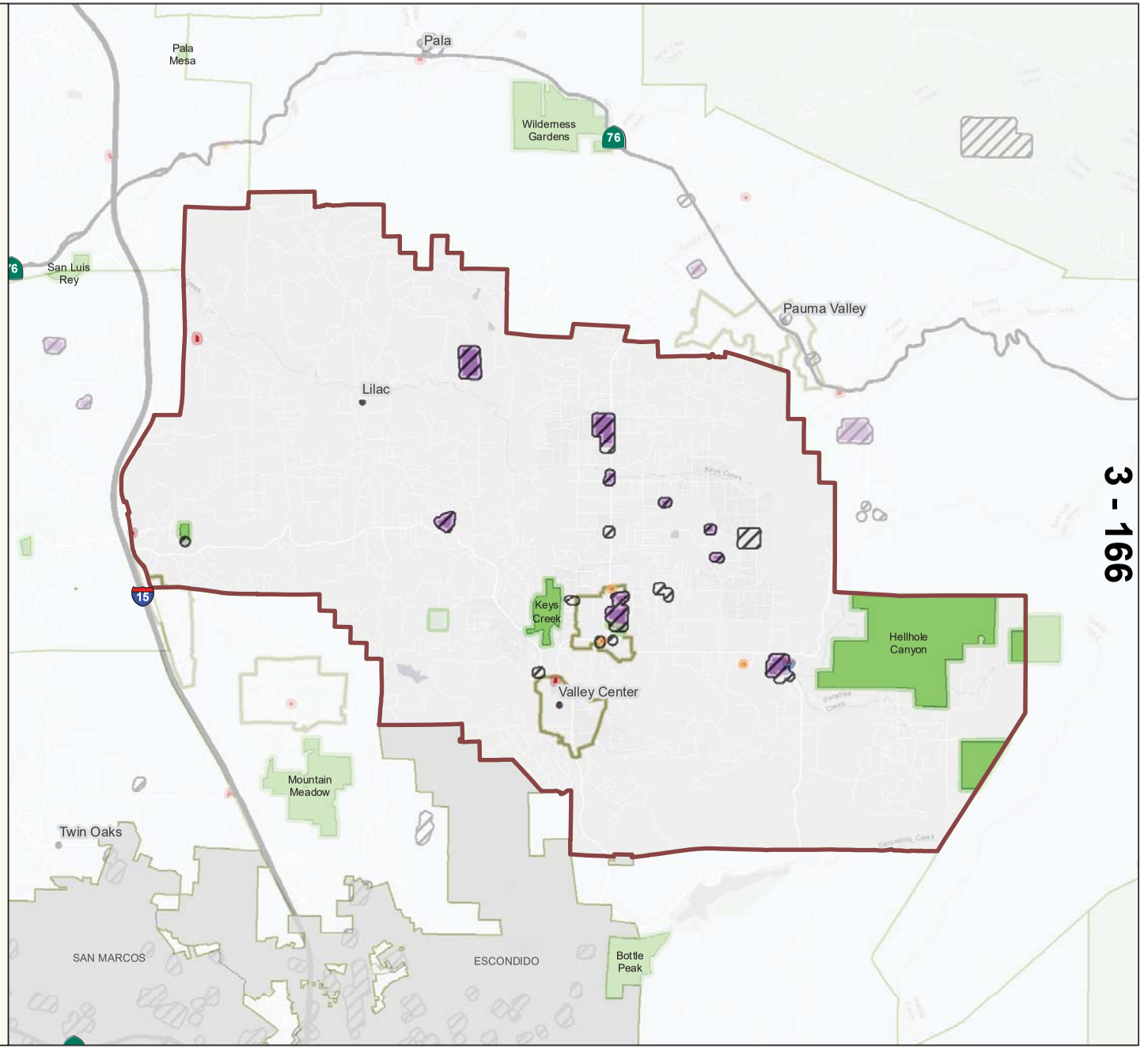
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Small Cell Wireless

Avoidance 300 feet - Valley Center

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 300 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 3 Miles

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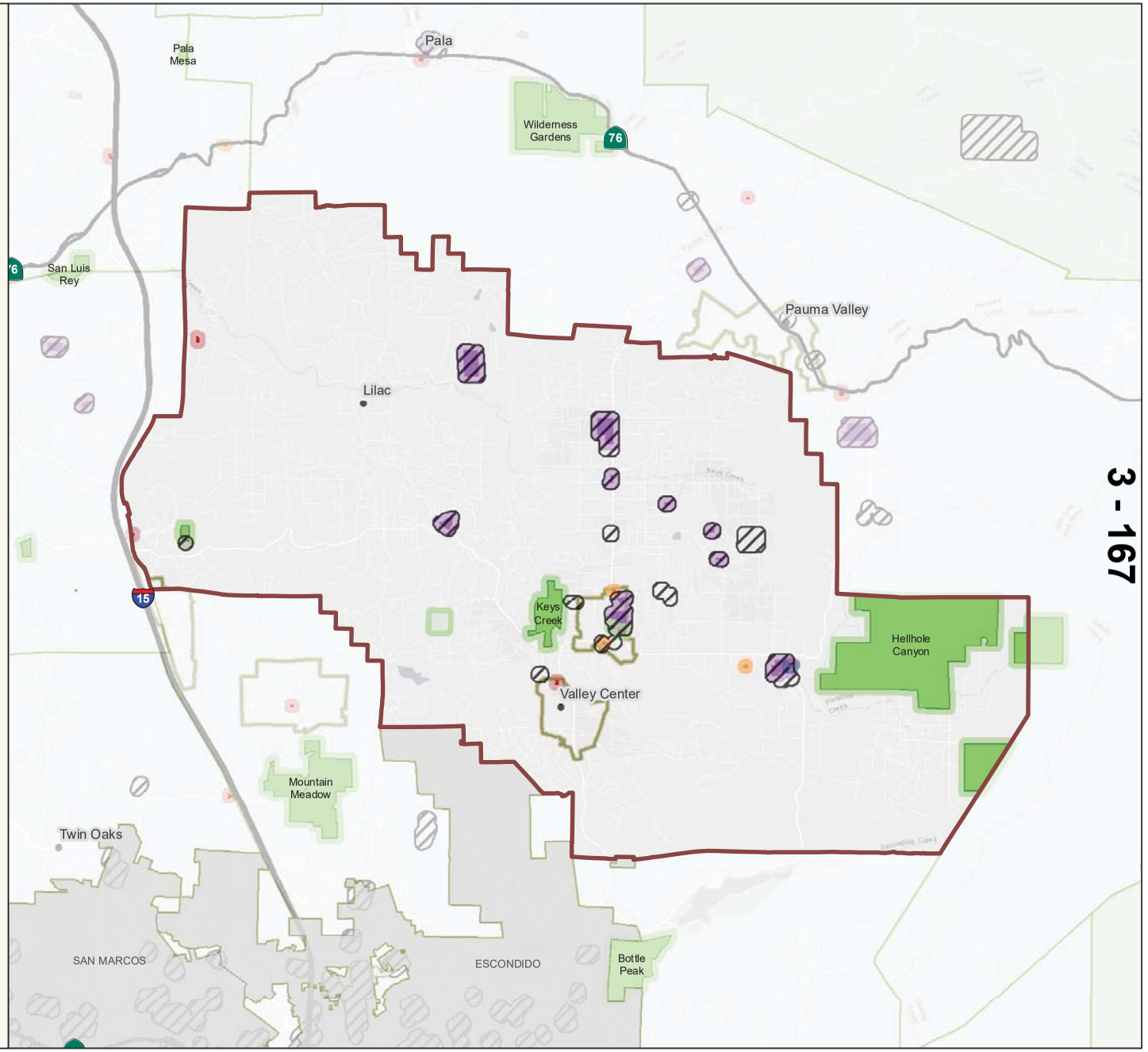
P:\gp2020\20190222_small_wireless\mxd\small_cell_template.mxd Date: 7/5/2019

Small Cell Wireless

Avoidance 500 feet - Valley Center

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 500 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



0 1 2 3 Miles

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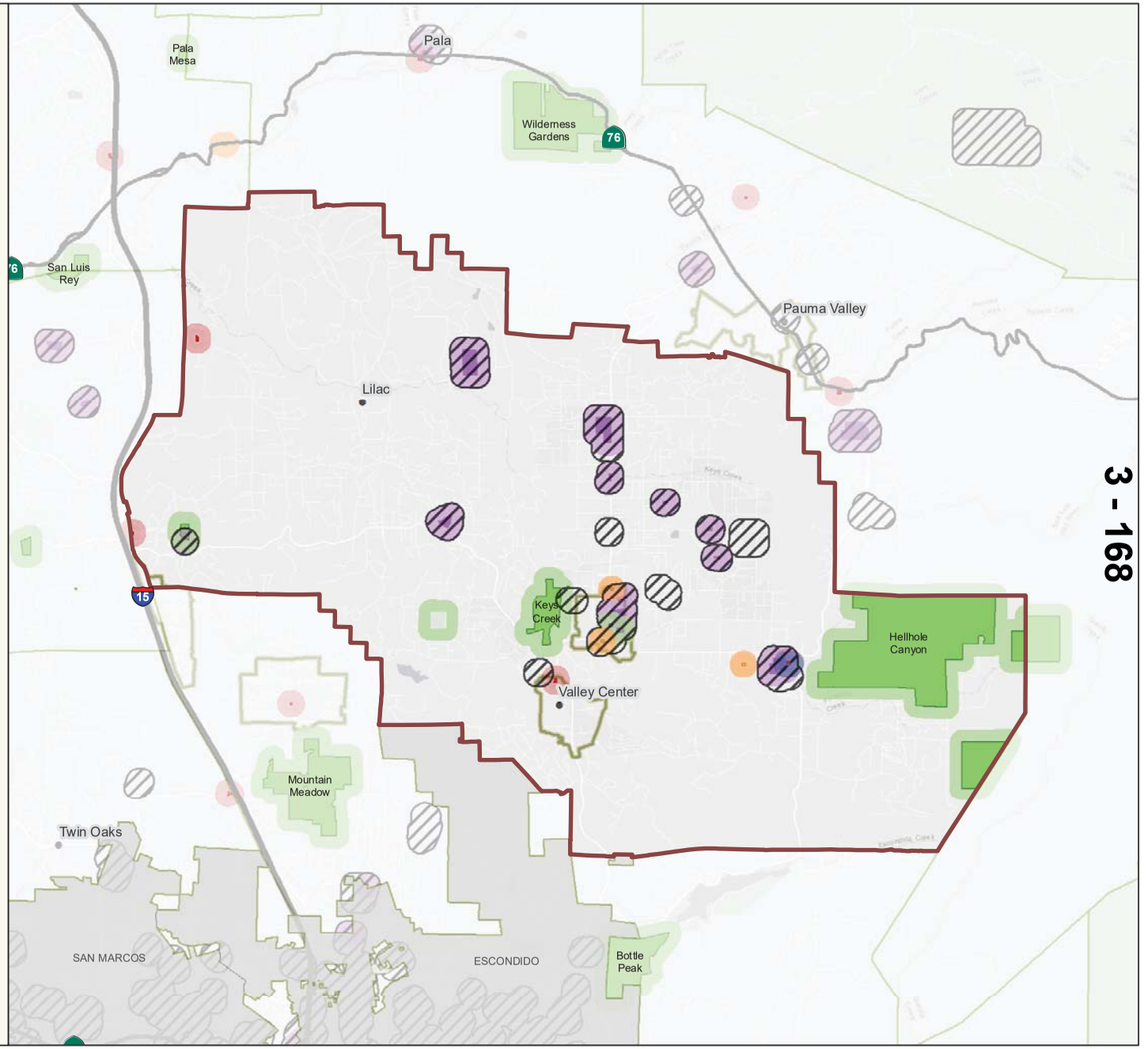
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Small Cell Wireless

Avoidance 1,000 feet - Valley Center

Legend

- Fire
- Shopping Areas
- Sheriff
- Schools
- County Parks
- Avoidance Sites - 1,000 foot buffer (Schools, Hospitals, Day Care, Religious Facilities)
- Community Villages



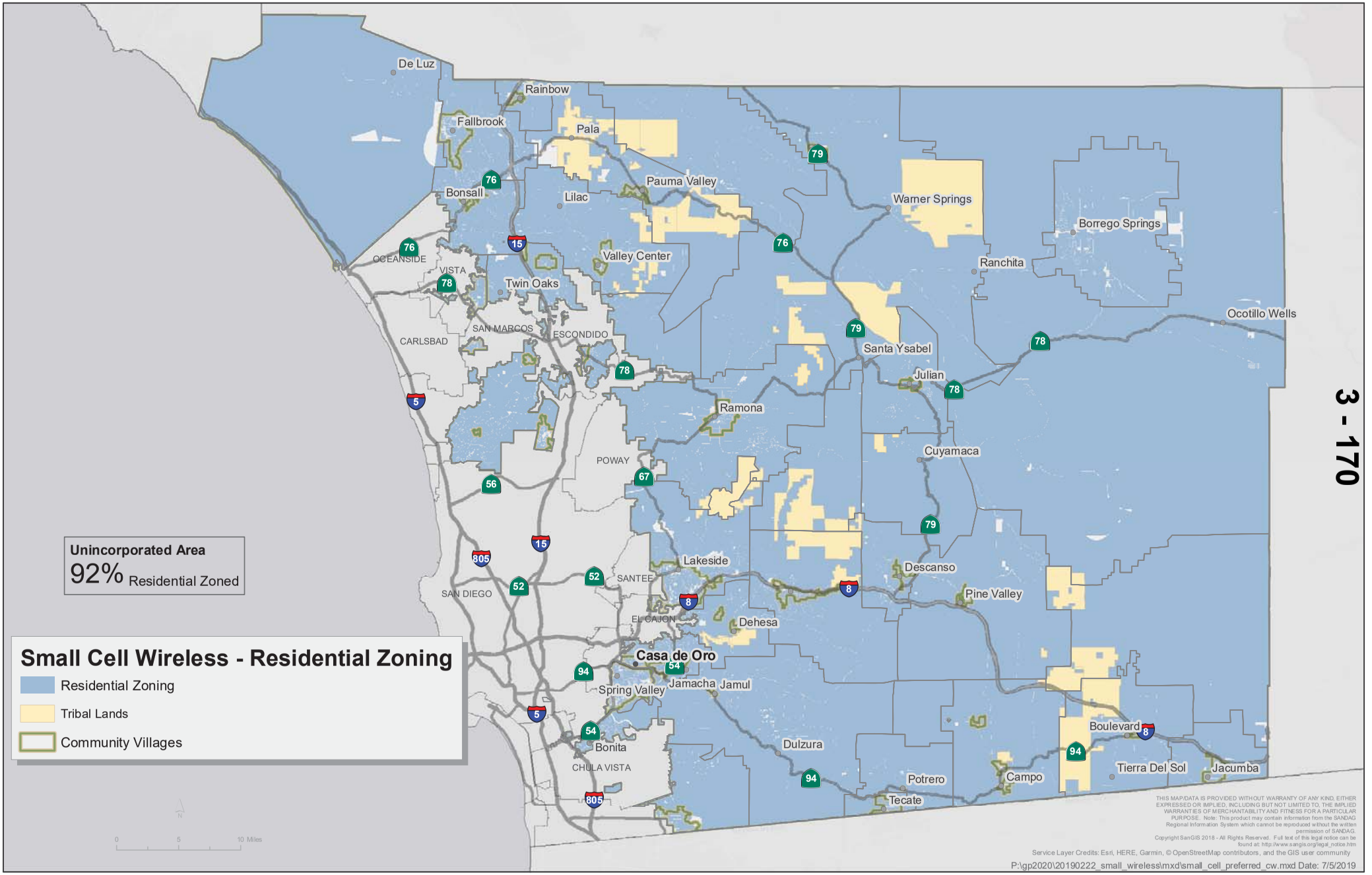
N 0 1 2 3 Miles

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Residential Distances (LD-4)

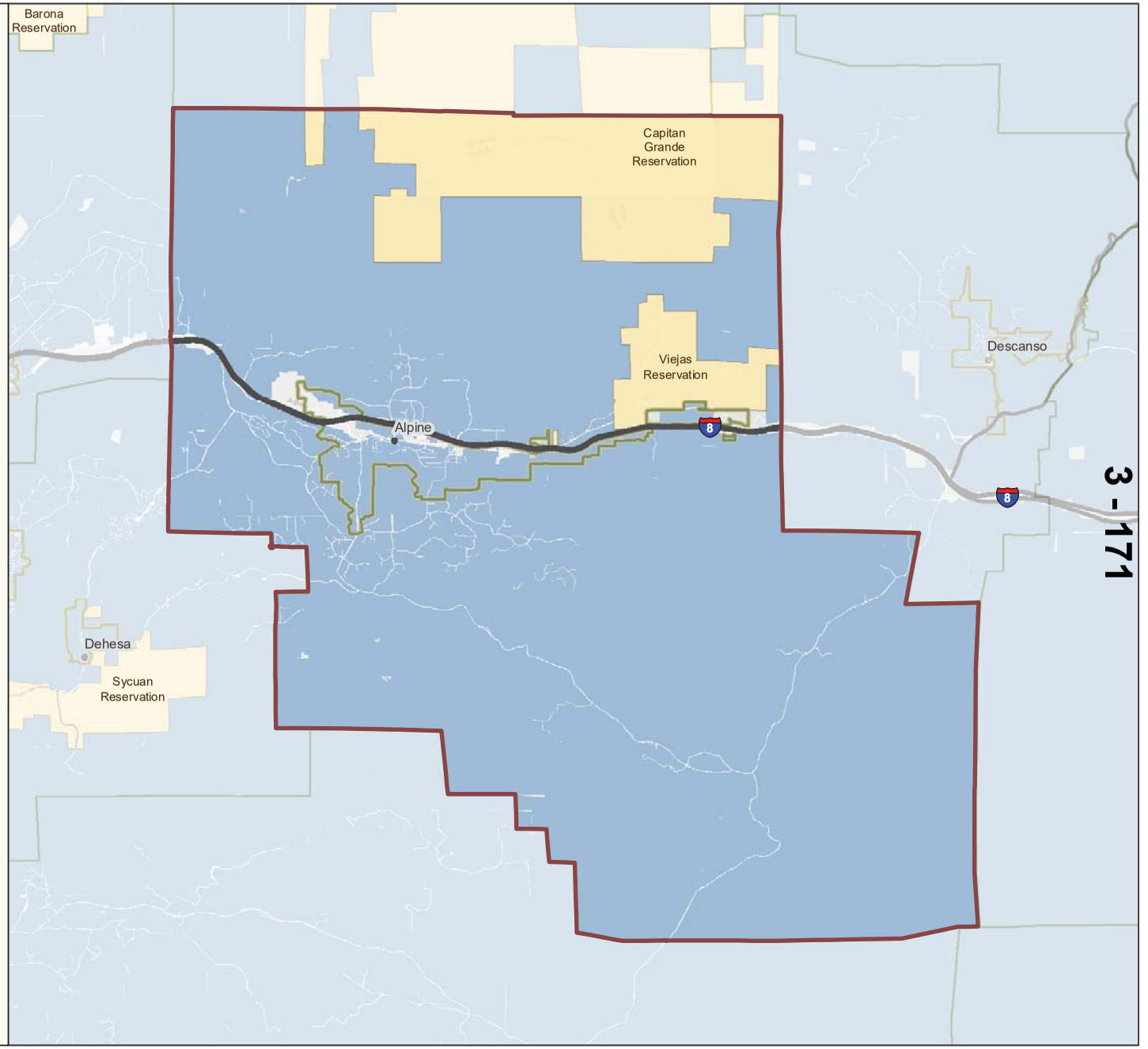

De Luz
Rainbow
Fallbrook
Pala
Pauma Valley
Bonsall
Lilac
Warner Springs
Borrego Springs
OCEANSIDE
VISTA
Valley Center
Twin Oaks
Ranchita
Ocotillo Wells
SAN MARCOS
ESCONDIDO
CARLSBAD
Santa Ysabel
Julian
Ramona
Cuyamaca
POWAY
Lakeside
Descanso
SANTEE
SAN DIEGO
Pine Valley
EL CAJON
Dehesa
Casa de Oro
Jamacha
Jamul
Spring Valley
Boulevard
Dulzura
Bonita
CHULA VISTA
Potrero
Campo
Tierra Del Sol
Jacumba
Tecate
Unincorporated Area
92% Residential Zoned
Small Cell Wireless - Residential Zoning
Residential Zoning
Tribal Lands
Community Villages
0 5 10 Miles
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Small Cell Wireless

Residential Zoning - Alpine

Legend

- Residential Zoning
- Tribal Lands
- Community Villages



Community of Alpine

85% Residential in Community

N

0 1 2 3 Miles

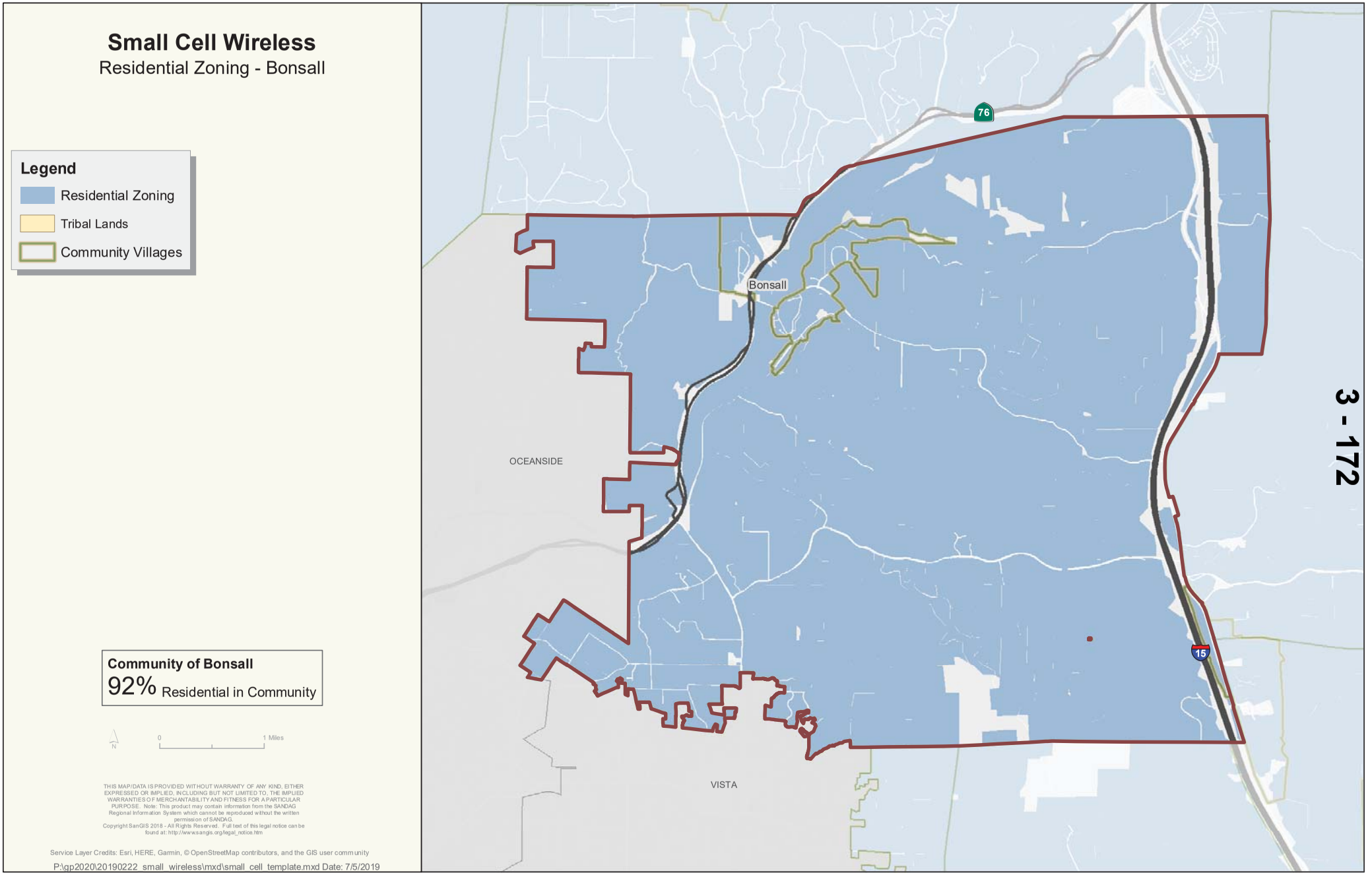
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Small Cell Wireless

Residential Zoning - Bonsall



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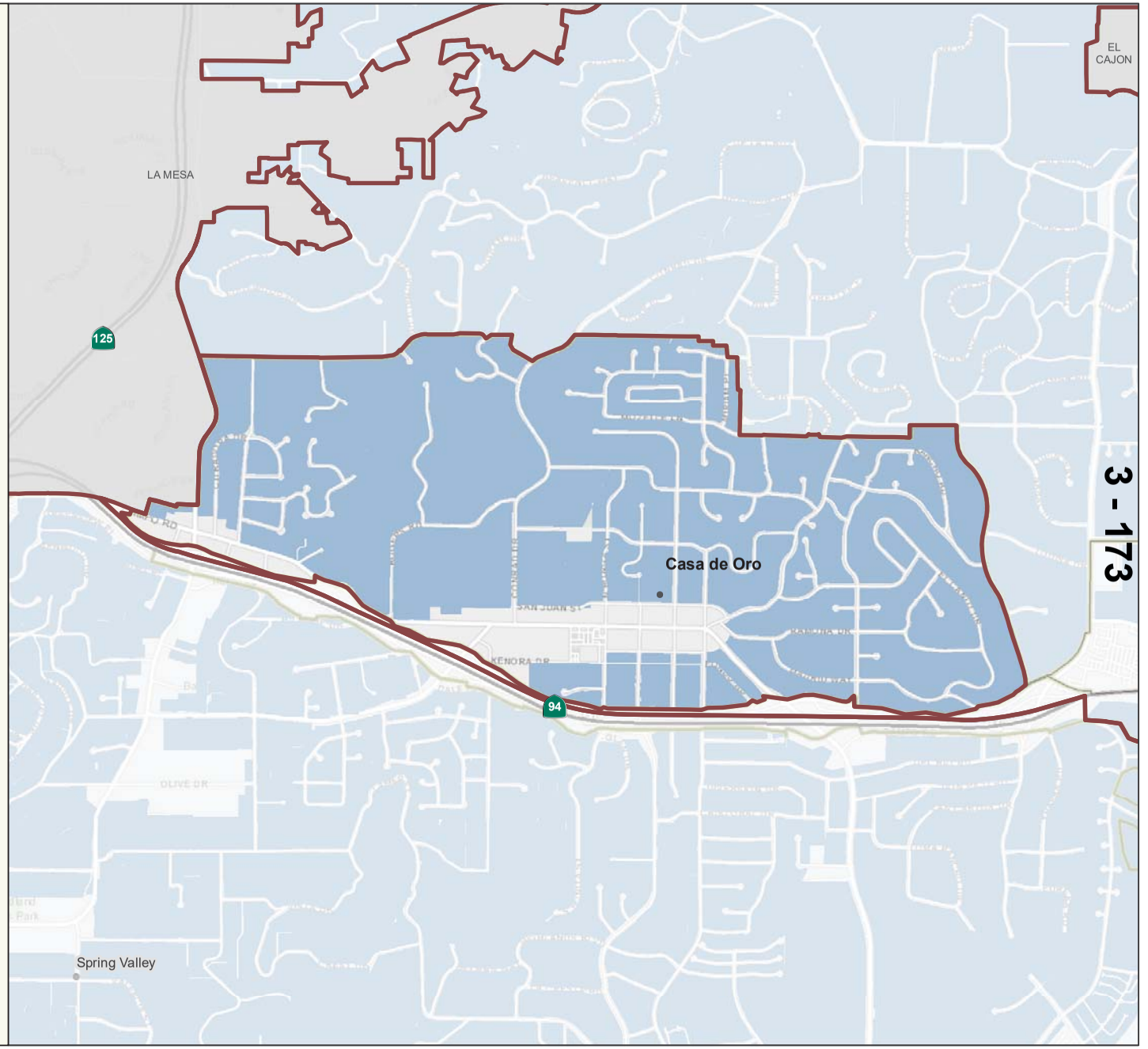
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Small Cell Wireless

Residential Zoning - Casa De Oro

Legend

- Residential Zoning
- Tribal Lands
- Community Villages



Community of Casa De Oro

78% Residential in Community

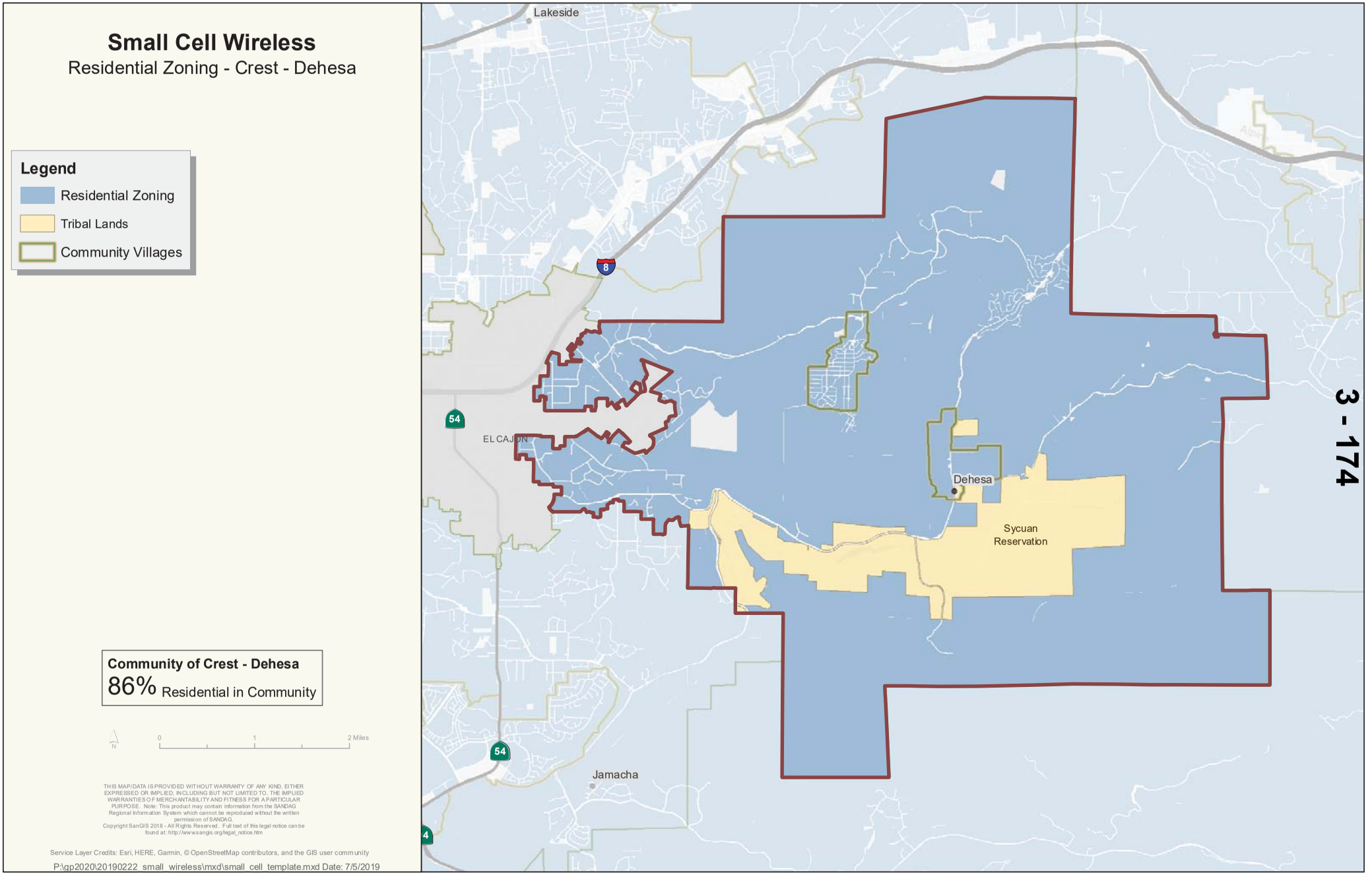
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Small Cell Wireless

Residential Zoning - Crest - Dehesa



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Small Cell Wireless

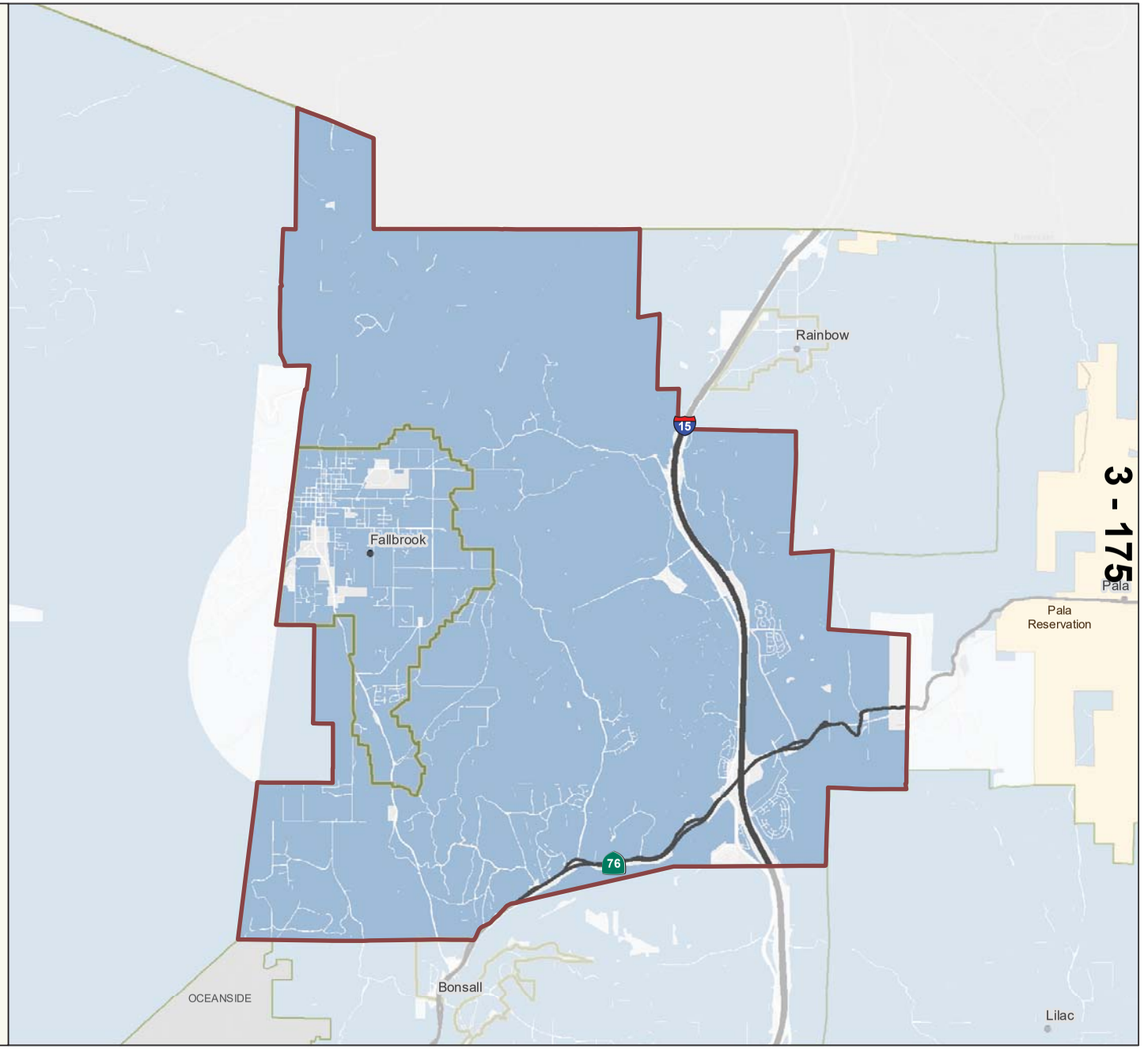
Residential Zoning - Fallbrook

Legend

- Residential Zoning
- Tribal Lands
- Community Villages

Community of Fallbrook

93% Residential in Community



0 1 2 3 Miles

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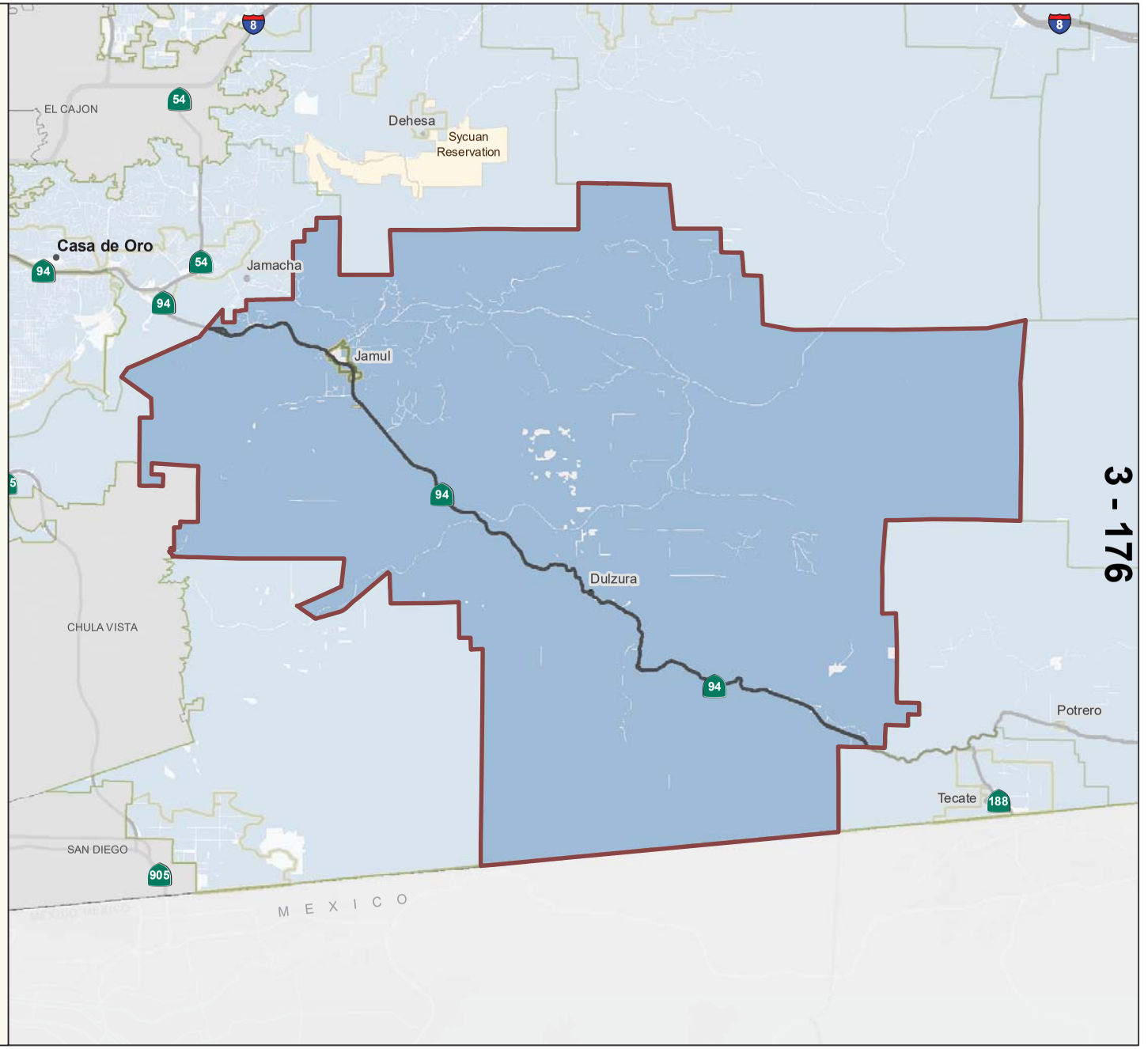
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Small Cell Wireless

Residential Zoning - Jamul

Legend

- Residential Zoning
- Tribal Lands
- Community Villages



Community of Jamul

98% Residential in Community

N 0 1 2 3 4 5 Miles

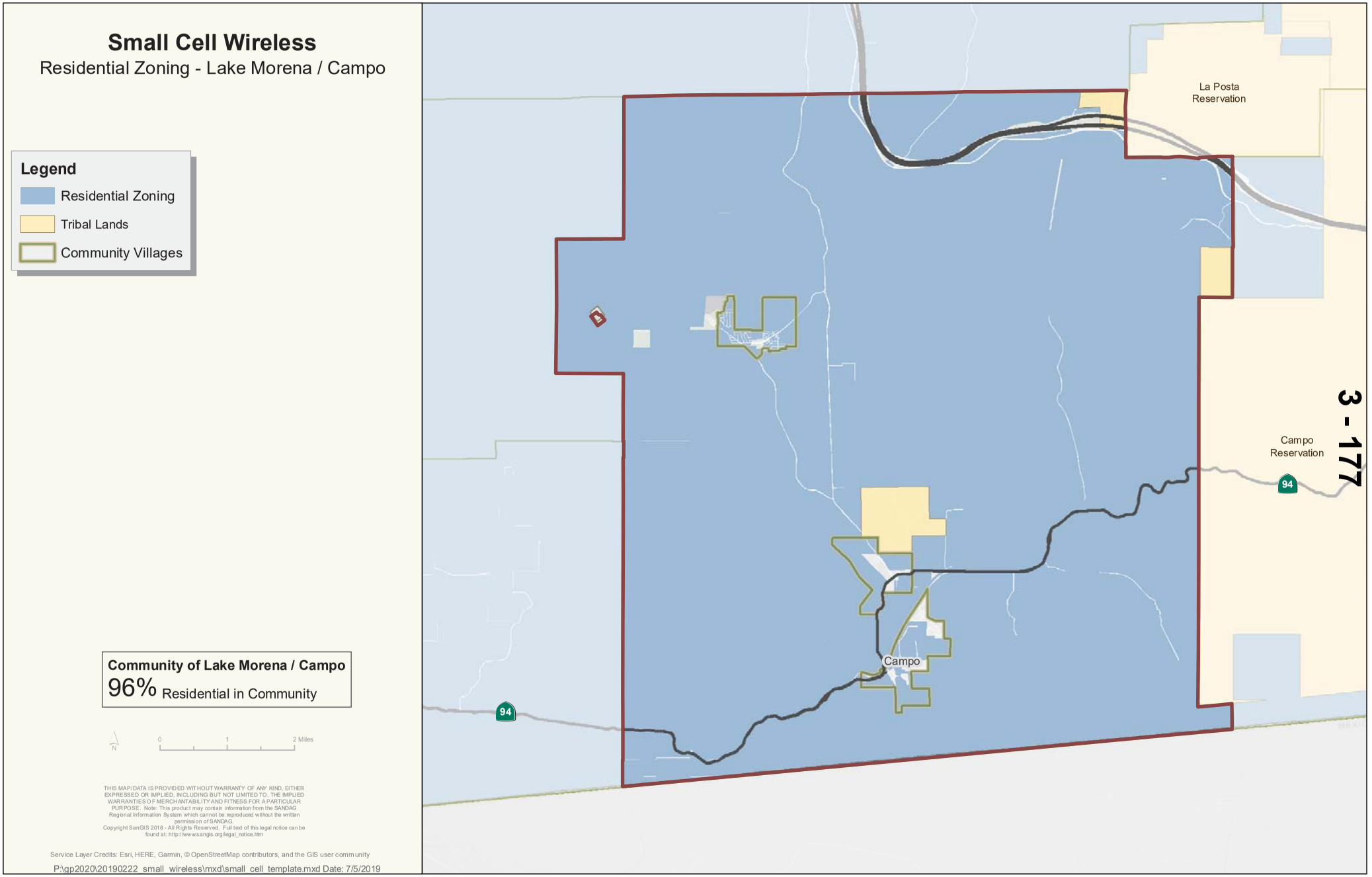
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Small Cell Wireless

Residential Zoning - Lake Morena / Campo



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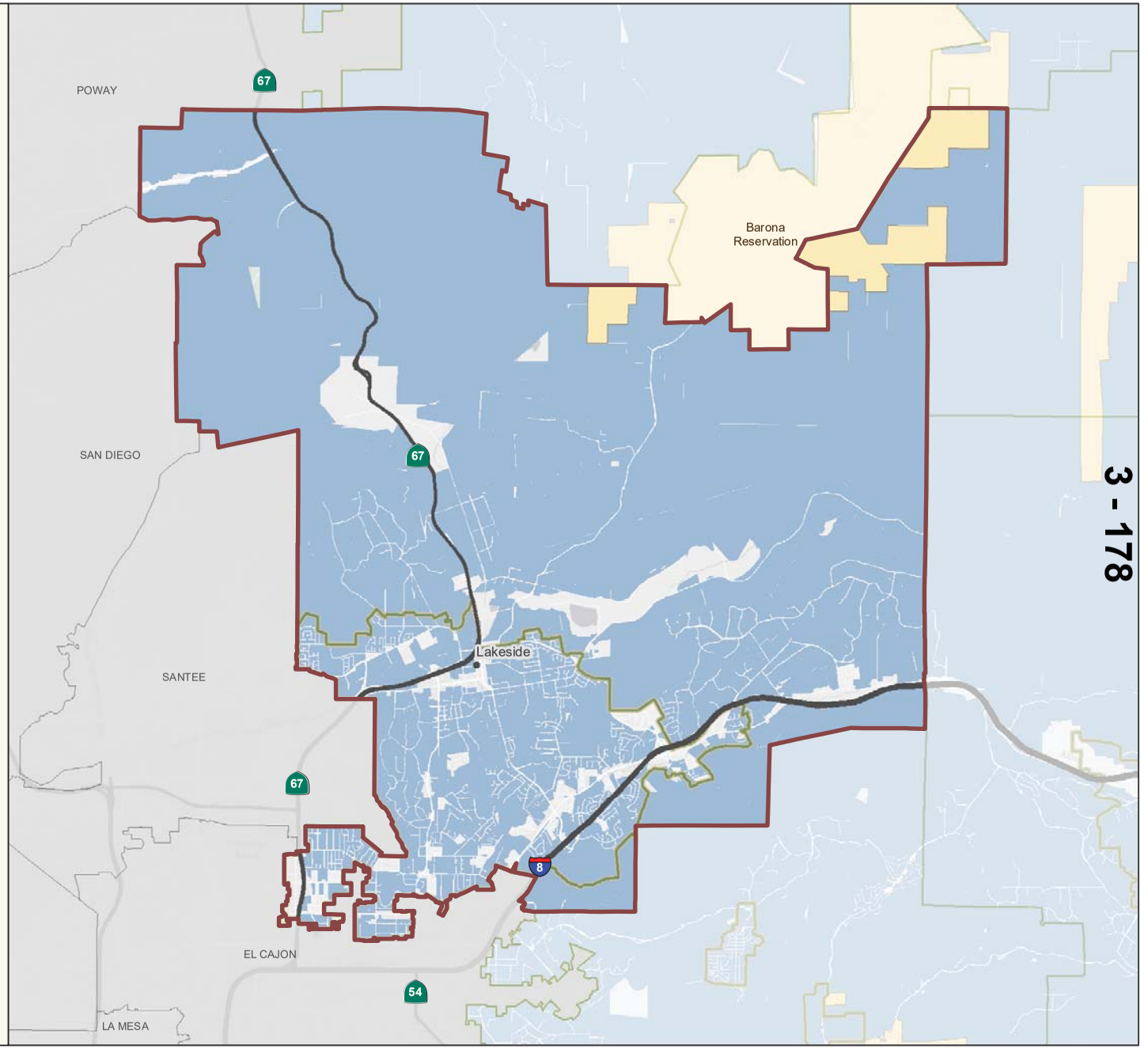
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Small Cell Wireless

Residential Zoning - Lakeside

Legend

- Residential Zoning
- Tribal Lands
- Community Villages



Community of Lakeside

87% Residential in Community

N 0 1 2 3 Miles

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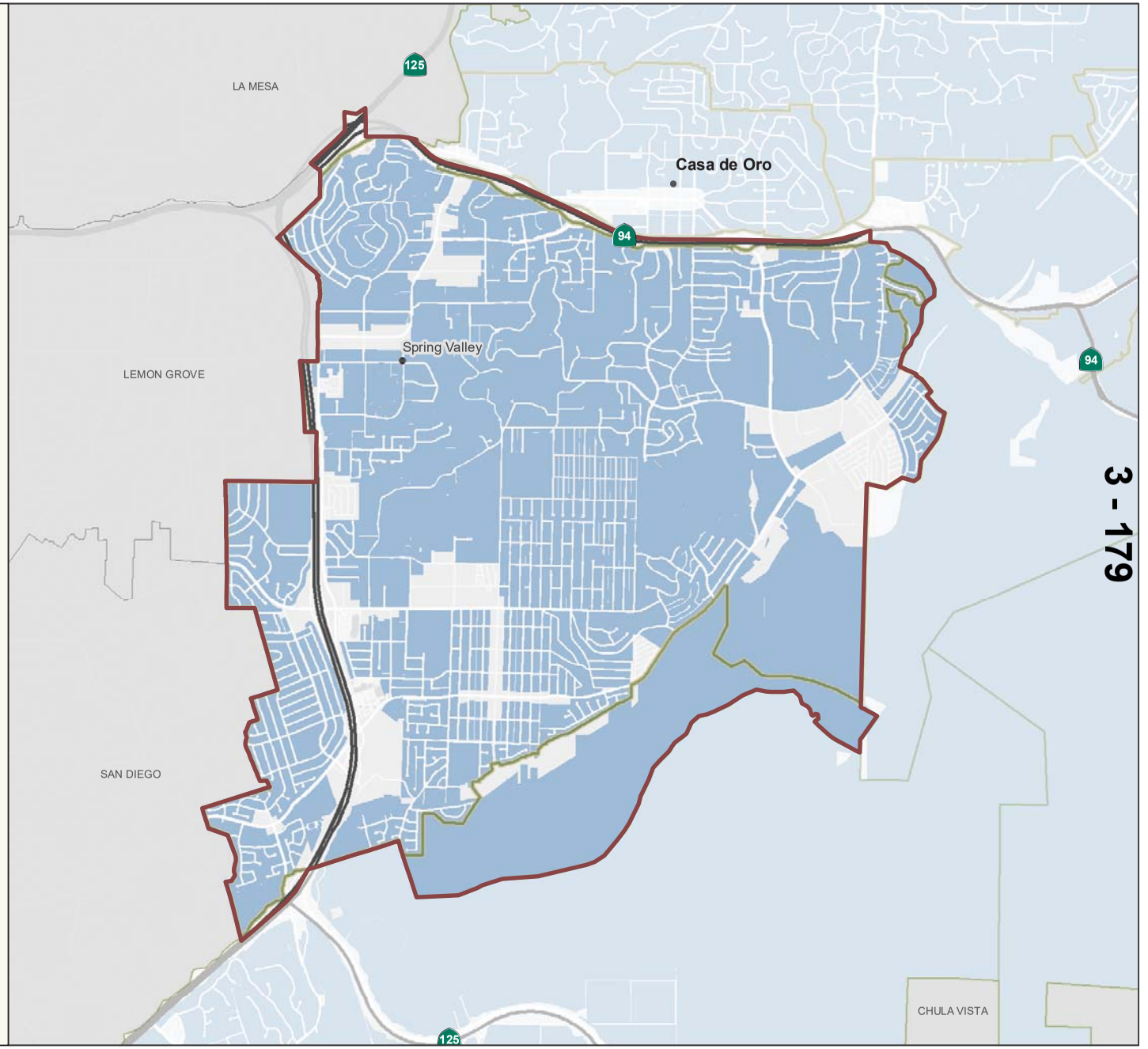
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Small Cell Wireless

Residential Zoning - Spring Valley

Legend

- Residential Zoning
- Tribal Lands
- Community Villages



Community of Spring Valley

74% Residential in Community

N

0 1 Miles

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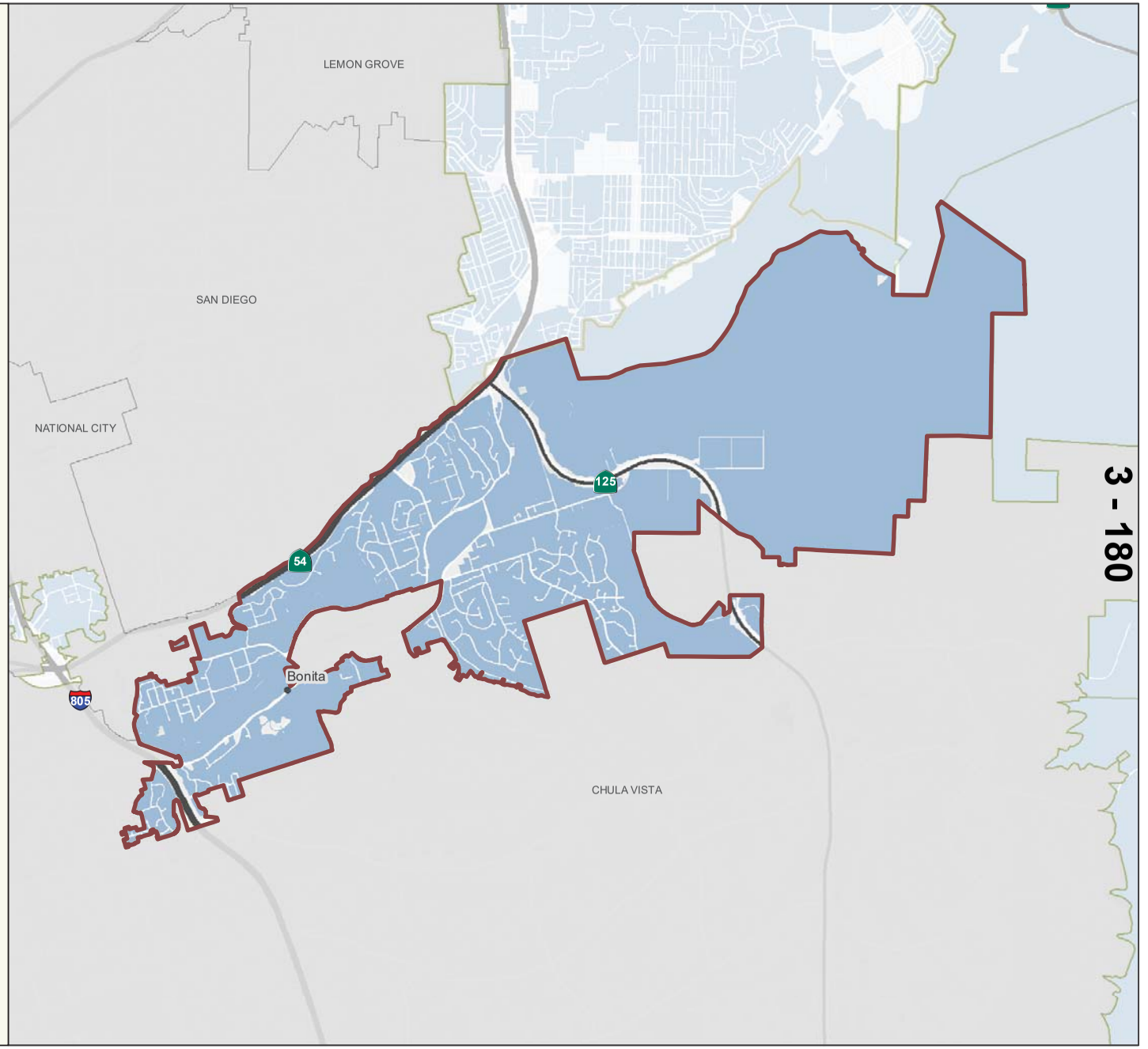
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Small Cell Wireless

Residential Zoning - Sweetwater

Legend

- Residential Zoning
- Tribal Lands
- Community Villages



Community of Sweetwater

93% Residential in Community

N 0 1 Miles

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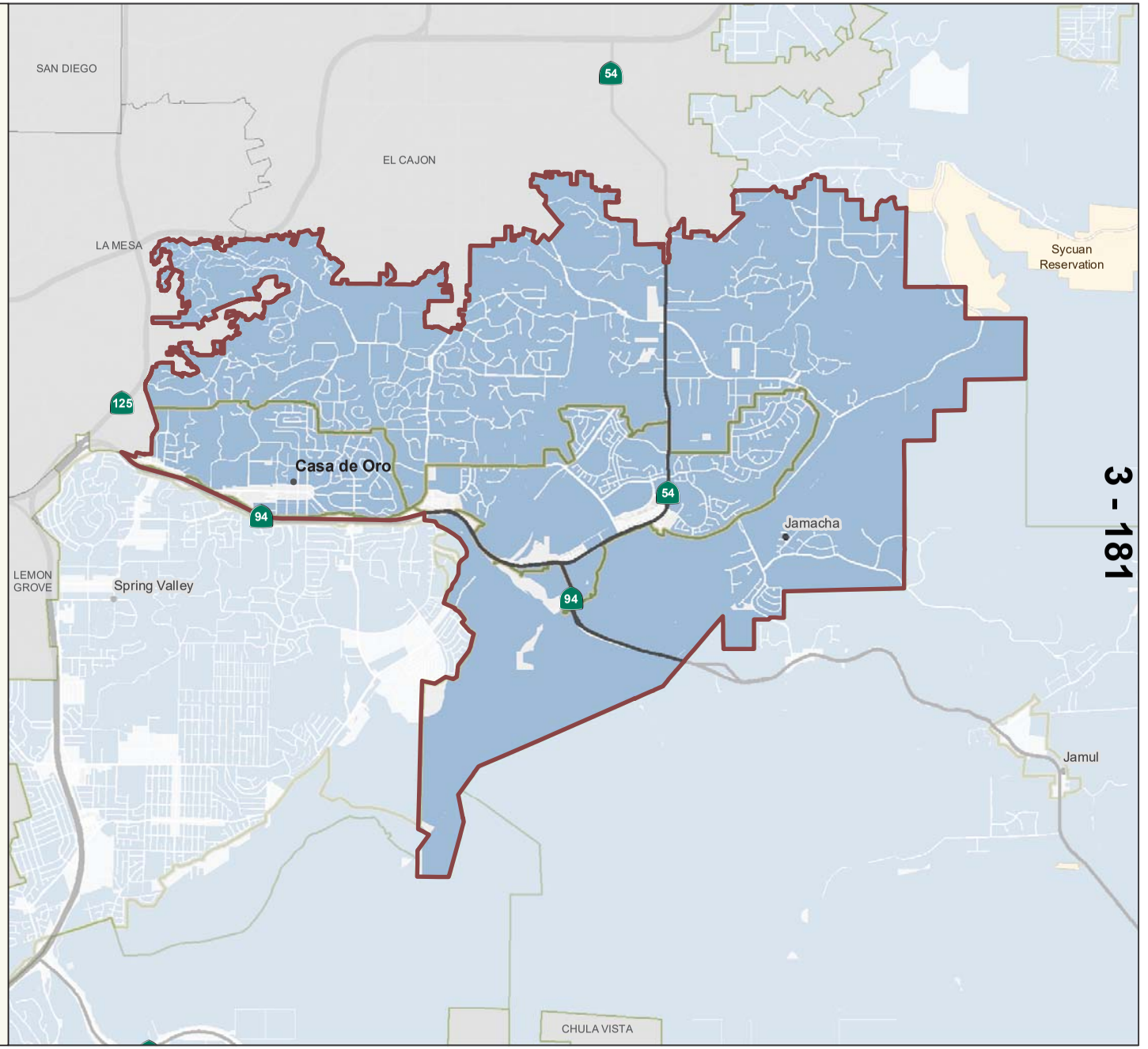
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Small Cell Wireless

Residential Zoning - Valle De Oro

Legend

- Residential Zoning
- Tribal Lands
- Community Villages



Community of Valle De Oro

89% Residential in Community

0 1 Miles

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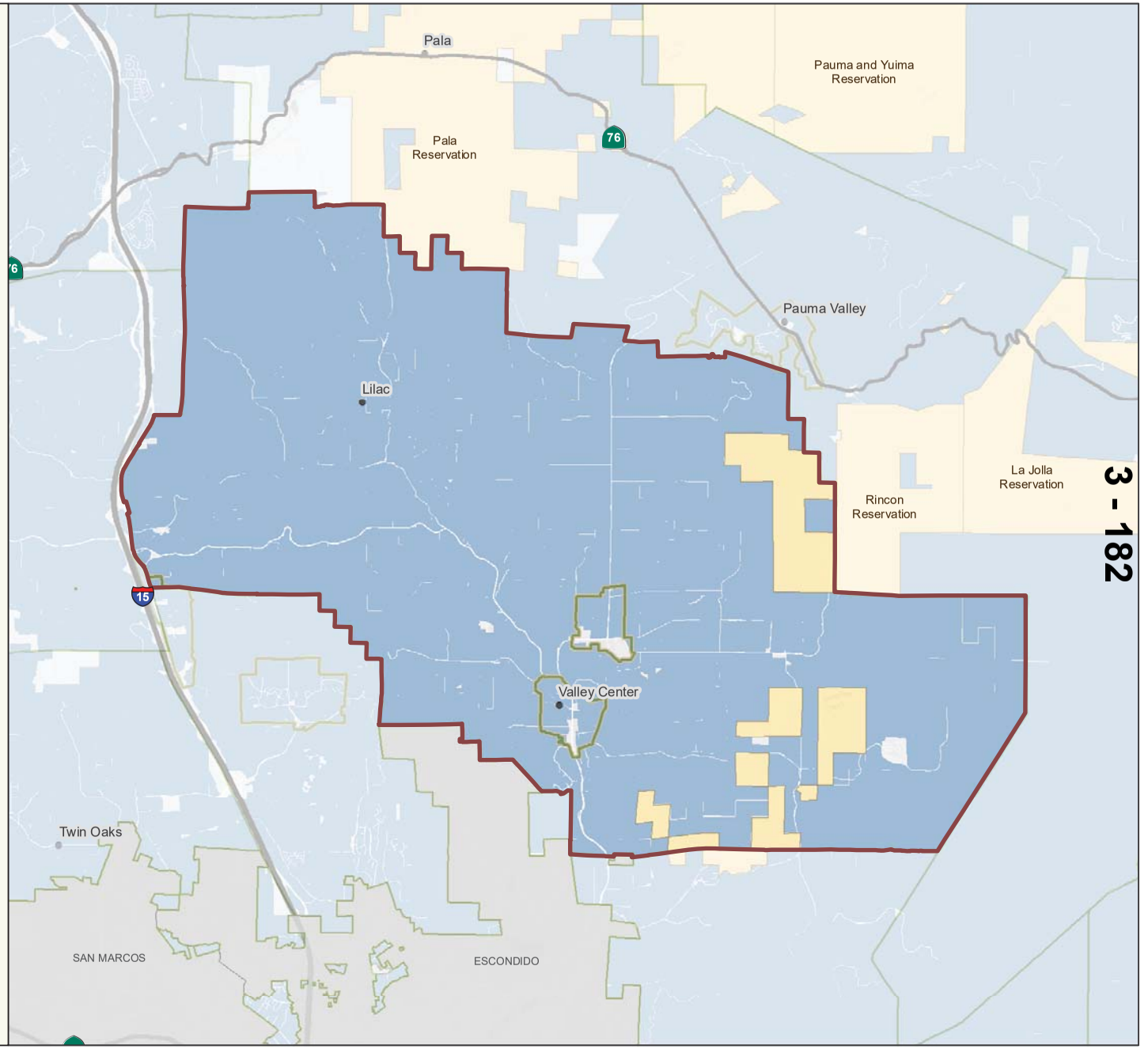
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Small Cell Wireless

Residential Zoning - Valley Center

Legend

- Residential Zoning
- Tribal Lands
- Community Villages



Community of Valley Center

92% Residential in Community

N

0 1 2 3 Miles

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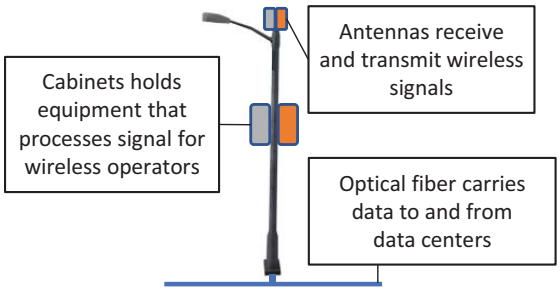
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Configuration Preferences (LD-5)

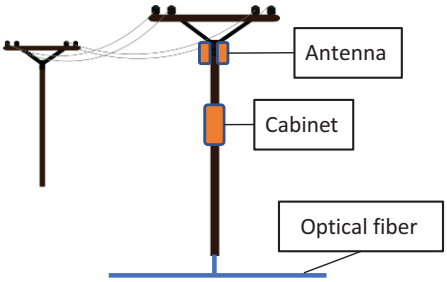
CONFIGURATION PREFERENCES

1. Co-location with an existing facility



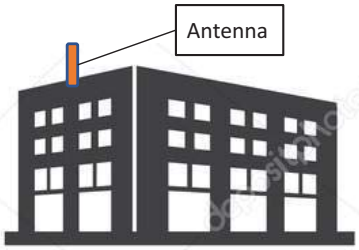


2. Existing or replacement utility poles



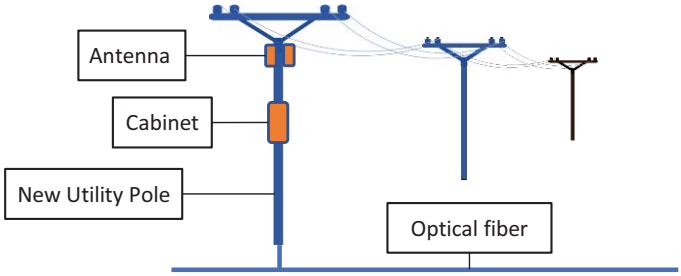


3. Existing or replacement structure, or roof-mounted in Industrial & Commercial Zones only



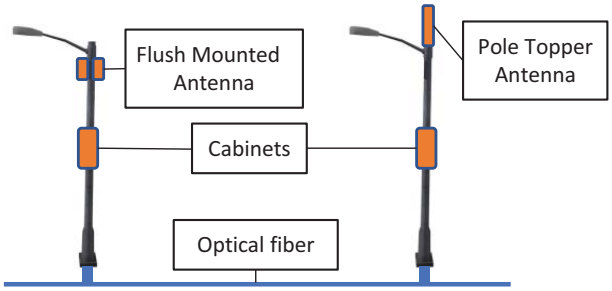


4. New utility poles



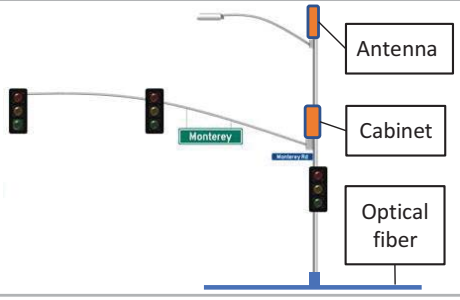


5. County-owned street light poles





6. County-Owned traffic signals

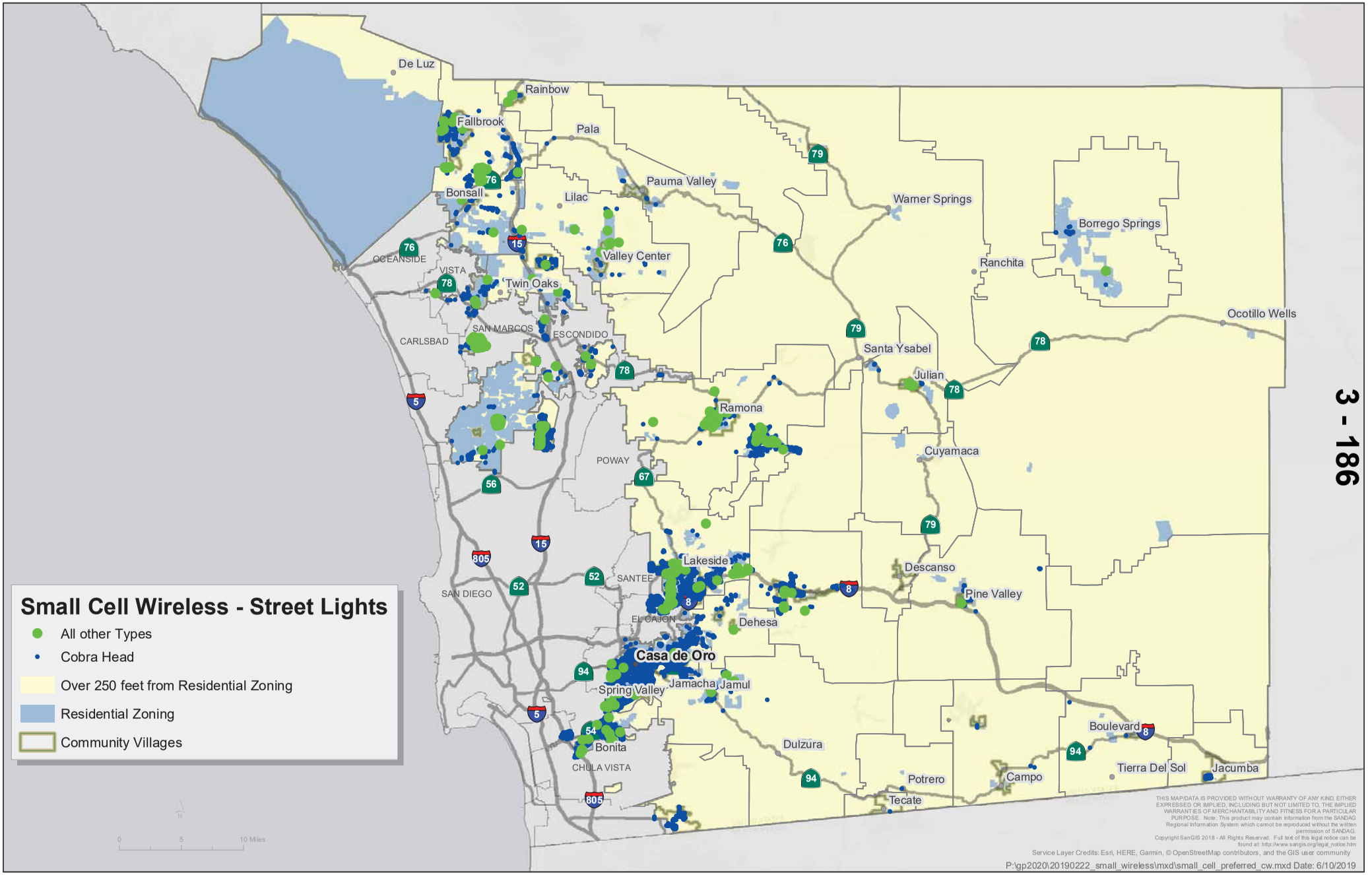




DRAWINGS ARE NOT TO SCALE – FOR ILLUSTRATIVE PURPOSES ONLY

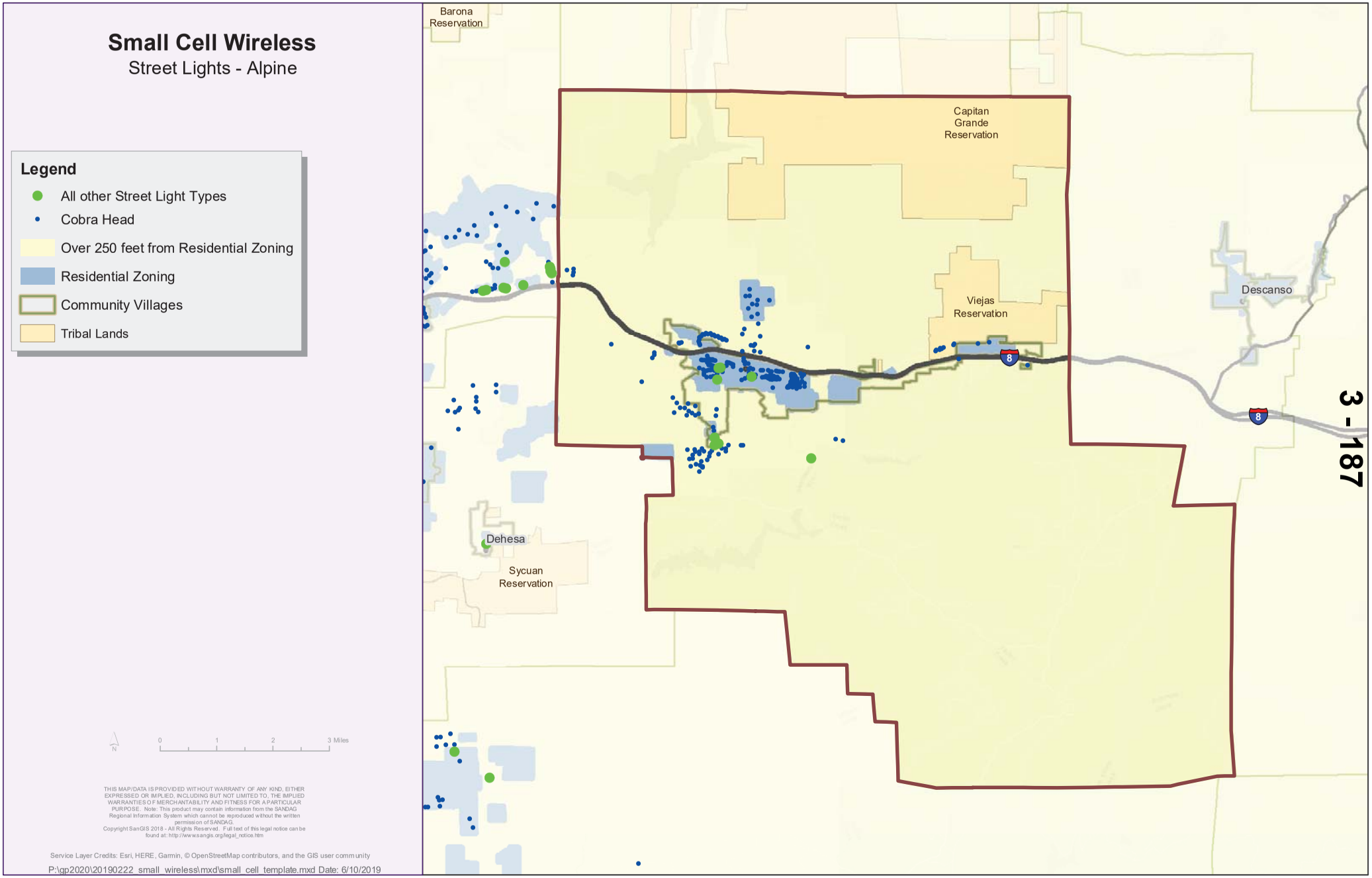
Small Cell Wireless Antennas are no more than three (3) cubic feet, and all other related equipment on the structure is no more than 28 cubic feet. Utility poles, street lights, and traffic signals range in height from 25 to 50 feet. The combined height of the structure and SCW shall not exceed 50 feet (including antennas).

Streetlights (6992.A.8.ii.)


Small Cell Wireless - Street Lights
All other Types
Cobra Head
Over 250 feet from Residential Zoning
Residential Zoning
Community Villages
De Luz
Rainbow
Fallbrook
Pala
Pauma Valley
Bonsall
Lilac
Warner Springs
Borrego Springs
Ranchita
Ocotillo Wells
Valley Center
OCEANSIDE
VISTA
Twin Oaks
SAN MARCOS
ESCONDIDO
CARLSBAD
Santa Ysabel
Julian
Ramona
Cuyamaca
POWAY
Lakeside
SANTEE
Descanso
Pine Valley
SAN DIEGO
EL CAJON
Dehesa
Casa de Oro
Spring Valley
Jamacha
Jamul
Dulzura
Boulevard
Tierra Del Sol
Jacumba
Bonita
CHULA VISTA
Potrero
Campo
Tecate
0
5
10 Miles
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Small Cell Wireless

Street Lights - Alpine



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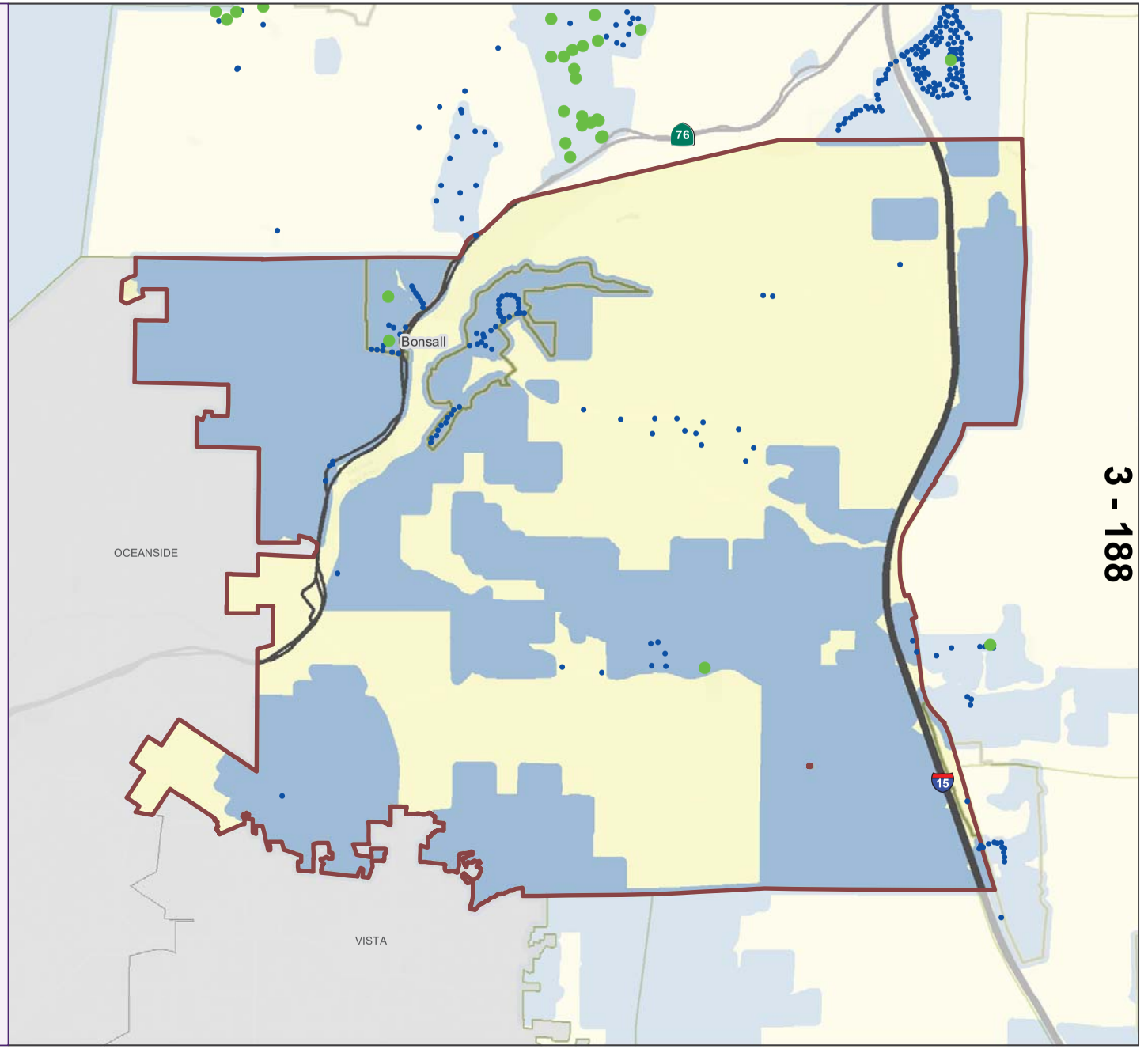
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Small Cell Wireless

Street Lights - Bonsall

Legend

- All other Street Light Types
- Cobra Head
- Over 250 feet from Residential Zoning
- Residential Zoning
- Community Villages
- Tribal Lands



N

0 1 Miles

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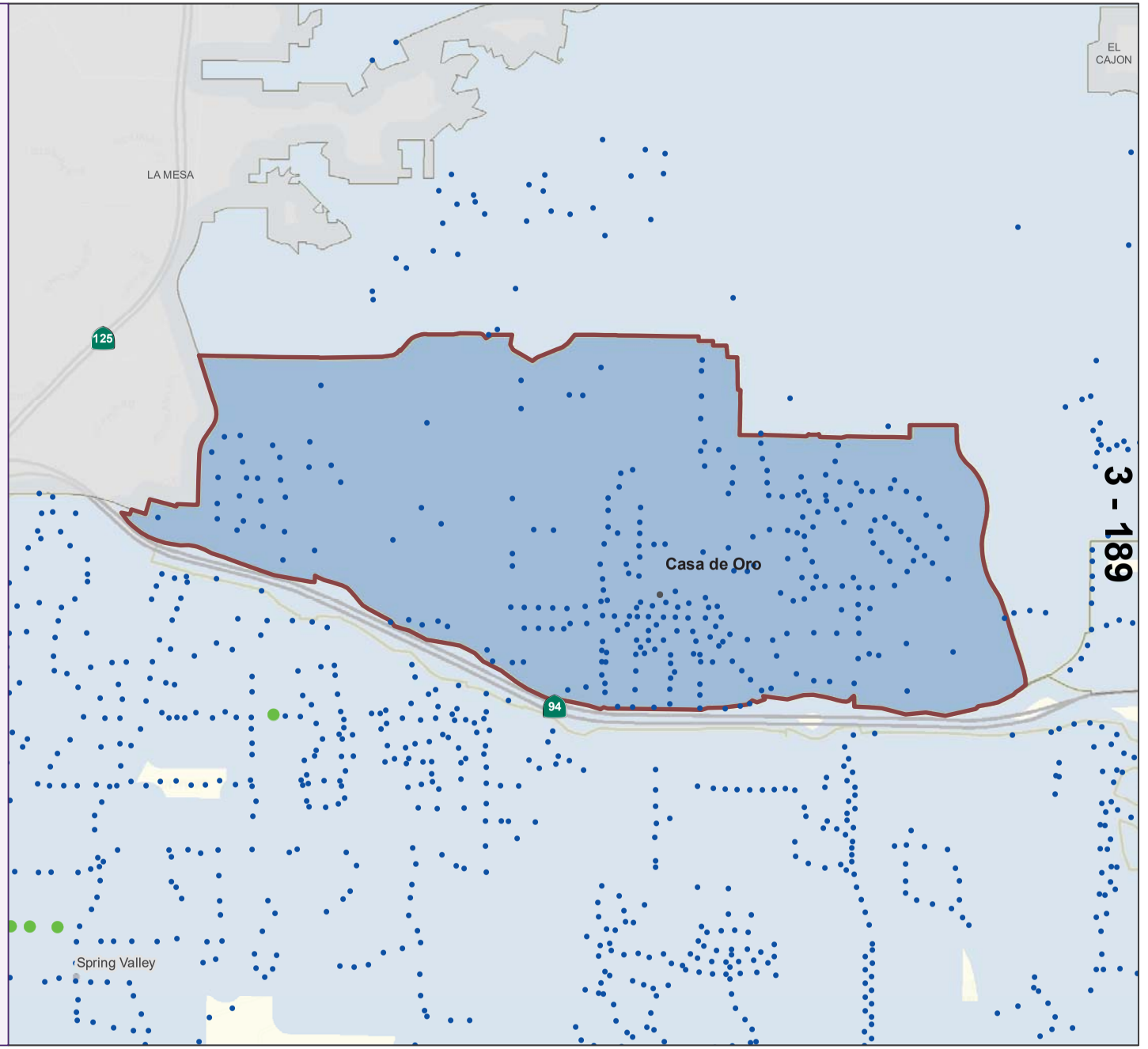
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Small Cell Wireless

Street Lights - Casa De Oro

Legend

- All other Street Light Types
- Cobra Head
- Over 250 feet from Residential Zoning
- Residential Zoning
- Community Villages
- Tribal Lands



N

0 0.5 Miles

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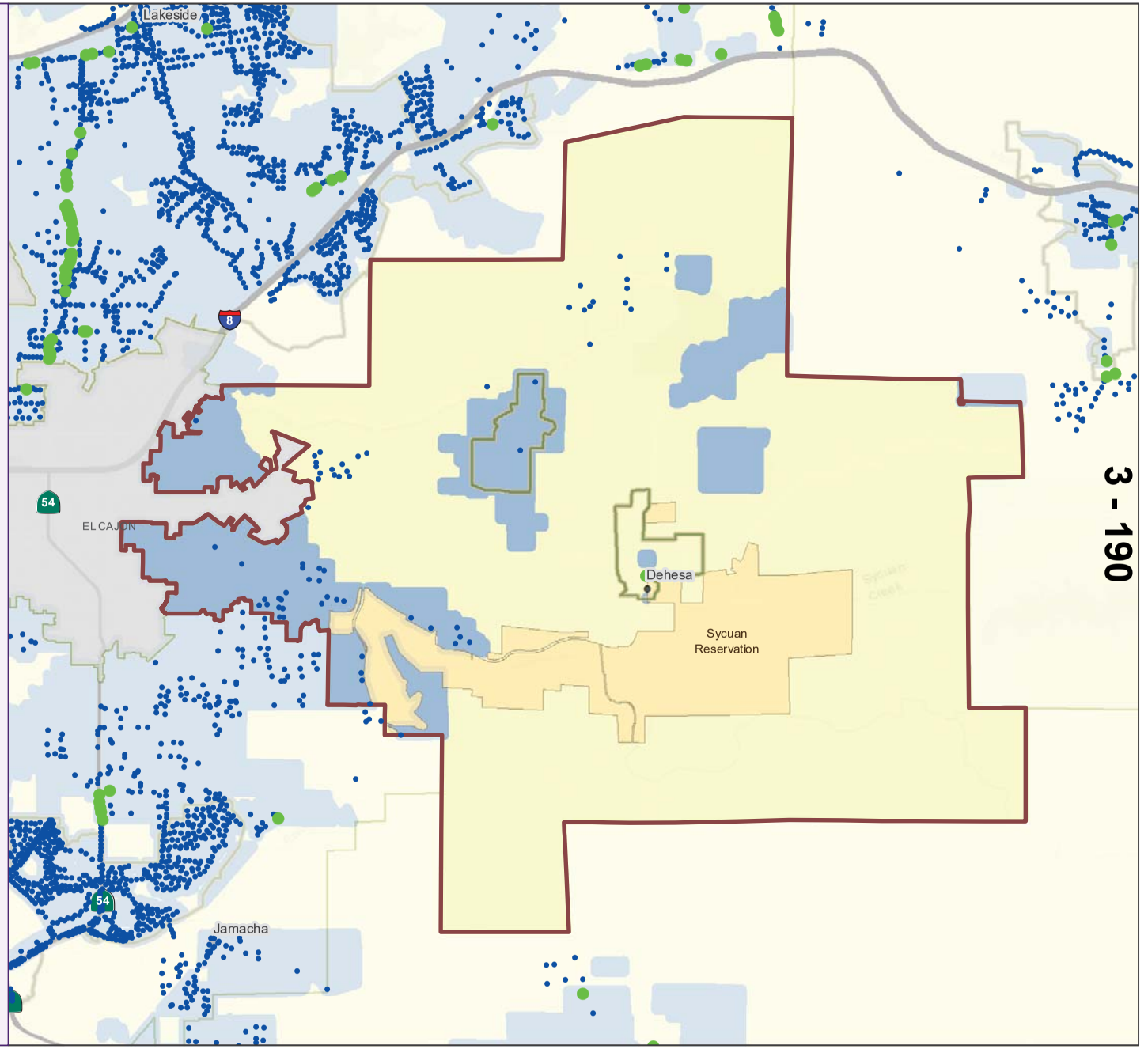
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Small Cell Wireless

Street Lights - Crest - Dehesa

Legend

- All other Street Light Types
- Cobra Head
- Over 250 feet from Residential Zoning
- Residential Zoning
- Community Villages
- Tribal Lands



0 1 2 Miles

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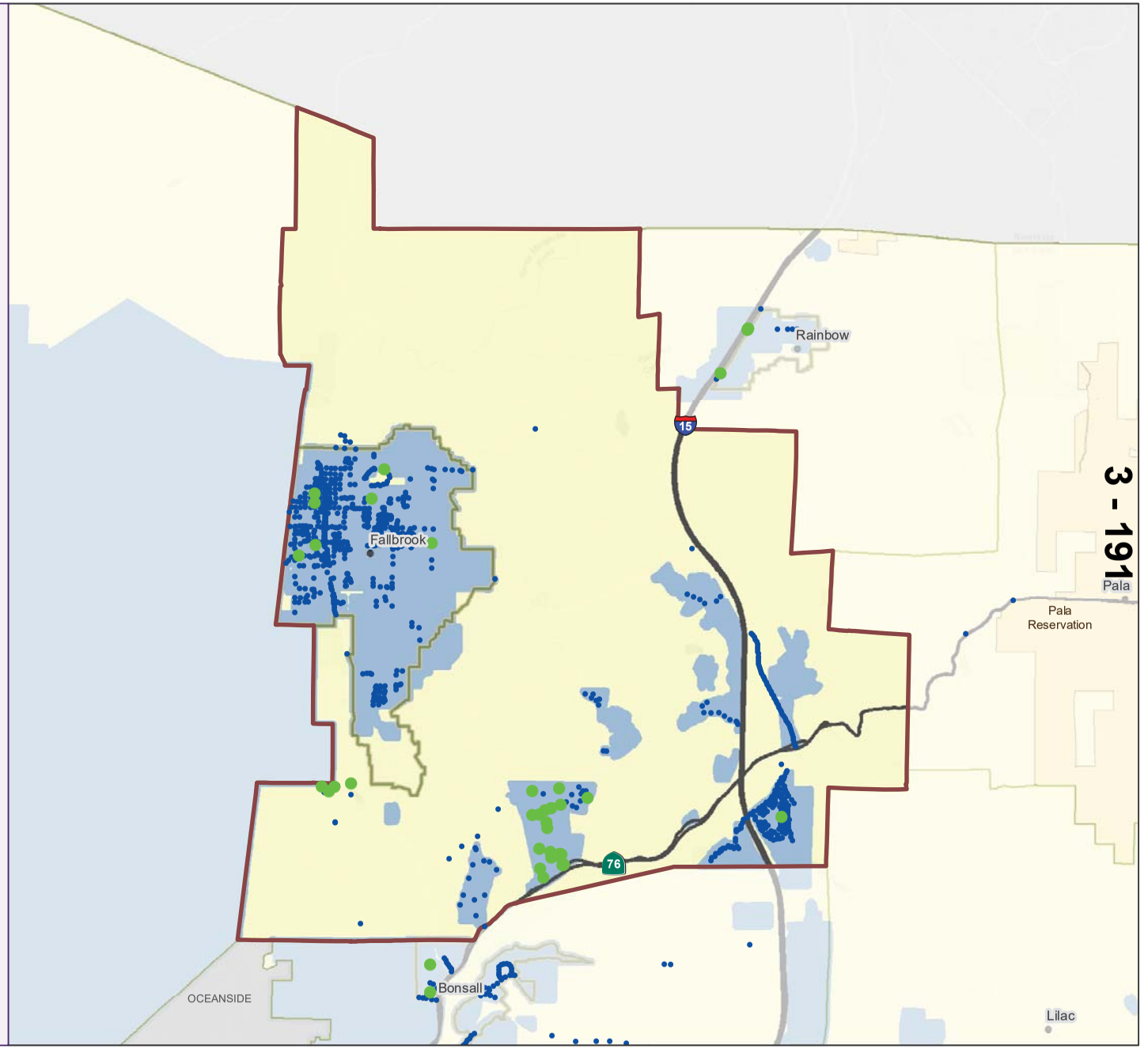
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Small Cell Wireless

Street Lights - Fallbrook

Legend

- All other Street Light Types
- Cobra Head
- Over 250 feet from Residential Zoning
- Residential Zoning
- Community Villages
- Tribal Lands



0 1 2 3 Miles

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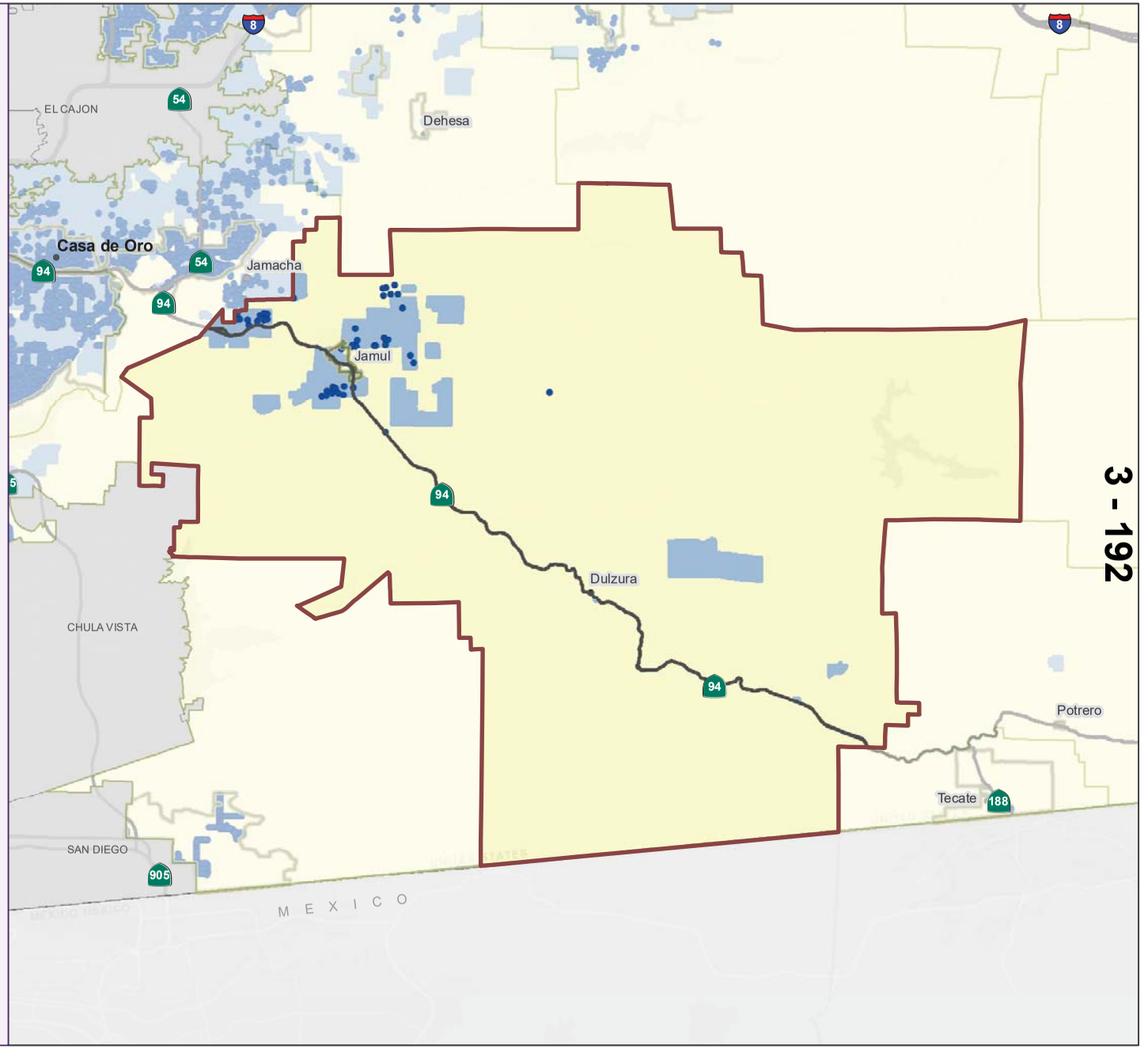
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Small Cell Wireless

Street Lights - Jamul

Legend

- All other Street Light Types
- Cobra Head
- Over 250 feet from Residential Zoning
- Residential Zoning
- Community Villages



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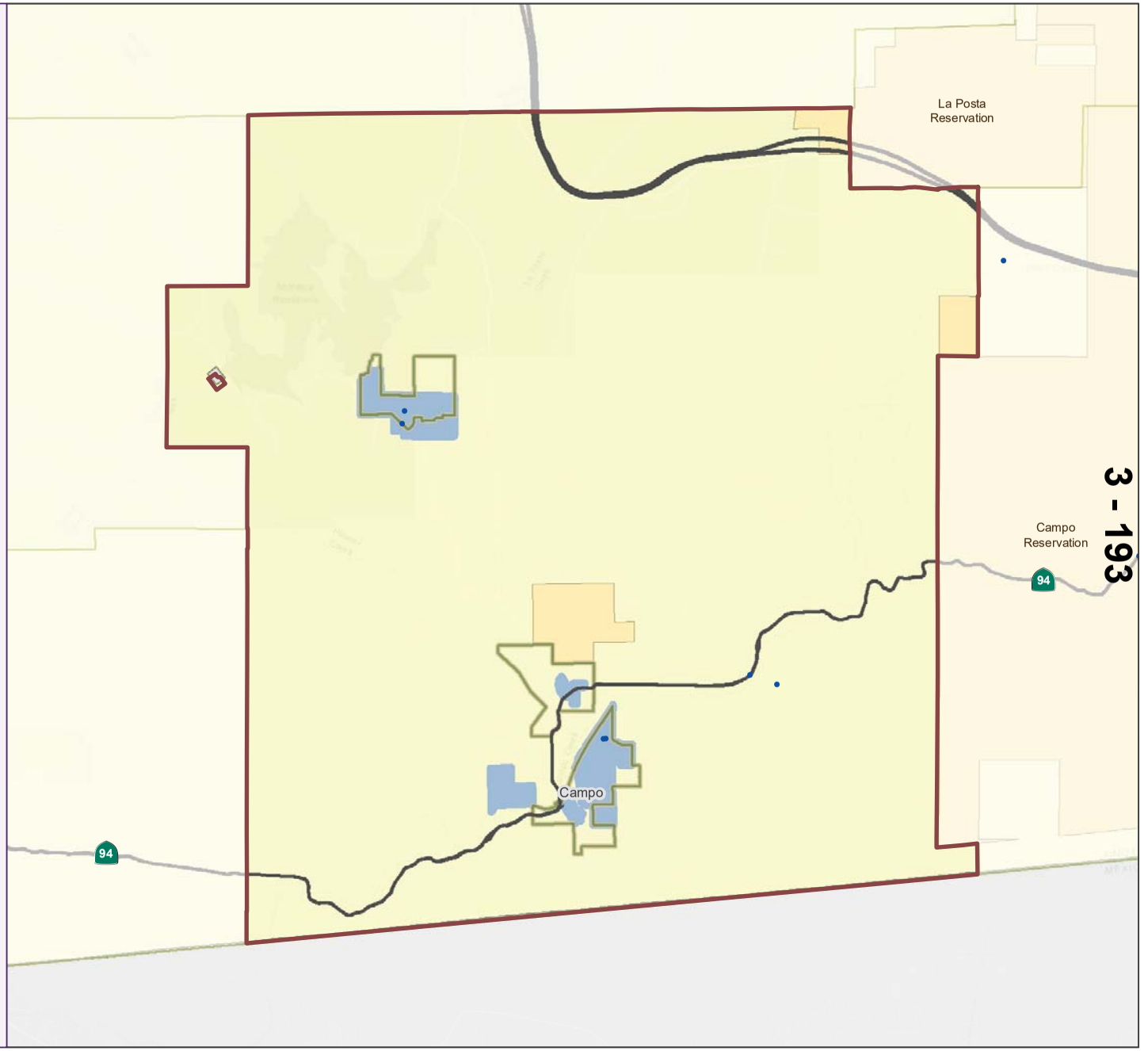
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Small Cell Wireless

Street Lights - Lake Morena / Campo

Legend

- All other Street Light Types
- Cobra Head
- Over 250 feet from Residential Zoning
- Residential Zoning
- Community Villages
- Tribal Lands



N 0 1 2 Miles

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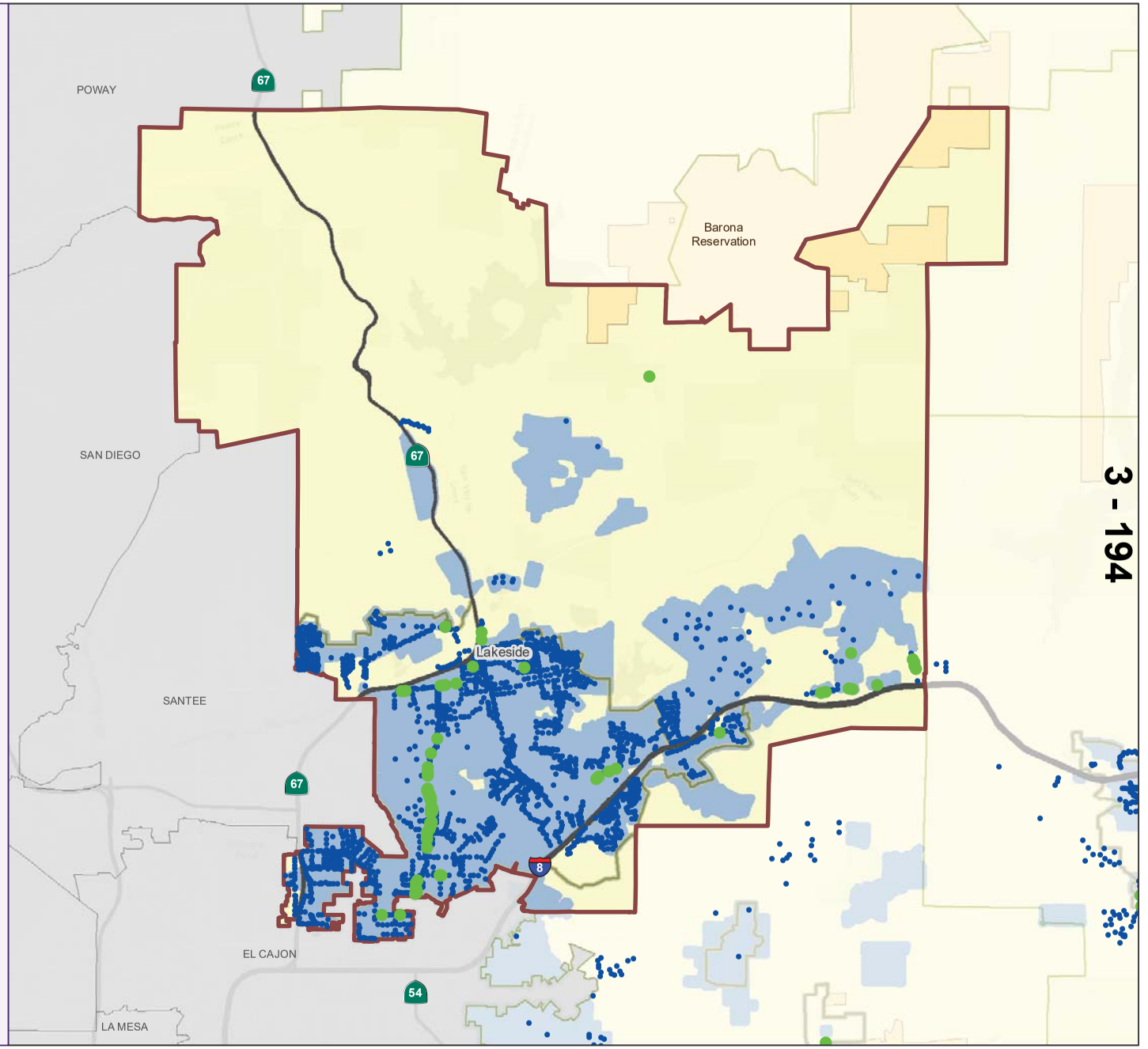
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Small Cell Wireless

Street Lights - Lakeside

Legend

- All other Street Light Types
- Cobra Head
- Over 250 feet from Residential Zoning
- Residential Zoning
- Community Villages
- Tribal Lands



0 1 2 3 Miles

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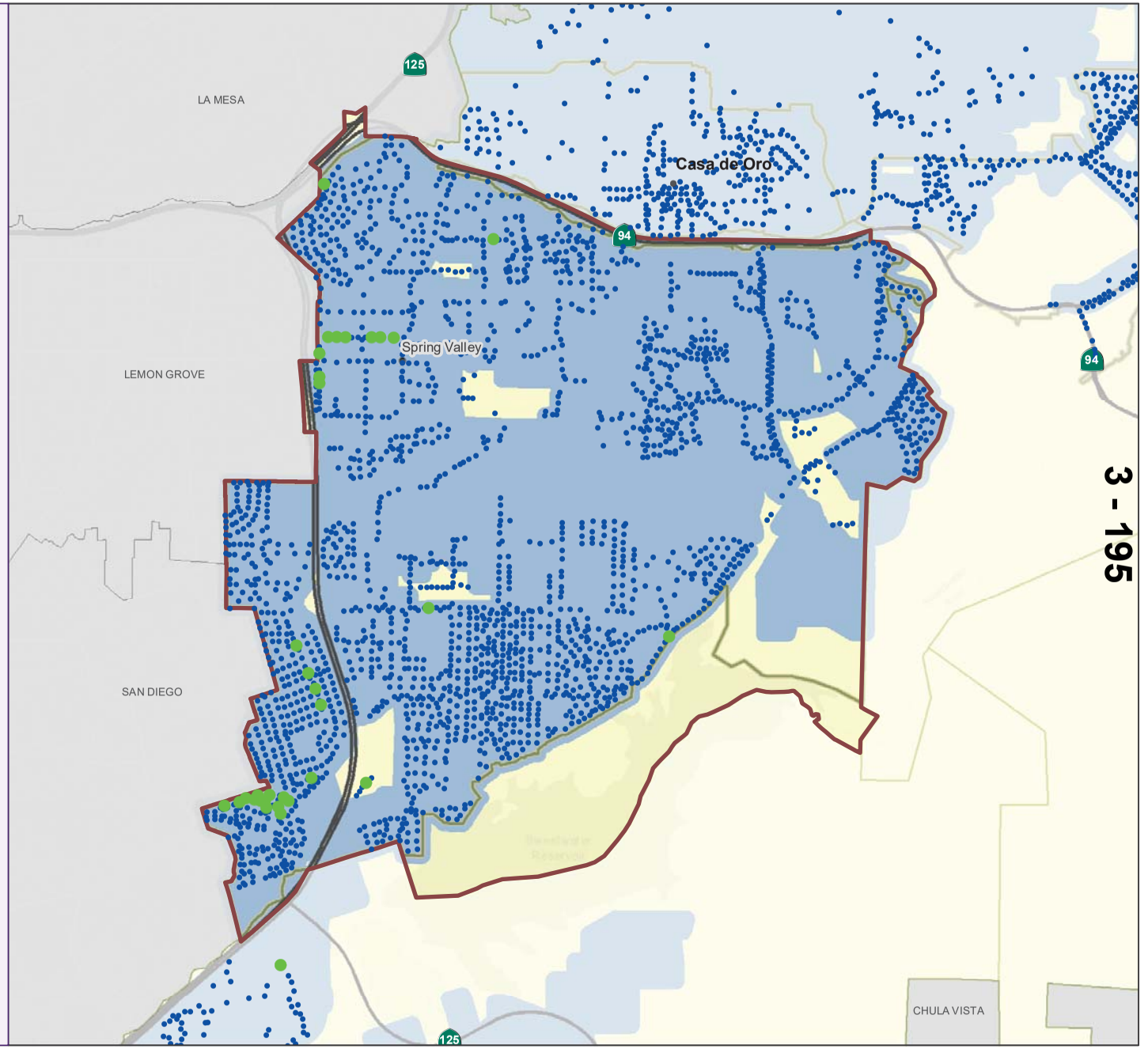
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Small Cell Wireless

Street Lights - Spring Valley

Legend

- All other Street Light Types
- Cobra Head
- Over 250 feet from Residential Zoning
- Residential Zoning
- Community Villages
- Tribal Lands



0 1 Miles

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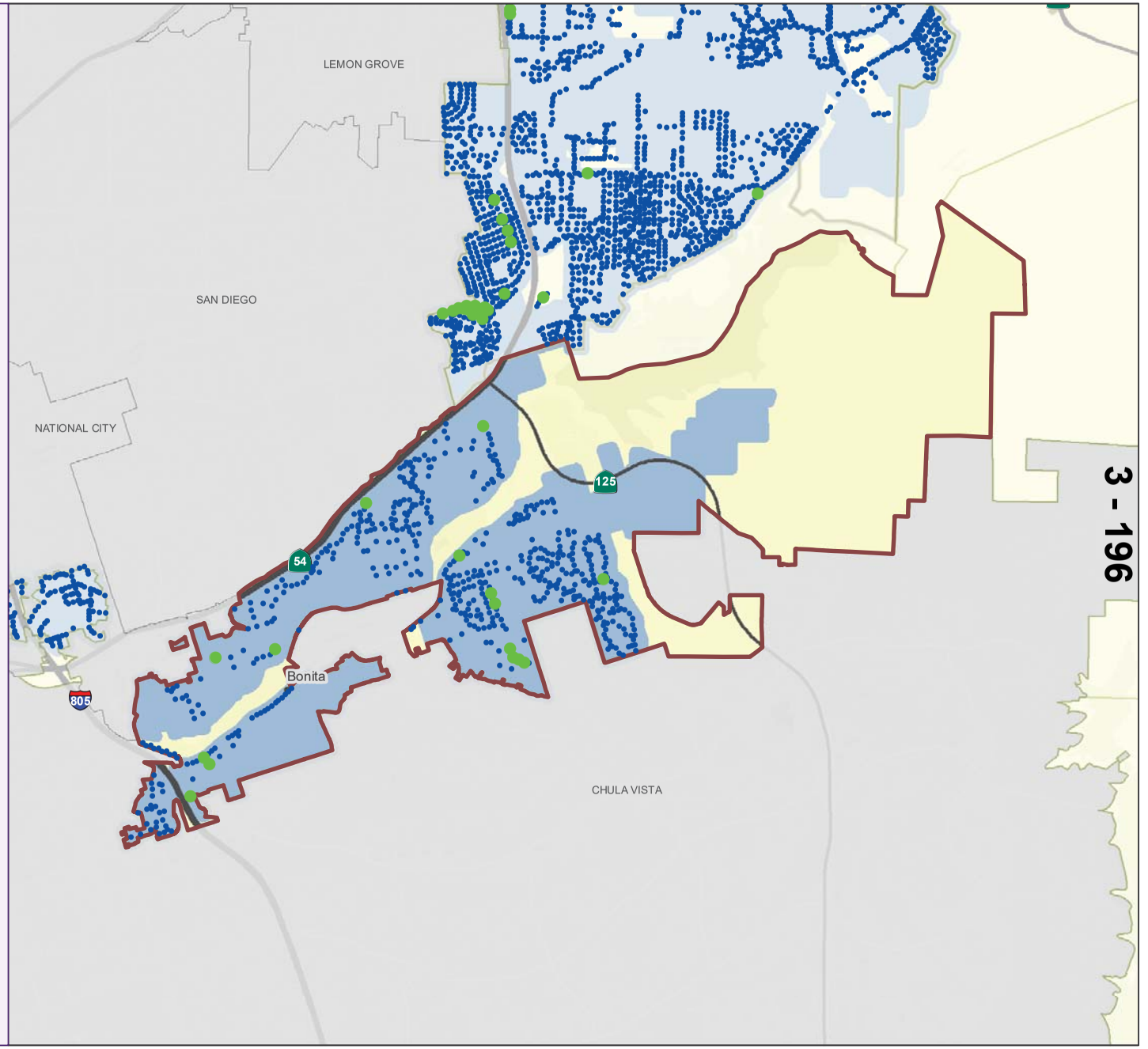
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Small Cell Wireless

Street Lights - Sweetwater

Legend

- All other Street Light Types
- Cobra Head
- Over 250 feet from Residential Zoning
- Residential Zoning
- Community Villages
- Tribal Lands



0 1 Miles

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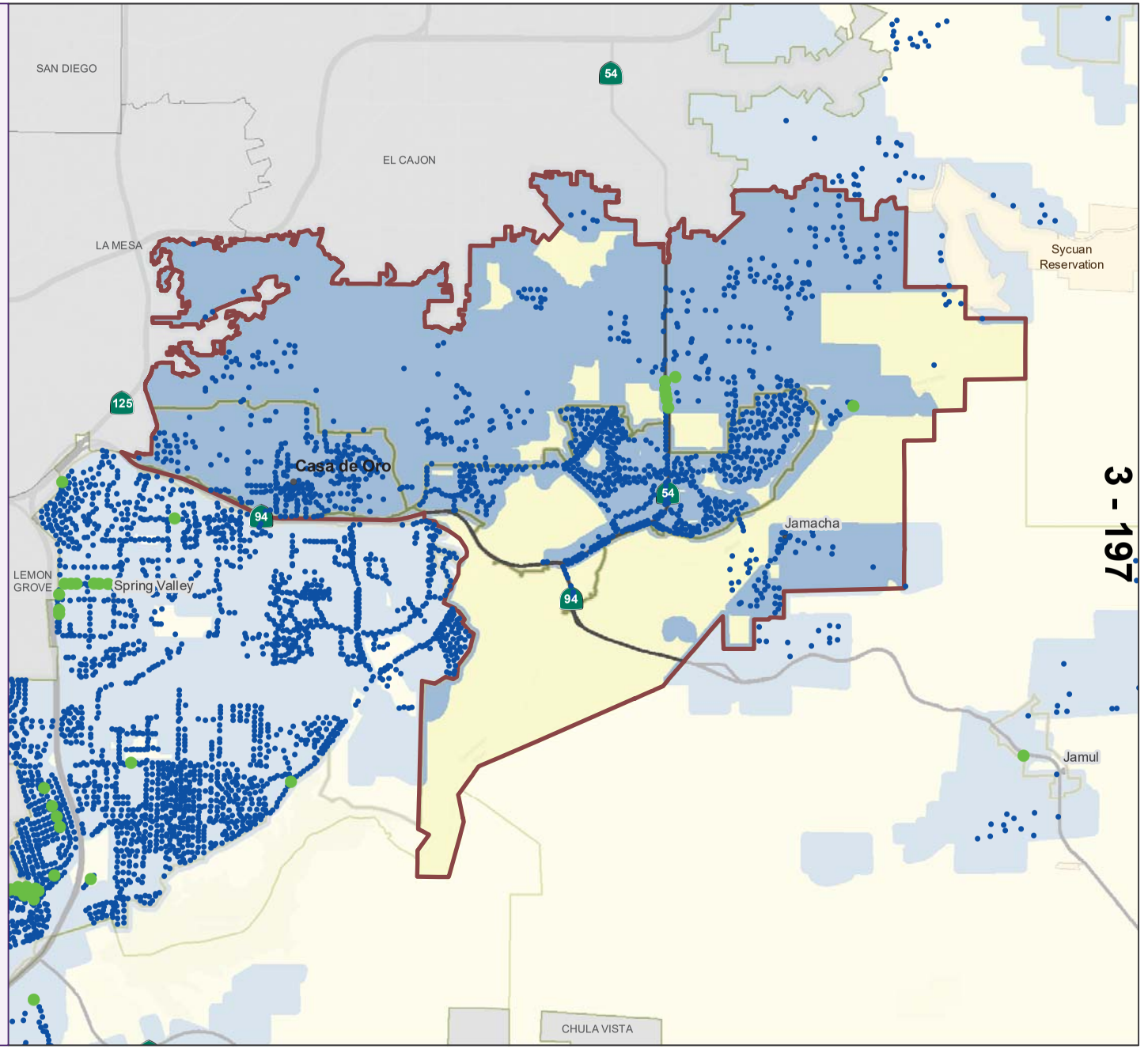
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Small Cell Wireless

Street Lights - Valle De Oro

Legend

- All other Street Light Types
- Cobra Head
- Over 250 feet from Residential Zoning
- Residential Zoning
- Community Villages
- Tribal Lands



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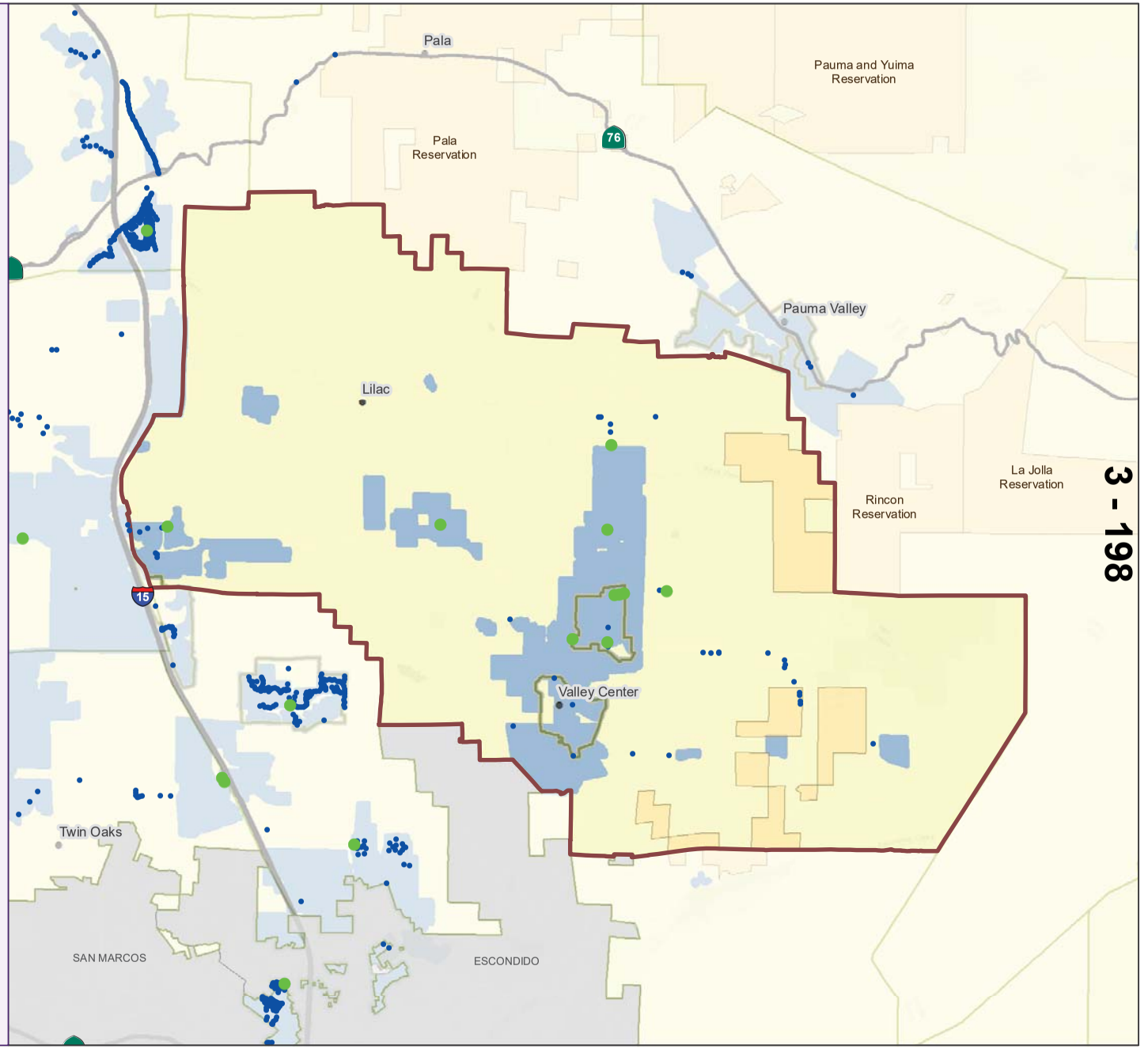
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Small Cell Wireless

Street Lights - Valley Center

Legend

- All other Street Light Types
- Cobra Head
- Over 250 feet from Residential Zoning
- Residential Zoning
- Community Villages
- Tribal Lands



N

0 1 2 3 Miles

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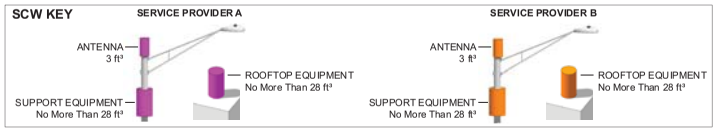
P:\gp2020\20190222_small_wireless\mxd\small_cell_template.mxd Date: 6/10/2019

Visual Separation of Existing Structures (LD-7)
Staff Recommendation

CAMPO ROAD - EXISTING STRUCTURES

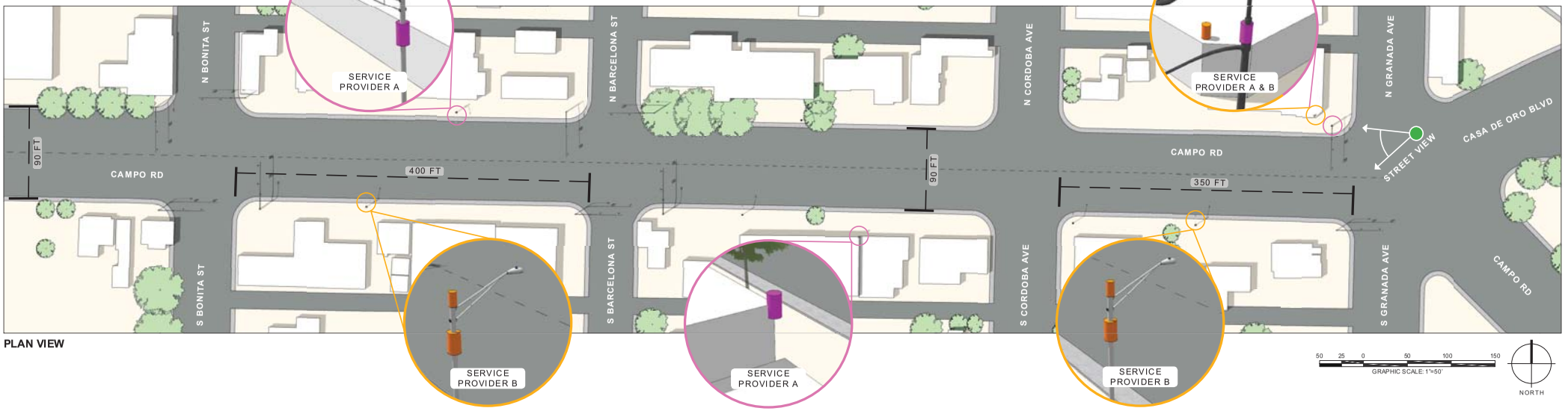
MOST PREFERRED ZONE (Commercial and Industrial Uses)
STAFF RECOMMENDATION
CO-LOCATE WHENEVER POSSIBLE ON EXISTING STRUCTURES
06.25.2019

Small Cell Wireless Antennas are no more than three (3) cubic feet, and all other related equipment on the structure is no more than 28 cubic feet. Utility poles, street lights, and traffic signals range in height from 25 to 50 feet. The combined height of the structure and SCW shall not exceed 50 feet (including antennas). *Model created using ArcGIS data.





STREET VIEW - LOOKING SOUTH WEST

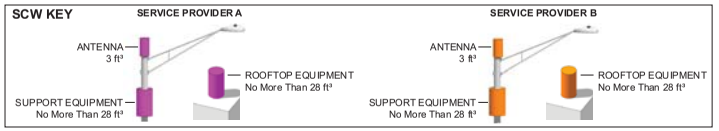


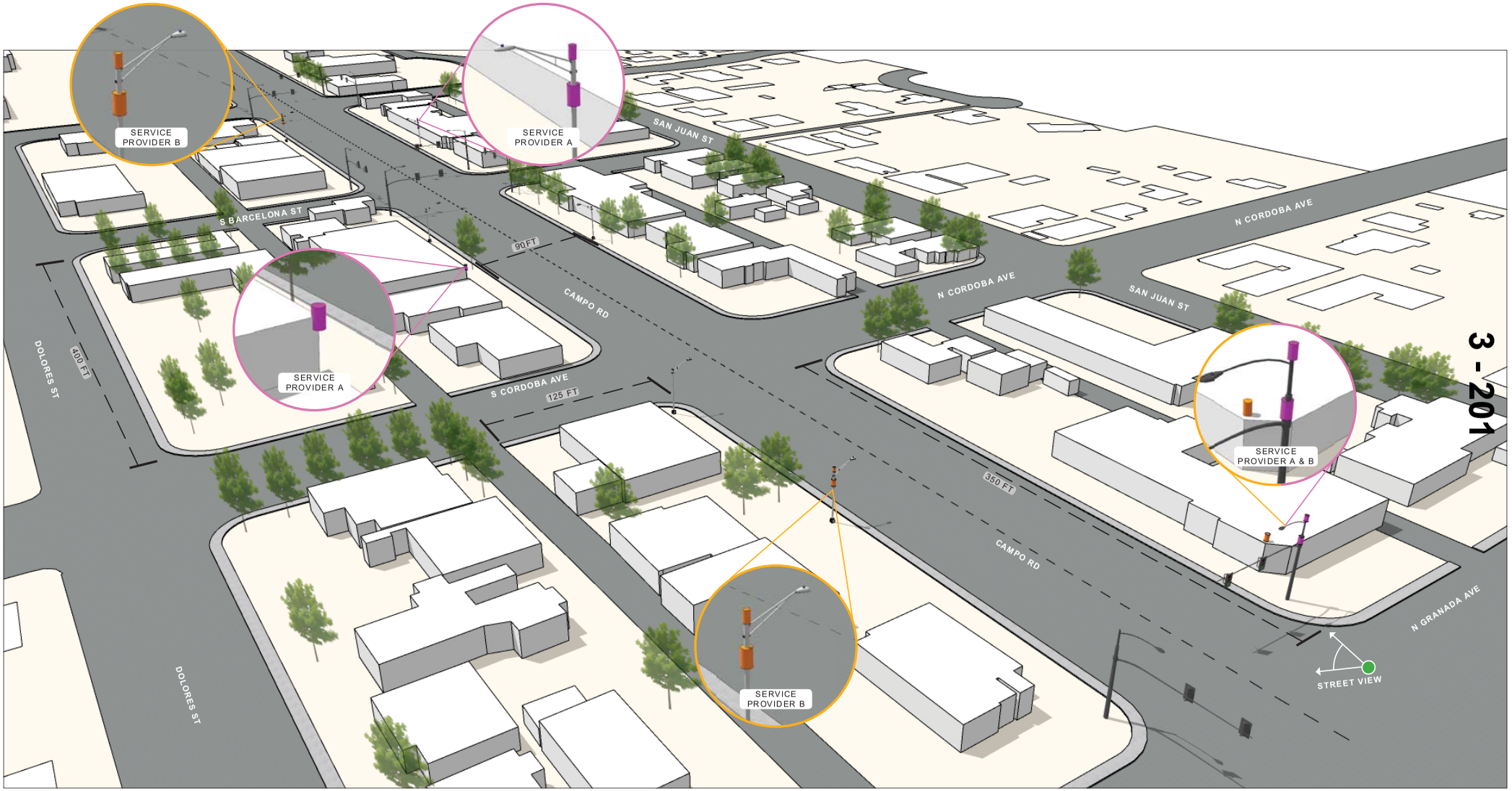
PLAN VIEW

CAMPO ROAD - EXISTING STRUCTURES

MOST PREFERRED ZONE (Commercial and Industrial Uses)
STAFF RECOMMENDATION
CO-LOCATE WHENEVER POSSIBLE ON EXISTING STRUCTURES
06.25.2019

Small Cell Wireless Antennas are no more than three (3) cubic feet, and all other related equipment on the structure is no more than 28 cubic feet. Utility poles, street lights, and traffic signals range in height from 25 to 50 feet. The combined height of the structure and SCW shall not exceed 50 feet (including antennas). *Model created using ArcGIS data.





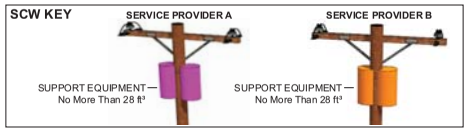
3 - 201

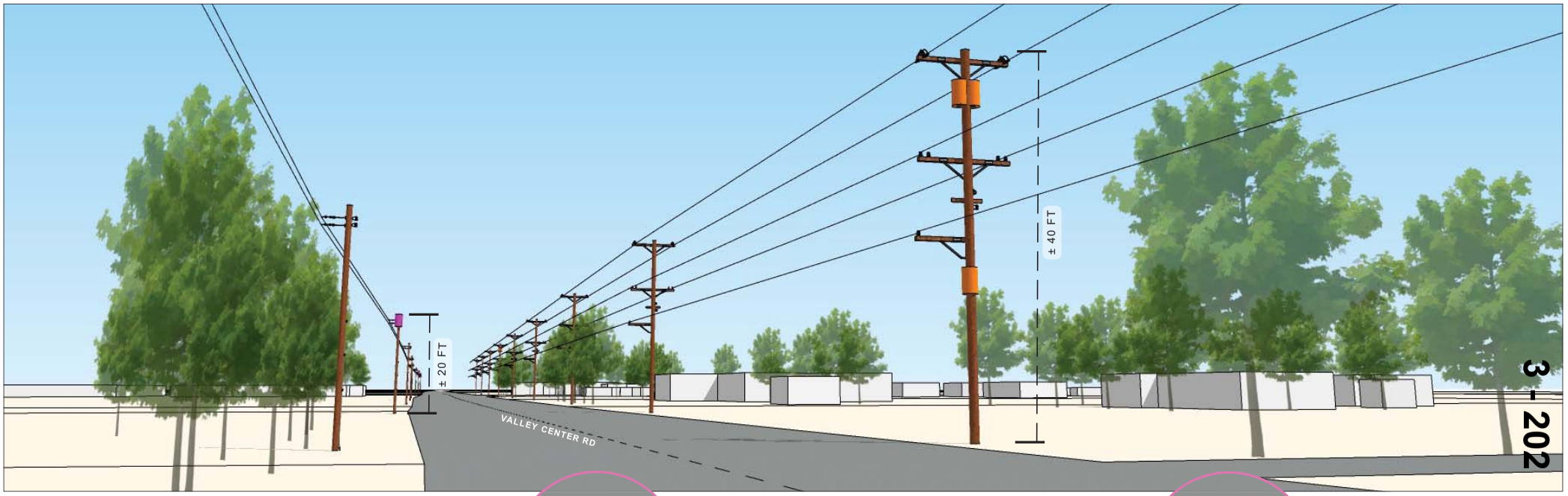
BIRD'S EYE VIEW - LOOKING NORTH WEST

VALLEY CENTER ROAD - EXISTING STRUCTURES

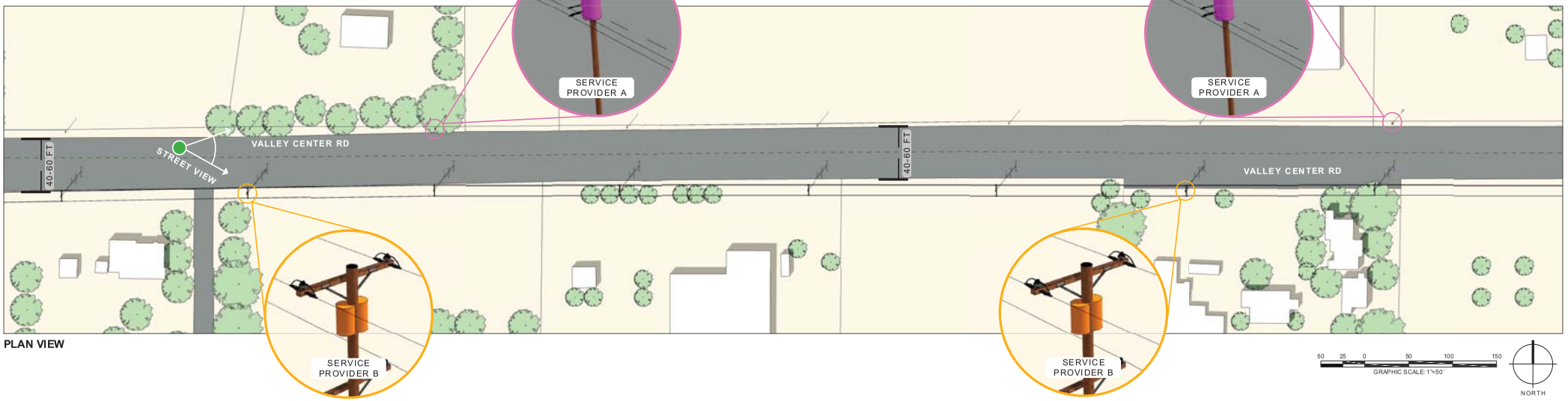
LEAST PREFERRED ZONE (Residential Uses)
STAFF RECOMMENDATION
CO-LOCATE WHENEVER POSSIBLE ON EXISTING STRUCTURES
06.25.2019

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STREET VIEW - LOOKING EAST



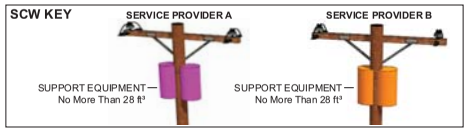
PLAN VIEW

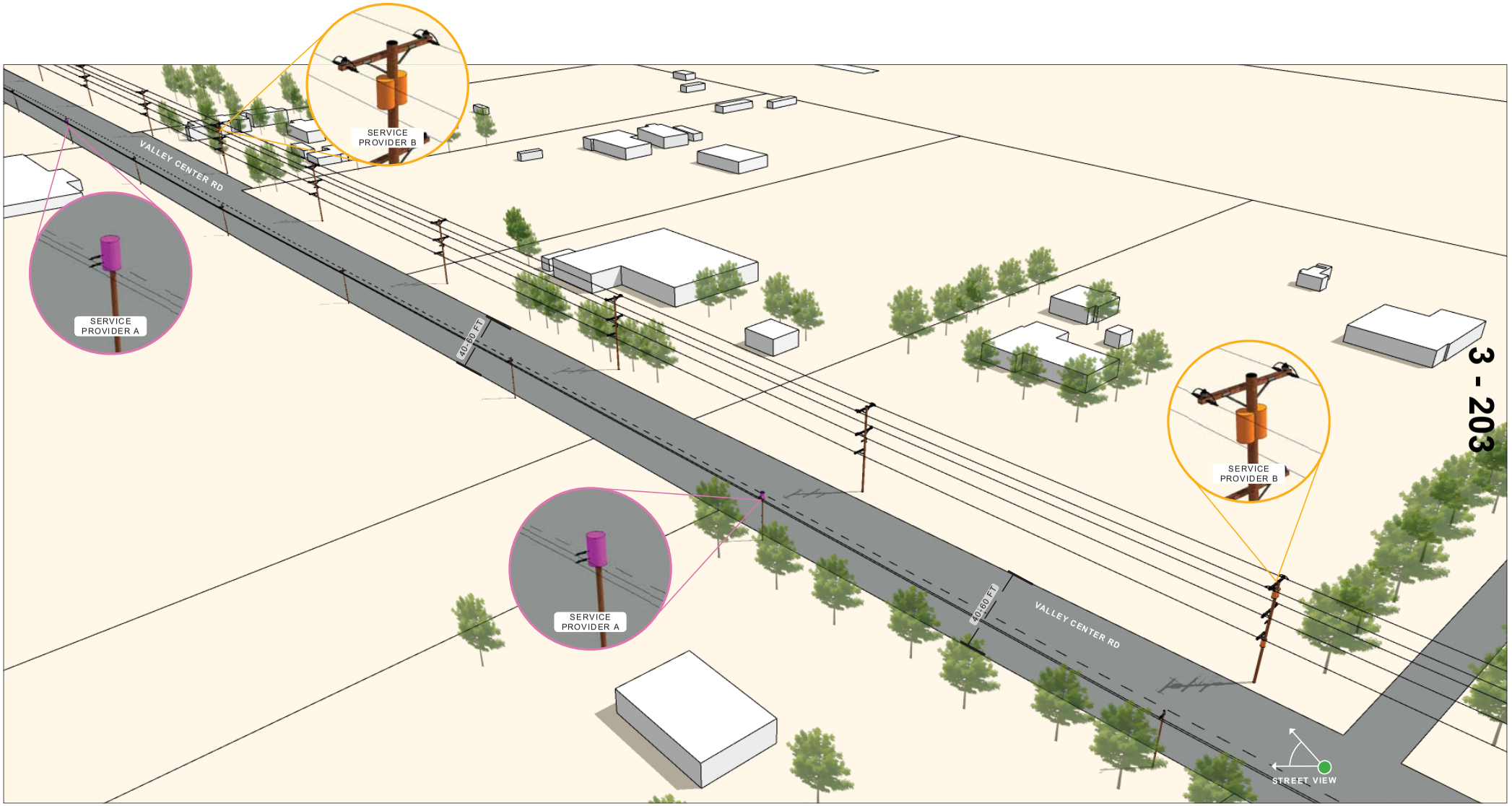
3 - 202

VALLEY CENTER ROAD - EXISTING STRUCTURES

LEAST PREFERRED ZONE (Residential Uses)
STAFF RECOMMENDATION
CO-LOCATE WHENEVER POSSIBLE ON EXISTING STRUCTURES
06.25.2019

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3 - 203

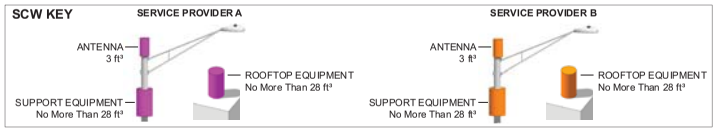
BIRD'S EYE VIEW - LOOKING SOUTH EAST

Visual Separation of New Structures (LD-8)
Staff Recommendation

CAMPO ROAD - NEW / REPLACEMENT STRUCTURES

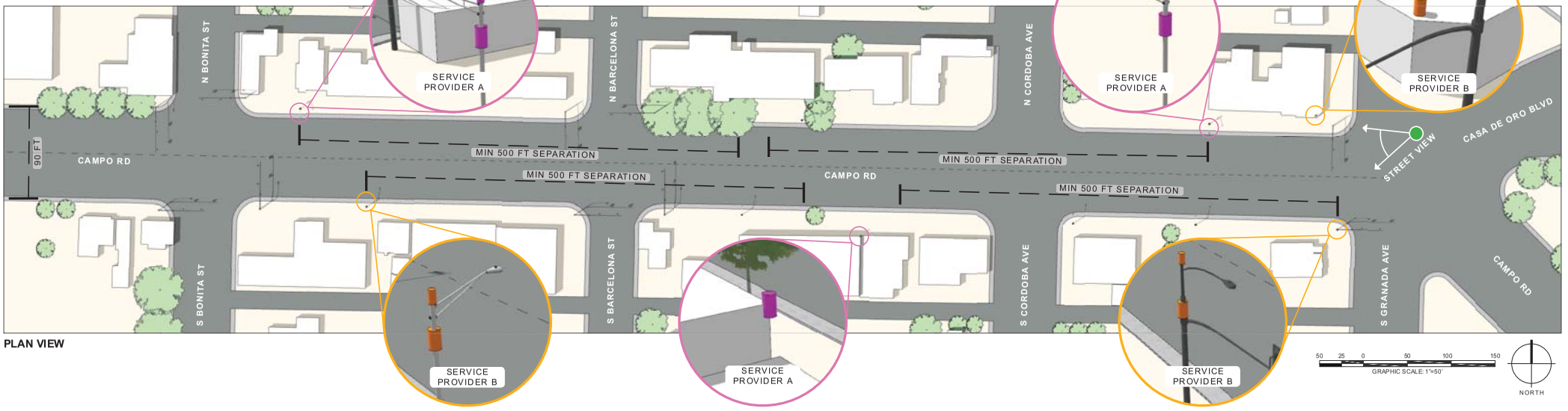
MOST PREFERRED ZONE (Commercial and Industrial Uses)
STAFF RECOMMENDATION
NEW SCW WITHIN SAME PROVIDER (500')
06.25.2019

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STREET VIEW - LOOKING SOUTH WEST

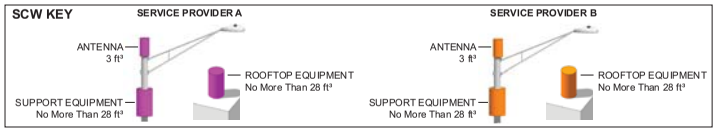


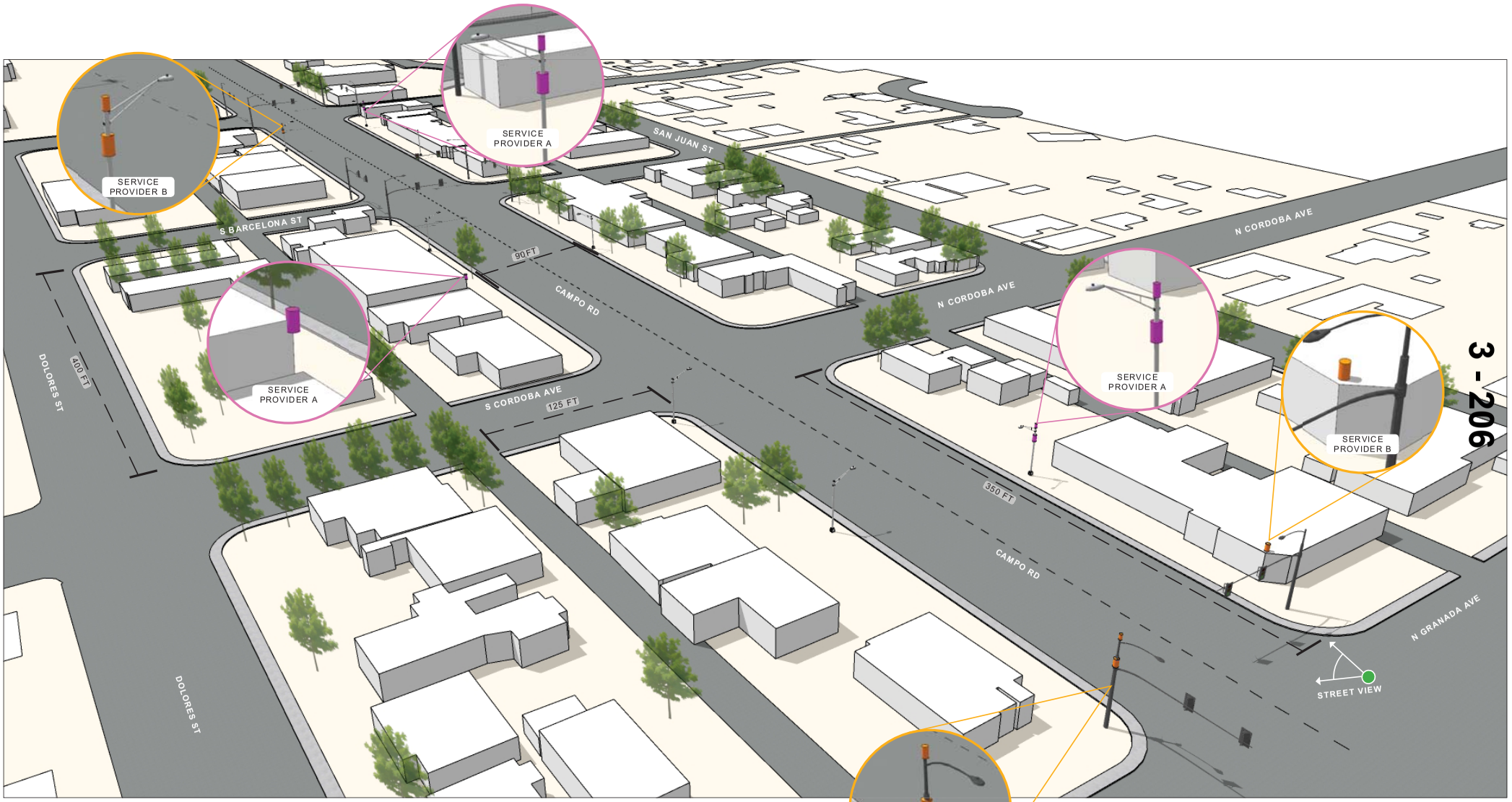
PLAN VIEW

CAMPO ROAD - NEW / REPLACEMENT STRUCTURES

MOST PREFERRED ZONE (Commercial and Industrial Uses)
STAFF RECOMMENDATION
NEW SCW WITHIN SAME PROVIDER (500')
06.25.2019

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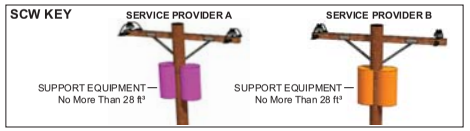


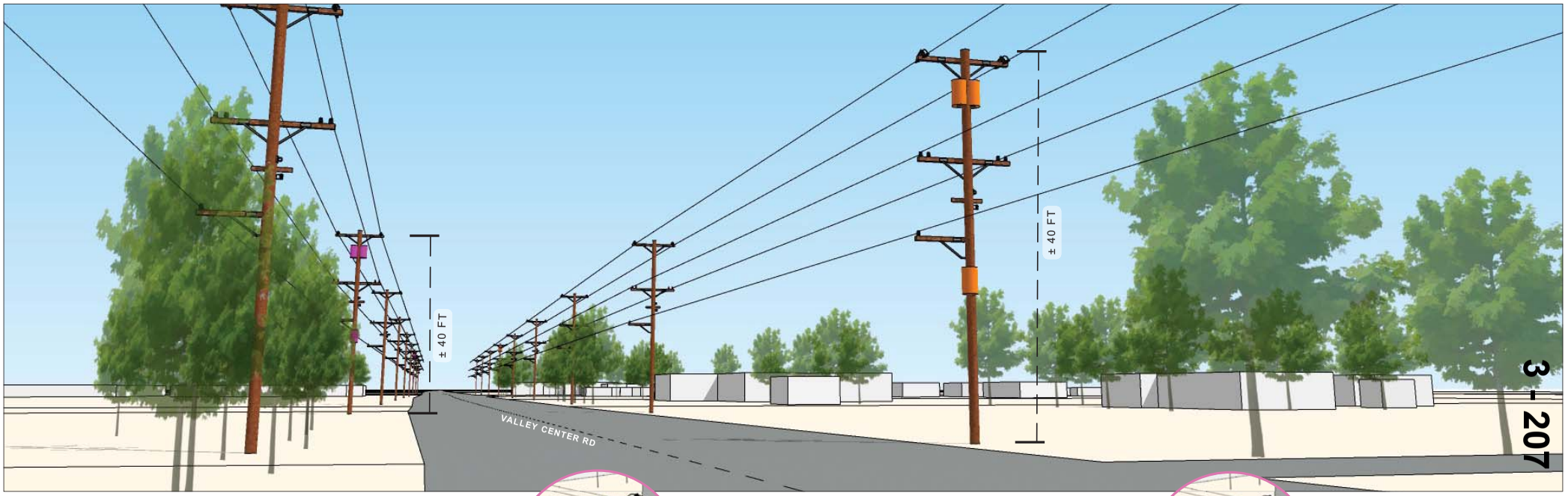
BIRD'S EYE VIEW - LOOKING NORTH WEST

VALLEY CENTER ROAD - NEW / REPLACEMENT STRUCTURES

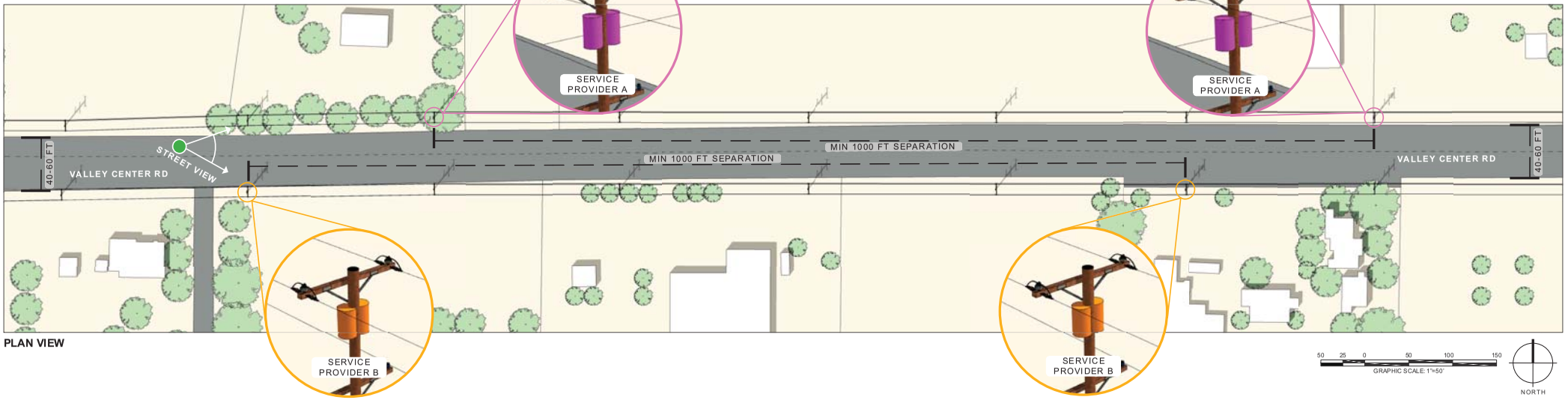
LEAST PREFERRED ZONE (Residential Uses)
STAFF RECOMMENDATION
NEW SCW WITHIN SAME PROVIDER (1000')
06.25.2019

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STREET VIEW - LOOKING EAST

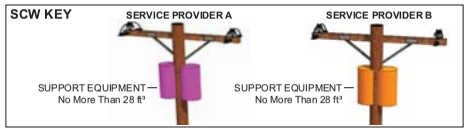


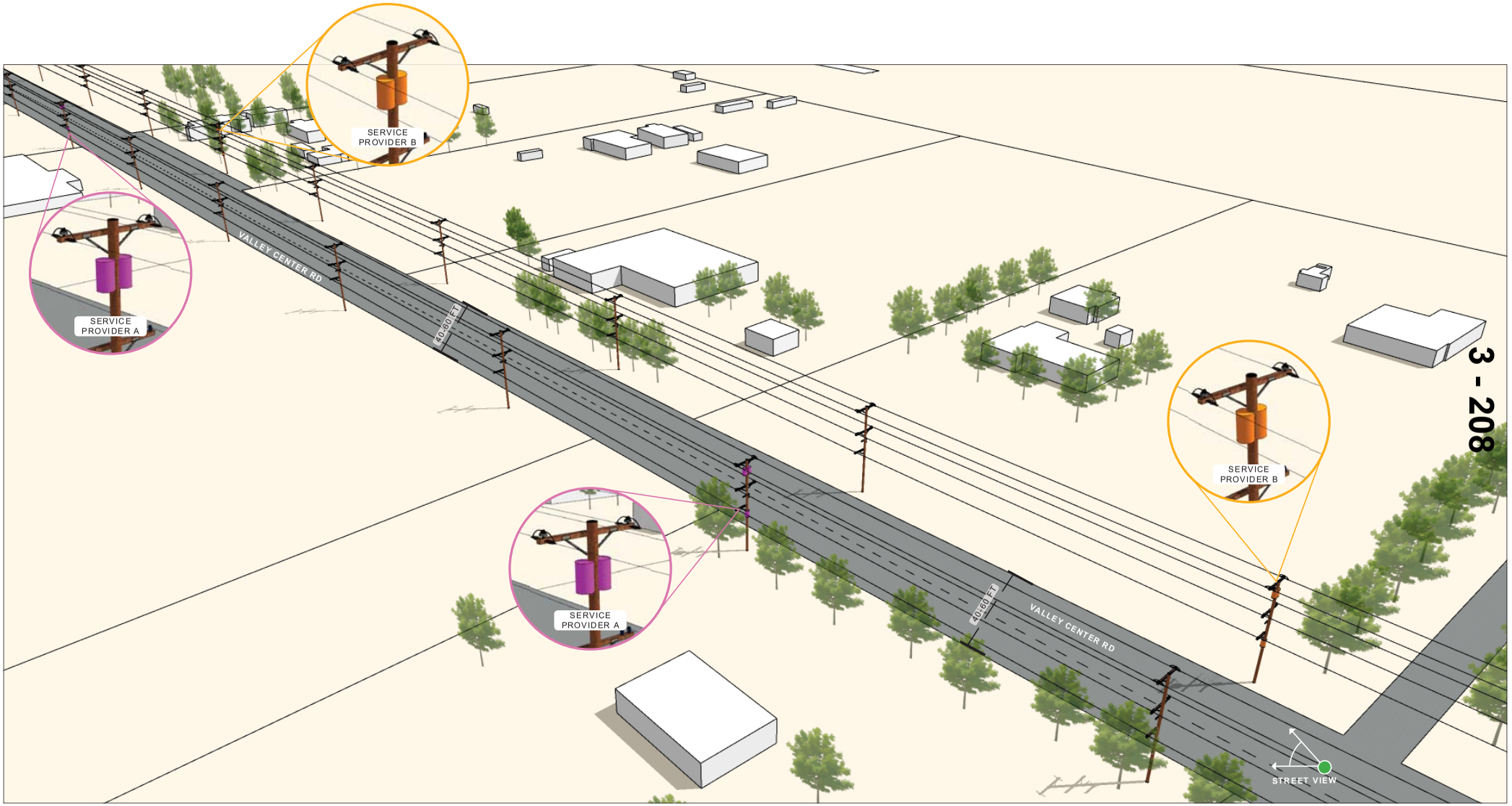
PLAN VIEW

VALLEY CENTER ROAD - NEW / REPLACEMENT STRUCTURES

LEAST PREFERRED ZONE (Residential Uses)
STAFF RECOMMENDATION
NEW SCW WITHIN SAME PROVIDER (1000')
06.25.2019

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BIRD'S EYE VIEW - LOOKING SOUTH EAST

Visual Separation Options to Consider
(LD-7 & 8)

Existing Structures

Most Preferred Zone

(i.e. Commercial and Industrial Uses)

Staff Recommendation: Co-Locate whenever possible on existing structures



500’

DRAWINGS ARE NOT TO SCALE – FOR ILLUSTRATIVE PURPOSES ONLY

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SCW Key

- **Service Provider A**
- **Service Provider B**

Existing Structures

Least Preferred Zone

(i.e. Residential Uses)

Staff Recommendation: Co-Locate whenever possible on existing structures



1,000’

DRAWINGS ARE NOT TO SCALE – FOR ILLUSTRATIVE PURPOSES ONLY

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SCW Key

- **Service Provider A**
- **Service Provider B**

Existing Structures

Most Preferred Zone

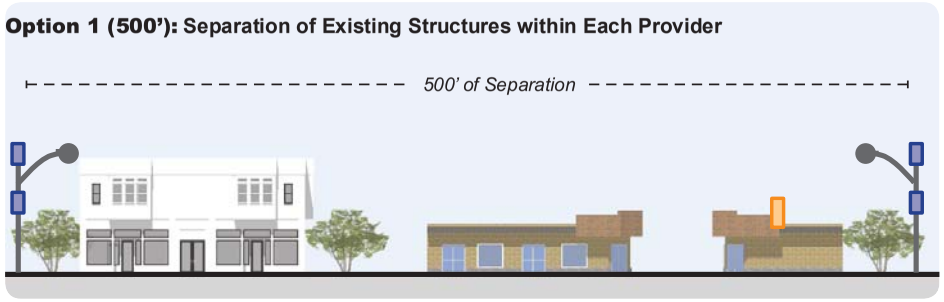
(i.e. Commercial and Industrial Uses)

Option 1 (300'): Separation of Existing Structures within Each Provider



500'

Option 1 (500'): Separation of Existing Structures within Each Provider



500'

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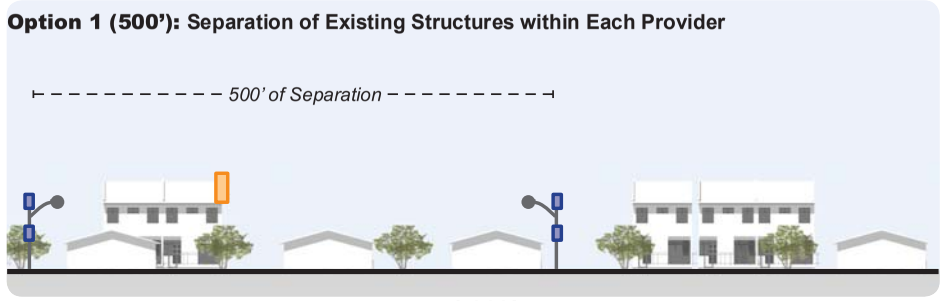
- **Service Provider A**
- **Service Provider B**

Existing Structures

Least Preferred Zone

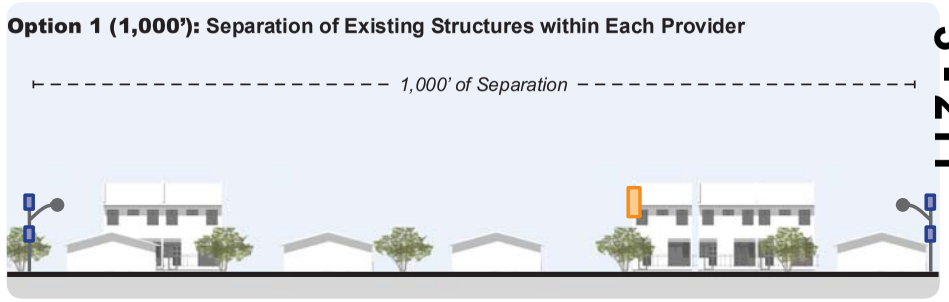
(i.e. Residential Uses)

Option 1 (500'): Separation of Existing Structures within Each Provider



1,000'

Option 1 (1,000'): Separation of Existing Structures within Each Provider



1,000'

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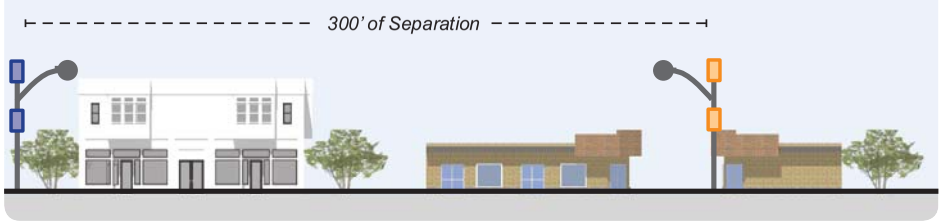
- **Service Provider A**
- **Service Provider B**

Existing Structures

Most Preferred Zone

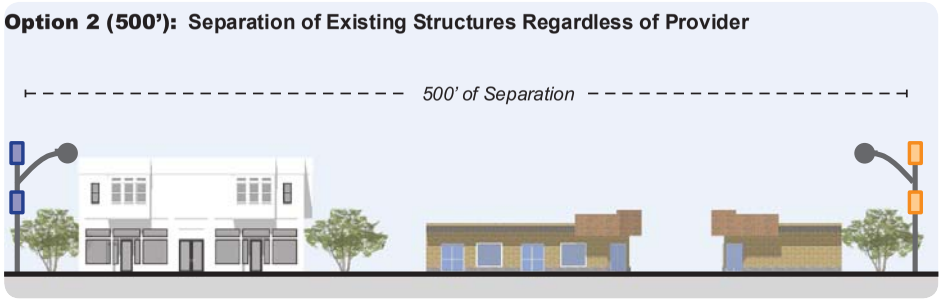
(i.e. Commercial and Industrial Uses)

Option 2 (300'): Separation of Existing Structures Regardless of Provider



500'

Option 2 (500'): Separation of Existing Structures Regardless of Provider



500'

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SCW Key

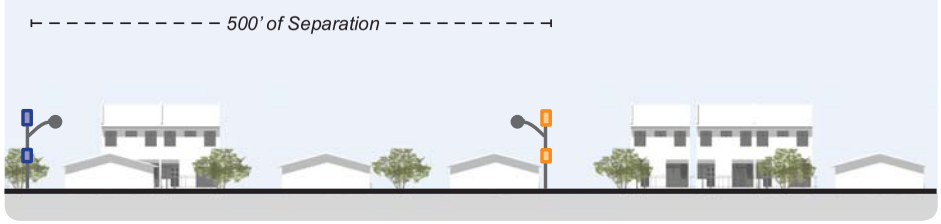
- **Service Provider A**
- **Service Provider B**

Existing Structures

Least Preferred Zone

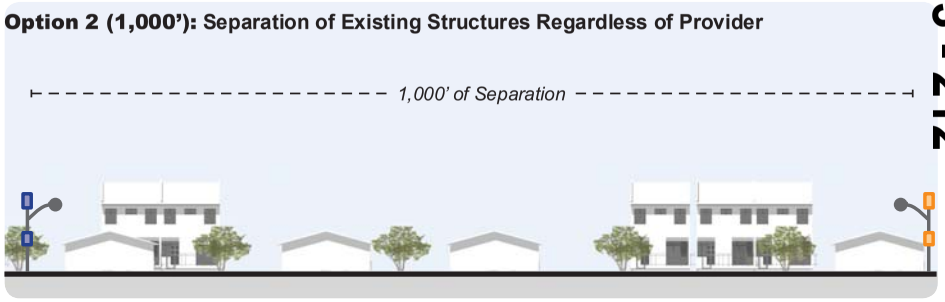
(i.e. Residential Uses)

Option 2 (500'): Separation of Existing Structures Regardless of Provider



1,000'

Option 2 (1,000'): Separation of Existing Structures Regardless of Provider



1,000'

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SCW Key

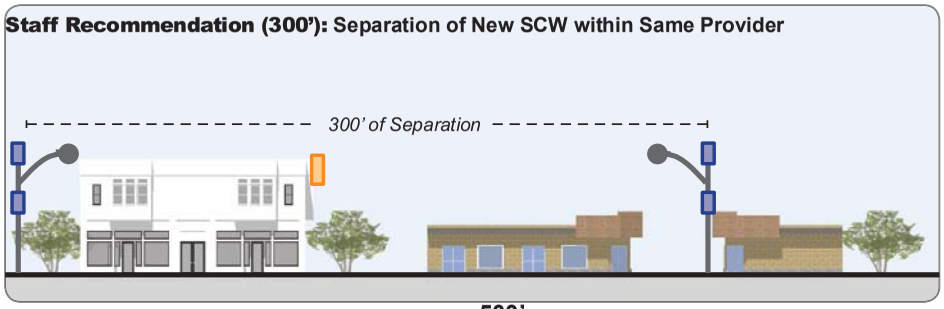
- **Service Provider A**
- **Service Provider B**

New Structures

Most Preferred Zone

(i.e. Commercial and Industrial Uses)

Staff Recommendation (300'): Separation of New SCW within Same Provider



500'

Staff Recommendation (500'): Separation of New SCW within Same Provider



500'

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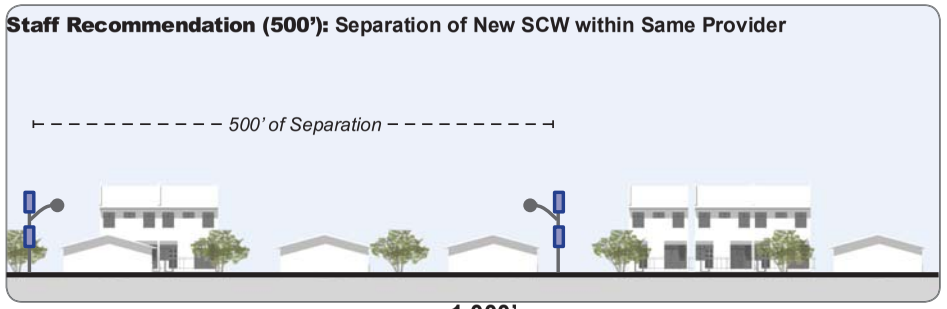
- **Service Provider A**
- **Service Provider B**

New Structures

Least Preferred Zone

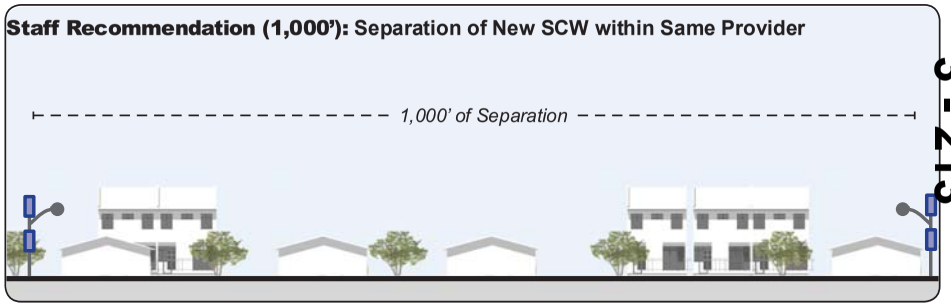
(i.e. Residential Uses)

Staff Recommendation (500'): Separation of New SCW within Same Provider



1,000'

Staff Recommendation (1,000'): Separation of New SCW within Same Provider



1,000'

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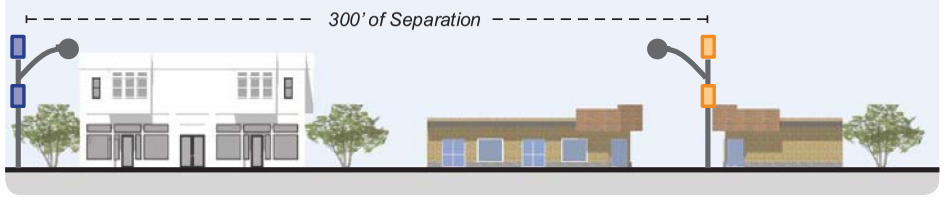
- **Service Provider A**
- **Service Provider B**

New Structures

Most Preferred Zone

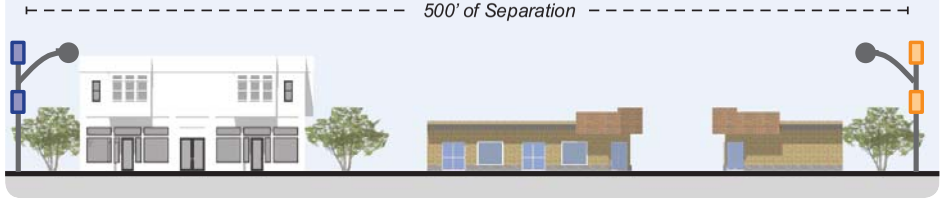
(i.e. Commercial and Industrial Uses)

Option (300'): Separation of New SCW Regardless of Provider



500'

Option (500'): Separation of New SCW Regardless of Provider



500'

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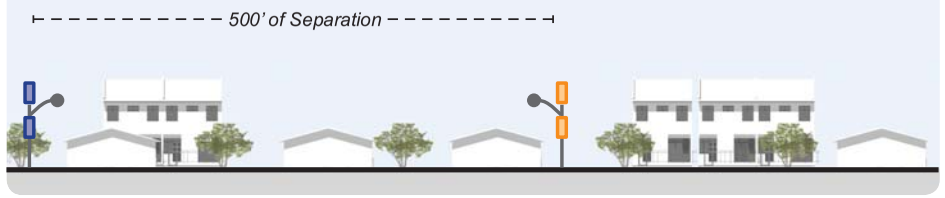
- **Service Provider A**
- **Service Provider B**

New Structures

Least Preferred Zone

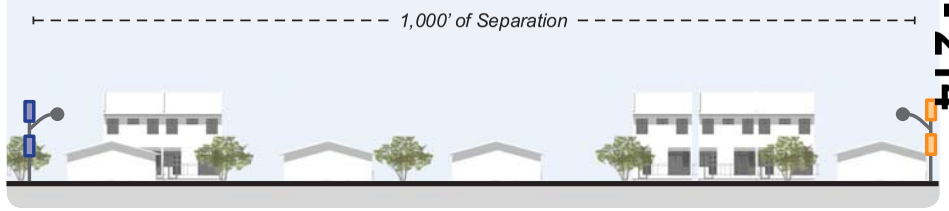
(i.e. Residential Uses)

Option (500'): Separation of New SCW Regardless of Provider



1,000'

Option (1,000'): Separation of New SCW Regardless of Provider



1,000'

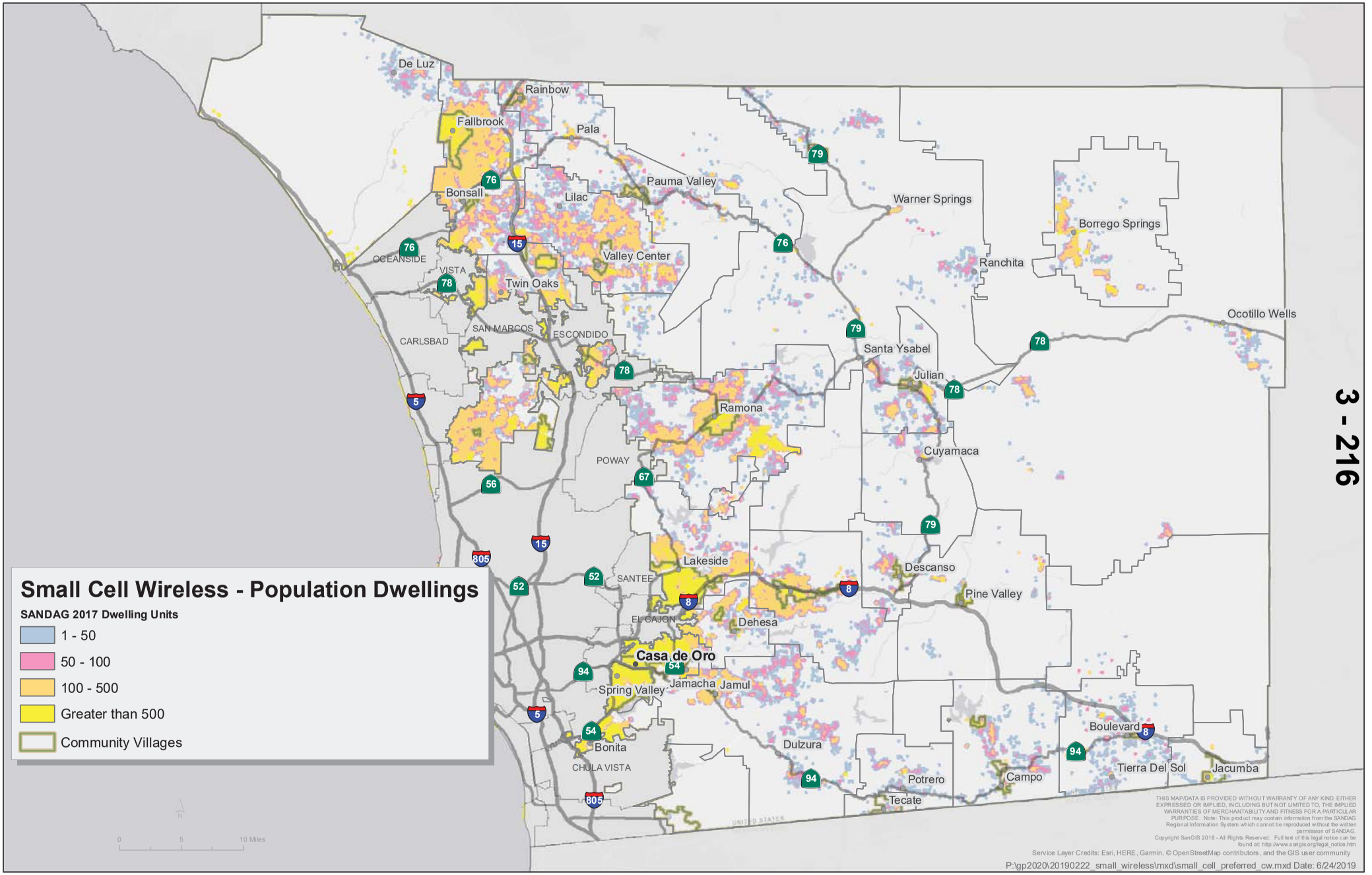
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SCW Key

- **Service Provider A**
- **Service Provider B**

Population Densities


De Luz
Rainbow
Fallbrook
Pala
Pauma Valley
Bonsall
Lilac
Warner Springs
Borrego Springs
OCEANSIDE
VISTA
Valley Center
Twin Oaks
Ranchita
Ocotillo Wells
SAN MARCOS
ESCONDIDO
CARLSBAD
Santa Ysabel
Julian
Ramona
Cuyamaca
POWAY
Lakeside
Descanso
SANTEE
Pine Valley
EL CAJON
Dehesa
Casa de Oro
Jamacha
Jamul
Spring Valley
Boulevard
Dulzura
Bonita
Tierra Del Sol
Jacumba
CHULA VISTA
Potrero
Campo
Tecate
Small Cell Wireless - Population Dwellings
SANDAG 2017 Dwelling Units
1 - 50
50 - 100
100 - 500
Greater than 500
Community Villages
0
5
10 Miles
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Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community
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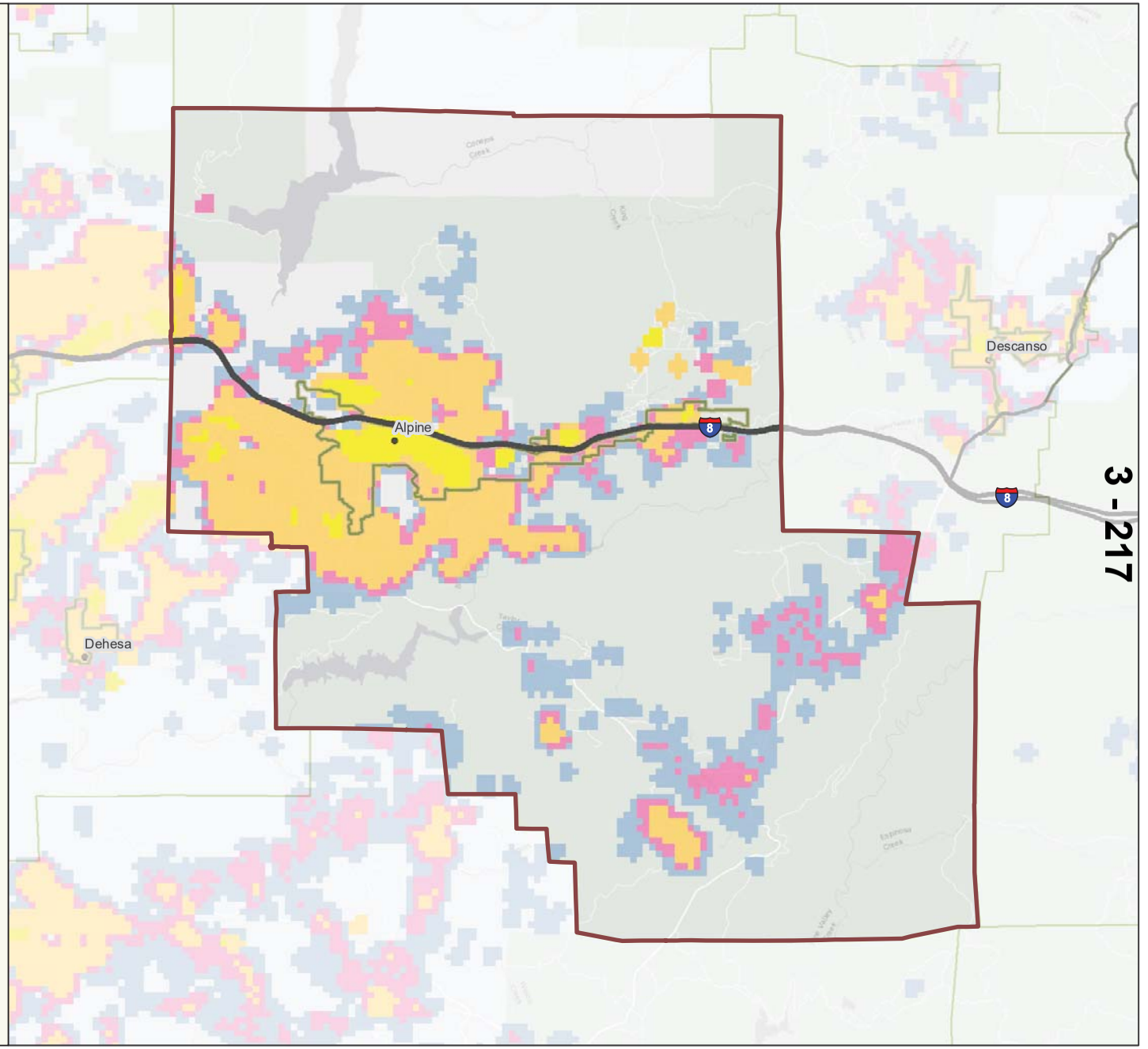
Small Cell Wireless

Population Dwelling - Alpine

Legend

SANDAG 2017 Dwelling Units

- 1 - 50
- 50 - 100
- 100 - 500
- Greater than 500
- Community Villages



0 1 2 3 Miles

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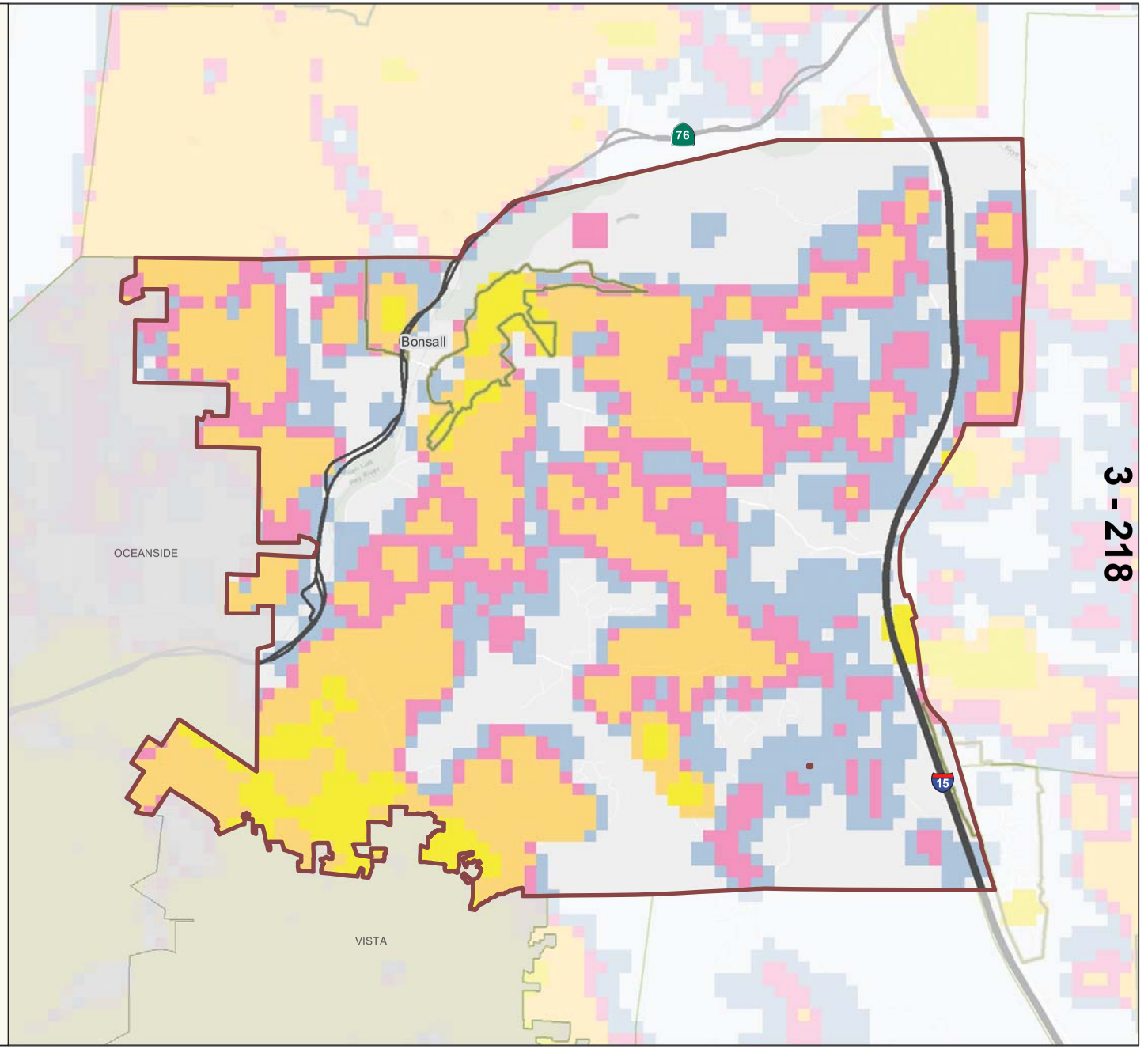
Small Cell Wireless

Population Dwelling - Bonsall

Legend

SANDAG 2017 Dwelling Units

- 1 - 50
- 50 - 100
- 100 - 500
- Greater than 500
- Community Villages



N

0 1 Miles

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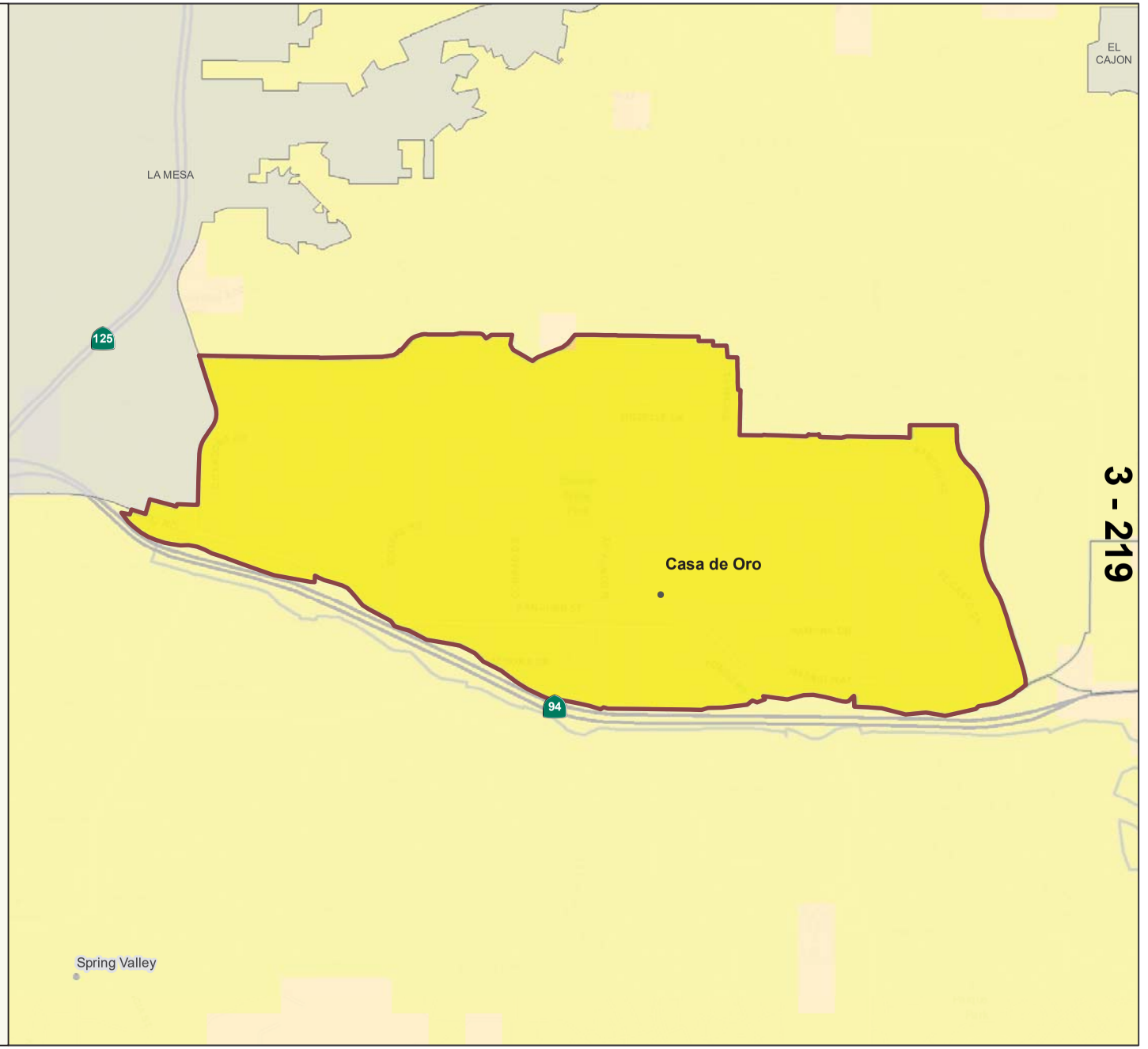
Small Cell Wireless

Population Dwelling - Casa De Oro

Legend

SANDAG 2017 Dwelling Units

- 1 - 50
- 50 - 100
- 100 - 500
- Greater than 500
- Community Villages



N

0 0.5 Miles

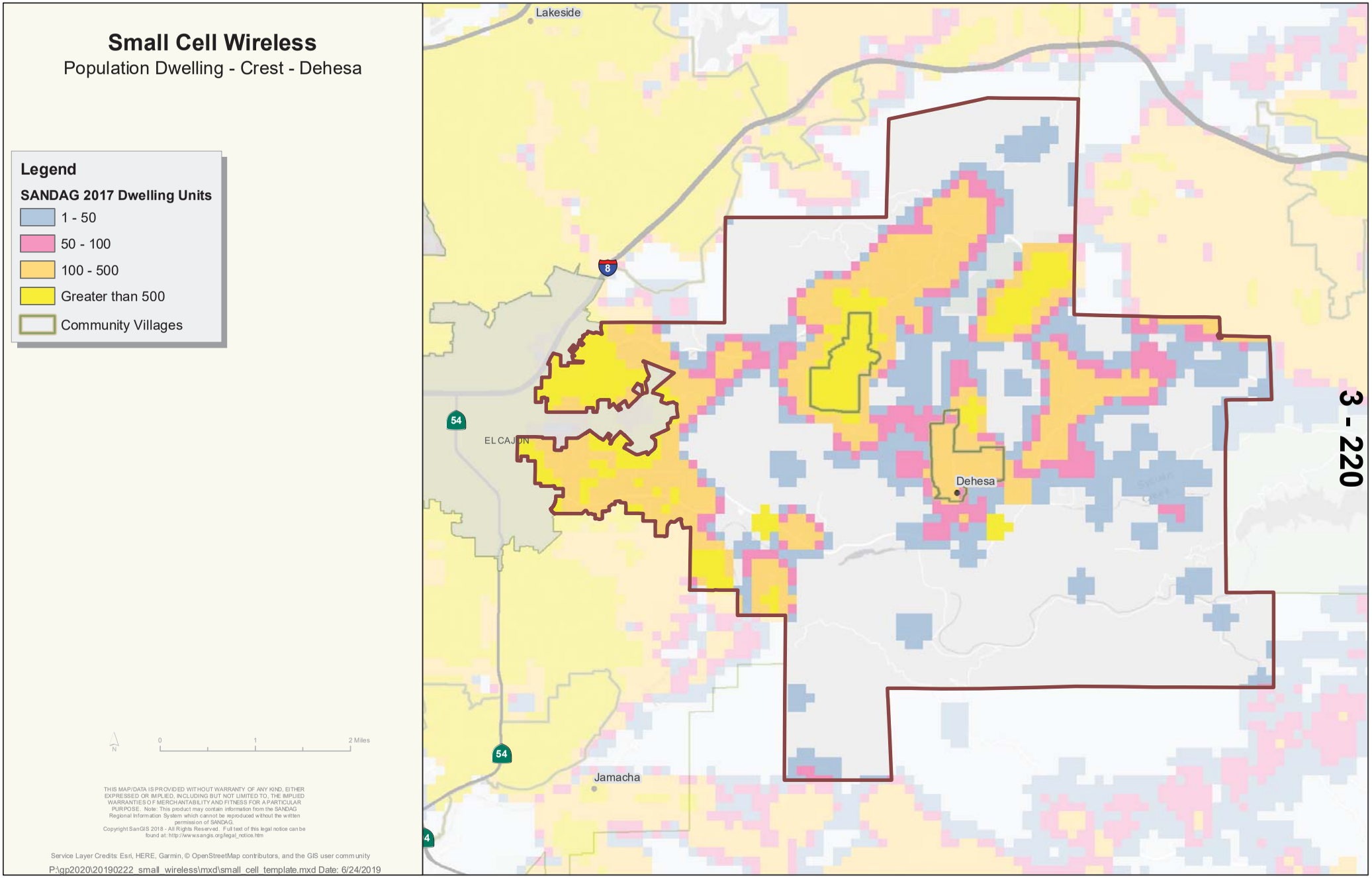
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Small Cell Wireless

Population Dwelling - Crest - Dehesa



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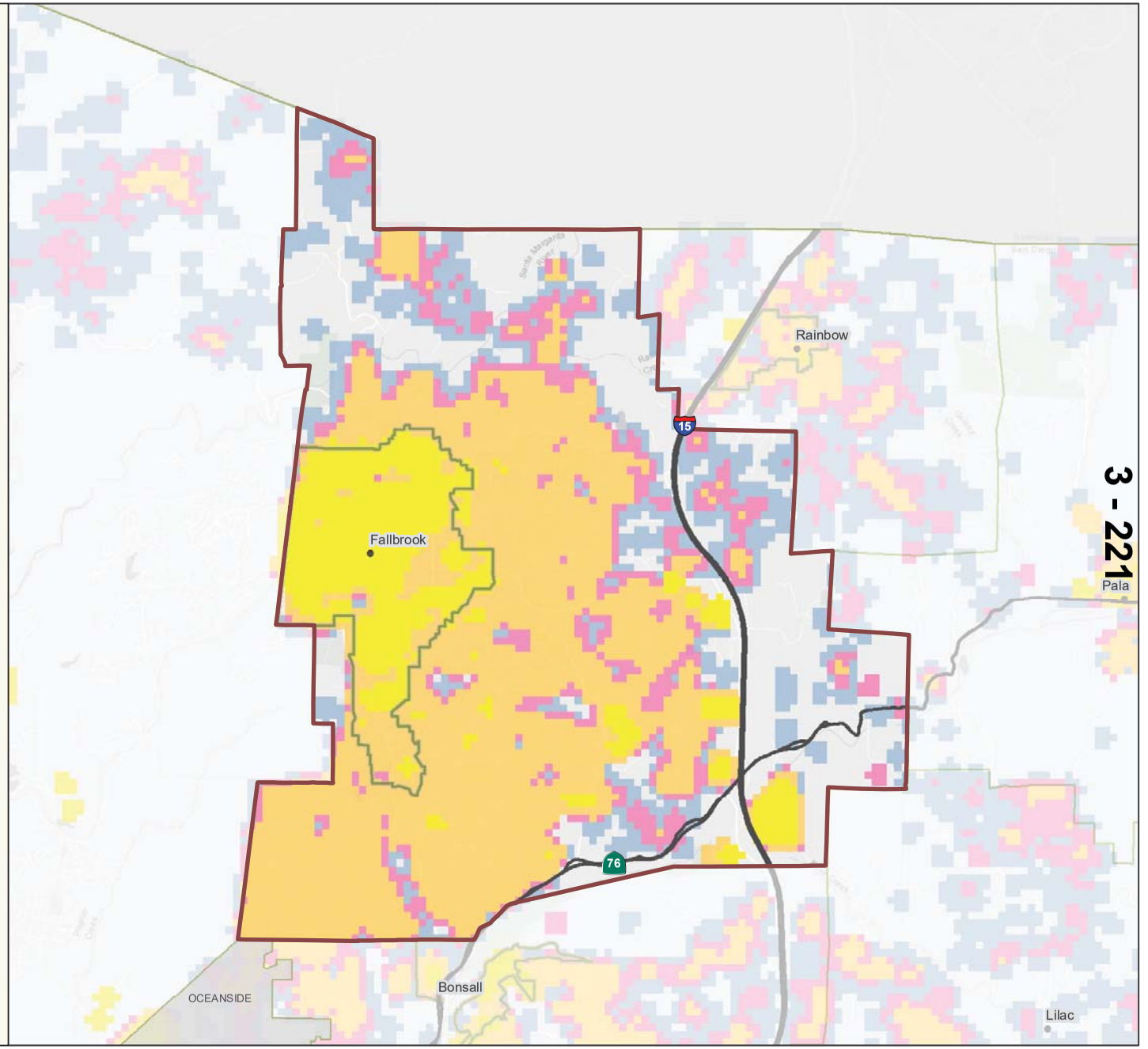
Small Cell Wireless

Population Dwelling - Fallbrook

Legend

SANDAG 2017 Dwelling Units

- 1 - 50
- 50 - 100
- 100 - 500
- Greater than 500
- Community Villages



0 1 2 3 Miles

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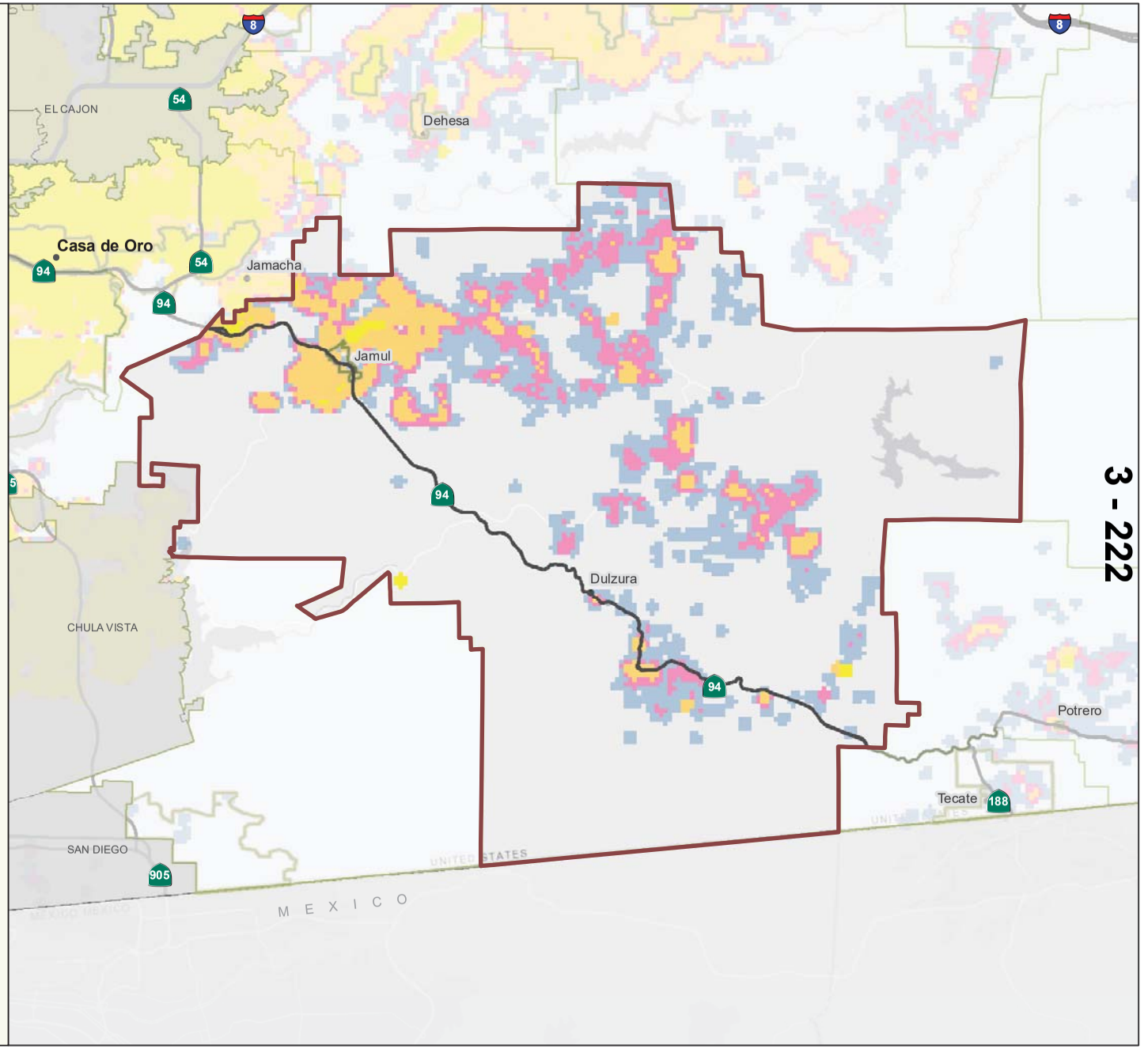
Small Cell Wireless

Population Dwelling - Jamul

Legend

SANDAG 2017 Dwelling Units

- 1 - 50
- 50 - 100
- 100 - 500
- Greater than 500
- Community Villages



0 1 2 3 4 5 Miles

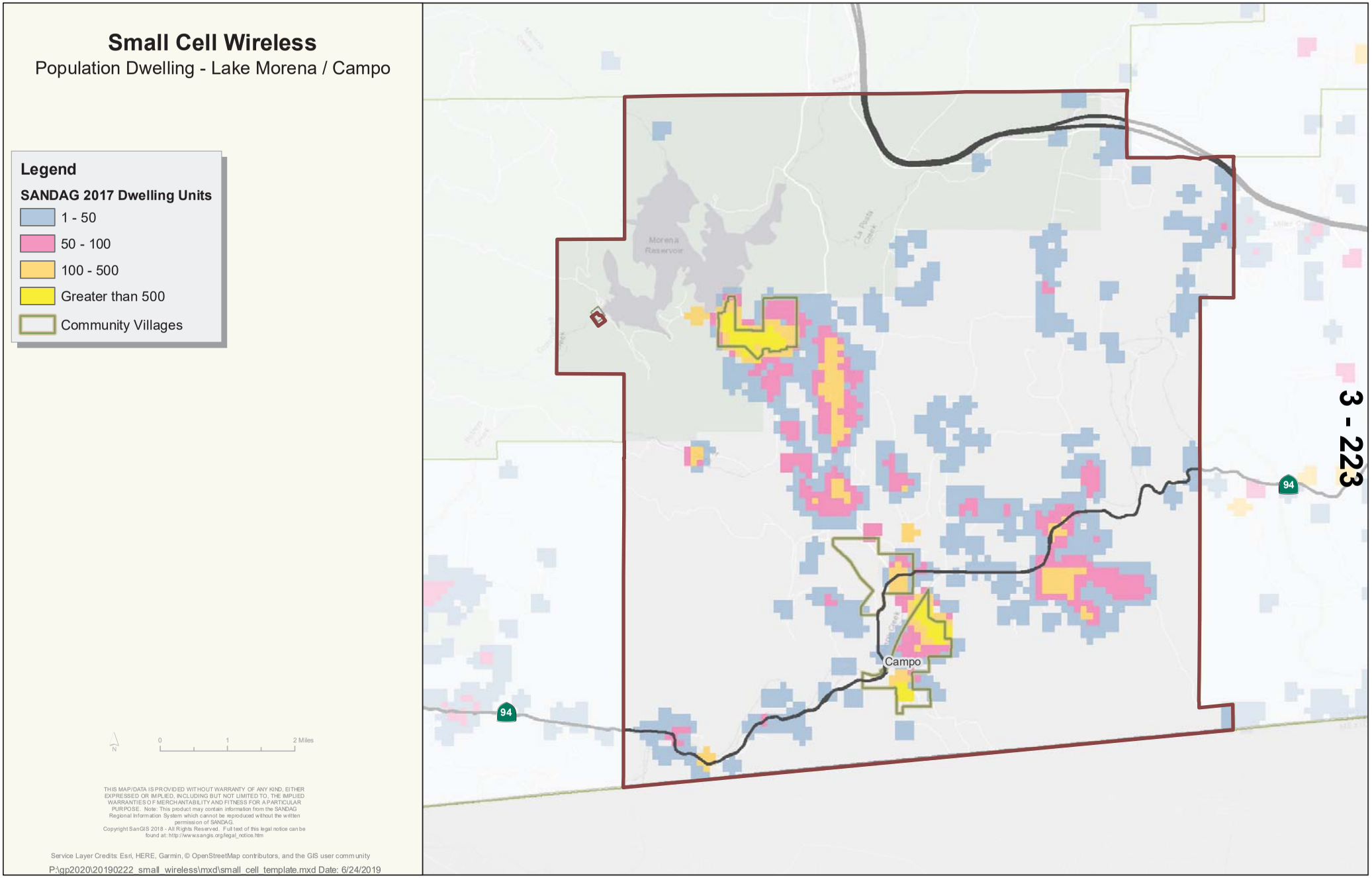
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Small Cell Wireless

Population Dwelling - Lake Morena / Campo



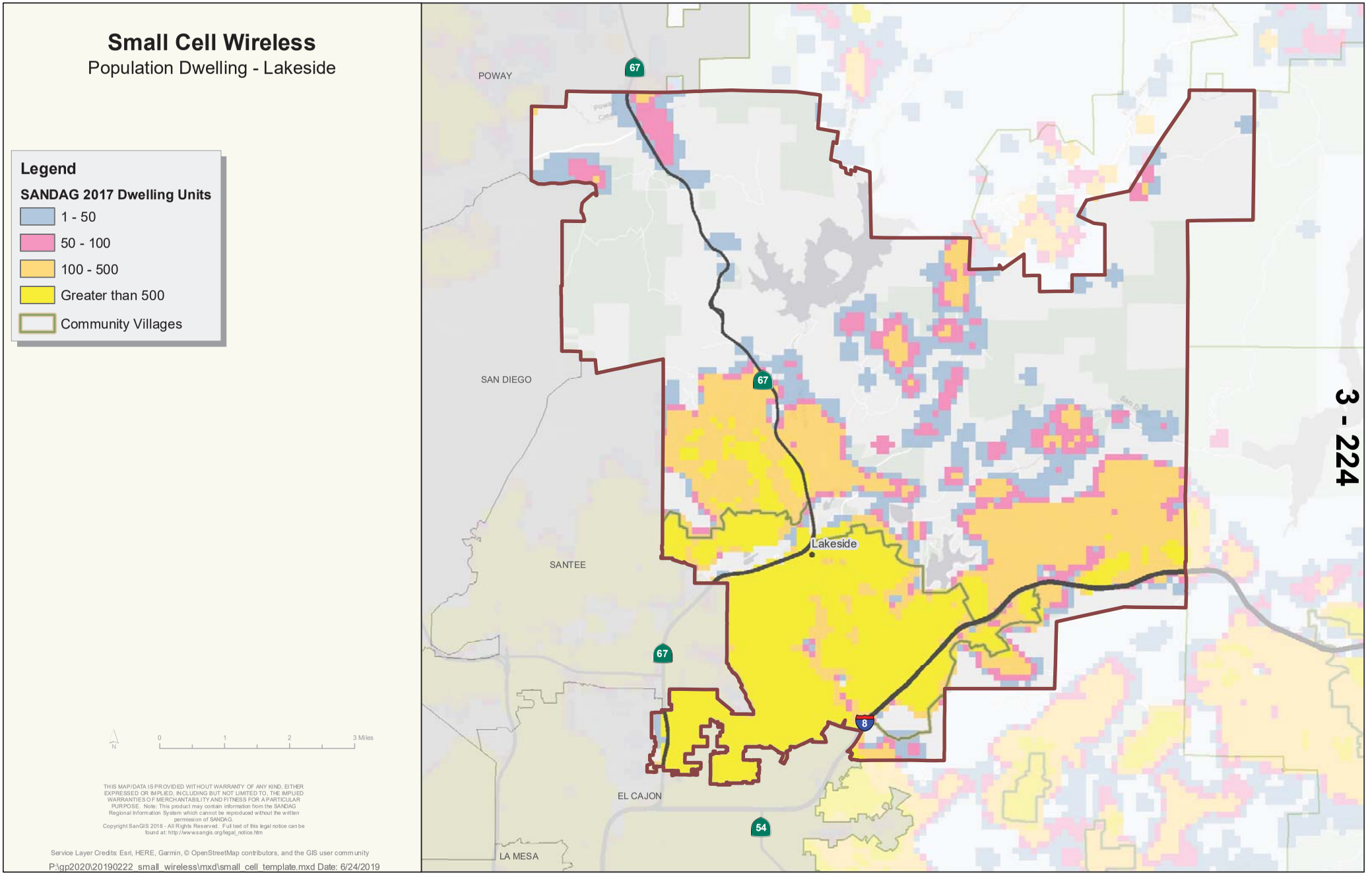
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Small Cell Wireless

Population Dwelling - Lakeside



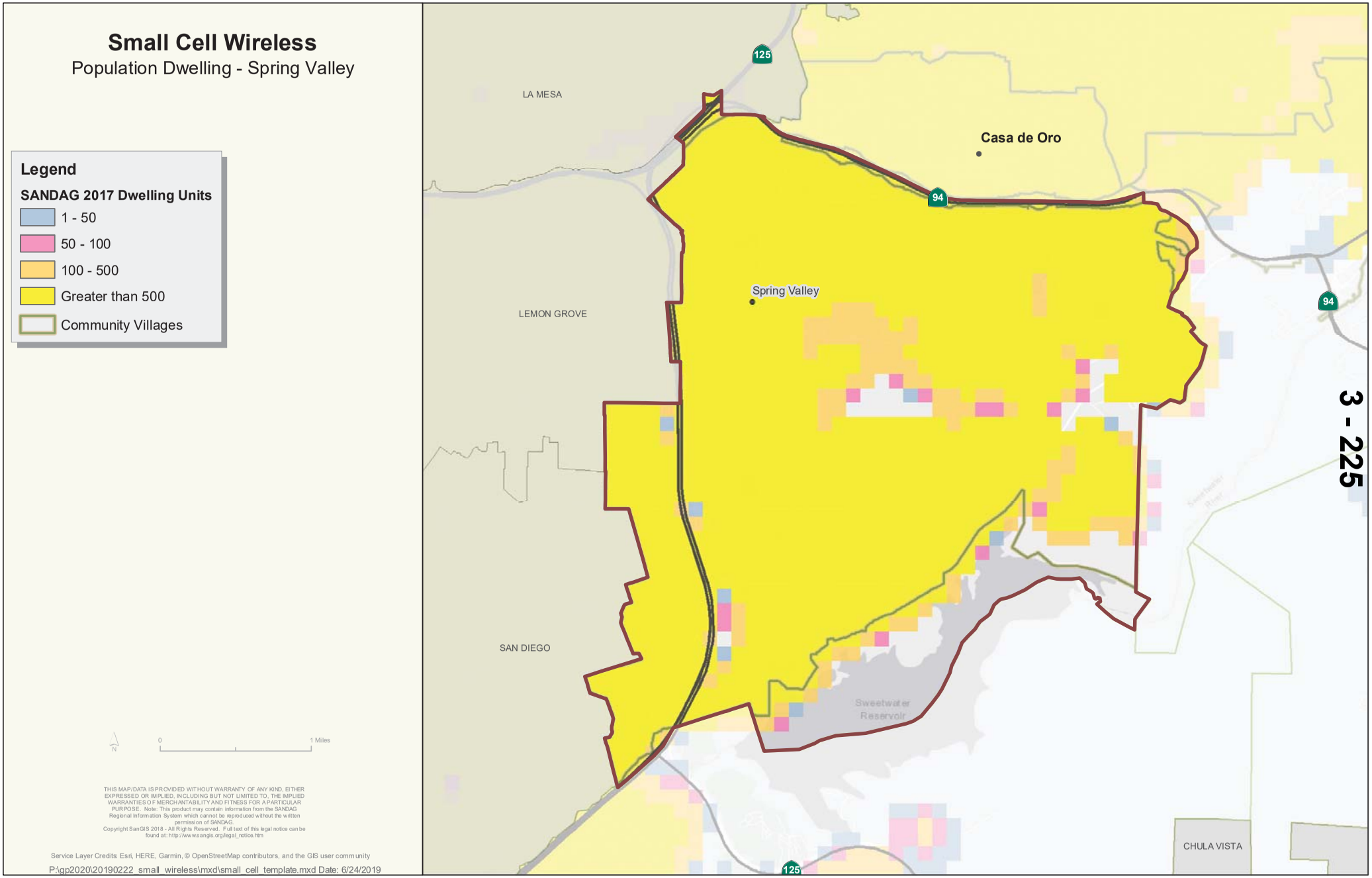
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Small Cell Wireless

Population Dwelling - Spring Valley



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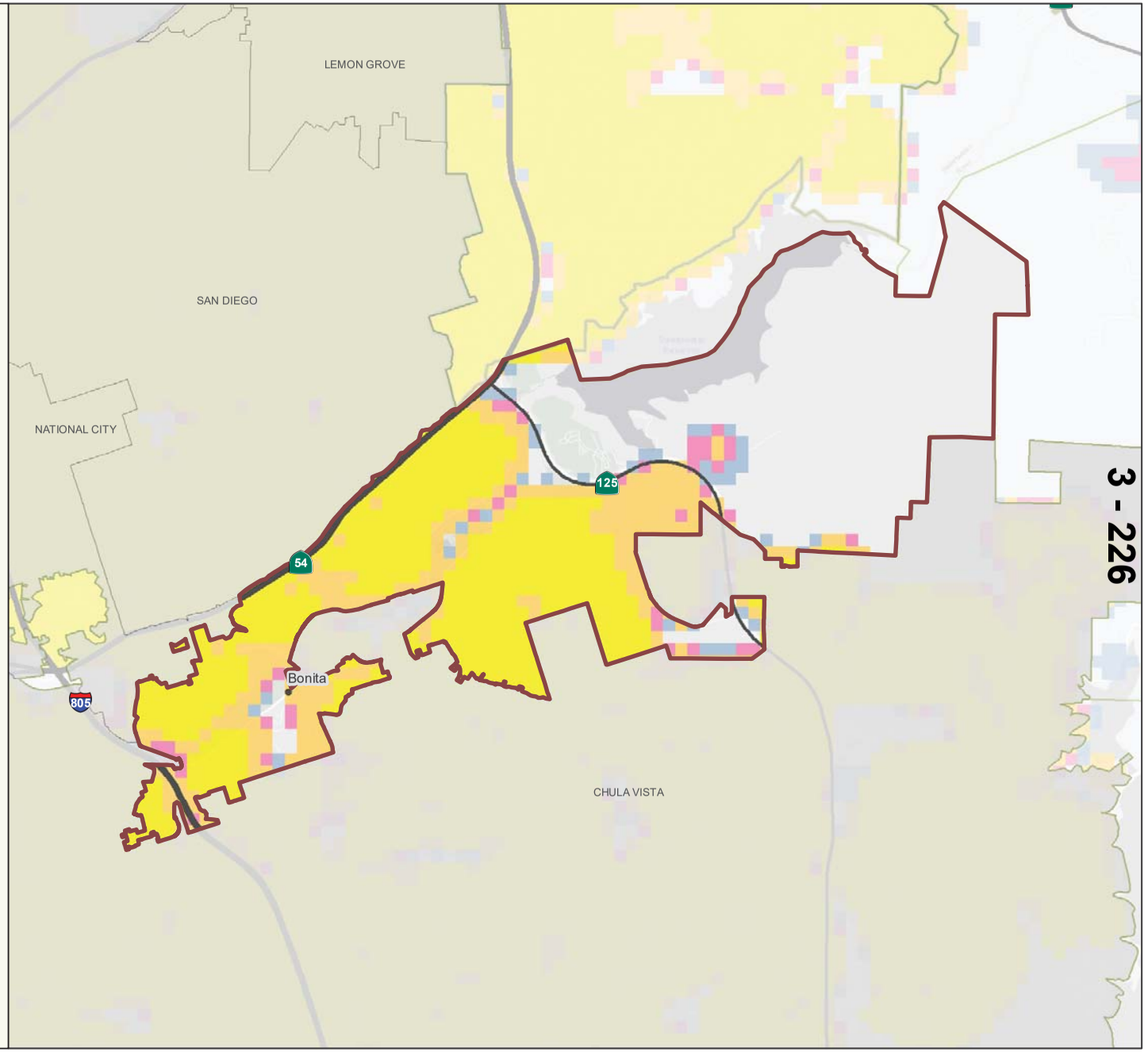
Small Cell Wireless

Population Dwelling - Sweetwater

Legend

SANDAG 2017 Dwelling Units

- 1 - 50
- 50 - 100
- 100 - 500
- Greater than 500
- Community Villages



N

0 1 Miles

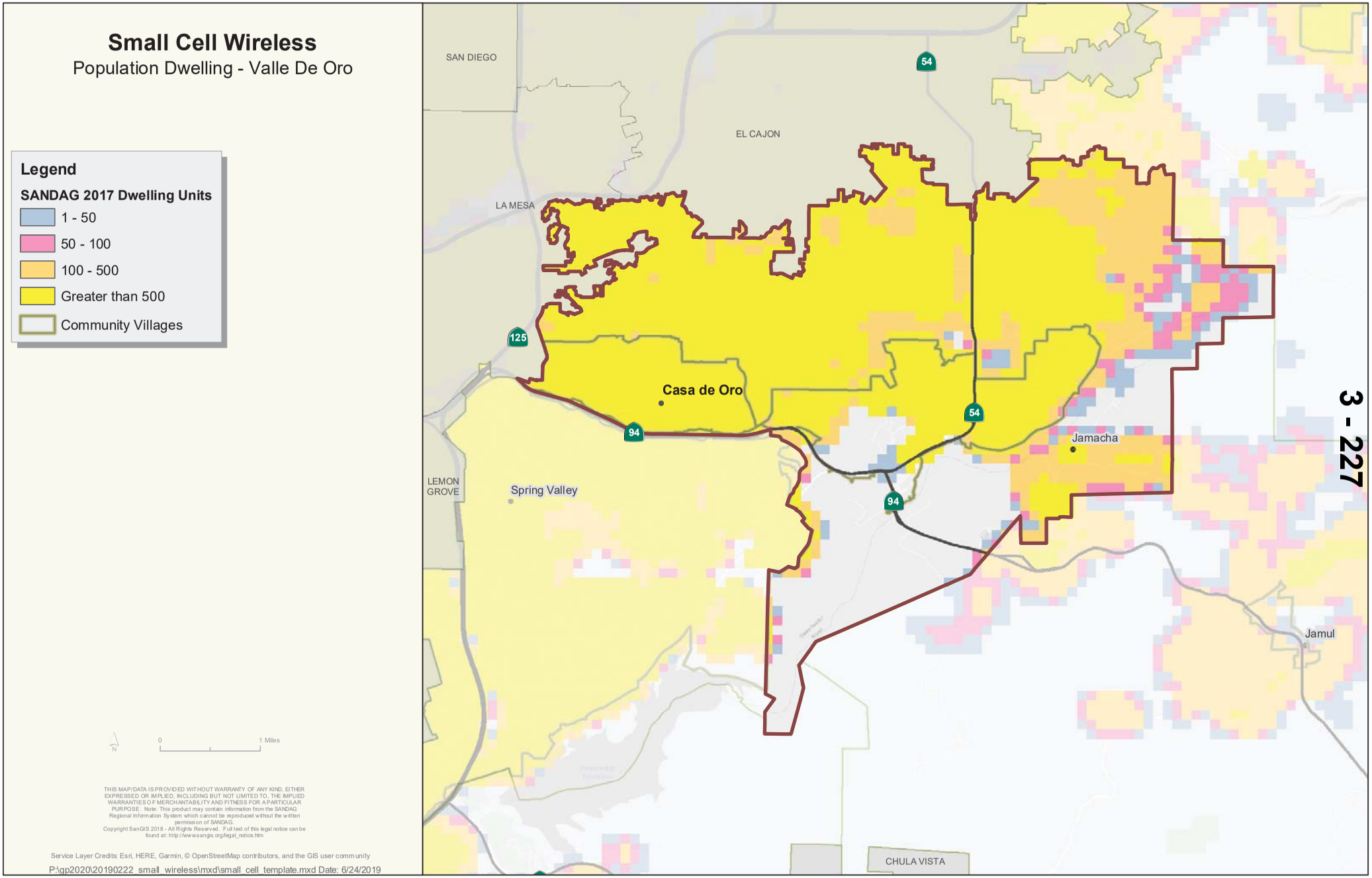
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Small Cell Wireless

Population Dwelling - Valle De Oro



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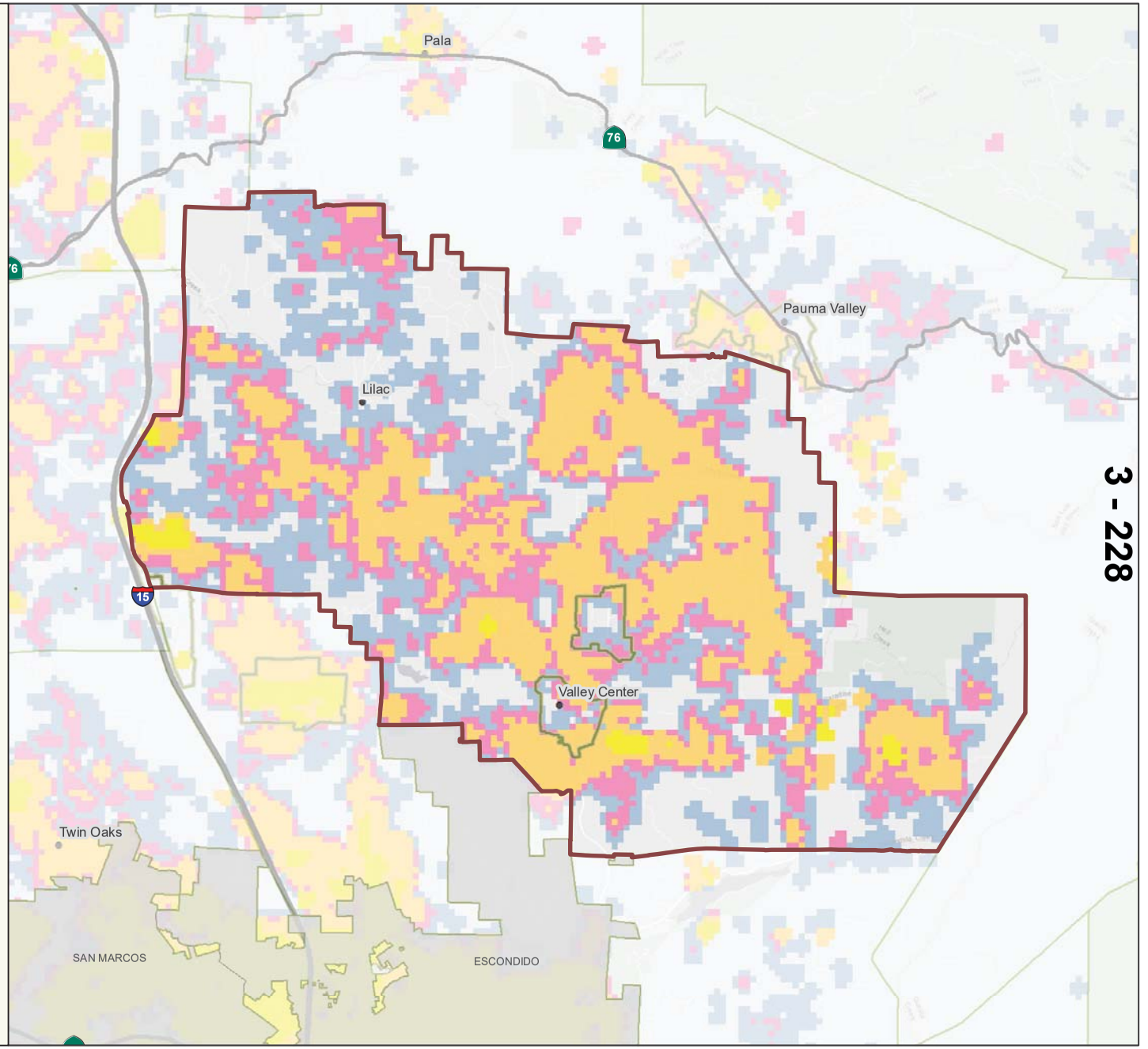
Small Cell Wireless

Population Dwelling - Valley Center

Legend

SANDAG 2017 Dwelling Units

- 1 - 50
- 50 - 100
- 100 - 500
- Greater than 500
- Community Villages



N 0 1 2 3 Miles

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Attachment E – DRAFT Small Cell Wireless Application and Checklist

FOR COUNTY USE ONLY
RECORD ID:
DPW20 _____
RWENCP-_____

APPLICATION FOR SMALL CELL WIRELESS FACILITY PERMIT

GOVERNED BY CHAPTER 6, DIVISION 1
TITLE 7 OF SAN DIEGO COUNTY CODE
COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS
5510 OVERLAND AVENUE, SUITE 110 SAN DIEGO, CA 92123
PHONE (858) 694-2055 • FAX (858) 279-7020
E-mail LDPERMITCOUNTER@SDCOUNTY.CA.GOV

Date_____

THOMAS BROTHERS		
YEAR / EDITION	PAGE	COORD

Permit Owner _____ Telephone # _____
Last Name *First*

Application Contact Name _____ Email Address _____ Telephone #_____

Mailing Address _____
Street *City* *State* *Zip Code*

Carrier / Contact Name _____ Email Address _____ Telephone #_____

Mailing Address _____
Street *City* *State* *Zip Code*

Site Number	GPS (Latitude/Longitude)	Address	Community	County Pole Number	New Pole	Other/ Existing Pole / Structure
1						
2						
3						
4						
5						

Deposit to be paid by: _____
Last Name *First* *Street Address* *City* *State* *Zip Code*

Accounts Receivable Account #: _____

Attachments/Requirements at Application:

- ❒ Financially Responsible Party Agreement
- ❒ Inspection Deposits and Permit Fee
- ❒ Traffic Control Permit Application (if applicable)
- ❒ Environmental Review Questionnaire
- ❒ Facilities Agreement/Letter of Authorization
- ❒ Traffic Control Plan/Regional Standard Drawing (if applicable)
- ❒ Contractor's License and Proof of Liability Insurance
- ❒ Utility Company Connection Approval (if applicable)
- ❒ Location Map and Construction Drawing
- ❒ Justification for Least Preferred Location
- ❒ Public Notice

AGREEMENT

In consideration of the granting of this permit, the applicant agrees:

1. I hereby agree as a condition of the granting of this permit to provide defense and indemnification in accordance with Section 71.103 of the San Diego County Code of Regulatory Ordinances as follows: Permit Owner agrees to indemnify, hold harmless, and defend the County and each of its officers and employees from any liability of responsibility for accident, loss or damage to persons or property resulting from the encroachment's presence within the County right-of-way or any installation, construction, maintenance, state of use, or repair work related to the encroachment done by Permit Owner, or Permit Owner's agents, employees or representatives.
2. To comply with all applicable laws in the establishment, maintenance, and/or removal of the small cell wireless facility. No small cell facility shall interfere with the public use and maintenance of the travelled way, shoulder/parking lane, sidewalk/pathway, and/or traffic signal/street lighting.
3. Small cell wireless facility will obtain electrical service independent of existing electrical service to a County facility.
4. Small cell wireless facility shall satisfy all permit requirements prior to energizing facility.
5. That the Permittee and any other person engaged in any work authorized by this permit shall conform to all due safety precautions for the protection of persons and property.
6. To remove or relocate any small cell wireless facility placed, changed or renewed under the authority of this permit; prior to its expiration or within 24 hours of notification to remove, if the duration is 10 days or less; or within 5 day of notification to remove.
7. After removing, relocation, or abandonment of a small cell wireless facility, permit owner shall be responsible for the restoration or costs to restore the county facility to the equivalent or better condition than it was prior to the date this permit became effective, or prior to the date the small cell wireless facility was first placed, whichever is earlier.
8. Permit owner shall be financially responsible for the annual fee of facilities placed on County owned structures.
9. If a facility is sold, original permittee is responsible for annual fee until transfer to new permittee is approved.

"I declare under penalty of perjury under the laws of the State of California that the statements made herein are true and correct."
Signed_____ _____
Owner *Date*

DRAFT

Site Number	GPS (Latitude/Longitude)	Address	Community	County Pole Number	New Pole	Other/ Existing Pole / Structure
6						
7						
8						
9						
10						

DRAFT

SMALL CELL WIRELESS FACILITY QUESTIONNAIRE
(TO BE FILLED OUT BY APPLICANT)

PERMIT OWNER: _____

PROJECT LOCATION: _____

(Attach APPLICATION FOR SMALL CELL WIRELESS FACILITY PERMIT)

Please Check YES or NO

YES	NO	
☐	☐	The project's wireless facilities are within the County Maintained Public Right-of-way
☐	☐	The project's wireless facilities are on private property within the unincorporated area
☐	☐	The Traffic Control Plans are signed by a Licensed Civil or Traffic Engineer
☐	☐	The local Community Planning Group/Sponsor has been notified of the project
☐	☐	Property owners within 500 feet of the project site have been notified of the project
☐	☐	The project includes use of existing County poles
☐	☐	The project includes use of existing utility poles
☐	☐	The project includes use of existing structures on private property
☐	☐	The project is co-located with existing wireless telecommunication facilities
☐	☐	The project requires excavation in the right-of-way

YES	NO	(FURTHER REVIEW MAY BE REQUIRED FOR A "YES" ANSWER BELOW)
☐	☐	The project will not interfere with public use or maintenance of the roadway
☐	☐	The project will not impede upon the sidewalk, pathway, or trail
☐	☐	The project will not impact a traffic signal or street light pole(s)
☐	☐	The project does not propose grading or fill within a creek or wetland area
☐	☐	The project will not remove vegetation adjacent to a creek or wetland area
☐	☐	The project will not harm or remove healthy, mature or scenic trees
☐	☐	The project is not on a hazardous waste site per Section 65962.5 of Gov. Code
☐	☐	The project is not on property with an easement
☐	☐	The project is not on property with a current use permit
		If no, please provide the use permit project ID: _____
☐	☐	The project will not have significant impact to aesthetics
☐	☐	The project will not have impacts to historic or prehistoric resources
☐	☐	The project will not conflict with the County Noise Ord. No 36.404

The language below shall be placed on the face of the plans and will become a permit condition:

- "To avoid harm to any mature oak trees, the applicant will not place any concrete, fill, or grade within the canopy of any mature oak tree unless an arborist provides direction and certification that such construction would not cause harm to the tree".
- "If existing landscaping is to be removed, the applicant will replace it in kind".
- "Construction Activities will not occur before 7 a.m or after 7 p.m. nor will any construction occur on Sundays or holidays ad defined by the County Noise Ordinance No. 36.404 without first obtaining a noise variance."
- "No grading, fill, or any construction activities are permitted within a creek or wetland area."

I hereby certify the above answers are true and correct to the best of my knowledge:

PERMIT SIGNATURE: _____ **DATE:** _____

DRAFT

Attachment F – Environmental Checklist

County of San Diego

MARK WARDLAW
DIRECTOR
PHONE (858) 694-2962
FAX (858) 694-2555

PLANNING & DEVELOPMENT SERVICES
5510 OVERLAND AVENUE, SUITE 310, SAN DIEGO, CA 92123
www.sdcounty.ca.gov/pds

KATHLEEN A. FLANNERY
ASSISTANT DIRECTOR

July 19, 2019

ENVIRONMENTAL REVIEW UPDATE CHECKLIST FORM FOR PROJECTS WITH PREVIOUSLY APPROVED ENVIRONMENTAL DOCUMENTS

FOR PURPOSES OF CONSIDERATION OF A ZONING ORDINANCE UPDATE FOR SMALL CELL WIRELESS FACILITIES PDS2019-POD-19-003

The California Environmental Quality Act (CEQA) Guidelines Sections 15162 through 15164 set forth the criteria for determining the appropriate additional environmental documentation, if any, to be completed when there is a previously adopted Negative Declaration (ND) or a previously certified environmental impact report (EIR) covering the project for which a subsequent discretionary action is required. This Environmental Review Update Checklist Form has been prepared in accordance with CEQA Guidelines Section 15164(e) to explain the rationale for determining whether any additional environmental documentation is needed for the Zoning Ordinance Update for Small Cell Wireless Facilities.

1. Background on the previously certified EIR:

   A Final Program EIR for the County's General Plan Update, Environmental Review Number 02-ZA-001, State Clearing House Number 2002111067, was certified by the Board of Supervisors on August 3, 2011. The certified Final Program EIR evaluated potentially significant effects for the following environmental areas of potential concern: Aesthetics; Agricultural Resources; Air Quality; Biological Resources; Cultural and Paleontological Resources; Geology and Soils; Hazards and Hazardous Materials; Hydrology and Water Quality; Land Use and Planning; Mineral Resources; Noise; Population and Housing; Public Services; Recreation; Transportation and Traffic; Utilities and Service Systems, and Climate Change.

   Of these environmental subject areas, it was determined that only Geology/Soils and Population/Housing would not involve potentially significant impacts. The certified Final Program EIR found that the project would cause significant effects which could be mitigated to a level below significance for the following areas: Cultural and Paleontological Resources, Land Use and Planning, Recreation, and Global Climate Change. Effects to Aesthetics, Agricultural Resources, Air Quality, Biological Resources, Hazards and Hazardous Materials,

Hydrology and Water Quality, Mineral Resources, Noise, Public Services, Transportation and Traffic, and Utilities and Service Systems remained significant and unavoidable. A Statement of Overriding Considerations was made in approving the General Plan Update. The previously certified Final Program EIR is available at http://www.sandiegocounty.gov/pds/gpupdate/environmental.htmlAn addendum to the Final Program EIR dated January 30, 2019 was accepted by the Board of Supervisors for their approval of project number PDS2017-POD-17-004 and PDS2018-REZ-18-008 on February 27, 2019. These project numbers were associated with Zoning Ordinance Update No. 31 (Update No. 31) and associated County Code amendments. Update No. 31 included revisions to Sections 6980 – 6991 addressing Small Cell Wireless Facilities. The determination was made that there were no changes in the project or in the circumstances under which the project was undertaken that involve significant new environmental impacts which were not considered in the previously certified Program EIR for the General Plan Update. There was no increasing the severity of previously identified significant effects, and no new information of substantial importance had become available since the PEIR was certified.

2. Lead agency name and address:

   County of San Diego, Planning & Development Services
   5510 Overland Avenue, Suite 110
   San Diego, CA 92123

   a. Contact: Tara Lieberman, Environmental/Land Use Planner
   b. Phone number: (858) 495-5466
   c. E-mail: Tara.Lieberman@sdcounty.ca.gov

3. Project applicant's name and address:

   Tara Lieberman
   County of San Diego
   Planning & Development Services
   5510 Overland Ave., Suite 310
   San Diego, CA 92123

4. Does the project for which a subsequent discretionary action is now proposed differ in any way from the previously approved project?

YES	NO
☒	☐

   Zoning Ordinance Update No. 31 approved on February 27, 2019 included 21 total changes: 17 to the Zoning Ordinance, one property zoning change, one change to the County Code of Regulatory Ordinances, and two changes to the County Code of Administrative Ordinances. Included in Update No. 31 was Item No. 15 that described changes to Section 6980 - 6991 of the Zoning Ordinance for Federal Communication Commission Small Cell Wireless Facilities (SCWF). These changes included adding a definition for SCWF and splitting Section 6984 regarding application requirements. Resulting Section 6984.A listed non-discretionary permit requirements for SCWF, and Section 6984 B retained application requirements for discretionary permit requirements for other wireless telecommunications

facilities. Section 6985 concerning application processing was also split – part A for non-discretionary permit processing, and part B for discretionary permit processing.

The Board of Supervisors' approval of Item No. 15 of Update No. 31, included direction for staff to return to the Board within 180 days with additional requirements and options to: reduce cluttering; avoidance of sensitive sites; encourage co-location of SCWF with existing infrastructure; address distance between wireless facilities; placement of utility boxes; preferred locations for residential areas; undergrounding equipment; and additional public noticing.

The current proposed Zoning Ordinance Update for Small Cell Wireless Facilities (ZOU-SCWF) addresses the February 27, 2019 direction given by the Board. ZOU-SCWF proposes minimal changes to Sections 6980 – 6991 (Wireless Telecommunications Facilities) and adds Sections 6992 and 6993 to address SCWF. Changes proposed by ZOU-SCWF include: adding a definition for "Decorative Pole" and revises the definition of SCWF; adds a definition for "Structures," "Travel Way," and "Utility Pole"; removes Sections 6984.A and 6985.A and moves some of this text to new Sections 6992 and 6993; revises the headings for Section 6984.B and 6985.B to drop the letter B and make it clear that these sections would apply to Non-SCWF; added Section 6992 to address SCWF application process including development standards, operational and maintenance standards, and permit application contents; and, added Section 6993 to address SCWF application processing. Please see the revisions proposed by ZOU-SCWF attached.

As stated in the first paragraph of this section above, the Board also requested options regarding development standards and operational and maintenance standards for SCWF. These options are as follows:

- Proposed Section 6992.A.2 contains most-preferred and least-preferred locations for these facilities. The Board may adopt the changes as recommended or adopt revisions to the locational preferences;
- Proposed Section 6992.A.3 states that SCWF shall not be located within 1,000 feet of schools, childcare centers, hospitals, or churches. The Board may adopt the changes as recommended or adopt distance requirements ranging from 300 to 2000 feet;
- Proposed Section 6992.A.4 states that SCWF are also encouraged to locate in the public right-of-way. The Board may adopt this recommended text or adopt additional specificity by including Mobility Element Roads as a most-preferred location and local public roads as a least-preferred location or specify other preferences;
- Proposed Section 6992.A.8 contains configuration preferences for SCWF listing six configuration preferences from most-preferred (co-location with an existing facility) to least-preferred (County-owned traffic signal); excluding placement on a decorative pole; and restricting the number of SCWF to two on existing structures. The Board may adopt this recommended this text or adopt revisions to these configuration preferences including allowing for up to four SCWF to co-locate;
- Proposed Section 6992.A.9 sets visual separation distances for new SCWF structures owned by the same provider to 500 feet in most-preferred locations and 1,000 feet in least-preferred locations. The Board may adopt this text as recommended, adopt these visual separation distances regardless of provider, adopt these visual separation distances for facilities as well as structures, or adopt different visual separation distances;

- Proposed Section 6992.A.14 would require undergrounding of all equipment as technically feasible, except that equipment which must be above ground for proper functioning. The Board may adopt this text as recommended or not adopt requirements regarding undergrounding of SCWF equipment.
- Proposed Section 6992.A.15 would require SCWF to visually and operationally blend into their surroundings by complying with design regulations contained in several subsections of Section 6987. The Board may adopt these requirements as recommended or adopt more specific design requirements.
- Proposed Section 6992.B.2 would require SCWF compliance with the County Noise Ordinance. The Board may adopt this text as recommended or adopt more specific noise requirements;
- Proposed Section 6992.B.3 would require SCWF to minimize or avoid impacts to vegetation. The Board may adopt this text as recommended or not adopt requirements regarding plant disturbance; and
- The Board may or may not adopt or further revise the recommended text of other subsections of Section 6992 and 6993 related to other operational and maintenance standards and application requirements that are not related to environmental issues.

The Zoning Ordinance authorizes the Director of PDS to initiate requests to amend the Zoning Ordinance as necessary to implement and ensure consistency with the General Plan. The proposed revisions are intended to further preserve community character and protect aesthetic quality in accordance with the guidelines and intent of the Telecommunications Act of 1996. Furthermore, the proposed revisions are intended to encourage siting in preferred locations to minimize aesthetic impacts and to minimize the intrusion of wireless facilities into residential areas in accordance with the stated purpose of the Wireless Telecommunications Facilities Zoning Ordinance Code (Section 6982).

The ZOU-SCWF would not cause any changes to the General Plan or involve new significant environmental impacts that were not previously considered in the certified Final Program EIR for the General Plan Update, or cause a substantial increase in the severity of previously identified environmental impacts in the certified Final Program EIR. ZOU-SCWF does not constitute new information of substantial importance that would affect the previous environmental analysis of the certified Final Program EIR.

5. **SUBJECT AREAS DETERMINED TO HAVE NEW OR SUBSTANTIALLY MORE SEVERE SIGNIFICANT ENVIRONMENTAL EFFECTS COMPARED TO THOSE IDENTIFIED IN THE PREVIOUS ND OR EIR**. The subject areas checked below were determined to be new significant environmental effects or to be previously identified effects that have a substantial increase in severity either due to a change in project, change in circumstances or new information of substantial importance, as indicated by the checklist and discussion on the following pages.

☒ NONE

☐ Aesthetics	☐ Agriculture and Forest Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Energy
☐ Geology & Soils	☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials
☐ Hydrology & Water Quality	☐ Land Use & Planning	☐ Mineral Resources
☐ Noise	☐ Population & Housing	☐ Public Services
☐ Recreation	☐ Transportation/Traffic	☐ Utilities & Service Systems
☐ Wildfire	☐ Tribal Cultural Resources	☐ Mandatory Findings of Significance

DETERMINATION:
On the basis of this analysis, Planning & Development Services has determined that:

☒ No substantial changes are proposed in the project and there are no substantial changes in the circumstances under which the project will be undertaken that will require major revisions to the previous EIR due to the involvement of significant new environmental effects or a substantial increase in the severity of previously identified significant effects. Also, there is no "new information of substantial importance" as that term is used in CEQA Guidelines Section 15162(a)(3). Therefore, the previously certified Program EIR (August 2011) and Addendum dated January 30, 2019 can be relied on without modification.

☐ No substantial changes are proposed in the project and there are no substantial changes in the circumstances under which the project will be undertaken that will require major revisions to the previous EIR or ND due to the involvement of significant new environmental effects or a substantial increase in the severity of previously identified significant effects. Also, there is no "new information of substantial importance" as that term is used in CEQA Guidelines Section 15162(a)(3). Therefore, because the project is a residential project in conformance with, and pursuant to, a Specific Plan with an EIR completed after January 1, 1980, the project is exempt pursuant to CEQA Guidelines Section 15182.

☐ Substantial changes are proposed in the project or there are substantial changes in the circumstances under which the project will be undertaken that will require major revisions to the previous ND due to the involvement of significant new environmental effects or a substantial increase in the severity of previously identified significant effects. Or, there is "new information of substantial importance," as that term is used in CEQA Guidelines Section 15162(a)(3). However all new significant environmental effects or a substantial increase in severity of previously identified significant effects are clearly avoidable through the incorporation of mitigation measures agreed to by the project applicant. Therefore, a SUBSEQUENT ND is required.

☐ Substantial changes are proposed in the project or there are substantial changes in the circumstances under which the project will be undertaken that will require major revisions to the previous ND or EIR due to the involvement of significant new environmental effects or a substantial increase in the severity of previously identified significant effects. Or, there is "new information of substantial importance," as that term is used in CEQA Guidelines Section 15162(a)(3). Therefore, a SUBSEQUENT or SUPPLEMENTAL EIR is required.

	July 19, 2019
Signature	Date
Tara Lieberman	**Environmental/Land Use Planner**
Printed Name	Title

INTRODUCTION

CEQA Guidelines Sections 15162 through 15164 set forth the criteria for determining the appropriate additional environmental documentation, if any, to be completed when there is a previously adopted ND or a previously certified EIR for the project.

CEQA Guidelines, Section 15162(a) and 15163 state that when an ND has been adopted or an EIR certified for a project, no Subsequent or Supplemental EIR or Subsequent Negative Declaration shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole public record, one or more of the following:

1. Substantial changes are proposed in the project which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:

    a. The project will have one or more significant effects not discussed in the previous EIR or Negative Declaration; or
    b. Significant effects previously examined will be substantially more severe than shown in the previously adopted Negative Declaration or previously certified EIR; or
    c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
    d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous Negative Declaration or EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

CEQA Guidelines, Section 15164(a) states that an Addendum to a previously certified EIR may be prepared if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a Subsequent or Supplemental EIR have occurred.

CEQA Guidelines, Section 15164(b) states that an Addendum to a previously adopted Negative Declaration may be prepared if only minor technical changes or additions are necessary.
If the factors listed in CEQA Guidelines Sections 15162, 15163, or 15164 have not occurred or are not met, no changes to the previously certified EIR or previously adopted ND are necessary.

The following responses detail any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that may cause one or more effects to environmental resources. The

responses support the "Determination," above, as to the type of environmental documentation required, if any.

ENVIRONMENTAL REVIEW UPDATE CHECKLIST

I. AESTHETICS – Since the previous EIR was certified or previous ND was adopted, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to aesthetic resources including: scenic vistas; scenic resources including, but not limited to, trees, rock outcroppings, or historic buildings within a state scenic highway; existing visual character or quality of the site and its surroundings; or day or nighttime views in the area?

YES	NO
☐	☒

The changes to the Zoning Ordinance proposed by ZOU-SCWF as described under item no. 4 beginning on page 2, would not cause any changes to the General Plan or involve new significant environmental impacts that were not previously considered in the certified Final Program EIR for the General Plan Update from August 2011 or the Addendum to the Final Program EIR dated January 30, 2019. ZOU-SCWF would not cause a substantial increase in the severity of previously identified environmental impacts in the certified Final Program EIR related to aesthetic resources including: scenic vistas; scenic resources including, but not limited to, trees, rock outcroppings, or historic buildings within a state scenic highway; existing visual character or quality of the site and its surroundings; or day or nighttime views in the area. ZOU-SCWF does not constitute new information of substantial importance that would affect the previous environmental analysis of the certified Final Program EIR.

II. AGRICULTURE AND FORESTRY RESOURCES -- Since the previous EIR was certified or previous ND was adopted, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to agriculture or forestry resources including: conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use, conflicts with existing zoning for agricultural use or Williamson Act contract, or conversion of forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

YES	NO
☐	☒

The changes to the Zoning Ordinance proposed by ZOU-SCWF as described under item no. 4 beginning on page 2, would not cause any changes to the General Plan or involve new significant environmental impacts that were not previously considered in the certified Final Program EIR for the General Plan Update from August 2011 or the Addendum to the Final Program EIR dated January 30, 2019. ZOU-SCWF would not cause a substantial increase in the severity of previously identified environmental impacts in the certified Final Program EIR related to agricultural and forestry resources including: conversion of Prime Farmland, Unique Farmland, or

Farmland of Statewide Importance to a non-agricultural use; conflicts with existing zoning for agricultural use or Williamson Act contract; or conversion of forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned for Timberland Production. ZOU-SCWF does not constitute new information of substantial importance that would affect the previous environmental analysis of the certified Final Program EIR.

III. AIR QUALITY -- Since the previous EIR was certified or previous ND was adopted, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to air quality including: conflicts with or obstruction of implementation of the San Diego Regional Air Quality Strategy (RAQS) or applicable portions of the State Implementation Plan (SIP); violation of any air quality standard or substantial contribution to an existing or projected air quality violation; a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard; exposure of sensitive receptors to substantial pollutant concentrations; or creation of objectionable odors affecting a substantial number of people?

YES	NO
☐	☒

The changes to the Zoning Ordinance proposed by ZOU-SCWF as described under item no. 4 beginning on page 2, would not cause any changes to the General Plan or involve new significant environmental impacts that were not previously considered in the certified Final Program EIR for the General Plan Update from August 2011 or the Addendum to the Final Program EIR dated January 30, 2019. ZOU-SCWF would not cause a substantial increase in the severity of previously identified environmental impacts in the certified Final Program EIR related to air quality including: conflicts with or obstruction of implementation of the RAQS or SIP; violation of any air quality standard or substantial contribution to an existing or projected air quality violation; a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment; exposure of sensitive receptors to substantial pollutant concentrations; or creation of objectionable odors affecting a substantial number of people. ZOU-SCWF does not constitute new information of substantial importance that would affect the previous environmental analysis of the certified Final Program EIR.

IV. BIOLOGICAL RESOURCES -- Since the previous EIR was certified or previous ND was adopted, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to biological resources including: adverse effects on any sensitive natural community (including riparian habitat) or species identified as a candidate, sensitive, or special status species in a local or regional plan, policy, or regulation, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service; adverse effects to federally protected wetlands as defined by Section 404 of the Clean Water Act; interference with the movement of any native resident or migratory fish or wildlife species or with wildlife corridors, or impeding the use of native wildlife nursery sites; and/or conflicts with the provisions of any adopted Habitat Conservation Plan, Natural Communities

Conservation Plan, or other approved local, regional or state habitat conservation plan, policies or ordinances?

YES	NO
☐	☒

The changes to the Zoning Ordinance proposed by ZOU-SCWF as described under item no. 4 beginning on page 2, would not cause any changes to the General Plan or involve new significant environmental impacts that were not previously considered in the certified Final Program EIR for the General Plan Update from August 2011 or the Addendum to the Final Program EIR dated January 30, 2019. ZOU-SCWF would not cause a substantial increase in the severity of previously identified environmental impacts in the certified Final Program EIR related to biological resources including: adverse effects on any sensitive natural community (including riparian habitat) or species identified as a candidate, sensitive, or special status species; adverse effects to federally protected wetlands as defined by Section 404 of the Clean Water Act; interference with the movement of any native resident or migratory fish or wildlife species or with wildlife corridors, or impeding the use of native wildlife nursery sites; and/or conflicts with the provisions of any adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional or state habitat conservation plan. ZOU-SCWF does not constitute new information of substantial importance that would affect the previous environmental analysis of the certified Final Program EIR.

V. CULTURAL RESOURCES -- Since the previous EIR was certified or previous ND was adopted, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to cultural resources including: causing a change in the significance of a historical or archaeological resource as defined in State CEQA Guidelines Section 15064.5; destroying a unique paleontological resource or site or unique geologic feature; and/or disturbing any human remains, including those interred outside of formal cemeteries?

YES	NO
☐	☒

The changes to the Zoning Ordinance proposed by ZOU-SCWF as described under item no. 4 beginning on page 2, would not cause any changes to the General Plan or involve new significant environmental impacts that were not previously considered in the certified Final Program EIR for the General Plan Update from August 2011 or the Addendum to the Final Program EIR dated January 30, 2019. ZOU-SCWF would not cause a substantial increase in the severity of previously identified environmental impacts in the certified Final Program EIR related to cultural resources including: causing a change in the significance of a historical or archaeological resource as defined in State CEQA Guidelines Section 15064.5; destroying a unique paleontological resource or site or unique geologic feature; and/or disturbing any human remains, including those interred outside of formal cemeteries. ZOU-SCWF does not constitute new information of substantial importance that would affect the previous environmental analysis of the certified Final Program EIR.

VI. ENERGY – Since the previous EIR was certified or previous ND was adopted, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects regarding energy use including: resulting in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

YES	NO
☐	☒

The changes to the Zoning Ordinance proposed by ZOU-SCWF as described under item no. 4 beginning on page 2, would not cause any changes to the General Plan or involve new significant environmental impacts that were not previously considered in the certified Final Program EIR for the General Plan Update from August 2011 or the Addendum to the Final Program EIR dated January 30, 2019. ZOU-SCWF would not cause a substantial increase in the severity of previously identified environmental impacts in the certified Final Program EIR related to energy use including: resulting in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation; or conflict with or obstruct a state or local plan for renewable energy or energy efficiency. ZOU-SCWF does not constitute new information of substantial importance that would affect the previous environmental analysis of the certified Final Program EIR.

VII. GEOLOGY AND SOILS -- Since the previous EIR was certified or previous ND was adopted, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that result in one or more effects from geology and soils including: exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, seismic-related ground failure, including liquefaction, strong seismic ground shaking, or landslides; result in substantial soil erosion or the loss of topsoil; produce unstable geological conditions that will result in adverse impacts resulting from landslides, lateral spreading, subsidence, liquefaction or collapse; being located on expansive soil creating substantial risks to life or property; and/or having soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

YES	NO
☐	☒

The changes to the Zoning Ordinance proposed by ZOU-SCWF as described under item no. 4 beginning on page 2, would not cause any changes to the General Plan or involve new significant environmental impacts that were not previously considered in the certified Final Program EIR for the General Plan Update from August 2011 or the Addendum to the Final Program EIR dated January 30, 2019. ZOU-SCWF would not cause a substantial increase in the severity of previously identified environmental impacts in the certified Final Program EIR related to geology and soils including: exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, seismic-related ground failure including liquefaction, strong seismic ground shaking, or landslides; result in substantial soil erosion or the loss of topsoil; produce unstable geological conditions that will result in adverse impacts resulting from landslides, lateral spreading, subsidence, liquefaction or collapse;

being located on expansive soil creating substantial risks to life or property; and/or having soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. ZOU-SCWF does not constitute new information of substantial importance that would affect the previous environmental analysis of the certified Final Program EIR.

VIII. GREENHOUSE GAS EMISSIONS -- Since the previous EIR was certified or previous ND was adopted, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that result in one or more effects related to environmental effects associated with greenhouse gas emissions or compliance with applicable plans, policies or regulations adopted for the purpose of reducing greenhouse gas emissions?

YES	NO
☐	☒

The changes to the Zoning Ordinance proposed by ZOU-SCWF as described under item no. 4 beginning on page 2, would not cause any changes to the General Plan or involve new significant environmental impacts that were not previously considered in the certified Final Program EIR for the General Plan Update from August 2011 or the Addendum to the Final Program EIR dated January 30, 2019. ZOU-SCWF would not cause a substantial increase in the severity of previously identified environmental impacts in the certified Final Program EIR related to environmental effects associated with greenhouse gas emissions or compliance with applicable plans, policies or regulations adopted for the purpose of reducing greenhouse gas emissions. ZOU-SCWF does not constitute new information of substantial importance that would affect the previous environmental analysis of the certified Final Program EIR.

IX. HAZARDS AND HAZARDOUS MATERIALS -- Since the previous EIR was certified or previous ND was adopted, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that result in one or more effects from hazards and hazardous materials including: creation of a significant hazard to the public or the environment through the routine transport, storage, use, or disposal of hazardous materials or wastes; creation of a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; production of hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; location on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 creating a hazard to the public or the environment; location within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport; within the vicinity of a private airstrip resulting in a safety hazard for people residing or working in the project area; impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; and/or exposure of people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

YES	NO
☐	☒

The changes to the Zoning Ordinance proposed by ZOU-SCWF as described under item no. 4 beginning on page 2, would not cause any changes to the General Plan or involve new significant environmental impacts that were not previously considered in the certified Final Program EIR for the General Plan Update from August 2011 or the Addendum to the Final Program EIR dated January 30, 2019. ZOU-SCWF would not cause a substantial increase in the severity of previously identified environmental impacts in the certified Final Program EIR related to hazards and hazardous materials including: creation of a significant hazard to the public or the environment through the routine transport, storage, use, or disposal of hazardous materials or wastes; creation of a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; production of hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; location on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 creating a hazard to the public or the environment; location within an airport land use plan or within two miles of a public airport or public use airport; within the vicinity of a private airstrip resulting in a safety hazard for people residing or working in the project area; impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; and/or exposure of people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. ZOU-SCWF does not constitute new information of substantial importance that would affect the previous environmental analysis of the certified Final Program EIR.

X. HYDROLOGY AND WATER QUALITY -- Since the previous EIR was certified or previous ND was adopted, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to hydrology and water quality including: violation of any waste discharge requirements; an increase in any listed pollutant to an impaired water body listed under section 303(d) of the Clean Water Act ; cause or contribute to an exceedance of applicable surface or groundwater receiving water quality objectives or degradation of beneficial uses; substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level; substantially alter the existing drainage pattern of the site or area in a manner which would result in substantial erosion, siltation or flooding on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems; provide substantial additional sources of polluted runoff; place housing or other structures which would impede or redirect flood flows within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, including County Floodplain Maps; expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; and/or inundation by seiche, tsunami, or mudflow?

YES	NO
☐	☒

The changes to the Zoning Ordinance proposed by ZOU-SCWF as described under item no. 4 beginning on page 2, would not cause any changes to the General Plan or involve new significant environmental impacts that were not previously considered in the certified Final Program EIR for the General Plan Update from August 2011 or the Addendum to the Final Program EIR dated

January 30, 2019. ZOU-SCWF would not cause a substantial increase in the severity of previously identified environmental impacts in the certified Final Program EIR related to hydrology and water quality including: violation of any waste discharge requirements; an increase in any listed pollutant to an impaired water body listed under section 303(d) of the Clean Water Act; cause or contribute to an exceedance of applicable surface or groundwater receiving water quality objectives or degradation of beneficial uses; substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level; substantially alter the existing drainage pattern of the site or area in a manner which would result in substantial erosion, siltation or flooding on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems; provide substantial additional sources of polluted runoff; place housing or other structures which would impede or redirect flood flows within a 100-year flood hazard area; expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; and/or inundation by seiche, tsunami, or mudflow. ZOU-SCWF does not constitute new information of substantial importance that would affect the previous environmental analysis of the certified Final Program EIR.

XI. LAND USE AND PLANNING -- Since the previous EIR was certified or previous ND was adopted, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to land use and planning including: physically dividing an established community; and/or conflicts with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect?

YES	NO
☐	☒

The changes to the Zoning Ordinance proposed by ZOU-SCWF as described under item no. 4 beginning on page 2, would not cause any changes to the General Plan or involve new significant environmental impacts that were not previously considered in the certified Final Program EIR for the General Plan Update from August 2011 or the Addendum to the Final Program EIR dated January 30, 2019. ZOU-SCWF would not cause a substantial increase in the severity of previously identified environmental impacts in the certified Final Program EIR related to land use and planning including: physically dividing an established community; and/or conflicts with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. ZOU-SCWF does not constitute new information of substantial importance that would affect the previous environmental analysis of the certified Final Program EIR.

XII. MINERAL RESOURCES -- Since the previous EIR was certified or previous ND was adopted, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to mineral resources including: the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; and/or loss of locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

YES	NO

☐ ☒

The changes to the Zoning Ordinance proposed by ZOU-SCWF as described under item no. 4 beginning on page 2, would not cause any changes to the General Plan or involve new significant environmental impacts that were not previously considered in the certified Final Program EIR for the General Plan Update from August 2011 or the Addendum to the Final Program EIR dated January 30, 2019. ZOU-SCWF would not cause a substantial increase in the severity of previously identified environmental impacts in the certified Final Program EIR related to mineral resources including: the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; and/or loss of locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. ZOU-SCWF does not constitute new information of substantial importance that would affect the previous environmental analysis of the certified Final Program EIR.

XIII. NOISE -- Since the previous EIR was certified or previous ND was adopted, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that result in one or more effects from noise including: exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels; a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project; for projects located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, or for projects within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

YES ☐ NO ☒

The changes to the Zoning Ordinance proposed by ZOU-SCWF as described under item no. 4 beginning on page 2, would not cause any changes to the General Plan or involve new significant environmental impacts that were not previously considered in the certified Final Program EIR for the General Plan Update from August 2011 or the Addendum to the Final Program EIR dated January 30, 2019. ZOU-SCWF would not cause a substantial increase in the severity of previously identified environmental impacts in the certified Final Program EIR related to noise including: exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels; a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; and a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. ZOU-SCWF does not constitute new information of substantial importance that would affect the previous environmental analysis of the certified Final Program EIR.

XIV. POPULATION AND HOUSING -- Since the previous EIR was certified or previous ND was adopted, are there any changes in the project, changes in circumstances under which the project is

undertaken and/or "new information of substantial importance" that result in one or more effects to population and housing including displacing substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere?

YES	NO
☐	☒

The changes to the Zoning Ordinance proposed by ZOU-SCWF as described under item no. 4 beginning on page 2, would not cause any changes to the General Plan or involve new significant environmental impacts that were not previously considered in the certified Final Program EIR for the General Plan Update from August 2011 or the Addendum to the Final Program EIR dated January 30, 2019. ZOU-SCWF would not cause a substantial increase in the severity of previously identified environmental impacts in the certified Final Program EIR related to population and housing including displacing substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere. ZOU-SCWF does not constitute new information of substantial importance that would affect the previous environmental analysis of the certified Final Program EIR.

XV. PUBLIC SERVICES -- Since the previous EIR was certified or previous ND was adopted, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that result in one or more substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: fire protection, police protection, schools, parks, or other public facilities?

YES	NO
☐	☒

The changes to the Zoning Ordinance proposed by ZOU-SCWF as described under item no. 4 beginning on page 2, would not cause any changes to the General Plan or involve new significant environmental impacts that were not previously considered in the certified Final Program EIR for the General Plan Update from August 2011 or the Addendum to the Final Program EIR dated January 30, 2019. ZOU-SCWF would not cause a substantial increase in the severity of previously identified environmental impacts in the certified Final Program EIR related to physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, police protection, schools, parks, or other public facilities. ZOU-SCWF does not constitute new information of substantial importance that would affect the previous environmental analysis of the certified Final Program EIR.

XVI. RECREATION -- Since the previous EIR was certified or previous ND was adopted, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that result in an increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical

deterioration of the facility would occur or be accelerated; or that include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

YES	NO
☐	☒

The changes to the Zoning Ordinance proposed by ZOU-SCWF as described under item no. 4 beginning on page 2, would not cause any changes to the General Plan or involve new significant environmental impacts that were not previously considered in the certified Final Program EIR for the General Plan Update from August 2011 or the Addendum to the Final Program EIR dated January 30, 2019. ZOU-SCWF would not cause a substantial increase in the severity of previously identified environmental impacts in the certified Final Program EIR related to an increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or that include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. ZOU-SCWF does not constitute new information of substantial importance that would affect the previous environmental analysis of the certified Final Program EIR.

XVII. TRANSPORTATION/TRAFFIC -- Since the previous EIR was certified or previous ND was adopted, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause effects to transportation/traffic including: an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system; exceedance, either individually or cumulatively, of a level of service standard established by the county congestion management agency for designated roads or highways; a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks; substantial increase in hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); inadequate emergency access; inadequate parking capacity; and/or a conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

YES	NO
☐	☒

The changes to the Zoning Ordinance proposed by ZOU-SCWF as described under item no. 4 beginning on page 2, would not cause any changes to the General Plan or involve new significant environmental impacts that were not previously considered in the certified Final Program EIR for the General Plan Update from August 2011 or the Addendum to the Final Program EIR dated January 30, 2019. ZOU-SCWF would not cause a substantial increase in the severity of previously identified environmental impacts in the certified Final Program EIR related to transportation/traffic including: an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system; exceedance, either individually or cumulatively, of a level of service standard established by the county congestion management agency for designated roads or highways; a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks; substantial increase in hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm

equipment); inadequate emergency access; inadequate parking capacity; and/or a conflict with adopted policies, plans, or programs supporting alternative transportation. ZOU-SCWF does not constitute new information of substantial importance that would affect the previous environmental analysis of the certified Final Program EIR.

XVIII. TRIBAL CULTURAL RESOURCES -- Since the previous EIR was certified or previous ND was adopted, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to tribal cultural resources including: causing a change in the significance of a tribal cultural resource as defined in Public Resource Code §21074?

YES	NO
☐	☒

Since the previous EIR for The General Plan Update (PDS2002-3910-02ZA001[ER], SCH#2002111067) was certified, there has been a change in circumstances. Assembly Bill 52 (AB-52) became effective on July 1, 2015. AB-52 requires that tribal cultural resources (TCR) be evaluated under CEQA. AB-52 consultation does not apply since the environmental document is not a Negative Declaration, Mitigated Negative Declaration or Environmental Impact Report.

XIX. UTILITIES AND SERVICE SYSTEMS -- Since the previous EIR was certified or previous ND was adopted, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause effects to utilities and service systems including: exceedance of wastewater treatment requirements of the applicable Regional Water Quality Control Board; require or result in the construction of new water or wastewater treatment facilities, new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; require new or expanded entitlements to water supplies or new water resources to serve the project; result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments; be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; and/or noncompliance with federal, state, and local statutes and regulations related to solid waste?

YES	NO
☐	☒

The changes to the Zoning Ordinance proposed by ZOU-SCWF as described under item no. 4 beginning on page 2, would not cause any changes to the General Plan or involve new significant environmental impacts that were not previously considered in the certified Final Program EIR for the General Plan Update from August 2011 or the Addendum to the Final Program EIR dated January 30, 2019. ZOU-SCWF would not cause a substantial increase in the severity of previously identified environmental impacts in the certified Final Program EIR related to utilities and service systems including: exceedance of wastewater treatment requirements of the applicable Regional Water Quality Control Board; require or result in the construction of new water or wastewater treatment facilities, new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; require new or expanded entitlements to water supplies or new water resources to serve the project; result in a determination

by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments; be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; and/or noncompliance with federal, state, and local statutes and regulations related to solid waste. ZOU-SCWF does not constitute new information of substantial importance that would affect the previous environmental analysis of the certified Final Program EIR.

XX. MANDATORY FINDINGS OF SIGNIFICANCE: Since the previous EIR was certified or previous ND was adopted, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that result in any mandatory finding of significance listed below?

Does the project degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?
Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

YES	NO
☐	☒

The changes to the Zoning Ordinance proposed by ZOU-SCWF as described under item no. 4 beginning on page 2, would not cause any changes to the General Plan or involve new significant environmental impacts that were not previously considered in the certified Final Program EIR for the General Plan Update from August 2011 or the Addendum to the Final Program EIR dated January 30, 2019. ZOU-SCWF would not cause a substantial increase in the severity of previously identified environmental impacts in the certified Final Program EIR related to degrading the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threatening to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory; having impacts that are individually limited, but cumulatively considerable; or having environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly. ZOU-SCWF does not constitute new information of substantial importance that would affect the previous environmental analysis of the certified Final Program EIR

ATTACHMENTS

- Zoning Ordinance Update for Small Cell Wireless Facilities (Proposed revisions to Sections 6980 – 6993)

- Addendum to the Previously Certified Program EIR for the County of San Diego General Plan Update, January 30, 2019
- Program EIR for the County of San Diego General Plan Update, August 2011 – On file with Planning & Development Services and online at https://www.sandiegocounty.gov/content/sdc/pds/gpupdate/environmental.html

REFERENCES USED IN THE COMPLETION OF THE ENVIRONMENTAL REVIEW UPDATE CHECKLIST FORM

California Department of Fish and Wildlife. Fish and Wildlife Code, Section 1600 *et. seq.*

California Environmental Quality Act, CEQA Guidelines

California Environmental Quality Act. 2001. California Code of Regulations, Title 14, Chapter 3, Section 15382.

County Code of Regulatory Ordinances, Title 3, Division 5, Chapter 3

County of San Diego, Board of Supervisors, Wednesday February 27, 2019, Minute Order No. 2, Subject: Noticed Public Hearing: Zoning Ordinance Update No. 31 and County Code Amendments (POD 17-004; REZ 18-008)
https://bosagenda.sdcounty.ca.gov/agendadocs/doc?id=0901127e809f36e0

County of San Diego, Board of Supervisors, Wednesday February 27, 2019, Attachment B to the Board Letter – An Ordinance Amending the San Diego County Zoning Ordinance Related to Definitions, Accessory Use Regulations, General Regulations, and Property Zoning (POD 17-004; REZ 18-008) (Strike-out/Underline Copy)
https://bosagenda.sdcounty.ca.gov/agendadocs/doc?id=0901127e809cc0a5

County of San Diego General Plan, 2011.

County of San Diego General Plan Final Program EIR, certified on August 3, 2011.

County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements for Agricultural Resources, approved March 19, 2007.

County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements for Air Quality, approved March 19, 2007

County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements for Biological Resources, approved September 15, 2010

County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements for Cultural Resources: Archaeological and Historical Resources, approved December 5, 2007

County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements for Geologic Hazards, approved July 30, 2007

County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements for Mineral Resources, approved July 30, 2008

County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements for Noise, approved March 19, 2007

County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements for Transportation and Traffic, approved August 24, 2011

County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements for Vectors, approved January 15, 2009

County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements for Visual Resources, approved July 30, 2007

County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements for Wildland Fire and Fire Protection, approved August 31, 2010

County of San Diego Zoning Ordinance

County of San Diego. Resource Protection Ordinance, Article II (16-17). October 10, 1991

Water Quality Control Plan for the San Diego Basin (9), California Regional Water Quality Control Board, San Diego Region

Attachment G – Correspondence

Community Planning and Sponsor Groups

County Staff attended the following Community Planning and Sponsor Groups (CPG/CSG) meetings:

- Crest/Dehesa CPG
- Campo/Lake Morena CPG
- Fallbrook CPG
- Spring Valley CPG
- Sweetwater CPG
- Jamul/Dulzura CPG

County Staff are scheduled to attend the Bonsall CSG and are available to attend other CPG/CSG meetings, if requested. Please note that minutes for each of the CPG meetings not currently available in this Planning Commission report will be made available at a future time.

Four CPG/CSGs also provided formal comment letters or their minutes for the record:

- Descanso
- Fallbrook
- Campo/Lake Morena
- Valley Center
- San Dieguito

From: Lieberman, Tara
To: Shute, Madeline; Neal, Stephanie
Subject: FW: SCW Facility Maps
Date: Wednesday, June 26, 2019 11:17:22 AM

-----Original Message-----
From: BillieJo Jannen <jannen@slashmail.org>
Sent: Tuesday, June 25, 2019 3:42 PM
To: Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>
Subject: Re: SCW Facility Maps

Thank you! I hope we weren't too question-greedy on this. We're getting a lot of pressure from within the community.

On 2019-06-25 14:48, Lieberman, Tara wrote:

> Hello Billie Jo,
>
> Thank you for having Stephanie and me at your CPG Meeting yesterday.
> We appreciate the opportunity to explain and clarify the draft Small
> Cell Wireless Ordinance.
>
> Attached are PDFs of the maps that we referenced yesterday. These are
> also available on the project website here:
>
> * Location Preferences
>
https://www.sandiegocounty.gov/content/dam/sdc/pds/advance/SmallCellWirelessFacilities/Small_Cell_Location_Preferences.pdf

> [1]
>
> * Avoidance Areas
> https://www.sandiegocounty.gov/content/dam/sdc/pds/advance/SmallCellWirelessFacilities/Small_Cell_Avoidance_Areas.pdf
> [2]
>
> PLEASE PROVIDE COMMENTS ON THE DRAFT ZONING ORDINANCE UPDATE TO SMALL
> CELL WIRELESS FACILITIES BY JUNE 30, 2019*
>
> Sent comments via e-mail to: PDS.ADVANCEPLANNING@SDCOUNTY.CA.GOV
>
> Send comments via mail to: Attn: Tara Lieberman
> 5510 Overland
> Avenue, Suite 310
> San Diego, CA
> 92123 [MS-O-650]
>
> * Comments submitted by June 30, 2019 will be reviewed and any
> applicable changes will be incorporated into the revised draft
> ordinance and Planning Commission Report, which will be posted in
> advance of the hearing.
>
> Comments submitted after June 30, 2019 will be incorporated into the
> public disclosure file submitted directly to the Planning
> Commissioners.
>
> The Planning Commission hearing will take place on JULY 19, 2019.

>
> Please let me know if you have any additional questions.
>
> Best,
>
> TARA LIEBERMAN
>
> Land Use / Environmental Planner, Advance Planning
>
> County of San Diego | Planning & Development Services
>
> 5510 Overland Ave., Suite 310, San Diego, CA, 92123
>
> Tara.Lieberman@sdcounty.ca.gov
>
> (858) 495-5466
>
>
>
> Links:
> ------
> [1]
>
https://www.sandiegocounty.gov/content/dam/sdc/pds/advance/SmallCellWirelessFacilities/Small_Cell_Location_Preferences.pdf

> [2]
> https://www.sandiegocounty.gov/content/dam/sdc/pds/advance/SmallCellWirelessFacilities/Small_Cell_Avoidance_Areas.pdf

From: Neal, Stephanie
To: Easland, Camila
Subject: FW: Comments: Small Cell Wireless Facilities Ordinance
Date: Monday, July 01, 2019 1:31:02 PM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: The D Dills <theddills@att.net>
Sent: Monday, July 01, 2019 12:45 PM
To: Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>
Cc: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>; Don Willis <DWillis4930@sbcglobal.net>; Joe Zagara <joe@zagaramanagement.com>; 'Laurel Lemarie' <whyfret1@mac.com>; Nelson Beth <beth.nelson@me.com>; Niko Christenfeld <nchristenfeld@ucsd.edu>; Philip Fisch <philipfisch@gmail.com>; Rachel Laffer <rachellaffer@hotmail.com>; Steve Thomas <st@valueselling.com>; Susan Williams <swilliams0303@icloud.com>; Tim Parillo <tparillo@gmail.com>
Subject: Comments: Small Cell Wireless Facilities Ordinance

July 1, 2019

San Dieguito Planning Group

P.O. Box 2789
Rancho Santa Fe, CA, 92067

Tara Lieberman
Land Use/Environmental Planner, Advance Planning
5510 Overland Avenue, Suite 310
San Diego California 92123

Re: Small Cell Wireless Facilities Ordinance

Dear Ms. Lieberman,

Below is the list of DRAFT San Dieguito Planning Group comments to the proposed zoning ordinance for Small Cell Wireless Facilities. At the next San Dieguito Planning Group meeting scheduled for 7:00pm, Thursday, July 11, 2019, we will formally vote to support this list of comments for submittal to the SD County PDS Advanced Planning.

Please note that since the new ordinance allows ministerial approval without comment by planning groups and/or homeowners' associations, and favors the right of way for installation, the community character of San Dieguito area may be adversely effected in places where the right of ways are used as trail easements for equestrian and hiking, as well as impacting the aesthetics of the San Dieguito area.

1. Make pre-application site visit a requirement.
   Rationale: This will give participating parties an opportunity to ask all the appropriate questions and recommend any changes because of varying conditions.

2. Support Structure Removal and Performance Bond: Prior to the issuance of a building permit, the Applicant and the owner of record of any proposed new Tower or support structure shall, at its sole cost and expense, file with the Administrator a bond or other form of security that is acceptable to the County as to the type of security and the form and manner of execution, in an amount of at least $75,000 for a Tower or $20,000 for a support structure that is not a Tower, and with such sureties as are deemed adequate by the County to assure the faithful performance of the terms and conditions of this Ordinance and conditions of any Special Use Permit issued pursuant to this Ordinance. The full amount of the bond or security shall remain in full force and effect throughout the term of the Special Use Permit/ use agreement and/or until any necessary site restoration is completed to restore the site to a condition comparable to that which existed prior to the issuance of the original Special Use Permit.

3. The applicant will be limited to submitting only five (5) cell sites per application, with only one application per 48 hr. period.
   Rationale: Applicant may overwhelm staff with applications, making it difficult to review within the application processing time limit.

4. The applicant will pick up building permits within 30 days of approval. Applicant will begin construction within 90 days of approval, else begin application process again or justify why extension needed.
   Rationale: Prevents "warehousing" of permits by applicant, i.e., leaving many approved applications at County for pick up until convenient for applicant; this is inconvenient for staff. If construction doesn't begin within the allotted timeframe, applicant must submit new application or justify why they deserve extension.

5. The applicant will provide a letter verifying that the site/ applicant/carrier will comply with all Federal, State, County, and municipality rules and regulations. All FCC, FAA, OSHA and other federal regulations that require training, equipment, specific program development, caused by the installation of any portion of a Wireless facility, to include Small Cell installations, will be at the applicant's expense. The applicant will fund an

Escrow account, held by the county, for the duration of the Permit/ agreement, funding for at least one half the total program's projected costs will be required as part of the application. The escrow account will be reviewed on a scheduled basis. The account will not go below a minimum of thirty-six (36) months of potential funding. The applicant/carrier will be contacted to fund the Escrow account for any and all the appropriate programs.

6. The applicant will provide one hundred (100) foot setback and Fall Zone in all areas and use Class 3 poles.
   Rationale: If hit by a motorist, a lighter weight pole may fall onto road or structure, etc.

7. No site will be closer that one hundred (100) feet to any occupied residence/ structure. Additional set back rules for residential areas of a minimum of five hundred (500) feet apply.

8. Height limitation is 35', one provider per site.
   Rationale: Providers are allowed to increase height by 10% per year; lower height will have less impact on Community Character.

9. Cell sites not to be located in "sensitive areas."
   Rationale: There are areas within the County that are considered "Sensitive Areas." These areas can be quite extensive in certain locations. The "Pre Application" meeting will mitigate/ eliminate the potential site placement in these areas.

10. Sound mitigation is required on equipment.
    Rationale: Reduce the impact to Comment Character by insulating the equipment boxes. Equipment may be seen, not heard.

11. Applicants must work within County-approved Wireless Facilities Master Plans, where applicable.
    Rationale: Some areas have Wireless Facilities Master Plans that specify a range of locations from Most Desirable to Least Desirable; provide aesthetic requirements, etc.

12. Where operating facilities in the County right of ways, facilities shall not impede use of public and private equestrian trails, including location of underground equipment.
    Rationale: Facilities and equipment in trails may make the trails hazardous to use, thereby invalidating the County or local insurance on those trails.

13. Encourage under-grounding of equipment where feasible, after staff and planning group and/or HOA review.

Rationale: Aesthetic elements will be improved if equipment boxes are underground. However, vaults in equestrian trails may make the trails unsafe to use and may invalidate the County or local insurance on those trails.

14. If fiber-optic cable is available, applicant is required to use it or justify why not feasible. Rationale: Fewer nodes may be needed if fiber-optic cable is used, reducing impact on Community Character.

Thank you for the opportunity for the San Dieguito Planning Group to comment on the proposed Small Cell Wireless Facilities Ordinance.

Sincerely,
Douglas Dill
Chair
San Dieguito Planning Group


Virus-free. www.avast.com

From: Lieberman, Tara
To: Neal, Stephanie; Shute, Madeline
Subject: FW: Fallbrook Community Planning Group Preliminary June Minutes
Date: Thursday, June 20, 2019 8:01:06 AM
Attachments: 5G Roll-out_004.jpg
5G Roll-out_000.jpg
5G Roll-out_001.jpg
5G Roll-out_003.jpg
5G Roll-out_002.jpg
SLR Dulin aerial.pdf
Rancho Monserate Golf Cart.jpg
fcpg preliminary minutes June 2019 meeting.doc

Tara Lieberman
Land Use / Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave., Suite 310, San Diego, CA, 92123
Tara.Lieberman@sdcounty.ca.gov
(858) 495-5466

From: Jerry Kalman <jerrylkalman@gmail.com>
Sent: Thursday, June 20, 2019 7:55 AM
To: Jim Russell <russellfarms@roadrunner.com>; Jack Wood <kkeyman@sbcglobal.net>; Roy Moosa<roymoosa@att.net>; Eileen Delaney <eileendelaneyMail@gmail.com>; Donna Gebhart <d_gebhart@pacbell.net>; Lee DeMeo <lee@leejdemeo.com>; Karel Hanson <karelhanson@gmail.com>; Jim Loge <jim.logefcpg@gmail.com>; Mark Mervich <mm@memervich.com>; Guy Howard <guyrussel.howard@yahoo.com>; Bill O'Connor <waoconnor@aol.com>; Victoria Stover <victoriastover72@gmail.com>; Kim Murphy <kim@fallbrookdreamhomes.com>; Lucette Moramarco <villageeditor@reedermedia.com>; LilaMacDonald <lila.macdonald@fallbrookchamberofcommerce.org>; LUEG, CommunityGroups <CommunityGroups.LUEG@sdcounty.ca.gov>; marcus.lubitsch@sdcounty.ca.gov; Lieberman, Tara<Tara.Lieberman@sdcounty.ca.gov>; Lardy, Eric <Eric.Lardy@sdcounty.ca.gov>; Efird, Robert <Robert.Efird@sdcounty.ca.gov>; Richardson, Shaina <Shaina.Richardson@sdcounty.ca.gov>; Mills,Benjamin <Benjamin.Mills@sdcounty.ca.gov>; Steve Brown <seb1944@aol.com>; Steven Strapac
<sstrapac@rainbowmwd.com>; Pisano, Nina <Nina.Pisano@sdcounty.ca.gov>; Oberbauer, Sean <Sean.Oberbauer@sdcounty.ca.gov>; sandfirereptile@gmail.com
Subject: Fallbrook Community Planning Group Preliminary June Minutes

Attached please find a draft copy of the minutes for the 17 June 2019 Fallbrook Community PlanningGroup. Also attached are seven documents in it that are incorporated by separate references in theminutes. The document scans include copies of the background information supplied by the Countyon the 5G roll-out and two pictures that pertain to the County's parks project adjacent to the Rancho

Monserate 55+ development at the eastern end of the community.

FALLBROOK COMMUNITY PLANNING GROUP
And
DESIGN REVIEW BOARD
Regular Meeting
Monday 17 Jun 2019, 7:00 P.M., Live Oak School, 1978 Reche Road, Fallbrook
Preliminary Minutes

The June meeting of the Fallbrook Community Planning Group was called to order at 7:00PM by Vice Chairman Jack Wood.

Twelve (12) members were present: Vice-Chairs Jack Wood and Roy Moosa, Jerry Kalman, Eileen Delaney, Donna Gebhart, Lee DeMeo, Karel Hanson, Steve Brown, Mark Mervich, William O'Connor, Victoria Stover and Kim Murphy. Chairman Jim Russell, Guy Howard and Jim Loge were excused.

1. Open Forum. Opportunity for members of the public to speak to the Planning Group on any subject matter within the Group's jurisdiction but not on today's agenda. Three-minute limitation. Non-discussion & Non-voting item.

   Kate Schwartz, a neighbor of the previously approved battery facility for SDG&E near East Mission Rd., inquired about the removal of landscaping elements that exposed her property to the open field and projected battery. She was informed that the Planning Group stipulated to the applicant that the bordering fences be landscaped. She will be given a copy of the minutes with that stipulation in them.

   Bob Gonsett, a resident on Alta Vista and operator of a communications service company, is concerned about the effects of pre-emptive SDG&E elective power outages on his business, which studies communications signaling for various agencies. He wants adequate warnings by the power company. He also advised that the power company will be conducting open houses to discuss the parameters of the outages at Valley Center Middle School on Tuesday, June 25, from 5PM to 7:30PM. Valley Center Middle School is at 28102 Lake Wohford Rd. Further information is available from a Mr. Fox at the power company (858-636-1932).

   Donna Gebhart reported that Al Gebhart met with Supervisor Desmond's staff and requested some form of honoring local volunteers and non-profit organizations for accomplishing community benefits and as a means to encourage volunteer efforts. She noted in particular the efforts of the Live Oak Park Coalition and the Santa Margarita Open Space Preserve activities on behalf of Fallbrook.

   A community resident noted the increasing presence of homeless people in Fallbrook and wanted to know if there is anything being done to address the problem. Eileen Delaney reported that one of the Revitalization projects for Supervisor Desmond is the homeless problem.

Jack Wood reported on the condition of Planning Group Chair Jim Russell, noting that it looks as though it might be at least another six weeks while Mr. Russell is in the care of the downtown VA Hospital. An additional round of surgery is scheduled for Tuesday, June 18.

2. Approval of the minutes for the meeting of 20 May 2019. Voting Item.

   Victoria Stover moved to approve the minutes and the motion passed unanimously.

3. On February 27, 2019, the Board of Supervisors (Board) directed staff to return to the Board in 180 days with additional requirements for small cell wireless facilities for reducing cluttering, avoidance of sensitive sites, co-location, distance between poles, placement of utility boxes, residential preferred locations, undergrounding of equipment, and additional public noticing. This project proposes changes to the Zoning Ordinance to address the Board direction and to comply with the September 2018 FCC Order. County planners: Tara Lieberman (858) 495-5466 tara.lieberman@sdcounty.ca.gov, Eric Lardy eric.lardy@sdcounty.ca.gov Public Facilities Committee, Community input, Voting item, (5/30)

   Both Eric Lardy and Tara Lieberman made a presentation on behalf of the County regarding the roll-out of 5G cellular technology. Of concern to those in attendance was the process and impact of the new small-cell technology on unincorporated/rural areas, in particular Fallbrook; in addition many residents and Planning Group members were annoyed that there is little future input allowed those in this unincorporated area to monitor and affect where and how the small-cell towers are deployed here. Because much of the decision-making has been mandated in a September 2018 ruling by the Federal Communications Commission, which set the ground rules for deployment, implementation is narrowly prescribed for County decision making.

   Eric Lardy (EL) noted that the Board of Supervisors and Planning Commission are taking input from residents and Planning Groups in July and August, but they do not like the mandated process any more than residents do.

   Tara Leiberman (TL) distributed a set of documents that explain many aspects of the program to deploy 5G antennas and supporting equipment. She noted that there are eight primary considerations (included in the document attached to these minutes) governing County decision-making on antenna/pole/support equipment placement. Some 50 jurisdictions throughout the County are affected by the 5G roll-out and most of the new sites are either colocations with existing 4G poles or will be along public rights of way. Further, she indicated that the roll-out will avoid certain sites, such as schools, by using a thousand-foot buffer around those area. The sites selected are categorized as "most" and "least" preferred, and the latter largely governs locations in unincorporated areas.

   They both noted that results from the County input sessions such as this meeting will go to the Planning Commission in July. EL said the governing documents will be revised in

keeping with decisions made after all community input received. Those findings will be communicated to Planning/Sponsor Groups throughout the county.

Community and Planning Group questions/concerns revolved around three broad issues: the need for those in attendance to get more information about the features and structure of the system; how 5G will be deployed in Fallbrook, and the request by the Planning Group on behalf of residents for more local input on particular site installations where they threaten the rural character of a neighborhood and/or the rights of individual property-owners.

Among questions asked were:

- **Will the County take into account historic sites in unincorporated areas? TL – The County will be looking into it county-wide.**
- **What consideration is given to possible health-effects of the new technology? EL – The County is prohibited by Federal law from considerations of those issues.**
- **Will there be consequences of colocation of 5G and 4G technologies in the same area? EL — None because 5G supplements 4G.**
- **How many antennas are envisioned for each pole? TL—Two at the moment, but they could accommodate one or more up to four on a pole, but the limitation is intentional by the County.**
- **What kind of support equipment is anticipated for each site? 4G sites require a large perimeter, generators, etc. Will that be required for 5G? EL/TL – The support equipment will be mostly underground, however, what will be on the pole, other than the antenna, will be small. EL—There are no generators for 5G sites.**
- **Why 5G? EL— It is faster than 4G, the roll-out satisfies a mandate by the FCC and it accommodates more users.**
- **Will 5G have potential adverse effects on public service communications facilities, particularly for emergency responders? EL—There has been no specific analysis on radio operations, to which Steve Abbott requested that the County make sure 5G does not interfere with fire department communications.**
- **Will adding more antennas and equipment increase fire hazards in the area? TL – The County will make sure carriers comply with standard County fire policies. She noted much of the equipment will be underground. EL—The County will not approve installations if they do not meet County standards. TL—The sites will also adhere to CPUC standards.**
- **Are the poles wood or metal? TL – Wood, primarily; and they will be no higher than 50 feet.**
- **How close will the poles be to residences? EL – They will abide by in-place setback requirements.**
- **Why aren't new installs to be treated as Major Use Permits like 4G sites? TL—The FCC has taken that option away from the County, which means they are to be treated as ministerial permits, granted by the County.**
- **Who is funding the process of 5G roll-out? EL – Carriers will pay for the sites and inspections. He said the FCC limits fees jurisdictions can charge for oversight.**

- **Are there any demonstration or completed sites that can be seen in the county? EL – There are none in unincorporated areas but there are a couple in the Kerney Mesa area.**
- **Will Planning Groups be informed when the roll-out comes to an unincorporated area? TL – Yes, when one is proposed for an area the County and Planning Group will be notified by the carriers.**
- **Once the Planning Group is notified what power will they have? EL – No discretionary power, informational notice only.**
- **Will the staff work with local resources (Bob Gonsett in particular) "to develop suitable language to be incorporated into the zoning code draft to bring necessary protections" from 5G interference with existing communications facilities (emergency and others)? EL – The issue has not come up but he will look into it.**
- **Why the thousand foot distance from schools, etc.? EL – Aesthetics.**
- **Why co-locate 4g/5G on a pole? TL – Limit the number of poles. Each antenna when there are two 5Gs on a pole will be ten feet apart. TL noted that the County website will have more information about the locations and colocation of 4G/5G poles.**
- **How many carriers per pole? EL – Two.**
- **The FCC requires blending for the 5G gear. How will that be achieved? TL – The equipment will be painted to blend in with the area.**
- **How many new poles are envisioned for the County? EL –About 1600. The emphasis is on using existing facilities (It was noted by Jack Wood that there are 6500 poles in County rights of way).**
- **Which rights of way will the poles go on? EL – Public rights of way.**
- **What about site (pole) security? EL – There will be no fence around the poles to limit public access. He does not see there will be a need like there is for 4G sites.**
- **How fast will the roll-out occur? EL – No idea.**
- **How will Planning Groups be notified of a deployment in our areas? EL – Carrier applications will trigger the notification process, and it will occur five at a time (not by the hundreds or singly).**
- **So the carrier will show the application to planning and sponsor groups but not for approval? EL – Yes. Time frames for roll-out prohibit involving planning/sponsor groups from participating in the approval process.**
- **Are these groups prohibited from participating in future roll-out decisions for 5G? EL – Yes. FYI, the Board is protesting this aspect to the FCC.**
- **Aren't we (Planning/Sponsor Groups) losing our democratic rights to make these decisions? EL – These operations are granted to the County and becoming ministerial decisions per the FCC.**

Roy Moosa moved to request the County to create a set of guidelines to make 5G roll-out in unincorporated areas tolerable to those communities affected by installation of new poles, especially in areas where there are no existing poles because of underground utilities. Further, he moved that there be a mechanism at the County that if there is no pole in an unincorporated area that the Planning/Sponsor Group be allowed to comment on its placement.

The motion was approved with Bill O'Connor against, all others in favor.

4. Rainbow Municipal Water District discussion of property at 3707 Old Highway 395, Fallbrook, Steve Strapac, District Engineer, 760-728-1178, ext. 199, sstrapac@rainbowmwd.com. Held over from the 20 May FCPG meeting. Community Input. Non-voting item. (5/1)

   Mr. Strapac was not at the meeting. Steve Brown moved to continue consideration to a future meeting. The motion was approved unanimously.

5. Presentation by Nina Pisano, 858 966 1353, Cell 858 699 8090, nina.pisano@sdcounty.ca.gov, San Diego County Parks and Recreation Department, on the San Luis Rey River Park. Community input. Non-voting item.

   Marcus Lubitsch, a manager with SD County Parks and Recreation Department, made the presentation on behalf of his department, noting that the County has acquired two parcels of land for parks at the east and west end of the Ocean Breezes project (between Old 395, Camino del Rey, Lilac Rd and CA 76). The two projects are nominally known as Downs and Dulin, the latter of concern to the Planning Group because it and the neighboring 55+ development is in the Planning Group's jurisdiction. The entire eight-mile/1600-acre stretch of the San Luis Rey River Park straddles both Fallbrook and Bonsall south of CA 76, and County general funds are being used to acquire land and develop park areas, outside of CSA 81 funding sources, within the project. It is referenced in the County's 2005 Master Plan, and will contain 20 miles of public accessible trails. The 45-acre Dulin Rd. parcel is slated to have multi-use sports fields, portions of the trail-network and restrooms (because the Downs parcel is outside of Fallbrook Community Planning Group jurisdiction, the remainder of the minutes will focus on the Dulin portion).

   Mr. Lubitsch noted that the County is working with residents of the Rancho Monserate development where Dulin Rd. enters the park area on access issues. He said that there was an outreach meeting with about 140 residents of the complex and there will be a traffic study to determine number of projected visits and the correct way to control traffic flow through the development and out into the park area. He said the County is committed to working with the development's Homeowners' Association on those access/traffic patterns; and that there would be another community meeting after further inputs are received from those studies. He indicated that the extension of Dulin Rd. into the park area would be narrow and two-lane. Roy Moosa asked if that was the only access into the park and was told that it is. He asked if the Planning Group would see future designs and traffic patterns and was assured that, yes, the County would share those with the Planning Group.

   It was noted by Donna Gebhart that residents of Rancho Monserate are concerned about safety for dog walkers and golf carts that use Dulin Rd., which Mr. Lubitsch said is the main access off 395 into the projected park. She also asked if the County would install a button or other mechanism that would allow riders in golf carts to signal for a stop in traffic, to which Marcus Lubitsch replied they would. She posted a picture of the

interface area where the existing portion of Dulin Rd. meets the park boundary (which is attached to these minutes) and was assured that that portion of Dulin Rd. will be two-lane only and striped. It was noted that in the future Dulin Rd. will continue all the way to Camino del Rey at the western end of the Ocean Breezes development, but that those residents will only have emergency use of the western portion of Dulin Rd. There was concern voiced about the flow of traffic through Rancho Monserate when events take place at the Dulin Park, but he expected there would be coordination with the sheriff's department when there would be events or expected surges of traffic.

When asked about the timeframe for starting the Dulin end of the project, he hoped there would be designs by next spring. Funding is expected in the next fiscal year.

Marcus Lubitsch also reported on other Parks and Recreation projects in Fallbrook, stating that work continues on improving both the Clemmens Lane (new restoroom and converting the volleyball courts to a soccer field) and Don Dussault (new picnic and exercise areas and an improved playground) projects. In addition, he reported that the Board of Supervisors has allocated $1 million for the acquisition of land for a skate park in Fallbrook, and that the County is fielding owner-offers to sell land for the project. He hoped to resolve the appropriate parcel selection in the coming months. He also indicated the County is working with the developers of Horse Creek Ranch on the creation of committed public parks in those developments east of I-15, and he expected the transfer of those lands to the County in the fall.

6. Presentation by Roger Boddaert, 760 728 4287 on naming a tree/flower to represent Fallbrook. Community input. Non-voting item (5/16)

   Mr. Bodaert was not present and Lee DeMeo moved to continue the project to a future meeting. The motion was approved unanimously.

7. ZAP 19-002 Request for a Minor Use Permit for a herpetoculture for the rearing and housing of live harmless reptiles for the pet industry and small animal rearing as food for the reptiles, Live harmless reptiles are turtles, tortoises, lizards, snakes and amphibians. No animals are venomous or poisonous. The project is located on the 2.06 acres at 3130 Sumac Lane, APN 125-03-26, Owner and contact person Rommie Huntington, 760-695-7535, sandfirereptile@gmail.com. County planner Sean Oberbauer, 857-495-5747, sean.oberbauer@sdcounty.ca.gov. Land Use and Design Review Committees. Community input. Voting item. (5/30)

   Both the Land Use and Design Review committees recommended continuing the project. Eileen Delaney moved to continue the project to a future meeting once discrepancies noted by the County are resolved. The motion was approved unanimously.

The meeting was adjourned at 8:52

Respectfully Submitted, Jerry Kalman, Secretary

DESCANSO COMMUNTIY PLANNING GROUP
Post Office Box 38, Descanso CA 91916-0038

GROUP MEMBERS

Seat 1:
Kerry Forrest, Chair

Seat 2:
Jo Ellen Quinting

Seat 3:
David Mellner

Seat 4:
John Elliott

Seat 5:
Mark Gassert

Seat 6:
William Bauer

Seat 7:
Terry Gibson

Planning and Development Services

Attn: Tara Lieberman

5510 Overland Ave, Suit 310

San Diego CA, 92123

Via Email: PDS.AdvancePlanning@sdcounty.ca.gov

COMMENTS ON THE DRAFT ORDINACE UPDATE FOR

SMALL CELL WIRELESS FACILITIES

Dear Tara Lieberman,

The Descanso Community Planning Group (DCPG) has received and reviewed the Draft Zoning Ordinance Update for Small Cell Wireless Facilities (SCWF) and its supporting documents. The DCPG wishes to make it known that our rural community strongly supports the development of wireless and optical fiber infrastructure in our community. The move towards less restrictions in the installation of SCWF is supported by the members of the DCPG.

Currently Descanso residents have very few choices for reliable cellular service as well as high speed affordable internet and wifi options. The Land Line service (hardwire communication lines) provided by ATT are being phased out as quickly as the company can reduce the number of existing users. The loss of this service is leaving some residents with no form of communication service in areas where cellular service is not available at this time, leaving the residents highly vulnerable in cases of health or other emergencies.

Comments of the DCPG are as follows:

1. Attachment X, 6992 Small Cell Wireless Facility Application Requirements A.3 Include *Libraries* in the 1,000 foot setback.

2. Attachment X, 6992 Small Cell Wireless Facility Application Requirements. The DCPG wishes to know, why the set back is being applied? If indeed there is no health risk to children caused by the electromagnetic waves that SCWF emit why is there a 1000 foot set back being applied.

The document labeled " Options for Small Cell Wireless Facilities" Topic area " Distance from schools, childcare centers, hospitals or churches (6992.A.3) FCC Order indicates this is allowed based on Aesthetics not health. If this is the case and the electromagnetic waves are not a risk then why the setback? However if PDS is applying this set back to reflect possible yet undetermined health risks to children should this not also be reflected where children and their parents reside?

3. The DCPG supports the new proposed development standards for SCWF within the document. San Diego Gas & Electric is currently installing excessively large new metal power poles on very big support structures throughout the community despite our objections during the EIR review process. These poles will undoubtedly serve as future locations for the SCWF as outlined in this revision. Community character and aesthetics have been excessively damaged by SDGE Power Pole replacement and the DCPG wishes that these additional SCWF structures do not further degrade our community character, aesthetics and views.
4. Is the connection to fiber optic cable as shown in " Configuration Preferences" required in the installation of SCWF's? If so will these cables be installed within our community and will they be underground or attached to more poles or existing poles causing more damage to our communities character, aesthetics and views?
5. The Descanso Community Plan was crafted in the 2020 Master Plan update. At that time the Wireless Community Master Plan was included in the Community Plan. This plan is very out of date and does not reflect current practices and technology. The DCPG will be pursuing an update of the Wireless Community Plan for our geographic area. We request PDS assistance in this endeavor.

Thank you for the opportunity to review and comment on the proposed Zoning Ordinance Update for Small Cell Wireless Facilities. Please take our comments seriously and help us protect what is left of our community character, post SDGE Power Pole installations.

Regards,

Kerry Forrest, Chair
DCPG

Cc: DCPG File

Valley Center Community Planning Group

PO Box 127 Valley Center CA 92082

Oliver Smith
(seat 11)
Chair
oliver.smith@philips.com

Jeana Boulos
(seat 9)
Vice Chair
jeana.h.boulos@gmail.com

Kathy MacKenzie
(seat 15)
Secretary
valleycenterplans@gmail.com

Susan Fajardo
(seat 14)
susanfarr@vcweb.org

James Garritson
(seat 12)
vc@garritson.com

Dina Gharmalkar
(seat 4)
dinargharmalkar@yahoo.com

Delores Chavez Harmes
(seat 5)
dee@cfovc.com

Steve Hutchison
(seat 2)
hutchisonsm@gmail.com

Susan Janisch
(seat 3)
socalji@cts.com

LaVonne Norwood
(seat 10)
lavonne@armorfabrication.com

William Del Pilar
(seat 1)
Wdelpilar-vccpg@outlook.com

Kevin Smith
(seat 7)
sjkls8@gmail.com

Seat 8 (Open)

Renee Wolf
(seat 6)
renee@essentialaddictions.com

Lisa Adams
(seat 13)
lhadamsca@yahoo.com

June 29, 2019

To: Tara Lieberman
San Diego County Planning and Development Services
5510 Overland Avenue, Suite 310
San Diego, CA 92123 [MS O-650]

RE: Comments on draft Zoning Ordinance Update for Small Cell Wireless Facilities

Tara:

The Valley Center Community Planning Group has reviewed the draft Zoning Ordinance Update for Small Cell Wireless (SCW) Facilities and would like to make the following recommendations:

1) There is a concern that the discretionary process currently in use for full size cell towers will change to a non-discretionary process. We make it a point to carefully evaluate cell tower applications and talk to the neighbors involved to get their input. Is this opportunity to evaluate and make recommendations to the county for SCW facilities in Valley Center going away?

2) Does VCCPG have the opportunity to make comments on the preferences and avoidance areas for SCW facilities noted on the county provided maps?

3) Who makes the decision as to whether there is an aesthetics issue with a SCW facility location? Will VCCPG be given an opportunity to evaluate and make recommendations for this issue?

4) Will VCCPG be notified of proposed SCW facilities prior to their being approved?

5) Please advise where in the ordinance any undergrounding of equipment is required to have any public and/or private lands used repaired to at least the previously existing conditions.

Because of the public notice time frame of May 30, 2019 to June 30, 2019 and the only VCCPG meeting in that time frame being May 10, 2019, there was insufficient time for VCCPG to corporately review and make a formal recommendation. Therefore, I am submitting these recommendations in advance of a VCCPG recommendation vote to be held at our regular meeting on July 8, 2019. If the recommendation of the group is not to support this letter, I will be in contact.

If you have further questions, I can be reached at (760) 703-1455.

Respectfully,

Oliver Smith

Oliver Smith, Chair
Valley Center Community Planning Group

From: Lieberman, Tara
To: Neal, Stephanie; Shute, Madeline
Subject: FW: Sweetwater CPG
Date: Wednesday, June 05, 2019 3:20:54 PM
Importance: High

From: Stephen <stephen.stonehouse@cox.net>
Sent: Wednesday, June 05, 2019 10:09 AM
To: Lardy, Eric <Eric.Lardy@sdcounty.ca.gov>; Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>
Cc: Anderson, Marshall <Marshall.Anderson@sdcounty.ca.gov>
Subject: Sweetwater CPG
Importance: High

Thank you all for presenting at last night's meeting. As discussed, we would appreciate the County sending someone to present information on "Granny Flats" at a future meeting.
Also, please include in Staff's presentation to the Board, our objection to not having the CPG's included in the process of these cell towers being built in OUR communities. To my view, this goes against what our Planning Group's purpose is.
Thank you,
Stephen Stonehouse
Co-chair, Sweetwater CPG

Organizations

Rancho Santa Fe Association
Post Office Box A • Rancho Santa Fe, CA 92067
(858) 756-1174 • FAX (858) 756-9814
rsfassociation.org

June 28, 2019

Attn: Tara Lieberman
5510 Overland Avenue, Suite 310
San Diego, CA 92123 [MS O-650]

Subject: Rancho Santa Fe Association Comments on the Draft Zoning Ordinance Update for Small Cell Wireless Facilities

Dear Ms. Lieberman,

Please accept this letter as our formal comments concerning the ordinance update for small cell wireless facilities.

As stated in the San Dieguito Community Plan (Amended June 18, 2014, page 2), "...the historically established estate residential community of Rancho Santa Fe is now the focus of the Plan Area." This plan also explains that the Covenant was...

> "...designated as a California State Landmark in 1982 in recognition of its history and unique development pattern. Subsequently, in 2004, the State of California amended the existing landmark status to include a Cultural Landscape Amendment, which recognizes the history and evolution of the six different Component Landscapes that comprise the Covenant."

These important recognitions, in combination with the Rancho Santa Fe Association (RSFA) Wireless Master Plan and rural riding and hiking trails, indicate the importance of preserving the community and cultural landscape characteristics. Therefore, we take the update of the ordinance for small cell wireless facilities seriously, as their design, location, and proliferation will affect the historical and cultural heritage of the 6,700 acres of the Covenant area, as well as all of the San Dieguito Planning Area. We believe we must have fair opportunities to review wireless facility plan proposals and provide recommendations.

However, our review of the proposed revisions and discussion with you have us concerned. While we understand that the County government is responding to changes resulting from the **FCC's 18-133 Declaratory Ruling and Third Report and Order** of September 2018, the County's proposed implementation of those changes is to the disadvantage of local communities who cherish community character and heritage. Given the severely short time for review of the proposed revisions it is difficult to understand and address every item that could affect this community, but we will focus on those we consider the most pressing.

1. Section 6993 SCW APPLICATION PROCESSING

COMMENT: This section is one of this community's greatest concerns. It revises what was a discretionary review process to a ministerial process, and completely eliminates the role of the Association being a recommending body to the County for small cell wireless applications within

our Covenant boundaries. With discretionary review the Rancho Santa Fe Association and the San Dieguito Planning Group could carefully consider design review and community impact, and submit recommendations to County staff and the Planning Commission for approval, conditional approval, or denial. However, the proposed ordinance eliminates the discretionary review for small cell wireless facilities. We understand that the County will still require the applicant provide the Association and the Planning Group with a notice of the application, but this simply amounts to a courtesy notice – allowing written comments to be submitted but without the importance of recommendations associated with discretionary review. It is critical that the Rancho Santa Fe Association be involved in proposals that lie within the Covenant boundaries, and that all planning groups be included in the formal review of proposals within their respective areas.

To remedy this, we propose that the County find a way in which community input is invited from the earliest stage. Two points concerning this:

1) The County informed Association staff that FCC prohibits mandatory pre-application meetings. However, we are not confident in that statement. FCC 18-133 par. 145 and elsewhere do not appear to overtly prohibit mandatory pre-application meetings. In fact, § 1.6003 (e) seems to allow for it:

> FCC 18-133 § 1.6003 (e) Shot clock date. The shot clock date for a siting application is determined by counting forward, beginning on the day after the date when the application was submitted, by the number of calendar days of the shot clock period identified pursuant to paragraph (b) of this section and ***including any pre-application period asserted by the siting authority***;

If this is indeed the case, pre-application meeting should be mandatory for proposals that affect communities with aesthetic concerns and historical and cultural landscape designations. The FCC clearly recognizes the importance of pre-application meetings:

> FCC 18-133 par. 146 That said, we encourage voluntary pre-application discussions, which may well be useful to both parties. The record indicates that such meetings can clarify key aspects of the application review process, especially with respect to large submissions or applicants new to a particular locality's processes, and may speed the pace of review. To the extent that an applicant voluntarily engages in a pre-application review to smooth the way for its filing, the shot clock will begin when an application is filed, presumably after the pre-application review has concluded.

Simply put, the County should require pre-application meetings. If this is found to be prohibited by the FCC rulings, then the County should strongly encourage applicants to attend a pre-application meeting, and invite affected community members to participate in the discussion, express concerns, explain community characteristics of which the applicant may be unaware, be allowed to make suggestions during the meeting, and to submit formal recommendations after the meeting.

2) If mandatory pre-application meetings are found to be prohibited, and an applicant refuses to attend a pre-application meeting, the County must consider alternative means in which a community will be invited to participate in the review and recommendation of small cell wireless facility proposals. These alternatives to a pre-application meeting are to be incorporated into the revised ordinance as it continues to the next and future stages of review by the Planning Commission and Board of Supervisors.

To reiterate the purpose of these two recommendations, we note again that the change from a discretionary to a ministerial process has reduced noticing time, processing time, and the opportunities to provide recommendations through the County review and permitting process. By inviting recognized community entities to participate in pre-application meetings or in an alternative venue, opportunities will be rightfully provided for input from communities who are most directly impacted. One may ask: What is the point of allowing aesthetic concerns to be a part of wireless regulations, as the FCC does (FCC 18-133, pars. 12 and 84-91) if the affected community is not even provided the opportunity to actively participate in application review and offer meaningful input?

2. Section 6992 SMALL CELL WIRELESS FACILITY APPLICATION REQUIREMENTS

A. Development Standards

13. Height

i. 1. The combined height of the structure and SCW shall not exceed 50 feet (including antennas).

COMMENT: This exceeds the height for poles as specified in our Wireless Facility Master Plan, which states:

Section 3.1: "Height shall be limited to 35 feet unless it is demonstrated that a co-location on a higher structure will eliminate other facilities among carriers."

Section 3.2: "Antennas may be mounted on top of a pole-type structure (e.g., traffic signal pole, power/telephone pole, etc.) if the pole is 30 feet or less in height. The antennas should be vertically aligned with the pole and shall not exceed 20% of the height of the pole or 35 feet whichever is smaller."

Because the RSFA Wireless Facilities Master Plan has been approved, we expect these existing standards to be respected and grandfathered.

3. Small Cell Location Preferences, and Small Cell Avoidance Areas

As part of the County notice for public comment of the Draft Zoning Ordinance Update for Small Cell Wireless Facilities, Planning & Development Services posted two sets of maps online. One set was for preferred locations to site small cell facilities, and the other set of maps was for the areas to avoid. Please note that the Covenant area is not depicted in either set of maps. Rather, the RSFA Wireless Facilities Master Plan contains information for a range of preference areas, from most preferred to least preferred. We anticipate these area preferences will continue to be respected.

4. Equestrian Trails and ROW Issues

No wireless facility installation, including associated equipment, should be placed within an existing or proposed equestrian trail with the Rancho Santa Fe Covenant. The purpose of this is to ensure rider and horse safety on the trail, and to prevent diverting the horse off the trail onto a roadway. Please note this needs to be addressed on the *Small Cell Wireless Facility Questionnaire*, which has a question dealing with impeding pathways and trails. Site visits by

Association staff and experienced equestrians who live in the community impacted by a proposed site location and site design should be invited to assess conditions.

5. Small Cell Wireless Facility Questionnaire

One item in that checklist is "The local Community Planning Group/Sponsor has been notified of the project," and is to be addressed by the applicant. We are simply inserting a reminder here that the Rancho Santa Fe Association is indeed a "Sponsor" and as such, will receive proper notification of small cell site proposals.

6. Batch Processing of Applications and Successive Applications

As shown on the *Application for Small Cell Wireless Facility Permit*, up to 10 cell sites can be listed on a single permit application. Based on Association staff discussion with you, County PDS is considering whether to change this. Due to the complexities of reviewing batched applications for appropriate site selection and site design in communities with varied topography, woods, historical designation, and cultural landscape recognition, we request that fewer than 10 be processed. Five, as shown on the first page of the application, is much more reasonable.

This also brings up the question of how soon an applicant should be allowed to submit another application. There must be a reasonable amount of time between applications in order to allow community review. Whether the appropriate period between successive applications is, say two weeks or a month, it is difficult to specify at this time. Certainly, however, allowing an applicant to submit successive applications within a matter of days is inexcusable as it burdens a community's review with unreasonable demands.

Thank you for your review of our comments and requests. We will be following closely the statements of other communities, and discussions and recommendations by County staff and the Planning Commission as this revision goes through the process up to the Board of Supervisors.

Sincerely,

Christy Whalen
Manager
Rancho Santa Fe Association

RANCHO DEL MAR ASSOCIATION
2683 Via de la Valle G-327
Del Mar, CA 92014
ranchodelmarhoa1@gmail.com

July 1, 2019

Via Email-

Ms. Tara Lieberman
Ms. Stephanie Neal
Land Use / Environmental Planner, Advance Planning
5510 Overland Avenue, Suite 310 / Mail Stop – 0650
San Diego California 92123

Re: Small Cell Wireless Facilities Ordinance

Dear Ms. Lieberman, Ms. Neal and San Diego County Supervisors:

I write on behalf of the Rancho Del Mar Association, a community of 120 homes located to the North of the Polo/Soccer fields and the Horse Park, above Via de la Valle. Our community is very rural in nature and consists of homes on large lots (1 acre plus), some of which are zoned for use as equestrian properties. All our residents are property owners in the unincorporated area of San Diego County.

Our community is deeply concerned about the new FCC directive making it possible for the telecommunications industry to place cell antennas anywhere in the County right-of-way. We write on behalf of our all our 120 homeowners to voice our strong objection to the FCC's takeover of our County's land as well as due process with respect to our rights. We ask you, as zoning planners and Supervisors, to please consider our following position and requests into the strongest possible terms. All our homeowners paid considerable sums for the purchase and improvement of our properties. We chose to live in a more rural community, which has no power or telephone poles; no sidewalks and we value the rural, uncluttered nature of our community. All our utilities are underground and there are no poles of any kind in our community. We are concerned about the substantial change in character that placing numerous poles necessary to install 5G in and around our community would bring and we are very concerned about property devaluation with cell towers in residential areas, as most of us have the majority of our net worth in our homes. Because 5G is an unproven technology, please take steps to investigate, and protect these sensitive areas:

1. Cell towers are not to be in "Sensitive" areas. 1000-foot setbacks from sensitive areas as defined by the County are necessary.
2. 500-foot set back from residential properties. This is in addition to using priority placement scheme.
3. Pre-application site inspection & survey should be required for each site application. There must be an on-site inspection prior to approval of the site by the County or agent representing the

County. If any application conflicts with a sensitive area, site inspector may suggest the tower relocate so coverage is the same but sensitive area is protected.

4. All setbacks must meet fall zone length or zoning setback requirements, whichever is greater. Fall zone length must exceed the height of the tower by 20% because the height of the tower may be increased by 10% the next year.

5. Require mandatory, live RF compliance testing immediately after tower is installed and "on demand testing" by a third party paid for by carrier.

6. Height restriction 30 feet; next year [under 1903] tower may go 10% higher. Towers or poles of this height would substantially and materially change the entire nature of our community, ***which has no existing poles or towers of any kind since all our utilities are underground and poles and towers would have to be installed materially marring the beauty of our community forever.***

7. Payment, performance and removal bond must be fully paid up front.

8. Require a Certificate of Completion.

9. No cutting of trees to facilitate line of sight or initial placement. The general ambience of the community is to be preserved. Our community is heavily treed and if trees could be cut it would materially depreciate both the value of our homes and the native beauty of our community.

10. Under-grounding of equipment where possible; discretion may be used by staff. ***All our existing utilities are underground and any new utilities, such as 5G equipment, similarly should be underground.***

11. The ordinance shall comply with the Americans with Disabilities Act (this includes but is not limited to safe access to private, commercial and public buildings).

12. Prior notice should be required for the occupants and owners of all residences, apartments, and businesses within 1000 feet of the proposed location.

Please consider adopting all the sections and verbiage of the "City of Hercules CA Wireless Telecommunications Facilities Ordinance (Chapter 16)" at this link, weaving in specific SD County requirements as deemed appropriate. We suggest this because the Hercules Ordinance provides enforceable bullet-proof directions on the administration of Telecom applications and siting of antennas with no wiggle room for the Telcoms who want to install this equipment. Let's not forget the companies who will want to install this equipment want to do so solely for profit and irrespective of the impact this equipment will have on the day to day lives of the people who live near the poles, towers and equipment they want to install.
https://www.codepublishing.com/CA/Hercules/#!/Hercules10/Hercules1016.html#10-16

Finally, 5G telecom is just the current, latest, newest technology in a long line of inevitable technological advancements. There will, no doubt, be future technologies available to the transmission of phone and data information. We have had no complaints in our community regarding cell service. It would be a shame to mar the beauty of our community with poles and cell towers, along with the inevitable equipment to service them, just for the accommodation of the "latest and greatest" technological advancement. 5G service is just that- the ***fifth*** iteration of an evolving and changing technology. Before poles, towers and equipment are to be located within our pristine community, care and thought must be given to ensure that when 6G, or 7G or 20G technology is developed, we are not left with a scarred and blighted landscape in a rural community where all of our homeowners have moved to enjoy the beauty and nature of our tranquil, unspoiled neighborhood.

Respectfully submitted,

The Trustees of Rancho del Mar Association

By: _____
Erwin J. Shustak, Vice-President

From: Neal, Stephanie
To: Shute, Madeline
Cc: Lieberman, Tara
Subject: FW: We do not know the risks - we NEED your leadership
Date: Friday, June 28, 2019 2:03:34 PM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Sent: Friday, June 28, 2019 1:58 PM
To: Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>; Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: FW: We do not know the risks - we NEED your leadership

Camila Easland
Junior Land Use / Environmental Planner, Advance Planning
Planning & Development Services
5510 Overland Ave., Suite 310, San Diego, CA, 92123
camila.easland@sdcounty.ca.gov

(858) 495-5491

From: Jonathan from Refound <jonathan@refound.com>
Sent: Thursday, June 27, 2019 3:52 PM
To: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>; Jacob, Dianne <Dianne.Jacob@sdcounty.ca.gov>; Wilson, Adam <Adam.Wilson@sdcounty.ca.gov>
Subject: We do not know the risks - we NEED your leadership

Dear Tara, Dianne, Adam,

I am writing with concern about the plans to implement and install small-cell wireless infrastructure based on the recent FCC ruling. This ruling essentially allows installment anywhere without local control or reasonable fees. The FCC rules allow these wireless facilities 10-20 feet from homes on rights of way, and *neglect health, safety, fire, falling, and other hazards* while setting an absolute 60-90 day shot clock, regardless of application number. *5G will also require the removal or severe pruning of all trees along the streets, as they cannot block the signal.* The FCC orders are unconstitutional and are currently being challenged. I URGE you to disallow this illegal mandate, and not take any irreversible action by changing our local wireless infrastructure ordinances to facilitate 5G, as it may be overturned.

Other cities and counties are standing against these “rushed” and “streamlined” FCC rules. They are being challenged in the ninth circuit by many municipalities; the Marin County, California Board of Supervisors, town of Fairfax, CA, and the Massachusetts Municipal Association are examples of such against these rules. Others are waiting to see the outcomes of the existing legal challenges and tightening their ordinances. Burlington, Massachusetts, recently revised the town ordinances in a manner that caused the applications put forth by Verizon to be withdrawn. Petaluma County, California, recently revised town ordinances to require under-grounding of equipment and large setbacks from residences. Pittsfield, Massachusetts, recently revised city ordinances to limit the number of "small cells" placed on a structure. These actions provide more support and legal justification for our local governments to challenge them as well. Further, heads of the House Energy and Commerce Committee and the Subcommittee on Communications and Technology have written to the FCC questioning collusion. On January 14, 2019, Congresswomen Eshoo and Speier introduced HR 530 to block the FCC preemption of local authority. The National Resource Defense Council is also challenging the FCC's earlier rules to exempt small cells from historic and environmental considerations.

The FCC claims to 5G safety are unfounded On Feb. 6, 2019, in a Senate hearing, *industry leaders admitted that there’d been no health or safety testing*, despite $25 billion dollars invested by the wireless industry in 2018. Senator Blumenthal and Congresswoman Eshoo have written the FCC for proof that the 5G technologies, employment of millimeter microwave (MMW) radiation in the 6 – 100 GHz range, are safe, *with no satisfactory response*. The FCC regulations for safety were adopted in 1996, based on industry-science, and have not been updated for next generation wireless, equipment and devices. Further, they are based on thermal effects, not biological effects. Finally, the FCC’s Specific Absorption Rate (SAR) limits do not apply to devices operating above 6 GHz (which 5G does).

Despite widespread denial, there is overwhelming scientific evidence that radio frequency (RF) radiation is harmful to all forms of life. Wireless facilities have traditionally been kept from bird migration areas, as birds become disoriented by the signals. High power, proximity, and even new wireless frequencies from an influx of small-cell towers add to a pervasive threat to the environment, including us.

This will affect everyone, including those who make vital contributions to society, our community, and economy here in our area. **Your children, senior, expecting mothers and their babies, and immune-compromised constituents will be especially vulnerable to this harmful exposure.**

Recent research by the US National Toxicological Program (NTP) found cardiac and tumor risks heightened just from 2G wireless exposures, and other researchers have confirmed the NTP findings at ambient power levels. This is clear evidence of a link between long-term RF radiation exposure and cancer. The accumulated clinical evidence of sick and injured people, experimental evidence of damage to DNA, cells and organ systems in a wide variety of plants and animals, and epidemiological evidence that the major diseases that plague us, like cancer, heart disease, Alzheimer's, infertility, and diabetes are in large part caused by electromagnetic pollution, forms a literature base of well over *27,000 peer-reviewed studies* (consolidated in the EMF Portal). Higher frequencies, such as above 6 GHz, will be used for 5G. Scientists in the field expect these higher frequencies to be devastating to insects, including bees. They also expect 5G to heighten skin cancer incidence, with other impacts to eyes, immunological and neurological systems. There is already a large population here in our state that suffers from EMF-induced, serious, health problems. With the rollout of 5G this number will grow rapidly. The health complications are vast and include: headaches, tinnitus, chest pain from impaired blood flow, heart arrhythmia, heart failure, cognitive disorders, hearing loss, insomnia, seizures, and neurodegenerative diseases, to name a few.

Of further concern, Active Denial System (ADS) is a directed-energy weapon developed by the U.S. military, that heats the surface of the skin using MMW at 95 GHz (this is within the range of 5G). This radiation penetrates the first layer of skin, where it feels like intense heat and causes a stinging sensation. Skin may redden and even blister. For most humans, the radiation does not permeate the second layer of skin – except where it's thin, such as eyelids and for infants. The reflex of the eye during exposure is to close. Safety studies demonstrate corneal absorption of 94 GHz radiation, as well as *permanent ocular damage at exposure times greater than six seconds*; less than that for those with LASIK procedures.

Beyond health and safety concerns from the radiation, these towers pose fire and other hazards. Further, they will depreciate property values, impose on privacy and security, and through sickening of the population, will reduce productivity and our economy. This will place an undue burden on the government and medical providers, and will ultimately force people, and likely businesses, to leave our entire region. *Our local governments will surely be sued if they allow this predictable harm to children, adults, and senior citizens, fires from these small cells, or loss of property values.*

Our local governments should seek to limit, *not exponentially increase*, the amount of electrosmog pollution from manmade RF radiation in our area, as an imperative, according to numerous physician and scientist organizations! These include: The World Health Organization, Kaiser Permanente, American Academy for Environmental Medicine (AAEM), American Academy of Pediatrics (AAP), CA Sierra Club, the Honeybee Foundation, and even the California Department of Public Health. Nor should our local governments allow experimentation on the residents with a vast array of new MMW technologies - only previously used as ADS in crowd control. The Nuremberg Code has forbidden experimentation of this sort for over 50 years.

As our elected official(s), the citizens of San Diego County *require your good governance*, not protection of commercial and corporate interests. I am writing to request your due diligence: that our ordinance be carefully examined in light of the FCC's new ruling, health risks, other model ordinances, and with attention to crafting an ordinance that will prevent

harm to the community. I request a careful review of the existing ordinances, with plenty of citizen input, to insure citizen protections; *as our elected representative this is your duty*. If need be, I ask that you enact additional protective ordinances, not to allow unsafe 5G into our residential and commercial areas. Again, I ask that you not make any irreversible actions at this time. And if any actions or applications must be taken, that our local government make permits and decisions contingent only on the FCC ruling, or parts thereof, not being overturned.

Sincerely, Jonathan Raymond
CEO Refound

Sea Coast
EXCLUSIVE PROPERTIES

Steve Schuette
1053 Wotan Drive
Encinitas, CA 92024

June 26, 2019

Tara Lieberman
Land Use / Environmental Planner, Advance Planning
5510 Overland Avenue, Suite 310 / Mail Stop – 0650
San Diego California 92123

Re: Small Cell Wireless Facilities Ordinance

Dear Tara Lieberman & San Diego County Supervisors:

I am deeply concerned about the new FCC directive making it possible for the telecommunications industry to place cell towers anywhere in the County right-of-way. I am voicing my strong objection to the FCC's takeover of our County's land as well as due process with respect to our rights. That being said, as zoning planners and Supervisors, can you please take the following requests into the strongest possible consideration. We are afraid of property devaluation with cell towers in residential areas, as most of us have the majority of our net worth in our homes. Because 5G is an unproven technology, please protect certain sensitive areas:

1. Cell towers are not to be located in "Sensitive" areas. 1000 foot setbacks from sensitive areas as defined by the County are necessary.
2. 500 foot set back from residential.
3. Preapplication site inspection & survey required for each site application. There must be an on-site inspection prior to approval of the site by the County or agent representing the County. If application is in conflict with a sensitive area, site inspector may suggest the tower relocate so coverage is the same but sensitive area is protected.
4. Fall zone must exceed the height of the tower by 20% because the height of the tower may be increased by 10% the next year. Setback must meet fall zone length at a minimum.
5. Require mandatory live RF compliance testing immediately after tower is installed and "on demand testing" by a third party paid for by carrier.
6. Height restriction 30 feet; next year [under 1903] tower may go 10% higher.
7. Payment, performance and removal bond paid up front.
8. Require a Certificate of Completion.
9. No cutting of trees to facilitate line of sight or initial placement. The general ambience of the community is to be preserved.
10. Co-location up to two carriers is encouraged.
11. Under-grounding of equipment where possible; discretion may be used by staff.
12. The ordinance shall comply with the Americans with Disabilities Act.

Thank you,

Steve Schuette

From:	Neal, Stephanie
To:	Shute, Madeline
Subject:	FW: CEP comments on wireless ordinance draft - both revised, plse use these to replace
Date:	Wednesday, June 19, 2019 4:52:14 PM
Attachments:	Notes on SD County Ordinance 6.12.19 sb.pdf Options chart suggestions sb.pdf

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov

(858) 495-5341

From: Lieberman, Tara
Sent: Tuesday, June 11, 2019 1:39 PM
To: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: FW: CEP comments on wireless ordinance draft - both revised, plse use these to replace

From: director@electrosmogprevention.org <director@electrosmogprevention.org>
Sent: Monday, June 10, 2019 6:57 PM
To: Talleh, Rami <Rami.Talleh@sdcounty.ca.gov>; Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>
Cc: Stephanie B <smboege@gmail.com>
Subject: Re: CEP comments on wireless ordinance draft - both revised, plse use these to replace

Please use these attached documents to replace those I sent earlier.
Thank you!

Susan Brinchman, Director

Center for Electrosmog Prevention, a 501c3 nonprofit

PO Box 655, La Mesa, CA, USA

www.electrosmogprevention.org

www.facebook.com/stop5gca

Email/Skype:director@electrosmogprevention.org

office in Ramona, CA

760-440-0227

Click here to support CEP's efforts to reduce electrosmog pollution!

“Never doubt that a small group of thoughtful, committed **citizens can change the world;** indeed, it's the only thing that ever has.” ~Margaret Mead.

Sent from my hard-wired computer: no wireless Internet connection (WiFi), no cordless mouse or keyboard, with no smart meters on the building. Pollution from those wireless devices will cause long term health problems. See the comprehensive report on health effects at *www.Bioinitiative.org*

> On June 10, 2019 at 4:07 PM director@electrosmogprevention.org wrote:
>
> Dear Rami and Tara,
> I am attaching the comments I've made so far on the draft wireless ordinance posted this month.
> I figured you might need a little time before our phone conference call on Wed. to digest and address these.
> I think a meeting on just ADA considerations for the draft, after this meeting, would be helpful.
> The County must follow ADA and other federal and state disability and medical conditions discrimination laws, however, taking these into consideration with ordinance wording would save a lot of trouble for everyone.
> Sincerely,
> Sue
>
> Susan Brinchman, Director
>
> Center for Electrosmog Prevention, a 501c3 nonprofit
>
> PO Box 655, La Mesa, CA, USA
>
> www.electrosmogprevention.org
>
> www.facebook.com/stop5gca
>
> Email/Skype:director@electrosmogprevention.org
>
> *office in Ramona, CA*
>
> *760-440-0227*
>
> *Click here to support CEP's efforts to reduce electrosmog pollution!*
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Comments Susan Brinchman, Center for Electrosmog Prevention
director@electrosmogprevention.org

Question: What happens with further review of each item?

DOES NOT PROTECT RESIDENTIAL

Need specifics written out in favor of residents and County – NOT telecoms. Weak language ie. "suggested, encouraged" vs. "required, mandated". *TOO FLEXIBLE - NOT ENOUGH MANDATES . *TOO INDUSTRY-FRIENDLY - FAVORS INDUSTRY OVER RESIDENTS. Aesthetics requirements seem to be weak in the ordinance. Need strengthening. *DOES NOT PROTECT PROPERTY OWNERS OR RESIDENTS, PROPERTY VALUES

Note: unclear about double -underlined areas

FEEs and process for fees unclear

NO SHOT-CLOCKS mentioned. Time for processing not mentioned at all? Short shot-clocks = impossible to fight a planned SCW placement. For ADA requests, shot-clocks stop.

Macro towers and small cells by sports fields and parks, schools, should be not allowed.

Unclear about Fire Policy FP-2

Speculative facilities not protected against

All meetings with telecoms no matter how, shall be publicly conducted and recorded, as well as all written documents publicly accessible on website. Put in ordinance. No private meetings with telecoms. Conflict of interest.

<u>*ADA AREA MUST BE EXPANDED</u> – **<u>REQUIRES ADDITIONAL MEETING ON JUST ADA</u>**

*ALLOWS CUTTING DOWN OF THOUSANDS OF TREES ON PROPERTY AND RIGHT-OF-WAY

*NO MENTION OF COVERAGE GAP REQUIREMENT - CAN BE PLACED FOR ANY REASON THEN, EVEN IF NOT NECESSARY *ENCOURAGES "POLE-GRABBING" BY TELECOMS

Protection of residential areas

1. Setback to residential properties missing. Make it to edge of property. Cluttering not reduced, RATHER, increased and more than necessary. Larger setbacks needed for ADA and medical conditions requests for accommodations.
2. *ADA needs to be prominently in the ordinance* (see items below) and *in all public noticing*. For instance, "If you have a disabling or medical condition requiring avoidance of rf radiation, you may fill out an ADA request for accommodations by filling out the attached form or the electronic version located at …, if possible, by _____ (date)", could be included with PUBLIC NOTICING.
3. *5 Year Initial Master Plans* for small cell deployment will be made available to the public by each telecommunications company, posted to County site (and cited in any local noticing and meetings with planning department and community groups, sponsors, and public meetings) at least 6 months in advance. Included shall be power of each small cell, the exact street addresses requested for installation, details of each installation, its function, and justification for need. All permits will be based upon Master Plan. No small cells outside of Master Plan shall be considered. Meetings to determine adequacy of Master Plans shall be held every one to two weeks during the subsequent initial six months, until considered acceptable to local community, and only then shall permits be applied for. Changes to initial Master Plan shall be made with documented justifications subject to approval of local community.

Comments Susan Brinchman, Center for Electrosmog Prevention
director@electrosmogprevention.org

4. Undergrounding - make sure it is every part except antenna, radio boxes must be undergrounded. Poles should also not be made wider.
5. Exact locations need to be specified (addresses) when noticing property owners.
6. ADA: Expand written, mailed noticing to allow disabled people to be aware. Within 1 mile for sensitive individuals to know. Give time to respond before permit application processed. At least 60 days for submission of ADA request for Accommodations due to necessity for physician and legal consultations, upon which shot clock stops until all legal remedies exhausted.
7. Allow more time for permit processing if ADA request for accommodations is involved. No permit issued until final resolution at higher levels if needed (courts, State, ADA.gov) (all legal remedies).
8. Provide larger setbacks to residences of sensitive individuals, per ADA requests, at minimum 3000 feet in all directions.
9. Include travel paths for ADA accommodations.
10. Shielding and avoidance of emissions for sensitive individuals under ADA and disability discrimination laws – these are not preempted by Tel Act 1996. Include requirement in ordinance and bond for same. Provide directions for ADA accommodations requests in ordinance language with contact person etc. Not simply a complaint form.
11. Make wireless ordinance easy to find on SD County website. Placed in search engine for County website, link to drop down menu, etc. Note: cannot find current wireless ordinance on County website and no one else seems to find it either.
12. Make applications public immediately – post on readily accessible website and send to people signed up for notices. Need to publicly post applications within 24 hours at least, and scan and post all elements of application at same time. Post signage on proposed site within 24 hours.
13. Does not mention shot clocks at all, does it? or in relationship to incomplete applications and timeline, etc. Where are these found?
14. Put in place double check at many points in process for truth, accuracy, transparency, and correct placement of equipment, including at public meetings (recorded) and in writing. If placed incorrectly provide for removal within 48 hours, including poles.
15. RF Emissions and permit elements check - make it very frequent and by independent or County personnel paid for by telecoms. $500 per checkup at minimum once yearly.
16. Add to sensitive areas - sports fields and parks
17. Coverage gap requirement - needs to go into ordinance.
18. Make industry prove small cells needed. Have proof independently checked. Verizon saying it can boost up to 2 miles now. Small cells not even necessary. 4G not necessary either, it worked fine without the small cells, which ARE DANGEROUS NEAR LIVING BEINGS – HUMANS, PETS, WILDLIFE.
19. Expiration of permits if FCC order overturned - go from 12 months to 1 week.
20. No tree trimming allowed. Amend first * to read "oak trees" rather than mature oak trees. Do not allow cutting or trimming of any trees, especially oak trees of any age. (p. 20) (3.) Plants - allows removal of trees/plants. Need to remove word "minimize". Especially on right-of-way on private property. Not strong enough term. "Forbidden to remove trees/plants" is better.
21. Expand noise ordinance to include sensitive individuals. Noise from frequencies are perceived differently but can be painful or very disturbing (shrieking, shrill, ice pick pain). p. 20 (2.) Noise - County noise ordinance not designed for rf noise - may not be enough to prevent low buzzing sounds or shrill ringing sounds, which rf signals are known for. Can impact hearing (cause hearing loss and severe ear pain).

Comments Susan Brinchman, Center for Electrosmog Prevention
director@electrosmogprevention.org

Noise ordinance 9962: https://www.sandiegocounty.gov/cob/ordinances/ord9962.doc

" (g) "Disturbing, excessive or offensive noise" means any sound or noise that:

(1) Endangers the health or safety *of any person.*

(2) Causes discomfort or annoyance to a person of normal sensitivity. "

22. No new street poles in areas of undergrounded or planned undergrounded utilities.

23. No use of County-owned street lights or traffic lights.

24. No collocation (clutter) and will then collectively exceed FCC guidelines.

25. Need discretionary review for colocation requests and including rf emissions, independent testing and proof, checking afterwards.

26. Should never exceed FCC guidelines at any distance.

27. FCC guidelines for rf emissions should be considered for total load at cells on pole, not each cell, nor only a distance away.

28. (p. 13) WATER TANKS and other single and co-located sites for non-SCW (Macro-towers etc.)can be too close to homes. Need 1 mile at least.

29. If any of the permit application items are ever found to be incorrect at start or during term of permit, or upon business or resident complaint, the permit is automatically withdrawn and SMW must be removed within 24 hours.

Protection of County's liability (taxpayers)

1. *NO BONDS OR INSURANCE REQUIRED FOR EACH SMALL CELL - should be written into document, is mentioned on the 5G small draft cell application Agreement 1. indemnify, hold harmless and defend the County and each of its officers and employees "Permit Owner agrees to indemnify, hold harmless, and defend the County and each of its officers and employees from any liability of responsibility for accident, loss or damage to persons or property resulting from the encroachment's presence within the County right-of-way or any installation, construction, maintenance, state of use, or repair work related to the encroachment done by Permit Owner, or Permit Owner's agents, employees or representatives..."

Obtain **proof of safety of entire plan and devices**, by independent-of-industry, non-gov't entities that will assume liability if incorrect, with **adequate insurance necessary as part of ordinance** (think: massive environmental and health impacts, including starting major fires) not just a permit agreement to indemnify, meaningless if they aren't insured or go bankrupt, won't cover anything (as in the fires and utilities). Make it $2-$5 million per small cell (think fire other hazards). Insurance industry says it is high risk and like asbestos. Crown Castle warning investors recently about high risk for rf emissions & health. Should cover reimbursement to displaced homeowners and those who lose property value, shielding, and other costs like removal of small cells or poles if not within designated time period.

SEE ATTACHED OPTIONS CHART SUGGESTIONS SB

Comments Susan Brinchman, Center for Electrosmog Prevention
director@electrosmogprevention.org

Specific Ordinance Page Comments

Non-SCW

SCW (Small Cell Wireless-p. 16-21):

“SEMI”-POSITIVES

p. 17. All initial permits are discretionary (BUT LANGUAGE SO FLEXIBLE IMPOSSIBLE TO PREVAIL IF RESIDENTIAL, ESPECIALLY WITH SHOT CLOCKS)

p. 18 (9) Increased distance apart 1,000 feet (but "Wherever possible" is too weak re: language)

p. 18 (8. ii.) None on decorative poles

p. 18 ADA accessibility requirements (BUT NEEDS EXPANSION TO INCLUDE THOSE SENSITIVE TO RF RADIATION)

p.19. (14.) Undergrounding (does this mean radio boxes too?)

p. 20 (5., 6., 7.) Compliance with laws, continuous compliance, removal)

p. 20 (6.i.,ii.) Noticing required prior to or at time of submittal of request - for property owners w/in 500 feet (EXPAND TO 3000 ft) and to include all community planning or sponsoring groups and their represented members or residents.

p. 21 (B) Permits expire if FCC ruling is repealed or overturned (BUT NEED TO EXPIRE IN MUCH SHORTER TIME SUCH AS 1 WEEK VS. 12 MONTHS)

NEGATIVES:

* FEEs and process for fees unclear

*NO SHOT-CLOCKS mentioned. Time for processing not mentioned at all? Short shot-clocks = impossible to fight a planned SCW placement

*Allows macro-towers in County Parks and sports fields, etc.

*(p. 13) WATER TANKS and other single and co-located sites for non-SCW (Macro-towers etc.)can be too close to homes. Need 1/2 mile at least.

p. 17 (A.1.) Does not protect residential unless within 1,000 ft of a non-preferred site (A.7) Configuration still uses that rule

(A.3.) SCWs shall not be located within 1,000 feet of schools, child care centers, hospitals, or churches. Distance, ... shall be a straight line measured from the closest property lines. DOES NOT MENTION PARKS AND SPORTS FIELDS - ADD THESE. INCREASE DISTANCE TO 2,500 FEET.

(A.4.) SCW's encouraged to locate in public right-of-way. BUT WHAT DOES THIS MEAN IN TERMS OF PROPERTY LINES? NO DISTANCE TO PROPERTY LINES.

Comments Susan Brinchman, Center for Electrosmog Prevention
director@electrosmogprevention.org

p. 18

(8i) SCW configurations - least preferred are 4, 5, 6 (new utility poles, county-owned street light poles, traffic signals)

p. 18 (8.iii.) allows colocation of 2 on one pole

p. 19 (13.i.3.) allowing 10 % on a 40 ft pole allows SCW to be 4 feet in height. Too large.

p. 19. (15.i) removes requirement not to lose parking spaces

p. 20 (2.) Noise - County noise ordinance - may not be enough to prevent low buzzing sounds or shrill ringing sounds, which rf signals are known for.

Noise ordinance 9962: https://www.sandiegocounty.gov/cob/ordinances/ord9962.doc

" (g) "Disturbing, excessive or offensive noise" means any sound or noise that:

(1) Endangers the health or safety of any person.

(2) Causes discomfort or annoyance to a person of normal sensitivity. "

36.404: less than 11 units per acre - 50 dBA (daytime); 45 dBA (nighttime)

RF noise is variable by the person, causing tinnitus, but may not be measured by equipment. The noise never-the-less is real and causes great discomfort and annoyance.

NEEDS A SOLUTION IF NOISE REPORTED, COMPLAINT. CELL TURNED OFF AND RELOCATED. THE dBA is not acceptable measure for this type of noise. Provide solutions for ADA and other people of “sensitivity”. Endangers health.

(3.) Plants - allows removal of trees/plants. Need to remove word "minimize". Especially on right-of-way on private property. No removal or trimming of trees, period.

P. 21 (A.) No discretionary review for colocation Tiers 1-4)

COMMENTS ON SCW APPLICATION CHECKLIST

1. Allows self-reporting for "Further review..." lower section. Require proof of each item from independent source.

2. Amend first * to read "oak trees" rather than mature oak trees. Do not allow cutting or trimming of any trees.

What happens with further review of each item? Need specifics written out in favor of residents and County.

If any of the permit application items are ever found to be incorrect at start or during term of permit, the permit is withdrawn and SCW must be removed within 24 hours, macros within 1 week.

San Diego County Wireless Ordinance
Additional Suggestions for Options Chart
CEP/Brinchman
6/12/19

Topic Area	Included in Current Ordinance (Adopted 2/27/19)	FCC Order	PDS Recommendations	Changes requested Comments	Comments:
Location Preference				*Disallow residential and not close to businesses; 1 mile from residential for both SCW and macro	ADA
Right-of-Way Preference				*1000 ft. setback to property lines; may be much larger per ADA request accommodations, in all directions *No use of private roads or trails *no use of county street light poles *no new poles in right-of-way	*if private road must have property owner's permission and proof of liability insurance by property owner as well, $5 million * clutter reduction *ADA
Distance from schools, childcare centers, hospitals, or churches (6992.A.3)				*Add parks and ballfields – all to apply to both macro and SCW *expand to 3,000 feet from property line; add public places including but not limited to parks, libraries, post offices, municipal buildings and services, medical and dental offices, shopping areas, parking lots; main travel routes to public places	ADA rights to access public places and right-of-way, travel routes to public places and other; required not suggested
Co-location (6992.A.8.iii)				*Not allowed *May exceed FCC standards at pole *Cluttering	ADA

San Diego County Wireless Ordinance
Additional Suggestions for Options Chart
CEP/Brinchman
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				* requests subject to discretionary review including community	
Visual separation Existing				*1,000 in Preferred *3,000 feet in Least Preferred	ADA
Height				Do not allow 10% height on 40 foot pole. 3% height on 40 foot pole max	4 foot cell is unsightly
Visual Separation – New Structures				*1,000 in Preferred *3,000 feet in Least Preferred	Note: for all street poles
Undergrounding				*only antenna above ground, at top of pole	All else undergrounded
Design				*must be approved by community planning group	
Noise				Noise ordinance not designed for rf radiation	ADA item; medical conditions; base on complaints-remove if complaint
Plant Disturbance				No tree trimming on right-of-way	No trimming of trees on private property or right-of-way, no matter age of tree or type. Aesthetics.
Signage				Require warning as part of noticing and on every pole. Put the rf emission levels on the pole after each check, with date.	
Removal				Must follow permit approvals exactly or removal, no adjustments made;	

San Diego County Wireless Ordinance
Additional Suggestions for Options Chart
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6/12/19

				may be removed upon complaint or ADA request for accommodations	
Fire				Provide fire letter of compliance and coverage up to $50 million from insurance company for each small cell	
Noticing				Noticing to ppty owners within 1 mile; Provide all details of application sought including size, power, and type of transmitter	ADA necessity; All public noticing shall notify public of availability of ADA Accommodations Requests for disabilities or medical conditions requiring avoidance of rf radiation, with full details for how to file and process
Incomplete applications				Reverts shot clock to beginning; rejected	
FCC Order Repealed or Overturned				Permits expire 1 week; remove 2 weeks	
No speculative facilities				Must present 5 year plan upon permit application; 5 Year Initial Master Plans for small cell deployment will be made available to the public by each telecommunications company, posted to County site (and cited in any local	Must prove before permit application that small cells necessary for service (Verizon can now boost up to 2 miles)

				noticing and meetings with planning department and community groups, sponsors, and public meetings) at least 6 months in advance. Included shall be power of each small cell, the exact street addresses requested for installation, details of each installation, its function, and justification for need. All permits will be based upon Master Plan. No small cells outside of Master Plan shall be considered. Meetings to determine adequacy of Master Plans shall be held biweekly during the subsequent initial six months, until considered acceptable to local community, and only then shall permits be applied for. Changes to initial Master Plan shall be made with documented justifications subject to approval of local community.	
Shielding				Per ADA necessary for disabled	Upon request shield so

San Diego County Wireless Ordinance
Additional Suggestions for Options Chart
CEP/Brinchman
6/12/19

					emissions do not enter property or house; County oversight, paid for by small cell owner
Coverage Gap				Not necessary then shouldn't be put in	
RF Emissions Check				Charge $500 per small cell to check twice yearly or upon complaint	County hires independent contractors unrelated to telecoms Measure at 1 mm to small cell and at 5 foot intervals to 50 feet; use combined, overall, total load
Insurance / Bond Requirements				Require independent safety assurance/ statement of safety, insurance and bond	$2-$5 million per small cell; proof of insurance prior to application acceptance; Bond of $20 million per small cell for damages and removals; property value loss; need to leave lease early and new housing costs for disabled; ADA requirements such as shielding costs and hotline run by County
Annual Reporting				Must prove insurance and bond current; emissions	

San Diego County Wireless Ordinance
Additional Suggestions for Options Chart
CEP/Brinchman
6/12/19

				check; provide 5 year plan forward	
Shot clocks				? Applicable per FCC unless ADA request for accommodation received in advance or post-application	Needs to be mentioned Shot clocks not applicable with ADA application
Fees				?	Needs to be mentioned Fees for monitoring must be paid ahead of time
ADA				Noticing up to 1 mile, with 60 days to submit ADA request for Accommodations for disabled; full directions for how to submit ADA or medical conditions non-discrimination accommodations request in ordinance; ADA requests may include home (rental or owned) and travel paths; if ADA request made, shot clock stops till legally resolved according to all parties; granting of ADA requests w/ amount of documentation required by 2016 amendments; expand noise ordinance to include sensitive individuals	All public noticing shall notify public of availability of ADA Accommodations Requests for disabilities or medical conditions requiring avoidance of rf radiation, with full details for how to file.

San Diego County Wireless Ordinance
Additional Suggestions for Options Chart
CEP/Brinchman
6/12/19

County wireless ordinance website, attachments, applications, and permits easily found on drop menu for County website					
Permit Contingency				Permit contingent upon continuous, exact fulfillment of all terms including exact location, emissions, insurance, bond – which may be checked at any time during the year. *good for one year renewal with reapplication process same as original * no self-reporting or self-monitoring – must pay County to document or hire independent contractors to check on all steps of process *if fiberoptic to end-user plan selected permit canceled	Must be removed within 48 hours if complaint filed, permit conditions not met, ADA request to remove (all readily available to public online in drop menu for each location) Remove within 24 hours if fails to comply or fine results from bond issued, at $5,000 per day
Compliance with all laws of the United States and California, including ADA and disability or medical conditions					Removal with 48 hours notice

San Diego County Wireless Ordinance
Additional Suggestions for Options Chart
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discrimination laws.					
Parking spaces				Not allowed to lose parking spaces	
ADA and discrimination law policies				Must be in ordinance Per 2016 amendments (or later revisions) Quick turn-around	
Hotline provided				Hotline provided for ADA/medically ill persons to receive help with problems with small cells or macro towers	
Countywide fiberoptic to end-user device alternative option explored within 6 months				Permits for small cells canceled if fiberoptic to device option adopted by County	

From:	Lieberman, Tara
To:	Shute, Madeline
Subject:	FW: Draft wireless ordinance input from Center for Electrosmog Prevention
Date:	Wednesday, June 26, 2019 11:02:16 AM
Attachments:	Notes on SD County Ordinance 6.23.19 sb.pdf Options chart suggestions 6.23.19.sb.pdf image001.png

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From: Lardy, Eric <Eric.Lardy@sdcounty.ca.gov>
Sent: Wednesday, June 26, 2019 9:44 AM
To: Sjoblom, Randall <Randall.Sjoblom@sdcounty.ca.gov>; Alfaro, Suedy <Suedy.Alfaro@sdcounty.ca.gov>
Cc: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>; Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>; Howe, Dennis <Dennis.Howe@sdcounty.ca.gov>; Pasumarthi, Murali <Murali.Pasumarthi@sdcounty.ca.gov>
Subject: FW: Draft wireless ordinance input from Center for Electrosmog Prevention

Eric Lardy, AICP
Chief, Advance Planning
Planning & Development Services
5510 Overland Avenue, Suite 310
San Diego, CA 92123
eric.lardy@sdcounty.ca.gov
858-495-5334 (Cell) 619-550-9723

www.countynewscenter.com

From: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Sent: Wednesday, June 26, 2019 9:05 AM
To: Lardy, Eric <Eric.Lardy@sdcounty.ca.gov>
Subject: FW: Draft wireless ordinance input from Center for Electrosmog Prevention

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov

(858) 495-5341

From: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Sent: Tuesday, June 25, 2019 8:39 PM
To: Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>; Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: FW: Draft wireless ordinance input from Center for Electrosmog Prevention

Camila Easland
Junior Land Use / Environmental Planner, Advance Planning
Planning & Development Services
5510 Overland Ave., Suite 310, San Diego, CA, 92123
camila.easland@sdcounty.ca.gov

(858) 495-5491

From: director@electrosmogprevention.org <director@electrosmogprevention.org>
Sent: Tuesday, June 25, 2019 4:29 PM
To: Jacob, Dianne <Dianne.Jacob@sdcounty.ca.gov>; AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Subject: Draft wireless ordinance input from Center for Electrosmog Prevention

Dear Supervisor Jacob and Ms. Lieberman,

I am writing to further emphasize the dire need for improvement for the current very weak draft wireless ordinance, to protect our County and its residents from disaster. These improvements should be based on the needs of the residents in our County, who have the right to health and their own personal safety, financial solvency, and right to live on and maintain the value of their properties. As the ordinance is now written, it favors the telecom companies at the expense of the County and its residents, and we all will be in a terrible situation unless remedied. The County Planning Dept. does not work for the telecom companies nor a wayward "captive" federal agency such as the FCC, and should never act like they do. Nor should our County Supervisors, regardless of the presence of Qualcomm and their stake in 5G, which is misguided. The County should concern itself with its residents' needs, not the orders of federal agencies which the County has taken a stand against on many

other occasions, when need be, such as on immigration and marijuana use and propagation, the latter still a federal crime. You were hired/elected to serve the people of this County and I expect nothing less than that.

Whether or not you believe you are allowed to "act on this information" *directly*, you need to fully understand that RF radiation causes a host of health impacts, with *up to 15 or 20 symptoms at any given time*, immediately, for those with acute rf sensitivity (otherwise known as electromagnetic sensitivity or EMS, electro-hypersensitivity or EHS, microwave illness, etc), numbering between 100,000-200,000* in our County. Some are transient (if one can get out of the exposure), some are permanent, and some are progressive and remain, starting in an acute phase, within a short period of time, and continuing for years. There is even an ICD - 10 diagnostic and billing code for this type of exposure, for physicians, and has been in the USA since 2015, and with the WHO since the year 2001. With a strong and pervasive exposure (24/7), others with pre-existing or new conditions will quickly emerge as more ill or with new illness, and within a short period of time, with heart, auto-immune, including allergic reactions can easily develop. Within 1-2 years at most, a sharp increase in brain, heart, and skin cancers will also be seen. This is according to the science and physicians who understand rf exposure, and NOT your health department, which is woefully uneducated on this topic except those "captive" by industry sources (such as CDC, WHO, and the American Cancer Society, to name but a few). The attitude of your mistaken health department advisors won't change the realities of the exposures and illnesses you will cause if you proceed with the current wireless draft.

It is important to understand that the number of sickened people in our County WILL explode into amounts our healthcare system won't be able to handle, or even recognize, within a short period of time. It will undermine your Alzheimers, cancer, and other health projects instantly. This is not opinion. If you have the time to look at the science beyond the approximate 2,000 pages you've received already (since Jan. 2019), I will be glad to provide it. If you wish to speak to a researcher or physician familiar with this science, I can provide that. As one who's experienced many of these health effects first-hand, I can assure you the doctors and medical system will be overwhelmed. Many more people will be no longer able to work or pay taxes. Some will become homeless. Our social & economic system, already teetering with so many problems, will fail. This is why seasoned scientists in this field are saying about 5G: "it is an insane idea, one of the worst in the history of the world."

RF radiation exposure can cause changes in mental status, including mental health as it instantly impacts brainwaves in very negative ways, with near-instant development of depression, psychosis, suicides, and violent behavior. This has been verified by independent scientific studies. Want to reduce mental health problems and violence? Reduce electrosmog pollution (strong manmade electromagnetic fields such as from small cells and cell towers). Don't listen to your very ill-informed health department head. We can't afford the mental health needs now, nor the police needed. *Expose the entire population to*

close range strong microwave radiation and what you will get will be out of control. Is that what you want for San Diego County? *Could anyone force you to do this to us?* I say and hope you will say, "NO, this is an assault on our community that will not be allowed," just as some other cities, towns, and counties around the world are saying and taking action to back it up.

Therefore, in addition to the attached more detailed recommendations to the County Planning Dept., which I expect to be read and reviewed, I strongly recommend that the County in its wireless ordinance:

1. Use stronger language like "must avoid", "shall not", "will not", "must", "shall", etc, rather than words like "suggest", "may", "should not", which are likely to be ignored.

2. Require proof of insurance and bonds for the installers or telecom companies, per small cell as part of the Master Plan and prior to applying for permits. Small cells can catch fire. Small cells can destroy health and cost lives. Small cells can cause our property to be unsellable or lose in value up to 30% according to some realtors. Indemnification of the County is not enough and is an unacceptable way to address these dangers, in small print on the permit. If a company goes bankrupt due to the very foreseeable problems with these 4G/5G small cells, then the County is left holding the bag. An attorney I know thinks $5 million insurance per small cell would be a good start, to require.

3. Require a significant setback (500 -1,000 feet) to the edge of private property, so a small cell can't be placed right by the curb, near or in front of your home. Verizon brags it can broadcast 5G signals 2,000 + feet, so let them build them apart from residential. See Verizon stating the signals can go 2,000-3,000 feet. https://youtu.be/FwAsr1pC13Q *Close proximity to homes is no longer required for service and therefore is not a prohibition.*

4. Require a very detailed *Master Plan* from each telecom company, coordinated with all others in the community, with all locations

(addresses) of planned equipment, power levels of equipment, rf emissions detailed, at least six months in advance of any applications for permits. Allow time for County resident input on the Master Plan. Require independent proof of safety apart from any industry influence or report prior to any application for permits, as part of Master Plan.

5. Provide strong ADA (Americans with Disabilities Act) notifications, considerations, a*nd protections* for people with disabilities or conditions *who are sensitive to rf radiation levels lower than the FCC guidelines*, and must avoid close-range microwave radiation (like those with electromagnetic sensitivity (EMS)*, pacemakers, cardiac problems, breathing disorders, metal shunts, auto-immune diseases, ADHD, ADD, autism, seizure disorders, and electro-sensitivities, to name but a few). The only ADA concerns currently appear to be about whether a wheelchair could navigate the right-of-way. Isn't that disability discrimination? Don't discriminate. Keep the language about the public access but include all disabled people who have a right to the public right-of-way and public access. Improve that section. The ADA allows you to do so, County cannot discriminate, and recent court decisions acknowledge that some people are more sensitive to rf radiation and that the FCC has also admitted this, but declined to regulate for those (Plaintiffs vs. Fay School). The County is liable for these ADA legal problems, in addition to any liability on part of the telecoms. It cannot be indemnified from denying disabled people their rights under Title II.

6. Noticing of neighbors to the small cell should be up to one mile (online and in print) so people with medical and health conditions can be notified who need this. Noticing should be made by County prior to granting of permit, *with a time lag long enough for ADA*

and similar requests to be made. Included in the noticing should be all details, with full disclosure, including the type of equipment, its power and estimated or rf radiation levels at various distances to the pole, cross-referenced to the Master Plan, and options for residents to oppose the placement, including ADA requests.

7. Keep small cells far away from parks and ballfields, at least 3,000 feet.

8. Small cells should NEVER be granted as "ministerial" permits, approved shortly after receipt of a complete application, without giving anyone a chance to provide input for the maximum time possible. They should be "discretionary". The time frames allowed by federal law (60 and 90 day "shot clocks") need to be in the draft ordinance, giving the public time to be noticed and respond. There is no excuse for making permit granting near-automatic. Even the FCC provided timelines and these should be followed. Those with disabilities and/or ADA requests must be given extended notice and times. They must be noticed and given a set of directions to avail themselves of their rights. Rushing them through a short shot clock time or even shorter period is wrong and should never happen. Taking away public rights to even the short shot clock times and allowing even shorter times is wrong and must not occur.

9. One small cell to a pole and expanding the distances between any and all. These are too hazardous to allow groupings and also cause clutter with more than one cell, especially. Since small cells are not even required now for the technologies to function this should be forbidden anyway.

10. The County is must require telecom companies to pay a bond to

cover twice yearly (and upon request) independent testing (hired by County) to document how strong the signal or microwave emissions are from each pole and throughout the neighborhood, as well as the frequencies being used. This should be done before the initial use, before the cell is turned on permanently. These report must become public on the Internet within 24 hours. Emissions that individually or collectively exceed the FCC guidelines OR an ADA accommodation at any point shall be cause the cellular equipment to be removed.

11. Establish a well-staffed County complaint hotline for small cells making noise, causing health problems, or for any reason. Make the telecoms pay for it as part of a bond at application

12. No trees or landscaping in the right-of-way shall be cut down or trimmed during installation or afterward. Use strong language forbidding this.

13. Noise from small cells may be continuous, disruptive and even interfere with sleep, but not be able to evaluated by County standards or equipment for the types of noise emitted by high frequencies, and thus not be properly addressed. Noise complaints = automatic removal.

* People with EMS or greater sensitivity to rf radiation are at risk of death from small cells, due to interference with their heart rhythms and breathing, amongst other reasons. 3% of the population is a good estimate for the number with EMS, derived from scientific studies. That would mean 100,000 people in our County could be categorized as EMS and thus are very sensitive to rf radiation. This number is known to be growing, also, as a result of the vastly increased exposure to manmade electromagnetic radiation from wireless, and has been found to be at 5% in some studies, which would mean the number of people with EMS are approaching 200,000 in our County. This condition will rise exponentially if we install small cells as the draft ordinance now allows.

Susan Brinchman, Director

Center for Electrosmog Prevention, a 501c3 nonprofit

PO Box 655, La Mesa, CA, USA 91944-0655

www.electrosmogprevention.org

www.facebook.com/stop5gca

Email/Skype:director@electrosmogprevention.org

office in Ramona, CA

760-440-0227

"Never doubt that a small group of thoughtful, committed **citizens can change the world;** indeed, it's the only thing that ever has." ~Margaret Mead.

Sent from my hard-wired computer: no wireless Internet connection (WiFi), no cordless mouse or keyboard, with no smart meters on the building. Pollution from those wireless devices will cause long term health problems. See the comprehensive report on health effects at *www.Bioinitiative.org*

3 - 322

Susan Brinchman, Director
Center for Electrosmog Prevention
PO Box 655
La Mesa, CA 91944-0655
760-440-0227
director@electrosmogprevention.org

Question: What happens with further review of each item?

DOES NOT PROTECT RESIDENTIAL

Need specifics written out in favor of residents and County – NOT telecoms. Weak language ie. "suggested, encouraged" vs. "required, mandated". *TOO FLEXIBLE - NOT ENOUGH MANDATES . *TOO INDUSTRY-FRIENDLY - FAVORS INDUSTRY OVER RESIDENTS. Aesthetics requirements seem to be weak in the ordinance. Need strengthening. *DOES NOT PROTECT PROPERTY OWNERS OR RESIDENTS, PROPERTY VALUES

Note: unclear about double -underlined areas

FEEs and process for fees unclear

NO SHOT-CLOCKS mentioned. Time for processing not mentioned at all? Short shot-clocks = impossible to fight a planned SCW placement. For ADA requests, shot-clocks stop.

Macro towers and small cells by sports fields and parks, schools, should be not allowed.

Unclear about Fire Policy FP-2

Speculative facilities not protected against

All meetings with telecoms no matter how, shall be publicly conducted and recorded, as well as all written documents publicly accessible on website. Put in ordinance. No private meetings with telecoms. Conflict of interest.

<u>*ADA AREA MUST BE EXPANDED</u> – **<u>REQUIRES ADDITIONAL MEETING ON JUST ADA</u>**

*ALLOWS CUTTING DOWN OF THOUSANDS OF TREES ON PROPERTY AND RIGHT-OF-WAY

*NO MENTION OF COVERAGE GAP REQUIREMENT - CAN BE PLACED FOR ANY REASON THEN, EVEN IF NOT NECESSARY *ENCOURAGES "POLE-GRABBING" BY TELECOMS

Protection of residential areas

1. Setback to residential properties missing. Make it to edge of property. Cluttering not reduced, RATHER, increased and more than necessary. Larger setbacks needed for ADA and medical conditions requests for accommodations.
2. *ADA needs to be prominently in the ordinance* (see items below) and *in all public noticing*. For instance, "If you have a disabling or medical condition requiring avoidance of rf radiation, you may fill out an ADA request for accommodations by filling out the attached form or the electronic version located at …, if possible, by _____ (date)", could be included with PUBLIC NOTICING.
3. *5 Year Initial Master Plans* for small cell deployment will be made available to the public by each telecommunications company, posted to County site (and cited in any local noticing and meetings with planning department and community groups, sponsors, and public meetings) at least 6 months in advance. Included shall be power of each small cell, the exact street addresses requested for installation, details of each installation, its function, and justification for need. All permits will be based upon Master

Susan Brinchman, Director
Center for Electrosmog Prevention
PO Box 655
La Mesa, CA 91944-0655
760-440-0227
director@electrosmogprevention.org

Plan. No small cells outside of Master Plan shall be considered. Meetings to determine adequacy of Master Plans shall be held every one to two weeks during the subsequent initial six months, until considered acceptable to local community, and only then shall permits be applied for. Changes to initial Master Plan shall be made with documented justifications subject to approval of local community.

4. Undergrounding - make sure it is every part except antenna, radio boxes must be undergrounded. Poles should also not be made wider.
5. Exact locations need to be specified (addresses) when noticing property owners.
6. ADA: Expand written, mailed noticing to allow disabled people to be aware. Within 1 mile for sensitive individuals to know. Give time to respond before permit application processed. At least 60 days for submission of ADA request for Accommodations due to necessity for physician and legal consultations, upon which shot clock stops until all legal remedies exhausted.
7. Allow more time for permit processing if ADA request for accommodations is involved. No permit issued until final resolution at higher levels if needed (courts, State, ADA.gov) (all legal remedies).
8. Provide larger setbacks to residences of sensitive individuals, per ADA requests, at minimum 3000 feet in all directions.
9. Include travel paths for ADA accommodations.
10. Shielding and avoidance of emissions for sensitive individuals under ADA and disability discrimination laws – these are not preempted by Tel Act 1996. Include requirement in ordinance and bond for same. Provide directions for ADA accommodations requests in ordinance language with contact person etc. Not simply a complaint form.
11. Make wireless ordinance easy to find on SD County website. Placed in search engine for County website, link to drop down menu, etc. Note: cannot find current wireless ordinance on County website and no one else seems to find it either.
12. Make applications public immediately – post on readily accessible website and send to people signed up for notices. Need to publicly post applications within 24 hours at least, and scan and post all elements of application at same time. Post signage on proposed site within 24 hours.
13. Does not mention shot clocks at all, does it? or in relationship to incomplete applications and timeline, etc. Where are these found?
14. Put in place double check at many points in process for truth, accuracy, transparency, and correct placement of equipment, including at public meetings (recorded) and in writing. If placed incorrectly provide for removal within 48 hours, including poles.
15. RF Emissions and permit elements check - make it very frequent and by independent or County personnel paid for by telecoms. $500 per checkup at minimum once yearly.
16. Add to sensitive areas - sports fields and parks
17. Coverage gap requirement - needs to go into ordinance.
18. Make industry prove small cells needed. Have proof independently checked. Verizon saying it can boost up to 2 miles now. Small cells not even necessary. 4G not necessary either, it worked fine without the small cells, which ARE DANGEROUS NEAR LIVING BEINGS – HUMANS, PETS, WILDLIFE.
19. Expiration of permits if FCC order overturned - go from 12 months to 1 week.
20. No tree trimming allowed. Amend first * to read "oak trees" rather than mature oak trees. Do not allow cutting or trimming of any trees, especially oak trees of any age. (p. 20) (3.) Plants - allows

Susan Brinchman, Director
Center for Electrosmog Prevention
PO Box 655
La Mesa, CA 91944-0655
760-440-0227
director@electrosmogprevention.org

removal of trees/plants. Need to remove word "minimize". Especially on right-of-way on private property. Not strong enough term. "Forbidden to remove trees/plants" is better.

21. Expand noise ordinance to include sensitive individuals. Noise from frequencies are perceived differently but can be painful or very disturbing (shrieking, shrill, ice pick pain). p. 20 (2.) Noise - County noise ordinance not designed for rf noise - may not be enough to prevent low buzzing sounds or shrill ringing sounds, which rf signals are known for. Can impact hearing (cause hearing loss and severe ear pain).

    Noise ordinance 9962: https://www.sandiegocounty.gov/cob/ordinances/ord9962.doc

    " (g) "Disturbing, excessive or offensive noise" means any sound or noise that:

        (1) Endangers the health or safety *of any person.*

        (2) Causes discomfort or annoyance to a person of normal sensitivity. "

22. No new street poles in areas of undergrounded or planned undergrounded utilities.

23. No use of County-owned street lights or traffic lights.

24. No collocation (clutter) and will then collectively exceed FCC guidelines.

25. Need discretionary review for colocation requests and including rf emissions, independent testing and proof, checking afterwards.

26. Should never exceed FCC guidelines at any distance.

27. FCC guidelines for rf emissions should be considered for total load at cells on pole, not each cell, nor only a distance away.

28. (p. 13) WATER TANKS and other single and co-located sites for non-SCW (Macro-towers etc.)can be too close to homes. Need 1 mile at least.

29. If any of the permit application items are ever found to be incorrect at start or during term of permit, or upon business or resident complaint, the permit is automatically withdrawn and SMW must be removed within 24 hours.

Protection of County's liability (taxpayers)

1. *NO BONDS OR INSURANCE REQUIRED FOR EACH SMALL CELL - should be written into document, is mentioned on the 5G small draft cell application Agreement 1. indemnify, hold harmless and defend the County and each of its officers and employees "Permit Owner agrees to indemnify, hold harmless, and defend the County and each of its officers and employees from any liability of responsibility for accident, loss or damage to persons or property resulting from the encroachment's presence within the County right-of-way or any installation, construction, maintenance, state of use, or repair work related to the encroachment done by Permit Owner, or Permit Owner's agents, employees or representatives..."

Susan Brinchman, Director
Center for Electrosmog Prevention
PO Box 655
La Mesa, CA 91944-0655
760-440-0227
director@electrosmogprevention.org

Obtain **proof of safety of entire plan and devices**, by independent-of-industry, non-gov't entities that will assume liability if incorrect, with **adequate insurance necessary as part of ordinance** (think: massive environmental and health impacts, including starting major fires) not just a permit agreement to indemnify, meaningless if they aren't insured or go bankrupt, won't cover anything (as in the fires and utilities). Make it $2-$5 million per small cell (think fire other hazards). Insurance industry says it is high risk and like asbestos. Crown Castle warning investors recently about high risk for rf emissions & health. Should cover reimbursement to displaced homeowners and those who lose property value, shielding, and other costs like removal of small cells or poles if not within designated time period.

SEE ATTACHED OPTIONS CHART SUGGESTIONS SB

Specific Ordinance Page Comments

Non-SCW

SCW (Small Cell Wireless-p. 16-21):

"SEMI"-POSITIVES

p. 17. All initial permits are discretionary (BUT LANGUAGE SO FLEXIBLE IMPOSSIBLE TO PREVAIL IF RESIDENTIAL, ESPECIALLY WITH SHOT CLOCKS)

p. 18 (9) Increased distance apart 1,000 feet (but "Wherever possible" is too weak re: language)

p. 18 (8. ii.) None on decorative poles

p. 18 ADA accessibility requirements (BUT NEEDS EXPANSION TO INCLUDE THOSE SENSITIVE TO RF RADIATION)

p.19. (14.) Undergrounding (does this mean radio boxes too?)

p. 20 (5., 6., 7.) Compliance with laws, continuous compliance, removal)

p. 20 (6.i.,ii.) Noticing required prior to or at time of submittal of request - for property owners w/in 500 feet (EXPAND TO 3000 ft) and to include all community planning or sponsoring groups and their represented members or residents.

p. 21 (B) Permits expire if FCC ruling is repealed or overturned (BUT NEED TO EXPIRE IN MUCH SHORTER TIME SUCH AS 1 WEEK VS. 12 MONTHS)

NEGATIVES:

* FEEs and process for fees unclear

Susan Brinchman, Director
Center for Electrosmog Prevention
PO Box 655
La Mesa, CA 91944-0655
760-440-0227
director@electrosmogprevention.org

*NO SHOT-CLOCKS mentioned. Time for processing not mentioned at all? Short shot-clocks = impossible to fight a planned SCW placement

*Allows macro-towers in County Parks and sports fields, etc.

*(p. 13) WATER TANKS and other single and co-located sites for non-SCW (Macro-towers etc.)can be too close to homes. Need 1/2 mile at least.

p. 17 (A.1.) Does not protect residential unless within 1,000 ft of a non-preferred site (A.7) Configuration still uses that rule

(A.3.) SCWs shall not be located within 1,000 feet of schools, child care centers, hospitals, or churches. Distance, ... shall be a straight line measured from the closest property lines. DOES NOT MENTION PARKS AND SPORTS FIELDS - ADD THESE. INCREASE DISTANCE TO 2,500 FEET.

(A.4.) SCW's encouraged to locate in public right-of-way. BUT WHAT DOES THIS MEAN IN TERMS OF PROPERTY LINES? NO DISTANCE TO PROPERTY LINES.

p. 18

(8i) SCW configurations - least preferred are 4, 5, 6 (new utility poles, county-owned street light poles, traffic signals)

p. 18 (8.iii.) allows colocation of 2 on one pole

p. 19 (13.i.3.) allowing 10 % on a 40 ft pole allows SCW to be 4 feet in height. Too large.

p. 19. (15.i) removes requirement not to lose parking spaces

p. 20 (2.) Noise - County noise ordinance - may not be enough to prevent low buzzing sounds or shrill ringing sounds, which rf signals are known for.

Noise ordinance 9962: https://www.sandiegocounty.gov/cob/ordinances/ord9962.doc

" (g) "Disturbing, excessive or offensive noise" means any sound or noise that:

(1) Endangers the health or safety of any person.

(2) Causes discomfort or annoyance to a person of normal sensitivity. "

36.404: less than 11 units per acre - 50 dBA (daytime); 45 dBA (nighttime)

RF noise is variable by the person, causing tinnitus, but may not be measured by equipment. The noise never-the-less is real and causes great discomfort and annoyance.

NEEDS A SOLUTION IF NOISE REPORTED, COMPLAINT. CELL TURNED OFF AND RELOCATED. THE dBA is not acceptable measure for this type of noise. Provide solutions for ADA and other people of “sensitivity”. Endangers health.

Susan Brinchman, Director
Center for Electrosmog Prevention
PO Box 655
La Mesa, CA 91944-0655
760-440-0227
director@electrosmogprevention.org

(3.) Plants - allows removal of trees/plants. Need to remove word "minimize". Especially on right-of-way on private property. No removal or trimming of trees, period.

P. 21 (A.) No discretionary review for colocation Tiers 1-4)

COMMENTS ON SCW APPLICATION CHECKLIST

1. Allows self-reporting for "Further review..." lower section. Require proof of each item from independent source.

2. Amend first * to read "oak trees" rather than mature oak trees. Do not allow cutting or trimming of any trees.

What happens with further review of each item? Need specifics written out in favor of residents and County.

If any of the permit application items are ever found to be incorrect at start or during term of permit, the permit is withdrawn and SCW must be removed within 24 hours, macros within 1 week.

Susan Brinchman, Director
Center for Electrosmog Prevention
PO Box 655
La Mesa, CA 91944-0655
760-440-0227
director@electrosmogprevention.org

San Diego County Wireless Ordinance
Additional Suggestions for Options Chart
CEP/Brinchman
6/12/19

Topic Area	**Included in Current Ordinance (Adopted 2/27/19)**	**FCC Order**	**PDS Recommendations**	**Changes requested Comments**	**Comments:**
Location Preference				*Disallow residential and not close to businesses; 1 mile from residential for both SCW and macro	ADA
Right-of-Way Preference				*1000 ft. setback to property lines; may be much larger per ADA request accommodations, in all directions *No use of private roads or trails *no use of county street light poles *no new poles in right-of-way	*if private road must have property owner's permission and proof of liability insurance by property owner as well, $5 million * clutter reduction *ADA
Distance from schools, childcare centers, hospitals, or churches (6992.A.3)				*Add parks and ballfields – all to apply to both macro and SCW *expand to 3,000 feet from property line; add public places including but not limited to parks, libraries, post offices, municipal buildings and services, medical and dental offices, shopping areas, parking lots; main	ADA rights to access public places and right-of-way, travel routes to public places and other; required not suggested

Susan Brinchman, Director
Center for Electrosmog Prevention
PO Box 655
La Mesa, CA 91944-0655
760-440-0227
director@electrosmogprevention.org
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CEP/Brinchman
6/12/19

				travel routes to public places	
Co-location (6992.A.8.iii)				*Not allowed *May exceed FCC standards at pole *Cluttering * requests subject to discretionary review including community	ADA
Visual separation Existing				*1,000 in Preferred *3,000 feet in Least Preferred	ADA
Height				Do not allow 10% height on 40 foot pole. 3% height on 40 foot pole max	4 foot cell is unsightly
Visual Separation – New Structures				*1,000 in Preferred *3,000 feet in Least Preferred	Note: for all street poles
Undergrounding				*only antenna above ground, at top of pole	All else undergrounded
Design				*must be approved by community planning group	
Noise				Noise ordinance not designed for rf radiation	ADA item; medical conditions; base on complaints-remove if complaint
Plant Disturbance				No tree trimming on right-of-way	No trimming of trees on private property or right-of-way, no matter age of

Susan Brinchman, Director
Center for Electrosmog Prevention
PO Box 655
La Mesa, CA 91944-0655
760-440-0227
director@electrosmogprevention.org
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CEP/Brinchman
6/12/19

					tree or type. Aesthetics.
Signage				Require warning as part of noticing and on every pole. Put the rf emission levels on the pole after each check, with date.	
Removal				Must follow permit approvals exactly or removal, no adjustments made; may be removed upon complaint or ADA request for accommodations	
Fire				Provide fire letter of compliance and coverage up to $50 million from insurance company for each small cell	
Noticing				Noticing to ppty owners within 1 mile; Provide all details of application sought including size, power, and type of transmitter	ADA necessity; All public noticing shall notify public of availability of ADA Accommodations Requests for disabilities or medical conditions requiring avoidance of rf radiation, with full details for

Susan Brinchman, Director
Center for Electrosmog Prevention
PO Box 655
La Mesa, CA 91944-0655
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director@electrosmogprevention.org
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					how to file and process
Incomplete applications				Reverts shot clock to beginning; rejected	
FCC Order Repealed or Overturned				Permits expire 1 week; remove 2 weeks	
No speculative facilities				Must present 5 year plan upon permit application; 5 Year Initial Master Plans for small cell deployment will be made available to the public by each telecommunications company, posted to County site (and cited in any local noticing and meetings with planning department and community groups, sponsors, and public meetings) at least 6 months in advance. Included shall be power of each small cell, the exact street addresses requested for installation, details of each installation, its function, and justification for need. All permits	Must prove before permit application that small cells necessary for service (Verizon can now boost up to 2 miles)

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				will be based upon Master Plan. No small cells outside of Master Plan shall be considered. Meetings to determine adequacy of Master Plans shall be held biweekly during the subsequent initial six months, until considered acceptable to local community, and only then shall permits be applied for. Changes to initial Master Plan shall be made with documented justifications subject to approval of local community.	
Shielding				Per ADA necessary for disabled	Upon request shield so emissions do not enter property or house; County oversight, paid for by small cell owner
Coverage Gap				Not necessary then shouldn't be put in	
RF Emissions Check				Charge $500 per small cell to check twice yearly or upon complaint	County hires independent contractors unrelated to telecoms

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					Measure at 1 mm to small cell and at 5 foot intervals to 50 feet; use combined, overall, total load
Insurance / Bond Requirements				Require independent safety assurance/ statement of safety, insurance and bond	$2-$5 million per small cell; proof of insurance prior to application acceptance; Bond of $20 million per small cell for damages and removals; property value loss; need to leave lease early and new housing costs for disabled; ADA requirements such as shielding costs and hotline run by County
Annual Reporting				Must prove insurance and bond current; emissions check; provide 5 year plan forward	
Shot clocks				? Applicable per FCC unless ADA request for accommodation received in advance or post-application	Needs to be mentioned

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					Shot clocks not applicable with ADA application
Fees				?	Needs to be mentioned Fees for monitoring must be paid ahead of time
ADA				Noticing up to 1 mile, with 60 days to submit ADA request for Accommodations for disabled; full directions for how to submit ADA or medical conditions non-discrimination accommodations request in ordinance; ADA requests may include home (rental or owned) and travel paths; if ADA request made, shot clock stops till legally resolved according to all parties; granting of ADA requests w/ amount of documentation required by 2016 amendments; expand noise ordinance to	All public noticing shall notify public of availability of ADA Accommodations Requests for disabilities or medical conditions requiring avoidance of rf radiation, with full details for how to file.

Susan Brinchman, Director
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				include sensitive individuals	
County wireless ordinance website, attachments, applications, and permits easily found on drop menu for County website					
Permit Contingency				Permit contingent upon continuous, exact fulfillment of all terms including exact location, emissions, insurance, bond – which may be checked at any time during the year. *good for one year renewal with reapplication process same as original * no self-reporting or self-monitoring – must pay County to document or hire independent contractors to check on all steps of process *if fiberoptic to end-user plan selected permit canceled	Must be removed within 48 hours if complaint filed, permit conditions not met, ADA request to remove (all readily available to public online in drop menu for each location) Remove within 24 hours if fails to comply or fine results from bond issued, at $5,000 per day

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Compliance with all laws of the United States and California, including ADA and disability or medical conditions discrimination laws.					Removal with 48 hours notice
Parking spaces				Not allowed to lose parking spaces	
ADA and discrimination law policies				Must be in ordinance Per 2016 amendments (or later revisions) Quick turn-around	
Hotline provided				Hotline provided for ADA/medically ill persons to receive help with problems with small cells or macro towers	
Countywide fiberoptic to end-user device alternative option explored within 6 months				Permits for small cells canceled if fiberoptic to device option adopted by County	

Wireless Industry

From:	Lieberman, Tara
To:	Shute, Madeline
Subject:	FW: Comments: Zoning Ordinance Update on Small Wireless Facilities - Crown Castle
Date:	Tuesday, June 25, 2019 2:36:24 PM
Attachments:	WirelessTelecommunicationsQuestionnaire - Crown Castle v1 5.22.19.pdf CommunitySafety_Infographic.pdf CoverageVsCapacity_Infographic.pdf TechDemand_Infographic.jpg Comments to Draft Zoning Ordinance Update to Small Cell Wireless Facilities - Crown Castle.pdf

---

From: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Sent: Tuesday, June 25, 2019 2:33 PM
To: Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>; Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: FW: Comments: Zoning Ordinance Update on Small Wireless Facilities - Crown Castle

Camila Easland
Junior Land Use / Environmental Planner, Advance Planning
Planning & Development Services
5510 Overland Ave., Suite 310, San Diego, CA, 92123
camila.easland@sdcounty.ca.gov

(858) 495-5491

From: Salas, Adrian <Adrian.Salas@crowncastle.com>
Sent: Tuesday, June 25, 2019 11:25 AM
To: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Cc: Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>; Friese, Tanya <Tanya.Friese@crowncastle.com>
Subject: Comments: Zoning Ordinance Update on Small Wireless Facilities - Crown Castle

Hello,

Regarding the Draft Zoning Ordinance Update on Small Wireless Facilities, Crown Castle is submitting the following comments (also attached):

Wireless access has become a necessity of modern life. According to the Centers for Disease Control

and Prevention, over half of American households are wireless-only, meaning they have no 'land line' service. Additionally, mobile data traffic has increased 238% in the last two years alone (2016-2018), and that trend is expected to continue (Accenture). Like access to good roads and highways, there are direct and indirect economic benefits associated with dependable wireless connectivity. Today's mobile revolution has expanded critical connectivity capabilities to underserved communities via their smartphones. This is particularly important for young, minority, and low-income users, as they disproportionately rely on smartphones for information or to access vital resources (Pew).

There are also public safety aspects of wireless coverage as well: 80% of 911 calls originate from a mobile device (NENA). Reliable and resilient communications connect police officers, firefighters, and other first responders by providing information they need wherever they are. The Chula Vista Police Department for example, is expanding their Drones as First Responder Program, which can be dispatched to an emergency and send HD video back to Headquarters. San Diego County itself has adopted a mobile strategy for communicating to citizens during emergencies through services like the SD Emergencies App, CA Shakealert, and AltertSanDiego, which provide information on disasters, maps, and shelters directly to smart phones. This increased usage and innovation needs infrastructure to support it. We are trying to keep up with ballooning demand and provide the platform for flourishing innovative safety applications.

We respectfully remind the County of San Diego that the FCC order and federal law require that small wireless facilities deployments are held to the same processes/procedures as other users of the right-of-way. "We conclude that aesthetics requirements are not preempted if they are (1) reasonable, (2) no more burdensome than those applied to other types of infrastructure deployments…" (FCC Order 18-133 §§ 86). Regulation also bars prohibition of service (including effective prohibitions). For example, the proposed 1000-foot radial "buffer" around schools, hospitals, etc., constitutes a direct prohibition of service. "Congress determined that state or local requirements that prohibit or have the effect of prohibiting the provision of service are unlawful and thus preempted." (47 U.S.C. §§ 253(a), 332(c)(7)(B)(i)(II). Moreover, and as we detailed on the questionnaire we responded to on this topic (attached), public or commercial areas that draw large amounts of people are particularly in need of robust coverage, especially during special events or emergencies.

We have also attached three infographics. First, the Community Safety infographic highlights statistics relating to wireless service and its impact on public safety. The second is the Coverage Vs. Capacity infographic which further explains the role of small cell sites and their importance to sustaining a robust network that can keep up with demand. The third, TechDemand, shows the connected future that is expected and how many individual devices and sensors will be utilizing wireless connectivity (in addition to smartphones), even in residential settings.

Additionally, we have the following comments/edits on specifics of the proposed process:

Application form

1. Recommend change Carrier/Contract name to Provider/Contact. Crown Castle is a telecommunications service utility Provider. AT&T, Sprint, T-Mobile and Verizon are

Carriers.

2. Add column to the application site spreadsheet labeled Provider Site ID. This number would be the unique site ID that Providers use to identify the location, which is different than the numbers 1-5 or 5-10 site ID listed on the facility permit application form.
3. Recommend changing **Deposit to be paid** to **Application fee** since it is a set amount of $500 up to 5 sites, $100 each additional.
4. Item 6: 24-hour notification for removal needs clarification. What triggers the notification? That is not enough time to review and address equipment installed under this permit.

SCW Facility Questionnaire

1. Requiring local Community Planning Group and property owners within 500' of a proposed small cell wireless facility to be notified prior to submitting an application is a pre-application requirement that is not in compliance with the FCC Order.
2. Clarify impact to traffic or streetlight pole. Does this mean attaching to? If so, the same question is listed twice as the same questionnaire also asks if the project includes the use of County poles.
3. The question on whether the project will have significant impact to aesthetics is too subjective. What is considered significant? Regardless of modifying existing poles or installing new wireless support structures to attach a SCWF, unless the equipment is unshrouded or not painted to match, it will meet aesthetic standards.

Configuration Preferences

1. Is there a limit on volume or equipment dimensions for collocation to an existing facility as long as each carrier is below the 6cu antenna and 28cu for non-antenna equipment?
2. Confirm that #4. New utility Poles includes new poles installed to attach SCWF's, which may not include aerial power or fiber connections.

Zoning Ordinance topic area worksheet

1. Location preference – All areas, and especially Residential areas need and will have SCWF's in the future. As long as the justification on why a site is needed can be a simple statement as to fill a gap in coverage, improve network capacity or offload macro tower traffic, then the County can leave this in. The way currently proposed, the County's residents are incorrectly led into believing that SCWF's won't be in residential areas which is not accurate. It's where they are needed and designed to be.
2. 1000' distance from schools, hospitals, etc. – this arbitrary distance is a prohibition of services, is unrelated to aesthetics and is not enforceable. All the facility types listed are areas of high wireless use.
3. Visual separations (existing and new) – Clarify that this is per wireless carrier and not infrastructure provider. Distance should be same in ALL zones and if County needs a limit, it should be 100'-300' per *carrier*. No carrier nor provider is installing more locations than the minimum needed. Each new generation of wireless service (3g, 4g, 5g) has a reduced service footprint. 5G's low-powered signals only travel <500'. Unknown what 6G will bring but the County should not impose restrictions that will only need to keep being revised. Are these restrictions applied to all users of the ROW or just to wireless (which is not FCC compliant)?
4. Undergrounding – Only fiber and power lines can be placed underground. All meters, radio equipment and antenna need to be above ground. If there are aerial utilities, the County can't prohibit new fiber/power being aerially installed. Once a pole ground is scheduled to go underground, then Crown Castle will work with all

other attachers/utilities to relocate power/fiber below grade in a shared trench.

5. Design – please specify. Visually and operationally blend into surrounding is vague and subjective. Require all new equipment be painted to match pole and the shrouding of all antennas and cabling.
6. Noise – what is the current standard? Where is the measurement taken? What about collocation of carriers on one site, does the noise threshold get increased to encourage collocation? There is no generator and much of the new equipment is passively cooled (no fans) but there are still radio equipment enclosures that do generate heat and mush be actively cooled.
7. Noticing requirements – noticing planning groups and property owners prior to submitting application is not lawful. What is the purpose of noticing on a non-discretionary action? Are all users of the ROW subject to this same requirement? Recommend changing to a pre-construction door hangers to adjacent properties 2 week prior to construction if the County's intent is to inform property owners of ROW work near their property.
8. FCC Order repealed/overturned - clarify permits expire 12 months from date. All permits issued prior to the new date? Or only permits issued for a site expire is it hasn't been built within the 12 month period from issuance? Or add language that the permit changes to comply to any changes in state or federal law within XX months of issuance.

Thank you for the opportunity to provide comments, and we look forward to continuing to work with the County of San Diego on providing next generation wireless connectivity to citizens and businesses alike.

References:

Centers for Disease Control and Prevention - Wireless Substitution: Early Release of Estimates From the
National Health Interview Survey, July–December 2016; 2017.
https://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201705.pdf

Accenture; How the Wireless Industry Powers the US Economy; 2018 https://api.ctia.org/wp-content/uploads/2018/04/Accenture-Strategy-Wireless-Industry-Powers-US-Economy-2018-POV.pdf

NENA – National Emergency Number Association; https://www.nena.org/page/AboutNENA

Pew Research, Mobile Fact Sheet; 2019. https://www.pewinternet.org/fact-sheet/mobile/

Thank you, and please let us know if you have any questions.

ADRIAN SALAS
Government Affairs Manager, San Diego
T:(858) 935-3831
M:(619) 917-6116

CROWN CASTLE
10301 Meanley Dr. Ste. 200 San Diego, CA 92131

CrownCastle.com

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Sprint

Diane Browning
Counsel, State Regulatory

6450 Sprint Parkway
Overland Park, KS 66251
O: 913-315-9284
diane.c.browning@sprint.com

June 18, 2019

County of San Diego
Planning and Development Services
ATTN: Tara Lieberman
5510 Overland Avenue, Suite 310
San Diego, CA 92123

RE: Zoning Ordinance Update for Small Wireless Facilities

Dear Ms. Lieberman:

Sprint appreciates the opportunity to address and comment on the suggested changes to the Zoning Ordinance for Small Wireless Facilities and the impact on Sprint's development and implementation of wireless infrastructure necessary to support Sprint's 5G deployment in the County of San Diego ("County").

Sprint shares the County's goal to make San Diego one of the first major localities to roll out 5G technology. In order to accomplish this goal, it will be necessary to remove unnecessary barriers and cumbersome, outdated administrative processes that create obstacles for wireless carriers. Among these barriers are things like unreasonably high fees for permit applications, pole attachments, and use of the right-of-way; unnecessary delays in processing permit applications; and unduly burdensome design and equipment standards that interfere with a carrier's ability to optimize their technology.

The Federal Communications Commission ("FCC") has recognized the importance of streamlining processes and procedures for the deployment of small wireless facilities (or "small cells") in its Declaratory Ruling and Third Report and Order dated September 27, 2018 ("Order"). Among other things, the Order adopts rules and procedures consistent with eliminating or minimizing the barriers described above, including "shot clocks" for the processing of permit applications and reasonable caps on administrative and right-of-way fees. Sprint strongly encourages counties, cities and municipalities to ensure their ordinances are consistent with the FCC Order, and to take action to adopt policies, guidelines, and procedures designed to streamline administrative processes and eliminate

obstacles to facilitate the deployment of small cells and other wireless infrastructure necessary to support the implementation of 5G technology.

Sprint stands ready to work collaboratively with the County to develop and implement mutually agreeable processes and procedures that (i) are consistent with the FCC Order, (ii) eliminate or minimize unnecessary obstacles to 5G deployment, and (iii) acknowledge the proper exercise of the County's authority and oversight.

Again, we appreciate the opportunity to provide comments and look forward to working with the County. Should you have any questions, please contact the undersigned.

Sincerely,

Diane Browning

From: Neal, Stephanie
To: Shute, Madeline
Cc: Lieberman, Tara
Subject: FW: County of San Diego Small Cell Wireless Ordinance - Joint Wireless Industry Meeting
Date: Wednesday, June 19, 2019 4:51:32 PM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance
PlanningCounty of San Diego | Planning & Development
Services5510 Overland Ave. Ste. 310 | San Diego, CA
92123Stephanie.Neal@sdcounty.ca.gov

(858) 495-5341

From: MCGEE, KEVIN [mailto:km4510@att.com]
Sent: Friday, June 14, 2019 10:31 AM
To: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>; Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>
Subject: RE: County of San Diego Small Cell Wireless Ordinance - Joint Wireless Industry Meeting

Stephanie and Lara,

Thank you for the meeting with you yesterday.

I had another question that I meant to ask you yesterday.

With a perceived Effective date of "A New Code", coming no sooner than, August 8 or 30 days after the BoS approval, as I continue to submit for applications under the current code, will there be a "grace period" for the applications that are submitted prior to the effective date of a New Code?

Kevin McGee
AT&T Mobility San Diego & Las Vegas
858 232-3996

From: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Sent: Friday, June 07, 2019 1:30 PM
To: MCGEE, KEVIN <km4510@att.com>
Cc: Lardy, Eric <Eric.Lardy@sdcounty.ca.gov>; Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>
Subject: County of San Diego Small Cell Wireless Ordinance - Joint Wireless Industry Meeting

Hello Kevin,

On May 31, 2019, we released a public review draft ordinance for Small Cell Wireless Facilities with supporting documents including additional options for the Board to consider, the draft Small Cell Wireless Facilities application and questionnaire, and a visual illustration of draft configuration preferences.

The draft ordinance and supporting documents are available for download at the project website: https://www.sandiegocounty.gov/content/sdc/pds/advance/smallcellwirelessfacilities.html

As Planning & Development Services continues to refine the draft ordinance, we are seeking input from wireless service providers to gain an understanding of industry standards, equipment requirements and limitations, and company policies. We would also like to get your feedback on the requirements currently included in the draft ordinance and their feasibility.

We are hosting a joint wireless industry meeting on **Thursday June 13, 2019 from 8:30 – 10 am** to discuss the ordinance and your attendance would be greatly appreciated. If you are unable to attend, we are available for separate individual meetings the week of June 17th. Please let us know if you would like to schedule an individual meeting.

Thank you for your input!

Best,

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From:	Neal, Stephanie
To:	Shute, Madeline
Cc:	Lieberman, Tara
Subject:	FW: County of San Diego - PDS - Public Review of draft Zoning Ordinance Update for Small Cell Wireless Facilities
Date:	Wednesday, June 19, 2019 4:50:53 PM
Attachments:	image001.png San Diego Co - DRAFT Zoning Ordinance Update for Small Cell Wireless Facilities - Clean - ATT Comments.docx

Stephanie Neal
Junior Land Use/Environmental Planner, Advance
PlanningCounty of San Diego | Planning & Development
Services5510 Overland Ave. Ste. 310 | San Diego, CA
92123Stephanie.Neal@sdcounty.ca.gov

(858) 495-5341

From: MCGEE, KEVIN [mailto:km4510@att.com]
Sent: Wednesday, June 12, 2019 2:29 PM
To: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Cc: MYERS, RHONDA L <rx8839@att.com>
Subject: FW: County of San Diego - PDS - Public Review of draft Zoning Ordinance Update for Small Cell Wireless Facilities

Stephanie,

Here are AT&T's comments to the proposed County Wireless Ordinance Code Changes.

I will see you in the meeting tomorrow morning to discuss.

Thanks!

Kevin McGee
AT&T Mobility San Diego & Las Vegas
858 232-3996

From: Meridee Pabst <meridee.pabst@wirelesspolicy.com>
Sent: Monday, June 10, 2019 3:14 PM
To: MCGEE, KEVIN <km4510@att.com>
Cc: WYLIE, BRIAN D (Legal) <bw9895@att.com>; Rich Busch <rich.busch@wirelesscounsel.com>; MYERS, RHONDA L <rx8839@att.com>
Subject: FW: County of San Diego - PDS - Public Review of draft Zoning Ordinance Update for Small Cell Wireless Facilities

Hi Kevin,

I have attached draft suggested changes to San Diego County's small wireless code changes (see especially starting on page 15) and summarize below several high-priority issues for your discussion with County staff. Would you like to discuss before your meeting with County staff? It would be helpful to get some clarification from the County for purposes of refining our draft comments.

- **1,000-foot separation from schools, child care centers, hospitals, and churches**. This standard is problematic for a number of reasons:
  - This standard is contrary to the FCC Order in that installation of other infrastructure is not so limited.
  - The listed uses are those for which additional wireless capacity is often in high demand, and the owners of such properties want improved service. Schools, churches, hospitals, etc., are often landlords for wireless facilities.
  - This standard appears to be regulating small wireless facilities on the basis of perceived health effects, especially due to the list of uses generally considered to be sensitive. Such regulations are not allowed. *Sprint Spectrum v. Borough of Ringwood, 386 N.J. Super. 62, 898 A.2d 1054 (2005)(the ordinance there prohibited a wireless facility within 1,000 feet of a hospital, school, or public recreation facility)*.
  - Suggest deleting this limitation.
- **Location & configuration preferences.**
  - Suggest several clarifications to preferences, so they can be read together (example: suggest the location priorities apply only to new poles, in order to avoid a situation in which new poles are placed near zoning boundaries when a nearby existing pole might be used with less overall aesthetic impact).
  - Suggest eliminating preferences for locations outside of the ROW.
  - Co-location with another small wireless facility can be technically infeasible, and it can also lead to larger, bulkier poles. Is that the aesthetic result the County desires? Also, from a practical perspective, due to the unique character of each carrier's network design and the limited service area of each facility, it is unlikely that carriers will all need small wireless facilities in the same location.
  - Suggest all preferences apply to the extent technically feasible and the structure owner(s) allows the attachment.
- **Separation standards.**
  - Suggest separation standards apply on a carrier-specific basis, be only 500 feet regardless of zone/area, and be subject to variation when needed ("to the extent technically feasible"). 1,000-foot separation distances are too large when carriers are deploying high frequencies and may need to work around obstructions, etc.
- **Undergrounding.**
  - Suggest qualifications allowing equipment internal to the pole as well as equipment in external cabinets in a configuration consistent with the County's preferences as they are depicted in "Configuration Preferences."
- **Expiration of permits 12 months after FCC Order is "repealed or overturned."**
  - In line with typical treatment of nonconforming rights, suggest the County recognize the facility owner's vested rights in a legally nonconforming use and/or structure, in the event any future decision impacts the FCC Order.
  - Suggest deleting this subsection.
- **This draft limits the new poles allowed to "utility" poles.**
  - "Utility poles" are proposed to be defined as poles supporting electrical, telephone, cable, and internet wires. This definition limits new poles significantly and requires that new poles be more intrusive (supporting wires) than needed for a small wireless facility.
  - Suggest also allowing new wireless-only poles and new light poles (where appropriate).
- **Public notice.**
  - Suggest limiting to new poles in residential zones and at a radius of 250 feet.

Other issues:

- **We can suggest corresponding changes to the County's proposed new forms.**
- **An additional change to the SWC Questionnaire:** "The project will have significant impact to aesthetics" should be deleted. Only objective standards are allowed.
- **Other (non-small wireless facility) issues with County's wireless code**: You will recall that we suggested before that the County update its (non-small) wireless code for consistency with the EFR/6409 rule and otherwise to be consistency with FCC regulations (e.g., the code still has their narrow definition of "co-location"). Let's discuss whether you believe it makes sense to raise these issues again, given the scope of this code change.

Thanks and talk to you soon,

Meridee Pabst
425-628-2660 Direct

From: "Lardy, Eric" <Eric.Lardy@sdcounty.ca.gov>
Date: Friday, May 31, 2019 at 4:44 PM
Cc: "AdvancePlanning, PDS" <PDS.AdvancePlanning@sdcounty.ca.gov>
Subject: County of San Diego - PDS - Public Review of draft Zoning Ordinance Update for Small Cell Wireless Facilities

topicheader

On February 27, 2019, the Board of Supervisors (Board) directed staff to return to the Board in 180 days with additional requirements for small cell wireless facilities for reducing cluttering, avoidance of sensitive sites, co-location, distance between poles, placement of utility boxes, residential preferred locations, undergrounding of equipment, and additional public noticing. This project proposes changes to the Zoning Ordinance to address the Board direction and to comply with the September 2018 FCC Order.

The draft Zoning Ordinance Update for Small Cell Wireless Facilities is available for public review from **May 31, 2019 – June 30, 2019**.

The draft ordinance and supporting documents are available for download at the project website:
https://www.sandiegocounty.gov/content/sdc/pds/advance/smallcellwirelessfacilities.html

Supporting documents include the following:

- Additional Options for the Board to consider related to Small Cell Wireless Facilities
- Draft Small Cell Wireless Facility Questionnaire (to be completed by applicant)
- Draft Application for Small Cell Wireless Facility Permits (to be completed by applicant)
- Visuals illustrating staff recommendations for configuration preferences (Section 6992.A.8)

Please provide comments on the draft Zoning Ordinance Update for Small Cell Wireless

Facilities by June 30, 2019.

Sent comments via email to: PDS.AdvancePlanning@sdcounty.ca.gov

Send comments via mail to: Attn: Tara Lieberman

5510 Overland Avenue, Suite 310

San Diego, CA 92123 [MS O-650]

The proposed schedule leading to Board consideration is outlined below:

May 31 – June 30	**Draft Ordinance Available for Public Review**
June	**Public Outreach**
June	**CPSG Coordination**
July 19	**Planning Commission**
August 7	**Board of Supervisors**

Staff will continue to provide project updates as they become available, through the stakeholder email list and through the project web page at https://www.sandiegocounty.gov/content/sdc/pds/advance/smallcellwirelessfacilities.html

For any questions, please contact Tara Lieberman | PDS.AdvancePlanning@sdcounty.ca.gov (project email address) | (858) 495-5466 (project phone line)

County of San Diego
Planning & Development Services
Attn: Tara Lieberman
5510 Overland Ave
Suite 310
San Diego, CA, 92123

June 30, 2019

RE: County San Diego Zoning Ordinance Update for Small Cell Wireless Facilities

Dear Ms. Lieberman,

Thank you for the opportunity to provide input into the County's proposed revisions to the ordinance governing the approval of small cell wireless facilities.

Telecommunication Infrastructure

Telecommunication connectivity is vital to the function of many aspects of our modern economy and society. Our communication needs are increasingly wireless-based. More than fifty percent (50%) of telecommunications are now completely wireless and have no "landline"[1]. Over eighty percent (80%) of 911 calls now originate from a wireless/mobile device[2]. Our public safety personnel rely upon the dependability of our wireless network to ensure communication with peers and those in need of assistance. The County of San Diego Office of Emergency Services depends upon the wireless network to deploy its Wireless Emergency Alert System to AlertSanDiego, AmberAlert and is exploring the feasibility of using this technology for its ShakeAlert earthquake notification system[3].

Factor in the widespread use of video streaming, navigation apps, social media, web-browsing and voice calls and the growing demand on the existing wireless infrastructure can be accurately described as "exponential". To quantify this, the average smartphone user consumed 5.2GB of data per month in 2016, 7.1GB in 2017, and is projected to use 48GB monthly by 2023[4]. The demand is driven by use; and use is growing with increasing speed. In order to meet this demand, the wireless telecommunication infrastructure needs to be equipped to accommodate same. Engineering advances to meet this demand

[1] 55% of American homes are wireless only. (CDC's 2018 Wireless Substitution: Early Release of Estimates from the National Health Interview Survey, January-July, 2018)

[2] National Emergency Number Association, Enhancing 9-1-1 Operations With Automated Abandoned Callback & Location Accuracy (Motorola Solutions) (August 23, 2018)

[3] https://www.countynewscenter.com/county-to-use-wireless-emergency-alert-to-test-earthquake-warning/

[4] Ericsson Mobility Report, November 2017

have led to the evolution of our existing infrastructure from exclusively large cell towers ("macro sites"), to an interconnected, dynamic network supported and reinforced by the "infill" of small cell wireless facilities.

Small Cell Wireless Facilities ("SWF" and "SCW") will allow the existing network to meet the dramatic demands of wireless users, in addition to delivering the next generation of wireless technology. By handing off data between SWFs and macros quickly, the network will be able to meet user demands reliably by increasing the available "lanes" of information traffic. Without SWFs the present day functions of wireless devices will continue to diminish. Every new device, every new application, and each new user will slowly choke off the finite supply of throughput that our current network infrastructure handles. With the introduction of SWFs, we will be able to maintain the current levels of wireless service and provide significantly greater capacity, lower latency and transformative progress that will facilitate an immeasurable number of new applications.

It is this "critical" deployment initiative that the Federal Communication Commission's September 26, 2018 Delaratory Ruling and Third Report and Order, FCC 18-133 ("Order") intended to facilitate. In this vein, several of the current proposed development standards and process are in clear contravention of the Order's requirements. We have outlined our concerns below, by the corresponding code reference.

SMALL CELL WIRELESS FACILITY APPLICATION REQUIREMENTS

6992.A.3

Development Standards; Required Setback From Specific Uses

"*SCWs shall not be located within 1,000 feet of schools, child care centers, hospitals or churches*."

This setback would effectively exclude many stretches of right-of-way in contradiction of California Public Utilities Code Section 7901 which provides that telegraph or telephone corporations may construct lines of telegraph or telephone lines along and upon any public road or highway, along or across any of the waters or lands within this State, and may erect poles, posts, piers, or abutments for supporting the insulators, wires, and other necessary fixtures of their lines, in such manner and at such points as not to incommode the public use of the road or highway or interrupt the navigation of the waters.

This requirement would also result in a prohibition of service, in violation of the federal Telecommunication Act. In particular, under the Order, denying small cells where needed constitutes an effective prohibition of service, as it "materially inhibits" provision of new wireless services and densification of a carrier's network[5]. . The Supreme Court has held that local regulation that "impedes the provision of 'telecommunication service'" constitutes an effective prohibition of service[6]. Here, the requirement of a 1000' setback from the designated structures will, without question, result in prohibition of service. These areas experience high traffic, with many users and consequently a higher demand for capacity. SWFs are limited in range/propagation as they are significantly lower power than

[5] FCC 18-133, ¶¶ 37-40

[6] Verizon Communications, Inc. v. FCC, 535 U.S. 467, 491 (2002) (emphasis added)

the large macro sites. Often, this range is limited to a couple hundred feet, depending on the terrain. Accordingly, in order to function properly, the facilities must be located near the user generating the demand. Consequently, prohibiting SWFs within 1000' of such facilities will constitute an effective prohibition of service, which is of paramount importance to those attempting to communicate with school officials, hospital staff and patients, and childcare facilities. In an emergency, the ability to reach these contacts with one's mobile devices will be far less likely, if at all possible, without the ability to reinforce wireless infrastructure in proximity to these uses.

Verizon strongly encourages the deletion of this requirement from the proposed code revisions.

6992.A.9

Development Standards; Visual Separation Requirements for New Structures

"Wherever possible, no two SCWs owned by the same provider shall be located within 500 feet of one another in Most Preferred Locations, or within 1000 feet of one another in Least Preferred Locations in order to minimize clutter and other impacts to aesthetics and community character within the right of way."

Site location is an aesthetic consideration for which the FCC requires **reasonable, objective** criteria. In addition to the same reasons articulated relative to prohibition of service, the reasonableness of this requirement is tenuous. As a restriction based on aesthetics, SWFs pose little additional visual impact on infrastructure in the right-of-way. Pursuant to the Order, such criteria must be " (1) reasonable, (2) no more burdensome than those applied to other infrastructure deployments." [7] The installation of SWFs is not without considerable cost and consideration. Verizon deploys these facilities where they are needed, just as a light standard is installed where illumination is needed and power lines are installed where they are needed to service end-users. More specifically, the Order has addressed this specific requirement squarely articulating that "minimum spacing requirements that have the effect of materially inhibiting wireless service would be considered an effective prohibition of service."[8] To reiterate the point, SWFs must be located in proximity to the end-user(s) as they have limited propagation or "throw". This distance is often limited to a couple hundred feet at most, and depending on terrain. Thus a 1000' separation requirement in least preferred locations, and a 500' separation requirement in most preferred locations will, by their very design, constitute a prohibition of service.

Verizon strongly encourages the deletion of this requirement, or significantly reducing the setback to no more than 200' at a maximum, unless the applicant demonstrates a need for closer proximity.

6992.A.14

Development Standards; Undergrounding

As discussed during the June 13, 2019 Wireless Outreach meeting, Verizon requests that "*remote radio unit*" be inserted after "*electric meters*" as exempt from this requirement, consistent with Staff's

[7] FCC, 18-133, ¶¶ 86-87
[8] Id, ¶87

representations of same, and to avoid any erroneous interpretation concerning this provision. Undergrounding requirements, similar to aesthetic requirements must be reasonable, non-discriminatory, and objective[9]. Order ¶¶ 86, 90. Additionally, requiring remote radio units ("RRUs") to be underground would at the very least "materially inhibit" the deployment of SWFs and consequently would constitute a prohibition of service[10].

Verizon requests that "*remote radio unit*" be inserted after "*electric meters*".

6992.A.15

Development Standards; Design

The Order addressed aesthetic criteria for approval of qualifying small cells, concluding that they must be: (1) reasonable, (2) no more burdensome than those applied to other types of infrastructure deployments, and (3) objective and published in advance[11]. Objective standards must "incorporate clearly defined and ascertainable standards, applied in a principled manner."[12]

Design regulations are provided in Section 6992.A.15(i) and (ii). Section 6992.A.15(ii), requires compliance with Section 6987C through H, J, and M. The design regulations provided in Sections 6992.A(15)(i) and 6987.D, E, and F are objectionable because they are replete with subjective standards and therefore, in direct contradiction with the FCC's directive to provide objective aesthetic criteria. For illustration, 6987(F) requires the use of "the ***least visible*** antennas possible in order to achieve coverage objectives." This provision illustrates the complex challenge of such regulations. By tying the subjective determination of "least visible" to "coverage objectives" this requirement fails to account for *capacity* needs. Capacity objectives are a necessary factor that, if materially inhibited, would result in an effective prohibition of service. Additionally, with no objective standard, "least visible" would be subject to whomever happens to be reviewing an application on any given day. The above criteria are vague. Under objective standards, either a facility complies or it does not. Indefinite standards invite discretion and should be removed. The above criteria invite opinions that vary from person to person, undermining objectivity. Each of the above regulations are concepts which invite comparison of designs at the decision stage, posing the potential for denial of facilities that meet objective standards. There is also considerable risk that staff or the well-noticed public may erroneously infer that because some other examplar of antenna exists, that it is of the type or functionality to suffice in meeting the network objectives of any given carrier. The subjective nature of these requirements confer upon the reviewing party an arbitrary review authority, in contravention of the Order's directives.

[9] Id, ¶86, 90
[10] Id, ¶90
[11] Id, ¶86
[12] Id, ¶88

Verizon requests that the subjective language addressed above be removed *in toto* or revised with clear, objective definitions.

6992.J.6

Small Cell Wireless Permit Application Contents; Notice

"*Notice. Any application for a new or co-located SCW shall include evidence of compliance with the following notice requirements: (i) A notice of intent to request a permit for a new SCW shall be provided to all property owners within 500 feet of the proposed facility prior to or at the time of the submittal request. (ii) A notice of intent to request a permit for a new SCW shall be provided to any applicable community planning or sponsor group where the proposed facility is prior to or at the time of the submittal of a request."*

Any application for new or collocated SCW requires two (2) notices of intent prior to or at the time of submittal of a request. A notice of intent to request a permit is to be provided to all property owners within 500 feet of the proposed facility and another notice is to be provided to any applicable community planning or sponsor group.

Notice to a five-hundred foot (500') radius is inappropriate as it could capture properties on streets not impacted by a small cell. Wireless carriers developed small cells with an aim to minimize visual impact through small equipment components. Given their minimal impact, any notice for small cells should be limited to posting on the subject pole and mailing to abutting owners and occupants. Further, public input introduces subjectivity to decision-making for applications which must be reviewed under objective criteria. Soliciting public comment frustrates both the public and decision-makers. The public's subjective concerns simply cannot be addressed by decision-makers implementing what must be an objective process. And while such requirements bear little nexus to the limited impact of the deployment of a SWF, there is little doubt that such notice will result in the delay of application processing. Such delay will likely result in decision timeframes that exceed the mandated shotclock requirements.

Verizon requests that Notice requirements be limited to property owners abutting the proposed SWF, or in the alternative, within fifty feet (50'), with no notice to community planning or sponsor groups.

SCW APPLICATION PROCESSING

6993

Section 6993 allows only colocations proposed on existing approved Tiers 1-4 facilities to be reviewed administratively if in compliance with Section 6992, which means all other applications for small cells are subject to discretionary review. All facilities meeting the FCC's definition of small cell should be approved administratively because the FCC requires objective review. This includes small cells on new poles. Objective criteria warrant an administrative approval, not a discretionary planning process such as a use permit. Use permits involve planning commission hearings and public notice which would inappropriately involve discretionary findings and decisions, introducing subjectivity that contradicts

objective review. The County must evaluate all small cells under clear objective standards and that is why administrative approval is appropriate.

Further, the Order requires processing applications for new poles for small cells through definite Shot Clock time periods[13]. If applications are subject to discretionary review, the County may not timely process applications within the prescribed Shot Clock time periods. Pursuant to the Order, small cell applications must be processed within: (i) 60 days for collocations using an existing structure and (ii) 90 days for new structures (including replacement poles)[14]. Administrative review streamlines the application and approval process to meet Shot Clock deadlines.

The FCC defined "small wireless facilities" with specific dimension thresholds[15]. To incentivize small cells, the County of San Diego should offer expedited permitting of those that fall under certain dimension thresholds.

Summary

The reinforcement and densification of wireless infrastructure serves a necessary and vital role in our society. In a crisis, communication infrastructure is of paramount importance to the safety and well being of Emergency Services personnel, and residents. For the sustainability and vitality of the County's economic interests, a well-functioning telecommunication network is critical. The reasonable means to make the significant, multi-million dollar investment in the county's infrastructure is crucial to Verizon's ability to stay ahead of the capacity demands of its user base. The ability to maintain the current level of wireless service to those who rely upon it, is predicated on the ability to integrate SWFs into the existing network infrastructure. The FCC has underscored the importance of this initiative, noting that "local governments may believe (they) are simply protecting the interests of constituents. The telecommunication interests of its constituents, however, are not only local. They are statewide, national and international as well." These interests are those of safety, economic viability and sustainability and the foundation for future innovations not yet discovered.

Verizon respectfully submits the above comments and requests the County's thorough consideration in light of the importance of these improvements to local and regional interests.

Very truly yours,

[13] 47 C.F.R. § 1.6003(c).
[14] FCC 18-133, ¶ 105; 47 C.F.R. § 1.6003(c)(1).
[15] 47 C.F.R. § 1.6002(l).

Mike Farraher /s/

Mike Farraher

Municipal Engagement Partner

Verizon Wireless

July 1, 2019

5887 Copley Drive
San Diego, CA 92111

Eric Lardy
Chief, Advanced Planning
Planning & Development Services
5510 Overland Avenue, Suite 310
San Diego, CA 92123

Dear Eric and Land Use Team,

Cox is submitting a response to the County's request for comment on the proposed Small Cell installation ordinance to request the inclusion of Strand Mounted Small Cells (a.k.a: Micro Wireless Facilities). Cox asks for these types of installations to be part of the preferred locations for Small Cell deployment as they are less intrusive to the right of way and surrounding community.

To do this, the County would have to add a definition for "Micro Wireless Facility" such as the one described below:

"Micro Wireless Facility" means a wireless Telecommunications facility that 1) is not larger in dimension than 36" in length, 18" in width and 12" in height 2) does not have an exterior antenna which is longer than 11 ½" 3) an are installed directly onto existing overhead cables owned by Telecommunications providers.

Cox would like to state that Micro Wireless technology is less obtrusive to the right of way spatially and visually. Strand mounted equipment does not require any ground mounted powering or space to accommodate the technology. All equipment shall be required to fit within 12" vertically of the existing strand as described in what has been adopted as "Micro Wireless Facilities" in the industry. Cox recommends strand mounts be placed only in areas where aerial plant owners have existing aerial cables to protect from new aerial extensions in areas that did not exist before.

Strand mounted architecture is limited in coverage due to its compact size and lower elevation near trees and clutter requiring them to be closer together. To avoid every pole being utilized with multiple service providers equipment, Cox recommends that the County adopts a "no closer than every other pole" rule and limit the installations to a single wireless provider reducing aerial visual blight. Every other pole attachment will create a natural 300' to 350' separation between installations allowing for the technology to work properly due to its lower elevation and obstructions. By adopting the industry known "Micro Wireless Facility" options for Small Cell installations, the County will be able to limit equipment expansion or installations from becoming too bulking on the strand in any given area.

Cox's legal rights under the federal Cable Act and DIVCA grant Cox, and its affiliate Cox Wireless Access (CWA), use of existing cable facilities for deployment of communication services, including Micro Wireless Facilities without paying additional fees to the County beyond the fees paid as a cable franchise fee for use of the public rights of way. Cox will remit permit applications and associated fees as required by the County's municipal code.

In closing, Micro Wireless Facilities are a great alternative to placing new poles or additional clutter in residential areas or compressed right of ways that may not meet ADA requirements. Included are sample photos and specs of installations. By limiting the installations to existing aerial cables, residents and commercial properties are already used to having those aerial routes near their property vs new poles if existing ones are not available.

Should you have any questions, please do not hesitate to contact me at Carla.Leal@cox.com or 858-836-7311.

Respectfully,

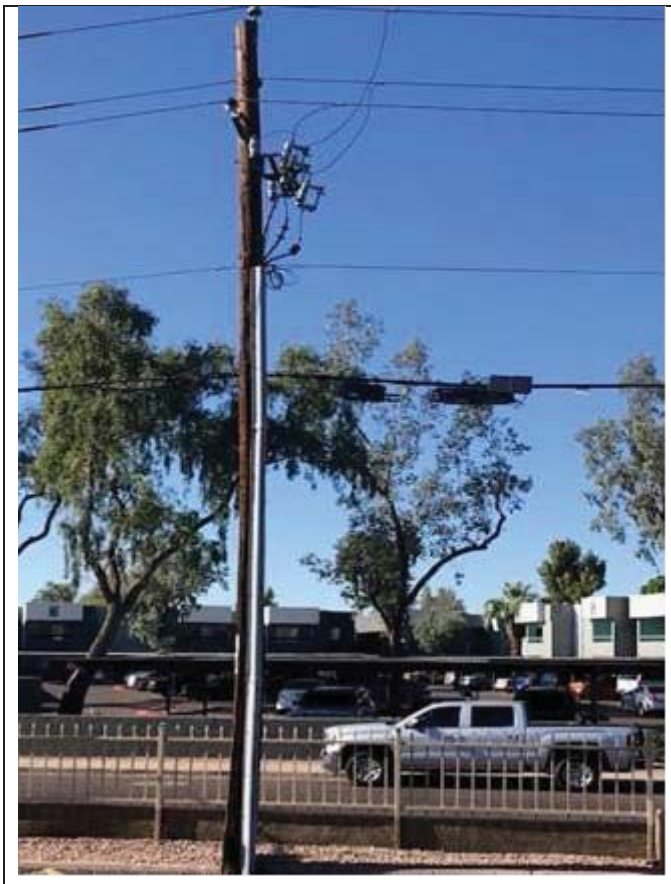
Carla Leal
Manager, Government Affairs
Cox California

Cc: Richard Strong
Eric Berry
Michael Hadland
Tara Lieberman
Stephanie Neal

Cox has provided a photo of a “Micro Wireless Facility” installation below for reference:



- Equipment is generally powered from aerial plant owners coax network
- Data communication to equipment comes from aerial plant owners network
- As this is a controlled space, Safety signage is installed to notify trained workers of emitting device
- All equipment fits within 12” requirement per pole owner agreement as well as local and national safety codes



- This is a sample of multiple technology solutions utilizing fiber backhaul.



- This is a sample of the components of multiple technology solutions utilizing fiber backhaul.

Individuals

From: AdvancePlanning, PDS
To: Lieberman, Tara
Subject: FW: Zoning Ordinance Update for Small Cell Wireless Facilities (Planning & Development Services)
Date: Monday, June 03, 2019 9:16:34 AM
Attachments: image001.png
image002.png

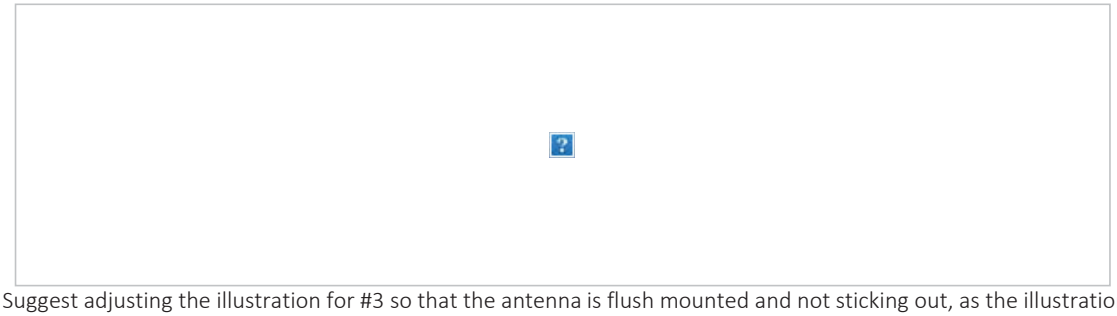
Bianca Lorenzana
Jr. Land Use/Environmental Planner
Pronouns: she/her
Bianca.Lorenzana@sdcounty.ca.gov
Phone: 858-694-2216
County of San Diego | Planning & Development Services
5510 Overland Avenue, Suite 310, San Diego, CA 92123

From: Tylke, Melanie
Sent: Monday, June 03, 2019 9:06 AM
To: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Subject: RE: Zoning Ordinance Update for Small Cell Wireless Facilities (Planning & Development Services)

Hi Tara –

For the update the supporting document Section 6992.A.8 may need to be updated. Also a definition on "decorative poles" may be warranted.

1. Typo highlighted –



2. Suggest adjusting the illustration for #3 so that the antenna is flush mounted and not sticking out, as the illustration does not jive with the ordinance:
    a. "6987 DESIGN REGULATIONS – NON-SCW APPLICATIONS
        E. Façade-mounted antennas shall be architecturally integrated into the building design and otherwise made as unobtrusive as possible. If possible, antennas should be located entirely within an existing or newly created architectural feature so as to be completely screened from view. Façade-mounted antennas shall not extend more than 24 inches out from the building face."



Melanie

From: County of San Diego <sdcounty@service.govdelivery.com>
Sent: Friday, May 31, 2019 5:22 PM

To: Tylke, Melanie <Melanie.Tylke@sdcounty.ca.gov>
Subject: Zoning Ordinance Update for Small Cell Wireless Facilities (Planning & Development Services)

topicheader

On February 27, 2019, the Board of Supervisors (Board) directed staff to return to the Board in 180 days with additional requirements for small cell wireless facilities for reducing cluttering, avoidance of sensitive sites, co-location, distance between poles, placement of utility boxes, residential preferred locations, undergrounding of equipment, and additional public noticing. This project proposes changes to the Zoning Ordinance to address the Board direction and to comply with the September 2018 FCC Order.

The draft Zoning Ordinance Update for Small Cell Wireless Facilities is available for public review from **May 31, 2019 – June 30, 2019**.

The draft ordinance and supporting documents are available for download at the project website: https://www.sandiegocounty.gov/content/sdc/pds/advance/smallcellwirelessfacilities.html

Supporting documents include the following:

- Additional Options for the Board to consider related to Small Cell Wireless Facilities
- Draft Small Cell Wireless Facility Questionnaire (to be completed by applicant)
- Draft Application for Small Cell Wireless Facility Permits (to be completed by applicant)
- Visuals illustrating staff recommendations for configuration preferences (Section 6992.A.8)

Please provide comments on the draft Zoning Ordinance Update for Small Cell Wireless Facilities by June 30, 2019.

Send comments via email to: PDS.AdvancePlanning@sdcounty.ca.gov

Send comments via mail to: Attn: Tara Lieberman
5510 Overland Avenue, Suite 310
San Diego, CA 92123 [MS O-650]

The proposed schedule leading to Board consideration is outlined below:

May 31 – June 30	**Draft Ordinance Available for Public Review**
June	**Public Outreach**
June	**CPSG Coordination**
July 19	**Planning Commission**
August 7	**Board of Supervisors**

Staff will continue to provide project updates as they become available, through the stakeholder email list and through the project web page at https://www.sandiegocounty.gov/content/sdc/pds/advance/smallcellwirelessfacilities.html

For any questions, please contact Tara Lieberman | PDS.AdvancePlanning@sdcounty.ca.gov (project email address) | (858) 495-5466 (project phone line)

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GovDelivery logo

Holly Manion
17090 El Mirador
Rancho Santa Fe, CA 92067

June 29, 2019

Tara Lieberman
Land Use / Environmental Planner, Advance Planning
5510 Overland Avenue, Suite 310 / Mail Stop – 0650
San Diego California 92123

Re: Small Cell Wireless Facilities Ordinance

Dear Tara Lieberman & San Diego County Supervisors:

I am writing to you as a real estate broker of 40 years, and a member of the North San Diego Association of Realtors regarding changes to your draft "Small Cell Wireless Facility Ordinance". My deep concern is for property devaluation as 5G cell sites are permitted and installed in and around residential and "sensitive" areas and properties of the County.

My personal experience as a realtor current literature suggests that any resident who faces 5G, or any cell tower near their property is going to experience difficulty selling their home, and devaluation of their property. I would strongly urge you to include language in your new ordinance that includes substantial setbacks from residential properties and sensitive areas. Other cities and towns in California **"prohibit Small Cells in residential areas"** or have adopted 1000 foot setbacks. Why should San Diego be less protective of residents? I recommend **1000 foot setback** for all residential and sensitive properties. Without these setbacks, I'm afraid the real estate market in San Diego will cease to be desirable, profitable, and an attribute to San Diego County.

In my professional opinion we will lose real estate business and we will lose business overall if families cannot find what they consider to be safe homes in the San Diego area and conversely, if they find that these homes are difficult to sell with cell towers in front of them.

The perception of 5G is one of deep concern because of the failure to test this new technology and the fact the millimeter wave is also used in full body scanners that pregnant women are allowed to "opt out" of at airports. We have to exercise great caution to protect the real estate industry here in San Diego and I would urge you all to be as generous as you possibly can be when it comes to residential setbacks from cell towers of all kinds.

The following are my suggested changes to your draft ordinance:

1. Preference for locations in commercial and/or industrial districts.
2. Minimum 1000 foot setback from residential and sensitive areas & properties.
3. Pre application site inspection & survey to be **required** for each site application. There must be an "on-site visual inspection" prior to approval of the site by the County or agent representing the County. If application is in conflict with a sensitive area/property, site inspector may suggest the tower relocate so sensitive area is protected.
4. Consider a "Tolling Agreement" between the applicant and the County to be part of the application.
5. Fall zone to be at least 100 feet in all directions.
6. Require mandatory live RF compliance testing paid for by the carrier immediately after tower/antenna is installed.
7. "On demand testing" of a site by a third party paid for by carrier.
8. Height restriction to be 30 feet (as they are allowed to go higher over time).
9. Require sound mitigation for each site.
10. Payment, performance and removal bond paid up front. Bond held by the County.
11. Require a Certificate of Completion and a Certificate of Compliance for each application.
12. No cutting of trees to facilitate line of sight or initial placement. The general ambience of the community is to be preserved.
13. Any ground mounted equipment that cannot be installed in/on a pole must be undergrounded flush to the ground.
14. Property owners must be notified within 500 feet of the proposed cell antenna/site with a copy of the photo simulations and RF compliance report.
15. The ordinance shall comply with the (ADA) Americans with Disabilities Act.

Sincerely,

Holly Manion

Holly Manion

Rancho Santa Fe Realty

DRE #00646025

http://electromagnetichealth.org/electromagnetic-health-blog/survey-property-desirability

http://electromagnetichealth.org/wp-content/uploads/2014/06/TAJSummer05p256-277.pdf

https://ehtrust.org/cell-phone-towers-lower-property-values-documentation-research/

From:	Lieberman, Tara
To:	Shute, Madeline
Subject:	FW: Health and environmental studies on small cell antennae microwaves
Date:	Tuesday, June 25, 2019 2:36:05 PM

From: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Sent: Tuesday, June 25, 2019 2:32 PM
To: Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>; Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: FW: Health and environmental studies on small cell antennae microwaves

Camila Easland
Junior Land Use / Environmental Planner, Advance Planning
Planning & Development Services
5510 Overland Ave., Suite 310, San Diego, CA, 92123
camila.easland@sdcounty.ca.gov
(858) 495-5491

From: Alan Conrad <alan@edible-alchemy.net>
Sent: Saturday, June 22, 2019 8:43 PM
To: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>; Jacob, Dianne <Dianne.Jacob@sdcounty.ca.gov>; Montufar-Federico, Karen <KMontufarFed@sandiego.gov>;Councilmember Monica Montgomery <MonicaMontgomery@sandiego.gov>
Subject: Re: Health and environmental studies on small cell antennae microwaves

forgot to copy this email to my council members and Dianne Jacob,

On Sat, Jun 22, 2019 at 8:37 PM Alan Conrad <alan@edible-alchemy.net> wrote:

> Hello Tara Lieberman.
> I read the draft on small cell antennae and perhaps you can help me find in it where this new technology has had any public health studies done, or if there's been any environmental impact reports done on it? For an organization who claims it's trying to protect the public, it seem more like you're intent in ignoring and violating the Nuremberg Code and expose us all to undue risk. Until you can prove safety in this new microwave technology, it is unethical and illegal to continue

to pursue this course of action. You are engaging in a mass experiment on the public without our informed consent. I will hold all employees and agents of the City of San Diego PERSONALLY responsible and seek recourse for breach of public trust, should you continue.
Thank you,
Alan Conrad
1847 Klauber Ave. San Diego, CA
92114

From: Neal, Stephanie
To: Shute, Madeline
Cc: Lieberman, Tara
Subject: FW: Zoning Ordinance Update for Small Cell Wireless Facilities
Date: Friday, June 28, 2019 1:56:04 PM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Sent: Friday, June 28, 2019 1:51 PM
To: Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>; Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: FW: Zoning Ordinance Update for Small Cell Wireless Facilities

Camila Easland
Junior Land Use / Environmental Planner, Advance Planning
Planning & Development Services
5510 Overland Ave., Suite 310, San Diego, CA, 92123
camila.easland@sdcounty.ca.gov

(858) 495-5491

From: Aleksandra Spasic <aleksspasic8@gmail.com>
Sent: Thursday, June 27, 2019 3:28 PM
To: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Subject: Zoning Ordinance Update for Small Cell Wireless Facilities

Dear Tara Lieberman,

I am writing with concern about the plans to implement and install small-cell wireless infrastructure based on the recent FCC ruling. This ruling essentially allows installment anywhere without local control or reasonable fees. The FCC rules allow these wireless facilities 10-20 feet from homes on rights of way, and *neglect health, safety, fire, falling, and other hazards* while setting an absolute 60-90 day shot clock, regardless of application number. *5G will also require the removal or severe pruning of all trees along the streets, as they cannot block the signal.* The FCC orders are unconstitutional and are currently being challenged. I URGE you to disallow this illegal mandate, and not take any irreversible action by changing our local wireless infrastructure ordinances to facilitate 5G, as it may be overturned.

Other cities and counties are standing against these “rushed” and “streamlined” FCC rules. They are being challenged in the ninth circuit by many municipalities; the Marin County, California Board of Supervisors, town of Fairfax, CA, and the Massachusetts Municipal Association are examples of such against these rules. Others are waiting to see the outcomes of the existing legal challenges and tightening their ordinances. Burlington, Massachusetts, recently revised the town ordinances in a manner that caused the applications put forth by Verizon to be withdrawn. Petaluma County, California, recently revised town ordinances to require under-grounding of equipment and large setbacks from residences. Pittsfield, Massachusetts, recently revised city ordinances to limit the number of "small cells" placed on a structure. These actions provide more support and legal justification for our local governments to challenge them as well. Further, heads of the House Energy and Commerce Committee and the Subcommittee on Communications and Technology have written to the FCC questioning collusion. On January 14, 2019, Congresswomen Eshoo and Speier introduced HR 530 to block the FCC preemption of local authority. The National Resource Defense Council is also challenging the FCC's earlier rules to exempt small cells from historic and environmental considerations.

The FCC claims to 5G safety are unfounded On Feb. 6, 2019, in a Senate hearing, *industry leaders admitted that there’d been no health or safety testing*, despite $25 billion dollars invested by the wireless industry in 2018. Senator Blumenthal and Congresswoman Eshoo have written the FCC for proof that the 5G technologies, employment of millimeter microwave (MMW) radiation in the 6 – 100 GHz range, are safe, *with no satisfactory response*. The FCC regulations for safety were adopted in 1996, based on industry-science, and have not been updated for next generation wireless, equipment and devices. Further, they are based on thermal effects, not biological effects. Finally, the FCC’s Specific Absorption Rate (SAR) limits do not apply to devices operating above 6 GHz (which 5G does).

Despite widespread denial, there is overwhelming scientific evidence that radio frequency (RF) radiation is harmful to all forms of life. Wireless facilities have traditionally been kept from bird migration areas, as birds become disoriented by the signals. High power, proximity, and even new wireless frequencies from an influx of small-cell towers add to a pervasive threat to the environment, including us.

This will affect everyone, including those who make vital contributions to society, our community, and economy here in our area. **Your children, senior, expecting mothers and their babies, and immune-compromised constituents will be especially vulnerable to this harmful exposure.**

Recent research by the US National Toxicological Program (NTP) found cardiac and tumor risks heightened just from 2G wireless exposures, and other researchers have confirmed the NTP findings at ambient power levels. This is clear evidence of a link between long-term RF radiation exposure and cancer. The accumulated clinical evidence of sick and injured people, experimental evidence of damage to DNA, cells and organ systems in a wide variety of plants and animals, and epidemiological evidence that the major diseases that plague us, like cancer, heart disease, Alzheimer's, infertility, and diabetes are in large part caused by electromagnetic pollution, forms a literature base of well over *27,000 peer-reviewed studies* (consolidated in the EMF Portal). Higher frequencies, such as above 6 GHz, will be used for 5G. Scientists in the field expect these higher frequencies to be devastating to insects, including bees. They also expect 5G to heighten skin cancer incidence, with other impacts to eyes, immunological and neurological systems. There is already a large population here in our state that suffers from EMF-induced, serious, health problems. With the rollout of 5G this number will grow rapidly. The health complications are vast and include: headaches, tinnitus, chest pain from impaired blood flow, heart arrhythmia, heart failure, cognitive disorders, hearing loss, insomnia, seizures, and neurodegenerative diseases, to name a few.

Of further concern, Active Denial System (ADS) is a directed-energy weapon developed by the U.S. military, that heats the surface of the skin using MMW at 95 GHz (this is within the range of 5G). This radiation penetrates the first layer of skin, where it feels like intense heat and causes a stinging sensation. Skin may redden and even blister. For most humans, the radiation does not permeate the second layer of skin – except where it's thin, such as eyelids and for infants. The reflex of the eye during exposure is to close. Safety studies demonstrate corneal absorption of 94 GHz radiation, as well as *permanent ocular damage at exposure times greater than six seconds*; less than that for those with LASIK procedures.

Beyond health and safety concerns from the radiation, these towers pose fire and other hazards. Further, they will depreciate property values, impose on privacy and security, and through sickening of the population, will reduce productivity and our economy. This will place an undue burden on the government and medical providers, and will ultimately force people, and likely businesses, to leave our entire region. *Our local governments will surely be sued if they allow this predictable harm to children, adults, and senior citizens, fires from these small cells, or loss of property values.*

Our local governments should seek to limit, *not exponentially increase*, the amount of electrosmog pollution from manmade RF radiation in our area, as an imperative, according to numerous physician and scientist organizations! These include: The World Health Organization, Kaiser Permanente, American Academy for Environmental Medicine (AAEM), American Academy of Pediatrics (AAP), CA Sierra Club, the Honeybee Foundation, and even the California Department of Public Health. Nor should our local governments allow experimentation on the residents with a vast array of new MMW technologies - only previously used as ADS in crowd control. The Nuremberg Code has forbidden experimentation of this sort for over 50 years.

As our elected official(s), the citizens of San Diego County *require your good governance*, not protection of commercial and corporate interests. I am writing to request your due diligence: that our ordinance be carefully examined in light of the FCC's new ruling, health risks, other model ordinances, and with attention to crafting an ordinance that will prevent

harm to the community. I request a careful review of the existing ordinances, with plenty of citizen input, to insure citizen protections; *as our elected representative this is your duty*. If need be, I ask that you enact additional protective ordinances, not to allow unsafe 5G into our residential and commercial areas. Again, I ask that you not make any irreversible actions at this time. And if any actions or applications must be taken, that our local government make permits and decisions contingent only on the FCC ruling, or parts thereof, not being overturned.

Sincerely,
Aleksandra Spasic

June 30, 2019

Beth Nelson
PO Box 611
Rancho Santa Fe, CA 92067

Tara Lieberman
Land Use / Environmental Planner, Advance Planning
5510 Overland Avenue, Suite 310 / Mail Stop – 0650
San Diego California 92123

Via Email: Tara.Lieberman@sdcounty.ca.gov

Re: Small Cell Wireless Facilities Ordinance

Dear Tara Lieberman & San Diego County Supervisors:

I am deeply concerned about the new FCC directive making it possible for the telecommunications industry to place cell towers anywhere in the County right-of-way. I am voicing my strong objection to the FCC's takeover of our County's land as well as due process with respect to our rights. That being said, as zoning planners and Supervisors, can you please take the following requests into the strongest possible consideration. We are afraid of property devaluation with cell towers in residential areas, as most of us have the majority of our net worth in our homes. Because 5G is an unproven technology, please protect certain sensitive areas:

1. Cell towers are not to be located in "Sensitive" areas. 1000-foot setbacks from sensitive areas as defined by the County are necessary.
2. 500-foot set back from residential.
3. Preapplication site inspection & survey required for each site application. There must be an on-site inspection prior to approval of the site by the County or agent representing the County. If application is in conflict with a sensitive area, site inspector may suggest the tower relocate so coverage is the same but sensitive area is protected.
4. Fall zone must exceed the height of the tower by 20% because the height of the tower may be increased by 10% the next year. Setback must meet fall zone length at a minimum.
5. Require mandatory live RF compliance testing immediately after tower is installed and "on demand testing" by a third party paid for by carrier.
6. Height restriction 30 feet; next year [under 1903] tower may go 10% higher.
7. Payment, performance and removal bond paid up front.
8. Require a Certificate of Completion.
9. **No cutting of trees to facilitate line of sight or initial placement. The general ambience of the community is to be preserved**. This is especially important for the Historic Landscape Designation in Rancho Santa Fe.
10. Co-location up to two carriers is encouraged.
11. Under-grounding of equipment where possible; discretion may be used by staff.
12. The ordinance shall comply with the Americans with Disabilities Act.

Beth Nelson [Signature]

June 30, 2019

Cc: Jim Desmond, Supervisor District 5

San Diego County Citizen

Invitation for comments – Wireless Ordinance

Beverly Raimondo
4911 1/2 Del Mar Ave
San Diego, CA 92107

June 27, 2019

San Diego County Board and Planning Commission
County Administration Center
1600 Pacific Hwy, Rm 335
San Diego, CA 92101

Dear County Supervisors and County Planning Commission,

I am writing to express my concern about the installment of 5G/small-cell antennas throughout San Diego County. The threats to public health, safety, privacy and security, property, and more must be addressed in the wireless ordinance. The citizens of San Diego County require your protection. I am grateful that The County is taking measures to incorporate such protections into an updated wireless ordinance, since the version approved in February makes no such provisions.

Based on review of the latest ordinance draft, there are still a number of ways this ordinance could be improved to ensure the best for SD County citizens, which I trust is your primary goal.

- **Restrict small cells in residential areas, and zones where children, elderly and those with special/medical needs will be.** No small cell should be allowed within (a minimum) of 1000 feet from a residential property line, in any direction. Or within 1000 ft of a school, hospital, library, church, daycare, community center, property lines. Verizon has a commercial on YouTube where they measured the distance of a 5G signal (through hills and obstacles) at a distance of greater than 3,000 feet, so there should be zero issue with these setbacks, they are a necessity.
- **Stronger language.** Use words like “must”, “shall”, “must avoid”, “will”, etc which are more clear in meaning and tone, instead of “may not”, “should not”, and “suggest”, which can be ignored.
- **Require a master plan.** The master plan needs to be coordinated across all carriers, and provide information for each antenna project like RF exposure levels, power levels, frequencies, and location address. The master plan should also be published online with ample notice, such that citizens can provide input BEFORE the antenna is installed. REQUIRE that these companies have a plan and strategy for where they place the antennas, and enforce their compliance. This will minimize excessive, haphazard installments.
- **No Co-location!** Co-location means multiple antennas to a single pole. And despite the thinking, it does not reduce clutter. Actually, it produces a huge eyesore of a pole will multiple projections hanging off of it. It DRAWS more attention because of the extra hardware. Col-location allows poles to become scarily top-heavy, and also exposes citizens to higher doses of radiation since multiple antennas will emit from a single location. One antenna per pole, and no antennas within 1000 feet of ANY other antenna.
- **No cutting or disturbance of trees and landscaping – at all.** This must be forbidden! There are other towns and cities with gorgeous, old trees being chopped down or excessively trimmed to allow for small cell deployment. Not going to happen in San Diego!
- **Provide clear-easy-to-reach County support for citizens.** We need to have a dedicated line/service to contact The County when issues with the small cells arise, such as noise, safety, health problems, or other complaints need to be reported. This service can be funded

by the wireless providers as a part of their application/bond/yearly renewal fees.

- **Insurance and Bonds.** Require than the companies have increased insurance and bonds to protect against malfunction, accidents, damages, and injury. These provide protection for the county too.
- **ADA language and provisions.** The ordinance lacks language that protects Americans with disabilities, and their use of these rights-of-way, where the small cells structures will be deployed. ADA protection must not be discriminatory toward those who have physical mobility disabilities only. What about citizens with EHS, pacemakers, ADD/ADHD, autoimmune, etc? These rights-of-way belong to us too, and this liability belongs to San Diego County.
- **Random third-party testing.** Random, independent third party inspections must be required biannually, at expense of the company, to ensure compliance with FCC guidelines.
- **Give notice** for any residence within a mile of a proposed small cell site, to provide ample time for residents to come forward and provide input.
- **Require safety signage on all poles.** All poles must have necessary warning signs and RF safety information.
- **Keep small cells away from parks and ball fields – at least 3000 ft away.**

Thank you for taking the time to consider and apply these suggestions. I look forward to seeing changes in next ordinance draft.

Sincerely,

Beverly Raimondo

From: Neal, Stephanie
To: Easland, Camila
Subject: FW: Wireless Ordinance + concerns about 5G
Date: Monday, July 01, 2019 9:59:29 AM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Sent: Monday, July 01, 2019 8:24 AM
To: Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>
Cc: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: FW: Wireless Ordinance + concerns about 5G

Bianca Lorenzana
Jr. Land Use/Environmental Planner
Pronouns: she/her
Bianca.Lorenzana@sdcounty.ca.gov
Phone: 858-694-2216
County of San Diego | Planning & Development Services
5510 Overland Avenue, Suite 310, San Diego, CA 92123

From: Cherri Christiansen <cherrichristiansen@gmail.com>
Sent: Sunday, June 30, 2019 6:06 PM
To: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>; Jacob, Dianne <Dianne.Jacob@sdcounty.ca.gov>
Subject: Re: Wireless Ordinance + concerns about 5G

Cherri Christiansen
16942 Vasquez Way #101
San Diego, CA 92127

June 30, 2019

San Diego County Board and Planning Commission
County Administration Center

1600 Pacific Hwy, Rm 335
San Diego, CA 92101

Dear County Supervisors and County Planning Commission,

I am writing to express my concern about the installment of 5G/small-cell antennas throughout San Diego County. The threats to public health, safety, privacy and security, property, and more must be addressed in the wireless ordinance. The citizens of San Diego County require your protection. I am grateful that The County is taking measures to incorporate such protections into an updated wireless ordinance, since the version approved in February makes no such provisions.

Based on review of the latest ordinance draft, there are still a number of ways this ordinance could be improved to ensure the best for SD County citizens, which I trust is your primary goal.

Restrict small cells in residential areas, and zones where children, elderly and those with pecial/medical needs will be. No small cell should be allowed within (a minimum) of 1000 feet from a esidential property line, in any direction. Or within 1000 ft of a school, hospital, library, church, aycare, community center, property lines. Verizon has a commercial on YouTube where they easured the distance of a 5G signal (through hills and obstacles) at a distance of greater than 3,000 et, so there should be zero issue with these setbacks, they are a necessity.

Stronger language. Use words like “must”, “shall”, “must avoid”, “will”, etc which are more clear in eaning and tone, instead of “may not”, “should not”, and “suggest”, which can be ignored.

Require a master plan. The master plan needs to be coordinated across all carriers, and provide formation for each antenna project like RF exposure levels, power levels, frequencies, and location ddress. The master plan should also be published online with ample notice, such that citizens can rovide input BEFORE the antenna is installed. REQUIRE that these companies have a plan and strategy r where they place the antennas, and enforce their compliance. This will minimize excessive, aphazard installments.

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No cutting or disturbance of trees and landscaping – at all. This must be forbidden! There are other owns and cities with gorgeous, old trees being chopped down or excessively trimmed to allow for small ell deployment. Not going to happen in San Diego!

Provide clear-easy-to-reach County support for citizens. We need to have a dedicated line/service o contact The County when issues with the small cells arise, such as noise, safety, health problems, or ther complaints need to be reported. This service can be funded by the wireless providers as a part of eir application/bond/yearly renewal fees.

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Random third-party testing. Random, independent third party inspections must be required annually, at expense of the company, to ensure compliance with FCC guidelines.

Give notice for any residence within a mile of a proposed small cell site, to provide ample time for esidents to come forward and provide input.

Require safety signage on all poles. All poles must have necessary warning signs and RF safety formation.

Keep small cells away from parks and ball fields – at least 3000 ft away.

Thank you for taking the time to consider and apply these suggestions. I look forward to seeing changes in next ordinance draft.

Sincerely,

Cherri Christiansen

Sent from my iPhone

From: Neal, Stephanie
To: Easland, Camila
Subject: FW: Small Cell Wireless Facilities POD 17-004 comments
Date: Monday, July 01, 2019 9:57:53 AM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: Daniel Gizzo <dpgizzo@gmail.com>
Sent: Sunday, June 30, 2019 9:49 PM
To: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>; Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>
Subject: Small Cell Wireless Facilities POD 17-004 comments

Tara Lieberman & Stephanie Neal
Land Use / Environmental Planner, Advance Planning
5510 Overland Avenue, Suite 310 / Mail Stop – 0650
San Diego California 92123

Re: Small Cell Wireless Facilities Ordinance

Dear Tara Lieberman & San Diego County Supervisors:

I am a resident and property owner in the unincorporated area of San Diego County (Rancho Del Mar area just north of Via de la Valle). I am deeply concerned about the new FCC directive making it possible for the telecommunications industry to place cell antennas anywhere in the County right-of-way. I am voicing my strong objection to the FCC's takeover of our County's land as well as due process with respect to our rights. That being said, as zoning planners and Supervisors, can you please take the following requests into the strongest possible consideration? I am (We are) afraid of property devaluation with cell towers in residential areas, as most of us have the majority of our net worth in our homes. Because 5G is an unproven technology, please protect certain sensitive areas:

1. Cell towers are not to be located in "Sensitive" areas. 1000 foot setbacks from sensitive areas as defined by the County are necessary.
2. 500 foot set back from residential. This is in addition to using priority placement schema.
3. Pre application site inspection & survey required for each site application. There must be an on-site inspection prior to approval of the site by the County or agent representing the County. If application is in conflict with a sensitive area, site inspector may suggest the tower relocate so coverage is the same but sensitive area is protected.
4. Setback must meet fall zone length or zoning setback requirements, whichever is greater. Fall zone length must exceed the height of the tower by 20% because the height of

the tower may be increased by 10% the next year.
5. Require mandatory live RF compliance testing immediately after tower is installed and "on demand testing" by a third party paid for by carrier.
6. Height restriction 30 feet; next year [under 1903] tower may go 10% higher.
7. Payment, performance and removal bond paid up front.
8. Require a Certificate of Completion.
9. No cutting of trees to facilitate line of sight or initial placement. The general ambience of the community is to be preserved.
10. Under-grounding of equipment where possible; discretion may be used by staff.
11. The ordinance shall comply with the Americans with Disabilities Act (this includes but is not limited to safe access to private, commercial and public buildings).
12. Noticing for the occupants and building owners of all residences, apartments, and businesses within 1000 feet of the proposed location.

Please consider adopting all of the sections and verbiage of the "City of Hercules CA Wireless Telecommunications Facilities Ordinance (Chapter 16)" at this link, weaving in specific SD County requirements as deemed appropriate. I suggest this because the Hercules Ordinance provides enforceable bullet proof directions on the administration of Telecom applications and siting of antennas with no wiggle room for the Telcoms.

https://www.codepublishing.com/CA/Hercules/#!/Hercules10/Hercules1016.html#10-16

Respectfully,

Dan & Monica Gizzo

4820 Rancho Viejo Dr

Del Mar, CA 92014

(858) 356-9654

--

Dan Gizzo Jr

dpgizzo@gmail.com

SAN DIEGO COUNTY CITIZEN
INVITATION FOR COMMENTS – WIRELESS ORDINANCE

Daria Lane
2223 Crest Drive
Crest, CA 92021

June 30, 2019

San Diego County Board and Planning Commission
County Administration Center
1600 Pacific Hwy, Rm 335
San Diego, CA 92101

Dear County Supervisors and County Planning Commission,

I am writing to express my concern about the installment of 5G/small-cell antennas throughout San Diego County. The threats to public health, safety, privacy and security, property, and more must be addressed in the wireless ordinance. The citizens of San Diego County require your protection. I am grateful that The County is taking measures to incorporate such protections into an updated wireless ordinance, since the version approved in February makes no such provisions.

Based on review of the latest ordinance draft, there are still a number of ways this ordinance could be improved to ensure the best for SD County citizens, which I trust is your primary goal.

- **Restrict small cells in residential areas, and zones where children, elderly and those with special/medical needs will be.** No small cell should be allowed within (a minimum) of 1000 feet from a residential property line, in any direction. Or within 1000 ft of a school, hospital, library, church, daycare, community center, property lines. Verizon has a commercial on YouTube where they measured the distance of a 5G signal (through hills and obstacles) at a distance of greater than 3,000 feet, so there should be zero issue with these setbacks, they are a necessity.
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- **Require a master plan.** The master plan needs to be coordinated across all carriers, and provide information for each antenna project like RF exposure levels, power levels, frequencies, and location address. The master plan should also be published online with ample notice, such that citizens can provide input BEFORE the antenna is installed. REQUIRE that these companies have a plan and strategy for where they place the antennas, and enforce their compliance. This will minimize excessive, haphazard installments.
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- **No cutting or disturbance of trees and landscaping – at all.** This must be forbidden! There are other towns and cities with gorgeous, old trees being chopped down or excessively trimmed to allow for small cell deployment. Not going to happen in San Diego!
- **Provide clear-easy-to-reach County support for citizens.** We need to have a dedicated line/service to contact The County when issues with the small cells arise, such as noise, safety, health problems, or other complaints need to be reported. This service can be funded by the wireless providers as a part of their application/bond/yearly renewal fees.

- **Insurance and Bonds.** Require than the companies have increased insurance and bonds to protect against malfunction, accidents, damages, and injury. These provide protection for the county too.
- **ADA language and provisions.** The ordinance lacks language that protects Americans with disabilities, and their use of these rights-of-way, where the small cells structures will be deployed. ADA protection must not be discriminatory toward those who have physical mobility disabilities only. What about citizens with EHS, pacemakers, ADD/ADHD, autoimmune, etc? These rights-of-way belong to us too, and this liability belongs to San Diego County.
- **Random third-party testing.** Random, independent third party inspections must be required biannually, at expense of the company, to ensure compliance with FCC guidelines.
- **Give notice** for any residence within a mile of a proposed small cell site, to provide ample time for residents to come forward and provide input.
- **Require safety signage on all poles.** All poles must have necessary warning signs and RF safety information.
- **Keep small cells away from parks and ball fields – at least 3000 ft away.**

Thank you for taking the time to consider and apply these suggestions. I look forward to seeing changes in next ordinance draft.

Sincerely,

Daria Lane

From: Neal, Stephanie
To: Easland, Camila
Subject: FW: Wireless Ordinance
Date: Monday, July 01, 2019 9:57:40 AM
Attachments: BioInitiativeReport-RF-Color-Charts.pdf
BioInitiativeReport-RF-Color-Charts.pdf

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: Erin Aquilante <erin.crampton@gmail.com>
Sent: Sunday, June 30, 2019 5:47 PM
To: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: Wireless Ordinance

Please review the data given to you in this email and submit as a citizen's concern regarding the Wireless Ordinance. This needs to be addressed!

Regards,

Erin Aquilante

Reported Biological Effects from Radiofrequency Radiation at Low-Intensity Exposure
(Cell Tower, Wi-Fi, Wireless Laptop and 'Smart' Meter RF Intensities)

Power Density (Microwatts/centimeter2 - uW/cm2)		Reference
As low as (10^{-13}) or 100 femtowatts/cm2	Super-low intensity RFR effects at MW reasonant frequencies resulted in changes in genes; problems with chromatin conformation (DNA)	Belyaev, 1997
5 picowatts/cm2 (10^{-12})	Changed growth rates in yeast cells	Grundler, 1992
0.1 nanowatt/cm2 (10^{-10}) or 100 picowatts/cm2	Super-low intensity RFR effects at MW reasonant frequencies resulted in changes in genes; problems with chromatin condensation (DNA) intensities comparable to base stations	Belyaev, 1997
0.00034 uW/cm2	Chronic exposure to mobile phone pulsed RF significantly reduced sperm count,	Behari, 2006
0.0005 uW/cm2	RFR decreased cell proliferation at 960 MHz GSM 217 Hz for 30-min exposure	Velizarov, 1999
0.0006 - 0.0128 uW/cm2	Fatigue, depressive tendency, sleeping disorders, concentration difficulties, cardio- vascular problems reported with exposure to GSM 900/1800 MHz cell phone signal at base station level exposures.	Oberfeld, 2004
0.003 - 0.02 uW/cm2	In children and adolescents (8-17 yrs) short-term exposure caused headache, irritation, concentration difficulties in school.	Heinrich, 2010
0.003 to 0.05 uW/cm2	In children and adolescents (8-17 yrs) short-term exposure caused conduct problems in school (behavioral problems)	Thomas, 2010
0.005 uW/cm2	In adults (30-60 yrs) chronic exposure caused sleep disturbances, (but not significantly increased across the entire population)	Mohler, 2010
0.005 - 0.04 uW/cm2	Adults exposed to short-term cell phone radiation reported headaches, concentration difficulties (differences not significant, but elevated)	Thomas, 2008
0.006 - 0.01 uW/cm2	Chronic exposure to base station RF (whole-body) in humans showed increased stress hormones; dopamine levels substantially decreased; higher levels of adrenaline and nor-adrenaline; dose-response seen; produced chronic physiological stress in cells even after 1.5 years.	Buchner, 2012
0.01 - 0.11 uW/cm2	RFR from cell towers caused fatigue, headaches, sleeping problems	Navarro, 2003

Stress proteins, HSP, disrupted immune function	Brain tumors and blood-brain barrier
Reproduction/fertility effects	Sleep, neuron firing rate, EEG, memory, learning, behavior
Oxidative damage/ROS/DNA damage/DNA repair failure	Cancer (other than brain), cell proliferation
Disrupted calcium metabolism	Cardiac, heart muscle, blood-pressure, vascular effects

Reported Biological Effects from Radiofrequency Radiation at Low-Intensity Exposure
(Cell Tower, Wi-Fi, Wireless Laptop and 'Smart' Meter RF Intensities)

Power Density (Microwatts/centimeter2 - uW/cm2)		Reference
0.01 - 0.05 uW/cm2	Adults (18-91 yrs) with short-term exposure to GSM cell phone radiation reported headache, neurological problems, sleep and concentration problems.	Hutter, 2006
0.005 - 0.04 uW/cm2	Adults exposed to short-term cell phone radiation reported headaches, concentration difficulties (differences not significant, but elevated)	Thomas, 2008
0.015 - 0.21 uW/cm2	Adults exposed to short-term GSM 900 radiation reported changes in mental state (e.g., calmness) but limitations of study on language descriptors prevented refined word choices (stupified, zoned-out)	Augner, 2009
0.05 - 0.1 uW/cm2	RFR linked to adverse neurological, cardio symptoms and cancer risk	Khurana, 2010
0.05 - 0.1 uW/cm2	RFR related to headache, concentration and sleeping problems, fatigue	Kundi, 2009
0.07 - 0.1 uW/cm2	Sperm head abnormalities in mice exposed for 6-months to base station level RF/MW. Sperm head abnormalities occurred in 39% to 46% exposed mice (only 2% in controls) abnormalities was also found to be dose dependent. The implications of the pin-head and banana-shaped sperm head. The occurrence of sperm head observed increase occurrence of sperm head abnormalities on the reproductive health of humans living in close proximity to GSM base stations were discussed."	Otitoloju, 2010
0.38 uW/cm2	RFR affected calcium metabolism in heart cells	Schwartz, 1990
0.8 - 10 uW/cm2	RFR caused emotional behavior changes, free-radical damage by super-weak MWs	Akoev, 2002
0.13 uW/cm2	RFR from 3G cell towers decreased cognition, well-being	Zwamborn, 2003
0.16 uW/cm2	Motor function, memory and attention of school children affected (Latvia)	Kolodynski, 1996
0.168 - 1.053 uW/cm2	Irreversible infertility in mice after 5 generations of exposure to RFR from an 'antenna park'	Magras & Zenos, 1997
0.2 - 8 uW/cm2	RFR caused a two-fold increase in leukemia in children	Hocking, 1996
0.2 - 8 uW/cm2	RFR decreased survival in children with leukemia	Hocking, 2000
0.21 - 1.28 uW/cm2	Adolescents and adults exposed only 45 min to UMTS cell phone radiation reported increases In headaches.	Riddervold, 2008

Stress proteins, HSP, disrupted immune function	Brain tumors and blood-brain barrier
Reproduction/fertility effects	Sleep, neuron firing rate, EEG, memory, learning, behavior
Oxidative damage/ROS/DNA damage/DNA repair failure	Cancer (other than brain), cell proliferation
Disrupted calcium metabolism	Cardiac, heart muscle, blood-pressure, vascular effects

Reported Biological Effects from Radiofrequency Radiation at Low-Intensity Exposure
(Cell Tower, Wi-Fi, Wireless Laptop and 'Smart' Meter RF Intensities)

Power Density (Microwatts/centimeter2 - uW/cm2)		Reference
0.5 uW/cm2	Significant degeneration of seminiferous epithelium in mice at 2.45 GHz, 30-40 min.	Saunders, 1981
0.5 - 1.0 uW/cm2	Wi-FI level laptop exposure for 4-hr resulted in decrease in sperm viability, DNA fragmentation with sperm samples placed in petri dishes under a laptop connected via WI-FI to the internet.	Avendano, 2012
1.0 uW/cm2	RFR induced pathological leakage of the blood-brain barrier	Persson, 1997
1.0 uW/cm2	RFR caused significant effect on immune function in mice	Fesenko, 1999
1.0 uW/cm2	RFR affected function of the immune system	Novoselova, 1999
1.0 uW/cm2	Short-term (50 min) exposure in electrosensitive patients, caused loss of well-being after GSM and especially UMTS cell phone radiation exposure	Eltiti, 2007
1.3 - 5.7 uW/cm2	RFR associated with a doubling of leukemia in adults	Dolk, 1997
1.25 uW/cm2	RFR exposure affected kidney development in rats (in-utero exposure)	Pyrpasopoulou, 2004
1.5 uW/cm2	RFR reduced memory function in rats	Nittby, 2007
2 uW/cm2	RFR induced double-strand DNA damage in rat brain cells	Kesari, 2008
2.5 uW/cm2	RFR affected calcium concentrations in heart muscle cells	Wolke, 1996
2 - 4 uW/cm2	Altered cell membranes; acetycholine-induced ion channel disruption	D'Inzeo, 1988
4 uW/cm2	RFR caused changes in hippocampus (brain memory and learning)	Tattersall, 2001
4 - 15 uW/cm2	Memory impairment, slowed motor skills and retarded learning in children	Chiang, 1989
5 uW/cm2	RFR caused drop in NK lymphocytes (immune function decreased)	Boscolo, 2001
5.25 uW/cm2	20 minutes of RFR at cell tower frequencies induced cell stress response	Kwee, 2001
5 - 10 uW/cm2	RFR caused impaired nervous system activity	Dumansky, 1974
6 uW/cm2	RFR induced DNA damage in cells	Phillips, 1998

Stress proteins, HSP, disrupted immune function	Brain tumors and blood-brain barrier
Reproduction/fertility effects	Sleep, neuron firing rate, EEG, memory, learning, behavior
Oxidative damage/ROS/DNA damage/DNA repair failure	Cancer (other than brain), cell proliferation
Disrupted calcium metabolism	Cardiac, heart muscle, blood-pressure, vascular effects

Reported Biological Effects from Radiofrequency Radiation at Low-Intensity Exposure
(Cell Tower, Wi-Fi, Wireless Laptop and 'Smart' Meter RF Intensities)

Power Density (Microwatts/centimeter2 - uW/cm2)		Reference
8.75 uW/cm2	RFR at 900 MHz for 2-12 hours caused DNA breaks in leukemia cells	Marinelli, 2004
10 uW/cm2	Changes in behavior (avoidance) after 0.5 hour exposure to pulsed RFR	Navakatikian, 1994
10 - 100 uW/cm2	Increased risk in radar operators of cancer; very short latency period; dose response to exposure level of RFR reported.	Richter, 2000
12.5 uW/cm2	RFR caused calcium efflux in cells - can affect many critical cell functions	Dutta, 1989
13.5 uW/cm2	RFR affected human lymphocytes - induced stress response in cells	Sarimov, 2004
20 uW/cm2	Increase in serum cortisol (a stress hormone)	Mann, 1998
28.2 uW/cm2	RFR increased free radical production in rat cells	Yurekli, 2006
37.5 uW/cm2	Immune system effects - elevation of PFC count (antibody producing cells	Veyret, 1991
45 uW/cm2	Pulsed RFR affected serum testosterone levels in mice	Forgacs, 2006
50 uW/cm2	Cell phone RFR caused a pathological leakage of the blood-brain barrier in 1 hour	Salford, 2003
50 uW/cm2	An 18% reduction in REM sleep (important to memory and learning functions)	Mann, 1996
60 uW/cm2	RFR caused structural changes in cells of mouse embryos	Somozy, 1991
60 uW/cm2	Pulsed RFR affected immune function in white blood cells	Stankiewicz, 2006
60 uW/cm2	Cortex of the brain was activated by 15 minutes of 902 MHz cell phone	Lebedeva, 2000
65 uW/cm2	RFR affected genes related to cancer	Ivaschuk, 1999
92.5 uW/cm2	RFR caused genetic changes in human white blood cells	Belyaev, 2005
100 uW/cm2	Changes in immune function	Elekes, 1996
100 uW/cm2	A 24.3% drop in testosterone after 6 hours of CW RFR exposure	Navakatikian, 1994
120 uW/cm2	A pathological leakage in the blood-brain barrier with 915 MHz cell RF	Salford, 1994

Stress proteins, HSP, disrupted immune function	Brain tumors and blood-brain barrier
Reproduction/fertility effects	Sleep, neuron firing rate, EEG, memory, learning, behavior
Oxidative damage/ROS/DNA damage/DNA repair failure	Cancer (other than brain), cell proliferation
Disrupted calcium metabolism	Cardiac, heart muscle, blood-pressure, vascular effects

Reported Biological Effects from Radiofrequency Radiation at Low-Intensity Exposure
(Cell Tower, Wi-Fi, Wireless Laptop and 'Smart' Meter RF Intensities)

Power Density (Microwatts/centimeter2 - uW/cm2)		Reference
500 uW/cm2	Intestinal epithelial cells exposed to 2.45 GHz pulsed at 16 Hz showed changes in intercellular calcium.	Somozy, 1993
500 uW/cm2	A 24.6% drop in testosterone and 23.2% drop in insulin after 12 hrs of pulsed RFR exposure.	Navakatikian, 1994

STANDARDS		
530 - 600 uW/cm2	Limit for uncontrolled public exposure to 800-900 MHz	ANSI/IEEE and FCC
1000 uW/cm2	PCS STANDARD for public exposure (as of September 1,1997)	FCC, 1996
5000 uW/cm2	PCS STANDARD for occupational exposure (as of September 1, 1997)	FCC, 1996
BACKGROUND LEVELS		
0.003 uW/cm2	Background RF levels in US cities and suburbs in the 1990s	Mantiply, 1997
0.05 uW/cm2	Median ambient power density in cities in Sweden (30-2000 MHz)	Hamnierius, 2000
0.1 - 10 uW/cm2	Ambient power density within 100-200' of cell site in US (data from 2000)	Sage, 2000

Stress proteins, HSP, disrupted immune function	Brain tumors and blood-brain barrier
Reproduction/fertility effects	Sleep, neuron firing rate, EEG, memory, learning, behavior
Oxidative damage/ROS/DNA damage/DNA repair failure	Cancer (other than brain), cell proliferation
Disrupted calcium metabolism	Cardiac, heart muscle, blood-pressure, vascular effects

Reported Biological Effects from Radiofrequency Radiation at Low-Intensity Exposure
(Cell Tower, Wi-Fi, Wireless Laptop and 'Smart' Meter RF Intensities)

SAR (Watts/Kilogram)		Reference
0.000064 - 0.000078 W/Kg	Well-being and cognitive function affected in humans exposed to GSM-UMTS cell phone frequencies; RF levels similar near cell sites	TNO Physics and
0.00015 - 0.003 W/Kg	Calcium ion movement in isolated frog heart tissue is increased 18% (P<.01) and by 21% (P<.05) by weak RF field modulated at 16 Hz	Schwartz, 1990
0.000021 - 0.0021 W/Kg	Changes in cell cycle; cell proliferation (960 MHz GSM mobile phone)	Kwee, 1997
0.0003 - 0.06 W/Kg	Neurobehavioral disorders in offspring of pregnant mice exposed in utero to cell phones - dose-response impaired glutamatergic synaptic transmission onto layer V pyramidal neurons of the prefrontal cortex. Hyperactivity and impaired memory function in offspring. Altered brain development.	Aldad, 2012
0.0016 - 0.0044 W/Kg	Very low power 700 MHz CW affects excitability of hippocampus tissue, consistent with reported behavioral changes.	Tattersall, 2001
0.0021 W/Kg	Heat shock protein HSP 70 is activated by very low intensity microwave exposure in human epithelial amnion cells	Kwee, 2001
0.0024 - 0.024 W/Kg	Digital cell phone RFR at very low intensities causes DNA damage in human cells; both DNA damage and impairment of DNA is reported	Phillips, 1998
0.0027 W/Kg	Changes in active avoidance conditioned behavioral effect is seen after one-half hour of pulsed radiofrequency radiation	Navakatikian, 1994
0.0035 W/Kg	900 MHz cell phone signal induces DNA breaks and early activation of p53 gene; short exposure of 2-12 hours leads cells to acquire greater survival chance - linked to tumor agressiveness.	Marinelli, 2004
0.0095 W/Kg	MW modulated at 7 Hz produces more errors in short-term memory functioin on complex tasks (can affect cognitive processes such as attention and memory)	Lass, 2002
0.001 W/Kg	750 MHz continuous wave (CW) RFR exposure caused increase in heat shock protein (stress proteins). Equivalent to what would be induced by 3 degree C. heating of tissue (but no heating occurred)	De Pomerai, 2000
0.001 W/Kg	Statistically significant change in intracellular calcium concentration in heart muscle cells exposed to RFR (900 MHz/50 Hz modulation)	Wolke, 1996

Stress proteins, HSP, disrupted immune function	Brain tumors and blood-brain barrier
Reproduction/fertility effects	Sleep, neuron firing rate, EEG, memory, learning, behavior
Oxidative damage/ROS/DNA damage/DNA repair failure	Cancer (other than brain), cell proliferation
Disrupted calcium metabolism	Cardiac, heart muscle, blood-pressure, vascular effects

Reported Biological Effects from Radiofrequency Radiation at Low-Intensity Exposure
(Cell Tower, Wi-Fi, Wireless Laptop and 'Smart' Meter RF Intensities)

SAR (Watts/Kilogram)		Reference
0.0021 W/Kg	A significant change in cell proliferation not attributable to thermal heating. RFR induces non-thermal stress proteins (960 MHz GSM)	Velizarov, 1999
0.004 - 0.008 W/Kg	915 MHz cell phone RFR caused pathological leakage of blood-brain barrier. Worst at lower SAR levels and worse with CW compared to Frequency of pathological changes was 35% in rats exposed to pulsed radiation at 50% to continuous wave RFR. Effects observed at a specific absorption (SA) of > 1.5 joules/Kg in human tissues	Persson, 1997
0.0059 W/Kg	Cell phone RFR induces glioma (brain cancer) cells to significantly increase thymidine uptake, which may be indication of more cell division	Stagg, 1997
0.014 W/Kg	Sperm damage from oxidative stress and lowered melatonin levels resulted from 2-hr per day/45 days exposure to 10 GHz.	Kumar, 2012
0.015 W/Kg	Immune system effects - elevation of PFC count (antibody-producing cells)	Veyret, 1991
0.02 W/Kg	A single, 2-hr exposure to GSM cell phone radiation results in serious neuron damage (brain cell damage) and death in cortex, hippocampus, and basal ganglia of brain- even 50+ days later blood-brain barrier is still leaking albumin (P<.002) following only one cell phone exposure	Salford, 2003
0.026 W/Kg	Activity of c-jun (oncogene or cancer gene) was altered in cells after 20 minutes exposure to cell phone digital TDMA signal	Ivaschuk, 1997
0.0317 W/Kg	Decrease in eating and drinking behavior	Ray, 1990
0.037 W/Kg	Hyperactivity caused by nitric oxide synthase inhibitor is countered by exposure to ultra-wide band pulses (600/sec) for 30 min	Seaman, 1999
0.037 - 0.040 W/Kg	A 1-hr cell phone exposure causes chromatin condensation; impaired DNA repair mechanisms; last 3 days (longer than stress response) the effect reaches saturation in only one hour of exposure; electro- sensitive (ES) people have different response in formation of DNA repair foci, compared to healthy individuals; effects depend on carrier frequency (915 MHz = 0.037 W/Kg but 1947 MHz = 0.040 W/Kg)	Belyaev, 2008
0.05 W/Kg	Significant increase in firing rate of neurons (350%) with pulsed 900 MHz cell phone radiation exposure (but not with CW) in avian brain cells	Beason, 2002

Stress proteins, HSP, disrupted immune function	Brain tumors and blood-brain barrier
Reproduction/fertility effects	Sleep, neuron firing rate, EEG, memory, learning, behavior
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Disrupted calcium metabolism	Cardiac, heart muscle, blood-pressure, vascular effects

Reported Biological Effects from Radiofrequency Radiation at Low-Intensity Exposure
(Cell Tower, Wi-Fi, Wireless Laptop and 'Smart' Meter RF Intensities)

SAR (Watts/Kilogram)		Reference
0.09 W/Kg	900 MHz study of mice for 7 days, 12-hr per day (whole-body) resulted in significant effect on mitochondria and genome stability	Aitken, 2005
0.091 W/Kg	Wireless internet 2400 MHz, 24-hrs per day/20 weeks increased DNA damage and reduced DNA repair; levels below 802.11 g Authors say "findings raise questions about safety of radiofrequency exposure from Wi-Fi internet access devices for growing organisms of reproductive age, with a potential effect on fertility and integrity of germ cells" (male germ cells are the reproductive cells=sperm)	Atasoy, 2012
0.11 W/Kg	Increased cell death (apoptosis) and DNA fragmentation at 2.45 GHz for 35 days exposure (chronic exposure study)	Kesari, 2010
0.121 W/Kg	Cardiovascular system shows significant decrease in arterial blood pressure (hypotension) after exposure to ultra-wide band pulses	Lu, 1999
0.13 - 1.4 W/Kg	Lymphoma cancer rate doubled with two 1/2-hr exposures per day of cell phone radiation for 18 months (pulsed 900 MHz cell signal)	Repacholi, 1997
0.14 W/Kg	Elevation of immune response to RFR exposure	Elekes, 1996
0.141 W/Kg	Structural changes in testes - smaller diameter of seminiferous	Dasdag, 1999
0.15 - 0.4 W/Kg	Statistically significant increase in malignant tumors in rats chronically exposed to RFR	Chou, 1992
0.26 W/Kg	Harmful effects to the eye/certain drugs sensitize the eye to RFR	Kues, 1992
0.28 - 1.33 W/Kg	Significant increase in reported headaches with increasing use of hand-held cell phone use (maximum tested was 60 min per day)	Chia, 2000
0.3 - 0.44 W/Kg	Cell phone use results in changes in cognitive thinking/mental tasks related to memory retrieval	Krause, 2000
0.3 - 0.44 W/Kg	Attention function of brain and brain responses are speeded up	Preece, 1999
0.3 - 0.46 W/Kg	Cell phone RFR doubles pathological leakage of blood-brain barrier permeability at two days (P=.002) and triples permeability at four days (P=.001) at 1800 MHz GSM cell phone radiation	Schirmacher, 2000
0.43 W/Kg	Significant decrease in sperm mobility; drop in sperm concentration; and decrease in seminiferous tubules at 800 MHz, 8-hr/day, 12 weeks, with mobile phone radiation level on STANDBY ONLY (in rabbits)	Salama, 2008

Stress proteins, HSP, disrupted immune function	Brain tumors and blood-brain barrier
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Disrupted calcium metabolism	Cardiac, heart muscle, blood-pressure, vascular effects

Reported Biological Effects from Radiofrequency Radiation at Low-Intensity Exposure
(Cell Tower, Wi-Fi, Wireless Laptop and 'Smart' Meter RF Intensities)

SAR (Watts/Kilogram)		Reference
0.5 W/Kg	900 MHz pulsed RF affects firing rate of neurons (Lymnea stagnalis) but continuous wave had no effect	Bolshakov, 1992
0.58 - 0.75 W/Kg	Decrease in brain tumors after chronic exposure to RFR at 836 MHz	Adey, 1999
0.6 - 0.9 W/Kg	Mouse embryos develop fragile cranial bones from in utero 900 MHz The authors say "(O)ur results clearly show that even modest exposure (e.g., 6 min daily for 21 days" is sufficient to interfere with the normal mouse developmental process"	Fragopoulou, 2009
0.6 and 1.2 W/Kg	Increase in DNA single and double-strand DNA breaks in rat brain cells with exposure to 2450 MHz RFR	Lai & Singh, 1996
0.795 W/Kg	GSM 900 MHz, 217 Hz significantly decreases ovarian development and size of ovaries, due to DNA damage and premature cell death of nurse cells and follicles in ovaries (that nourish egg cells)	Panagopoulous, 2012
0.87 W/Kg	Altered human mental performance after exposure to GSM cell phone radiation (900 MHz TDMA digital cell phone signal)	Hamblin, 2004
0.87 W/Kg	Change in human brainwaves; decrease in EEG potential and statistically significant change in alpha (8-13 Hz) and beta (13-22 Hz) brainwave activity in humans at 900 MHz; exposures 6/min per day for 21 days (chronic exposure)	D'Costa, 2003
0.9 W/Kg	Decreased sperm count and more sperm cell death (apoptosis) after 35 days exposure, 2-hr per day	Kesari, 2012
< 1.0 W/Kg	Rats exposed to mobile phone radiation on STANDBY ONLY for 11-hr 45-min plus 15-min TRANSMIT mode; 2 times per day for 21 days showed decreased number of ovarian follicles in pups born to these pregnant rats. The authors conclude "the decreased number of follicles in pups exposed to mobile phone microwaves suggest that intrauterine exposure has toxic effects on ovaries."	Gul, 2009
0.4 - 1.0 W/Kg	One 6-hr exposure to 1800 MHz cell phone radiation in human sperm cells caused a significant dose response and reduced sperm motility and viability; reactive oxygen species levels were significantly increased after exposure to 1.0 W/Kg; study confirms detrimental effects of RF/MW to human sperm. The authors conclude "(T)hese findings have clear implicatiions for the safety of extensive mobile phone use by males of reproductive age, potentially affecting both their fertility and the health and wellbeing of their offspring."	De Iuliis, 2009
1.0 W/Kg	Human semen degraded by exposure to cell phone frequency RF increased free-radical damage.	De Iuliis, 2009

Stress proteins, HSP, disrupted immune function	Brain tumors and blood-brain barrier
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Reported Biological Effects from Radiofrequency Radiation at Low-Intensity Exposure
(Cell Tower, Wi-Fi, Wireless Laptop and 'Smart' Meter RF Intensities)

SAR (Watts/Kilogram)		Reference
1.0 W/Kg	Motility, sperm count, sperm morphology, and viability reduced in active cell phone users (human males) in dose-dependent manner.	Agarwal, 2008
1.0 W/Kg	GSM cell phone use modulates brain wave oscillations and sleep EEG	Huber, 2002
1.0 W/Kg	Cell phone RFR during waking hours affects brain wave activity. (EEG patterns) during subsequent sleep	Achermann, 2000
1.0 W/Kg	Cell phone use causes nitric oxide (NO) nasal vasodilation (swelling inside nasal passage) on side of head phone use	Paredi, 2001
1.0 W/Kg	Increase in headache, fatigue and heating behind ear in cell phone users	Sandstrom, 2001
1.0 W/Kg	Significant increase in concentration difficulties using 1800 MHz cell phone compared to 900 MHz cell phone	Santini, 2001
1.0 W/Kg	Sleep patterns and brain wave activity are changed with 900 MHz cell phone radiation exposure during sleep	Borbely, 1999
1.4 W/Kg	GSM cell phone exposure induced heat shock protein HSP 70 by 360% (stress response) and phosphorylation of ELK-1 by 390%	Weisbrot, 2003
1.46 W/Kg	850 MHz cell phone radiation decreases sperm motility, viability is significantly decreased; increased oxidative damage (free-radicals) significantly decreased; increased oxidative damage (free-radicals)	Agarwal, 2009
1.48 W/Kg	A significant decrease in protein kinase C activity at 112 MHz with 2-hr per day for 35 days; hippocampus is site, consistent with reports that RFR negatively affects learning and memory functions	Paulraj, 2004
1.0 - 2.0 W/Kg	Significant elevation in micronuclei in peripheral blood cells at 2450 MHz (8 treatments of 2-hr each)	Trosic, 2002
1.5 W/Kg	GSM cell phone exposure affected gene expression levels in tumor suppressor p53-deficient embryonic stem cells; and significantly increased HSP 70 heat shock protein production	Czyz, 2004
1.8 W/Kg	Whole-body exposure to RF cell phone radiation of 900-1800 MHz 1 cm from head of rats caused high incidence of sperm cell death; deformation of sperm cells; prominent clumping together of sperm cells into "grass bundle shapes" that are unable to separate/swim. Sperm cells unable to swim and fertilize in normal manner.	Yan, 2007

Stress proteins, HSP, disrupted immune function	Brain tumors and blood-brain barrier
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Reported Biological Effects from Radiofrequency Radiation at Low-Intensity Exposure
(Cell Tower, Wi-Fi, Wireless Laptop and 'Smart' Meter RF Intensities)

SAR (Watts/Kilogram)		Reference
2.0 W/Kg	GSM cell phone exposure of 1-hr activated heat shock protein HSP 27 (stress response) and P38 MAPK (mutagen-activated protein kinase) that authors say facilitates brain cancer and increased blood-brain barrier permeability, allowing toxins to cross BBB into brain	Leszczynski, 2002
2 W/Kg	900 MHz cell phone exposure caused brain cell oxidative damage by increasing levels of NO, MDA, XO and ADA in brain cells; caused statistically significant increase in 'dark neurons' or damaged brain cells in cortex, hippocampus and basal ganglia with a 1-hr exposure for 7 consecutive days	Ilhan, 2004
2.6 W/Kg	900 MHz cell phone exposure for 1-hr significantly altered protein expression levels in 38 proteins following irradiation; activates P38 MAP kinase stress signalling pathway and leads to changes in cell sie and shape (shrinking and rounding up) and to activation of HSP 27, a stress protein (heat shock protein)	Leszczynski, 2004
2.0 - 3.0 W/Kg	RFR accelerated development of both skin and breast tumors	Szmigielski, 1982
2 W/Kg	Pulse-modulated RFR and MF affect brain physiology (sleep study)	Schmidt, 2012

STANDARDS		
0.08 W/Kg	IEEE Standard uncontrolled public environment (whole body)	IEEE
0.4 W/Kg	IEEE Standard controlled occupational environment (whole body)	IEEE
1.6 W/Kg	FCC (IEEE) SAR limit for 1 gram of tissue in a partial body exposure	FCC, 1996
2 W/Kg	ICNIRP SAR limit for 10 grams of tissue	ICNIRP, 1996

Stress proteins, HSP, disrupted immune function	Brain tumors and blood-brain barrier
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Oxidative damage/ROS/DNA damage/DNA repair failure	Cancer (other than brain), cell proliferation
Disrupted calcium metabolism	Cardiac, heart muscle, blood-pressure, vascular effects

From: Neal, Stephanie
To: Easland, Camila
Subject: FW: Wireless Ordinance
Date: Monday, July 01, 2019 9:57:35 AM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: Erin Aquilante <erin.crampton@gmail.com>
Sent: Sunday, June 30, 2019 5:41 PM
To: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: Wireless Ordinance

---------- Forwarded message ---------
From: **Erin Aquilante** <erin.crampton@gmail.com>
Date: Sun, Jun 30, 2019, 5:26 PM
Subject: Wireless Ordinance
To: <eric.lardy@sdcounty.ca.gov>, <Dianne.jacob@sdcounty.ca.gov>, <Tara.Lieberman@sdcounty.ca.gov>

Please take the time to read the following article and submit it as a citizen's (mine) concern.

Thank you,

Erin Aquilante

https://patch.com/california/ramona/county-supervisors-vote-feb-27-hazardous-5g-installations

From: Neal, Stephanie
To: Easland, Camila
Subject: FW:
Date: Monday, July 01, 2019 9:59:21 AM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Sent: Monday, July 01, 2019 8:23 AM
To: Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>
Cc: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: FW:

Bianca Lorenzana
Jr. Land Use/Environmental Planner
Pronouns: she/her
Bianca.Lorenzana@sdcounty.ca.gov
Phone: 858-694-2216
County of San Diego | Planning & Development Services
5510 Overland Avenue, Suite 310, San Diego, CA 92123

From: Evelyn Barandiaran <evelynb92106@gmail.com>
Sent: Sunday, June 30, 2019 1:36 PM
To: Jacob, Dianne <Dianne.Jacob@sdcounty.ca.gov>; AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Subject:

June 30, 2019
To:
San Diego County Board and Planning Commission
County Administration Center
1600 Pacific Hwy, Rm 335

San Diego, CA 92101

Dear County Supervisors and County Planning Commission,
I am writing to express my concern about the installment of 5G/small-cell antennas throughout San Diego County. The threats to public health, safety, privacy and security, property, and more must be addressed in the wireless ordinance. The citizens of San Diego County require your protection. I am grateful that The County is taking measures to incorporate such protections into an updated wireless ordinance, since the version approved in February makes no such provisions.
Based on review of the latest ordinance draft, there are still a number of ways this ordinance could be improved to ensure the best for SD County citizens, which I trust is your primary goal.
· Restrict small cells in residential areas, and zones where children, elderly and those with special/medical needs will be. No small cell should be allowed within (a minimum) of 1000 feet from a residential property line, in any direction. Or within 1000 ft of a school, hospital, library, church, daycare, community center, property lines. Verizon has a commercial on YouTube where they measured the distance of a 5G signal (through hills and obstacles) at a distance of greater than 3,000 feet, so there should be zero issue with these setbacks, they are a necessity.
· Stronger language. Use words like “must”, “shall”, “must avoid”, “will”, etc which are more clear in meaning and tone, instead of “may not”, “should not”, and “suggest”, which can be ignored.
· Require a master plan. The master plan needs to be coordinated across all carriers, and provide information for each antenna project like RF exposure levels, power levels, frequencies, and location address. The master plan should also be published online with ample notice, such that citizens can provide input BEFORE the antenna is installed. REQUIRE that these companies have a plan and strategy for where they place the antennas, and enforce their compliance. This will minimize excessive, haphazard installments.
· No Co-location! Co-location means multiple antennas to a single pole. And despite the thinking, it does not reduce clutter. Actually, it produces a huge eyesore of a pole will multiple projections hanging off of it. It DRAWS more attention because of the extra hardware. Col-location allows poles to become scarily top-heavy, and also exposes citizens to higher doses of radiation since multiple antennas will emit from a single location. One antenna per pole, and no antennas within 1000 feet of ANY other antenna.
· No cutting or disturbance of trees and landscaping – at all. This must be forbidden! There are other towns and cities with gorgeous, old trees being chopped down or excessively trimmed to allow for small cell deployment. Not going to happen in San Diego!
· Provide clear-easy-to-reach County support for citizens. We need to have a dedicated line/service to contact The County when issues with the small cells arise, such as noise, safety, health problems, or other complaints need to be reported. This service can be funded by the wireless providers as a part of their application/bond/yearly renewal fees.
· Insurance and Bonds. Require than the companies have increased insurance and bonds to protect against malfunction, accidents, damages, and injury. These provide protection for the county too.
· ADA language and provisions. The ordinance lacks language that protects Americans with disabilities, and their use of these rights-of-way, where the small cells structures will be deployed. ADA protection must not be discriminatory toward those who have physical mobility disabilities only. What about citizens with EHS, pacemakers, ADD/ADHD, autoimmune, etc? These rights-of-way belong to us too, and this liability belongs to San Diego County.

· Random third-party testing. Random, independent third party inspections must be required biannually, at expense of the company, to ensure compliance with FCC guidelines.
· Give notice for any residence within a mile of a proposed small cell site, to provide ample time for residents to come forward and provide input.
· Require safety signage on all poles. All poles must have necessary warning signs and RF safety information.
· Keep small cells away from parks and ball fields – at least 3000 ft away.

Thank you for taking the time to consider and apply these suggestions. I look forward to seeing changes in next ordinance draft.

Sincerely,
Evelyn Barandiaran
Concerned Point Loma Citizen

Courtney Melrose
2636 Grand Ave, San Diego 92109

Tara Lieberman
Land Use / Environmental Planner, Advance Planning
5510 Overland Avenue, Suite 310 / Mail Stop – 0650
San Diego California 92123

Re: Small Cell Wireless Facilities Ordinance

Dear Tara Lieberman & San Diego County Supervisors:

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10. Co-location up to two carriers is encouraged.
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12. The ordinance shall comply with the Americans with Disabilities Act.



June 25, 2019

Kelly Loy
406 Santa Bartola, Solana Beach, 92075

Tara Lieberman
Land Use / Environmental Planner, Advance Planning
5510 Overland Avenue, Suite 310 / Mail Stop – 0650
San Diego California 92123

Re: Small Cell Wireless Facilities Ordinance

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Lamont Loy
616 Stevens Ave., Solana Beach 92075

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5510 Overland Avenue, Suite 310 / Mail Stop – 0650
San Diego California 92123

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June 25, 2019

Rashmi Sharma
8758 Tillage Lane, San Diego, CA, 92127

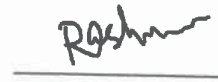
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_____ [*Signature*]

June 26, 2019

Todd Hurrell
5306 Linea del Cielo, Rancho Santa Fe, CA 92067

Tara Lieberman
Land Use / Environmental Planner, Advance Planning
5510 Overland Avenue, Suite 310 / Mail Stop – 0650
San Diego California 92123

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June 25, 2019

Kelsey Loy
616 Stevens Ave., Solana Beach 92075

Tara Lieberman
Land Use / Environmental Planner, Advance Planning
5510 Overland Avenue, Suite 310 / Mail Stop – 0650
San Diego California 92123

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June 25, 2019

Debbie Dorsee
18144 Via De Fortuna, RSF, 92067

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Land Use / Environmental Planner, Advance Planning
5510 Overland Avenue, Suite 310 / Mail Stop – 0650
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8758 Tillage Lane, San Diego, CA, 92127

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June 26, 2019

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6151 Paseo Delicias #D, Rancho Santa Fe, CA 92067

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June 25, 2019

Camille Zeleny
10255 Kashmere Lane, Escondido, CA 92029

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5510 Overland Avenue, Suite 310 / Mail Stop – 0650
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Lucie Berreby
16950 Avenida Luis, Rancho Santa Fe, CA 92067

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June 25, 2019

Bonnie Baugh,
3855 Via Pasatiempo, Rancho Santa Fe 92091

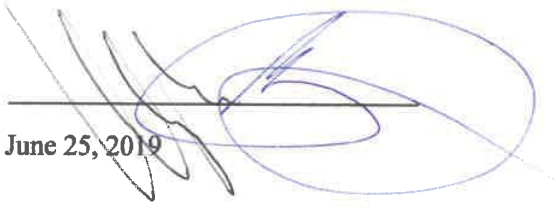
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June 25, 2019

Jean Wedbush,
17891 Via de Fortuna, Rancho Santa Fe, CA 92067

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Land Use / Environmental Planner, Advance Planning
5510 Overland Avenue, Suite 310 / Mail Stop – 0650
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June 25, 2019

Lorenza Ramirez
900 Howard Ave. #59, Escondido, CA 92029

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5510 Overland Avenue, Suite 310 / Mail Stop – 0650
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9. No cutting of trees to facilitate line of sight or initial placement. The general ambience of the community is to be preserved.
10. Under-grounding of equipment where possible; discretion may be used by staff.
11. The ordinance shall comply with the Americans with Disabilities Act.

Lorenza Ramirez Aguilar

June 25, 2019

Hal Baerg
5470 La Crescenta, Rancho Santa Fe 92067

Tara Lieberman
Land Use / Environmental Planner, Advance Planning
5510 Overland Avenue, Suite 310 / Mail Stop – 0650
San Diego California 92123

Re: Small Cell Wireless Facilities Ordinance

Dear Tara Lieberman & San Diego County Supervisors:

I am deeply concerned about the new FCC directive making it possible for the telecommunications industry to place cell towers anywhere in the County right-of-way. I am voicing my strong objection to the FCC's takeover of our County's land as well as due process with respect to our rights. That being said, as zoning planners and Supervisors, can you please take the following requests into the strongest possible consideration. We are afraid of property devaluation with cell towers in residential areas, as most of us have the majority of our net worth in our homes. Because 5G is an unproven technology, please protect certain sensitive areas:

1. Cell towers are not to be located in "Sensitive" areas. 1000 foot setbacks from sensitive areas as defined by the County are necessary.
2. 500 foot set back from residential.
3. Pre application site inspection & survey required for each site application. There must be an on-site inspection prior to approval of the site by the County or agent representing the County. If application is in conflict with a sensitive area, site inspector may suggest the tower relocate so coverage is the same but sensitive area is protected.
4. Fall zone must exceed the height of the tower by 20% because the height of the tower may be increased by 10% the next year. Setback must meet fall zone length at a minimum.
5. Require mandatory live RF compliance testing immediately after tower is installed and "on demand testing" by a third party paid for by carrier.
6. Height restriction 30 feet; next year [under 1903] tower may go 10% higher.
7. Payment, performance and removal bond paid up front.
8. Require a Certificate of Completion.
9. No cutting of trees to facilitate line of sight or initial placement. The general ambience of the community is to be preserved.
10. Under-grounding of equipment where possible; discretion may be used by staff.
11. The ordinance shall comply with the Americans with Disabilities Act.

June 25, 2019

From: Neal, Stephanie
To: Easland, Camila
Subject: FW: Small Cell Wireless Facilities POD 17-004 comments
Date: Monday, July 01, 2019 9:57:49 AM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: Irwin Zalkin <irwin@zalkin.com>
Sent: Sunday, June 30, 2019 9:10 PM
To: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: Fwd: Small Cell Wireless Facilities POD 17-004 comments

FYI

Sent from my iPhone

Begin forwarded message:

> **From:** Irwin Zalkin <irwin@zalkin.com>
> **Date:** June 30, 2019 at 9:05:18 PM PDT
> **To:** "Tara.Lieberman@sdcounty.ca.gov" <Tara.Lieberman@sdcounty.ca.gov>
> **Cc:** Rancho Del Mar <ranchodelmarhoa1@gmail.com>
> **Subject: Small Cell Wireless Facilities POD 17-004 comments**
>
> Dear Tara Lieberman & San Diego County Supervisors:
> My residence is in Del Mar, CA. I am writing this letter to the County because I believe Del Mar and other cities within San Diego will be adopting the SD County Ordinance. I am deeply concerned about the new FCC directive making it possible for the telecommunications industry to place cell antennas anywhere in the County right-of-way. I am voicing my strong objection to the FCC's takeover of our County's land as well as due process with respect to our rights. That being said, as zoning planners and Supervisors, can you please take the following requests into the strongest possible consideration? I am (We are) afraid of property devaluation with cell towers in residential areas, as most of us have the majority of our net worth in our homes. Because 5G is an unproven technology, please protect certain sensitive areas:
> 1. Cell towers are not to be located in "Sensitive" areas. 1000 foot setbacks from sensitive areas as defined by the County are necessary.
> 2. 500 foot set back from residential. This is in addition to using priority placement schema.

3. Pre application site inspection & survey required for each site application. There must be an on-site inspection prior to approval of the site by the County or agent representing the County. If application is in conflict with a sensitive area, site inspector may suggest the tower relocate so coverage is the same but sensitive area is protected.
4. Setback must meet fall zone length or zoning setback requirements, whichever is greater. Fall zone length must exceed the height of the tower by 20% because the height of the tower may be increased by 10% the next year.
5. Require mandatory live RF compliance testing immediately after tower is installed and "on demand testing" by a third party paid for by carrier.
6. Height restriction 30 feet; next year [under 1903] tower may go 10% higher.
7. Payment, performance and removal bond paid up front.
8. Require a Certificate of Completion.
9. No cutting of trees to facilitate line of sight or initial placement. The general ambience of the community is to be preserved.
10. Under-grounding of equipment where possible; discretion may be used by staff.
11. The ordinance shall comply with the Americans with Disabilities Act (this includes but is not limited to safe access to private, commercial and public buildings).
12. Noticing for the occupants and building owners of all residences, apartments, and businesses within 1000 feet of the proposed location.

Please consider adopting all of the sections and verbiage of the "City of Hercules CA Wireless Telecommunications Facilities Ordinance (Chapter 16)" at this link, weaving in specific SD County requirements as deemed appropriate. I suggest this because the Hercules Ordinance provides enforceable bullet proof directions on the administration of Telecom applications and siting of antennas with no wiggle room for the Telcoms.
https://www.codepublishing.com/CA/Hercules/#!/Hercules10/Hercules1016.html#10-16

Irwin Zalkin

4802 Vista De La Teirra
Del Mar, CA 92014
858-945-2144

From: Neal, Stephanie
To: Shute, Madeline
Cc: Lieberman, Tara
Subject: FW: Draft Zoning Ordinance Update for Small Cell Wireless Facilities
Date: Friday, June 28, 2019 2:03:37 PM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

-----Original Message-----
From: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Sent: Friday, June 28, 2019 1:59 PM
To: Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>; Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: FW: Draft Zoning Ordinance Update for Small Cell Wireless Facilities

Camila Easland
Junior Land Use / Environmental Planner, Advance Planning Planning & Development Services
5510 Overland Ave., Suite 310, San Diego, CA, 92123 camila.easland@sdcounty.ca.gov
(858) 495-5491

-----Original Message-----
From: Janice Tatro <j.tatro@cox.net>
Sent: Friday, June 28, 2019 10:51 AM
To: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Cc: Jacob, Dianne <Dianne.Jacob@sdcounty.ca.gov>
Subject: Draft Zoning Ordinance Update for Small Cell Wireless Facilities

Dear Tara Lieberman,

I have recently reviewed the documentation that has been sent out to some of the public regarding the installation of the new G5 cell towers, poles and/or boxes in my neighborhood which is in the Crest area of El Cajon. I feel that the potential health hazards as well as the fire hazards and loss to property values have been over looked or have not been sufficiently researched at the present time. Please delay any final decisions on this project until further extensive research is conducted.

Thank you,
Janice and Ronald Tatro
202 Highline Trail El Cajon, California 92021
619-447-9320

Jeffrey J. Carmel
3877 Avenida Feliz, #3546
Rancho Santa Fe, CA 92067

26 June 2019

Tara Lieberman
Land Use / Environmental Planner, Advance Planning
5510 Overland Avenue, Suite 310 / Mail Stop – 0650
San Diego California 92123

Re: Small cell wireless facilities ordinance

Dear Ms. Lieberman:

I am deeply concerned about the new Federal Communications Commission directive making it possible for the telecommunications industry to place cell towers anywhere in the San Diego County right-of-way. I am voicing my strong objection to the FCC's takeover of county land as well as due process with respect to our rights. That being said, as zoning planners, can you please take the following requests into the strongest possible consideration. We are afraid of property devaluation with cell towers in residential areas, as most of us have the majority of our net worth in our homes. Because 5G is an unproven technology, please protect certain sensitive areas:

1. Cell towers are not to be located in "Sensitive" areas. One-thousand-foot setbacks from sensitive areas as defined by the County are necessary.
2. Five-hundred-foot set back from residential.
3. Pre-application site inspection and survey required for each site application. There must be an on-site inspection prior to approval of the site by the county or agent representing the county. If application is in conflict with a sensitive area, site inspector may suggest the tower relocate so coverage is the same but sensitive area is protected.
4. Fall zone must exceed the height of the tower by 20 percent because the height of the tower may be increased by 10 percent the next year. Setback must meet fall zone length at a minimum.
5. Require mandatory live RF compliance testing immediately after tower is installed and "on demand testing" by a third party paid for by carrier.
6. Height restriction 30 feet; next year [under 1903] tower may go 10 percent higher.
7. Payment, performance and removal bond paid up front.
8. Require a Certificate of Completion.
9. No cutting of trees to facilitate line of sight or initial placement. The general ambience of the community is to be preserved.
10. Co-location up to two carriers is encouraged.
11. Under-grounding of equipment where possible; discretion may be used by staff.
12. The ordinance shall comply with the Americans with Disabilities Act.

Sincerely yours,



Jeffrey Carmel

SAN DIEGO COUNTY CITIZEN
INVITATION FOR COMMENTS – WIRELESS ORDINANCE

John Lane
2223 Crest Drive
Crest, CA 92021

June 30, 2019

San Diego County Board and Planning Commission
County Administration Center
1600 Pacific Hwy, Rm 335
San Diego, CA 92101

Dear County Supervisors and County Planning Commission,

I am writing to express my concern about the installment of 5G/small-cell antennas throughout San Diego County. The threats to public health, safety, privacy and security, property, and more must be addressed in the wireless ordinance. The citizens of San Diego County require your protection. I am grateful that The County is taking measures to incorporate such protections into an updated wireless ordinance, since the version approved in February makes no such provisions.

Based on review of the latest ordinance draft, there are still a number of ways this ordinance could be improved to ensure the best for SD County citizens, which I trust is your primary goal.

- **Restrict small cells in residential areas, and zones where children, elderly and those with special/medical needs will be.** No small cell should be allowed within (a minimum) of 1000 feet from a residential property line, in any direction. Or within 1000 ft of a school, hospital, library, church, daycare, community center, property lines. Verizon has a commercial on YouTube where they measured the distance of a 5G signal (through hills and obstacles) at a distance of greater than 3,000 feet, so there should be zero issue with these setbacks, they are a necessity.
- **Stronger language.** Use words like “must”, “shall”, “must avoid”, “will”, etc which are more clear in meaning and tone, instead of “may not”, “should not”, and “suggest”, which can be ignored.
- **Require a master plan.** The master plan needs to be coordinated across all carriers, and provide information for each antenna project like RF exposure levels, power levels, frequencies, and location address. The master plan should also be published online with ample notice, such that citizens can provide input BEFORE the antenna is installed. REQUIRE that these companies have a plan and strategy for where they place the antennas, and enforce their compliance. This will minimize excessive, haphazard installments.
- **No Co-location!** Co-location means multiple antennas to a single pole. And despite the thinking, it does not reduce clutter. Actually, it produces a huge eyesore of a pole will multiple projections hanging off of it. It DRAWS more attention because of the extra hardware. Co-location allows poles to become scarily top-heavy, and also exposes citizens to higher doses of radiation since multiple antennas will emit from a single location. One antenna per pole, and no antennas within 1000 feet of ANY other antenna.
- **No cutting or disturbance of trees and landscaping – at all.** This must be forbidden! There are other towns and cities with gorgeous, old trees being chopped down or excessively trimmed to allow for small cell deployment. Not going to happen in San Diego!
- **Provide clear-easy-to-reach County support for citizens.** We need to have a dedicated line/service to contact The County when issues with the small cells arise, such as noise, safety, health problems, or other complaints need to be reported. This service can be funded by the wireless providers as a part of their application/bond/yearly renewal fees.

- **Insurance and Bonds.** Require than the companies have increased insurance and bonds to protect against malfunction, accidents, damages, and injury. These provide protection for the county too.
- **ADA language and provisions.** The ordinance lacks language that protects Americans with disabilities, and their use of these rights-of-way, where the small cells structures will be deployed. ADA protection must not be discriminatory toward those who have physical mobility disabilities only. What about citizens with EHS, pacemakers, ADD/ADHD, autoimmune, etc? These rights-of-way belong to us too, and this liability belongs to San Diego County.
- **Random third-party testing.** Random, independent third party inspections must be required biannually, at expense of the company, to ensure compliance with FCC guidelines.
- **Give notice** for any residence within a mile of a proposed small cell site, to provide ample time for residents to come forward and provide input.
- **Require safety signage on all poles.** All poles must have necessary warning signs and RF safety information.
- **Keep small cells away from parks and ball fields – at least 3000 ft away.**

Thank you for taking the time to consider and apply these suggestions. I look forward to seeing changes in next ordinance draft.

Sincerely,

John Lane

From: Neal, Stephanie
To: Easland, Camila
Subject: FW: Zoning. Small Cell Wireless Facilities POD 17-004 comments, follow-up
Date: Monday, July 01, 2019 10:16:55 AM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: J Smith <smithpond@pm.me>
Sent: Monday, July 01, 2019 10:16 AM
To: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: Zoning. Small Cell Wireless Facilities POD 17-004 comments, follow-up

Dear Ms. Neal,

I am a long-time resident of San Diego County and an Electrical Engineer now retired from decades of working in the field of military communications and technical applications.

I understand the County is working on zoning issues related to additional wireless telecommunications equipment placement. As part of your considerations, may I respectfully request that the County review the ADA recognition of EHS and it's implications for placement.

In the past, health considerations for equipment placement were thought to be against federal law. However, more than one municipality has successfully fought in court to reject this federal overreach. The financial burden will be borne by the local government and that is where the power needs to remain.

None of the telecommunications companies are insured against claims of harm by wireless radiation for a reason. The insurers know they can't defend against claims.

The most conservative estimates, based on Swedish populations studies, show that at least 3% of people suffer severely from exposure to the types of electromagnetic fields generated by wireless telecommunications broadcasts. This means statistically over 90,000 people in our Country are extremely sensitive and will need accommodation as it relates to these installations. Additional research indicates anywhere from 30% to 40% more are affected at a sub clinical level.

Previous ADA rulings directed that access to shopping centers was included in necessary accommodations. Also, it should go without saying that placement of equipment should also be such that EHS persons in their homes are not impacted by the microwave or millimeter radiation from these installations.

While the legal and liability implications to the County are sobering, the real human impact of adding more sources of high frequency radiation to our environment is something we ignore at a high cost to everyone.

Joyful Smith
Serra Mesa

ADA, American Disabilities Act
EHS, Electrohypersensitivity

From: Neal, Stephanie
To: Easland, Camila
Subject: FW: Small Cell Wireless Facilities POD 17-004 Comments
Date: Monday, July 01, 2019 9:57:06 AM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: Karen Rich <karenlorainerich@gmail.com>
Sent: Saturday, June 29, 2019 8:04 PM
To: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: Small Cell Wireless Facilities POD 17-004 Comments

Dear Tara Lieberman, Stephanie Neal and San Diego County Supervisors:

My residence is in Carlsbad, CA. I am writing this letter to the County because I believe that Carlsbad and other cities within San Diego will be adopting the SD County Ordinance. I am deeply concerned about the new FCC directive making it possible for the telecommunications industry to place cell antennas anywhere in the County right-of-way. I am voicing my strong objection to the FCC's takeover of our County's land as well as due process with respect to our rights. That being said, as zoning planners and Supervisors, can you please take the following requests into the strongest possible consideration? I am (We are) afraid of property devaluation with cell towers in residential areas, as most of us have the majority of our net worth in our homes. Because 5G is an unproven technology, please protect certain sensitive areas:

1. Cell towers are not to be located in "Sensitive" areas. 1000 foot setbacks from sensitive areas as defined by the County are necessary.
2. 500 foot set back from residential. This is in addition to using priority placement schema.
3. Pre application site inspection & survey required for each site application. There must be an on-site inspection prior to approval of the site by the County or agent representing the County. If application is in conflict with a sensitive area, site inspector may suggest the tower relocate so coverage is the same but sensitive area is protected.
4. Setback must meet fall zone length or zoning setback requirements, whichever is greater. Fall zone length must exceed the height of the tower by 20% because the height of the tower may be increased by 10% the next year.
5. Require mandatory live RF compliance testing immediately after tower is installed and "on demand testing" by a third party paid for by carrier.
6. Height restriction 30 feet; next year [under 1903] tower may go 10% higher.
7. Payment, performance and removal bond paid up front.
8. Require a Certificate of Completion.
9. No cutting of trees to facilitate line of sight or initial placement. The general

ambience of the community is to be preserved.
10. Under-grounding of equipment where possible; discretion may be used by staff.
11. The ordinance shall comply with the Americans with Disabilities Act (this includes but is not limited to safe access to private, commercial and public buildings).
12. Noticing for the occupants and building owners of all residences, apartments, and businesses within 1000 feet of the proposed location.

Please consider adopting all of the sections and verbiage of the “City of Hercules CA Wireless Telecommunications Facilities Ordinance (Chapter 16)” at this link, weaving in specific SD County requirements as deemed appropriate. I suggest this because the Hercules Ordinance provides enforceable bullet proof directions on the administration of Telecom applications and siting of antennas with no wiggle room for the Telcoms.
https://www.codepublishing.com/CA/Hercules/#!/Hercules10/Hercules1016.html#10-16

Thank you and Sincerely,
Karen Rich
1964 Swallow Lane
Carlsbad CA 92009

From: Neal, Stephanie
To: Easland, Camila
Subject: FW: New 5G towers
Date: Monday, July 01, 2019 9:59:10 AM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Sent: Monday, July 01, 2019 8:22 AM
To: Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>
Cc: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: FW: New 5G towers

Bianca Lorenzana
Jr. Land Use/Environmental Planner
Pronouns: she/her
Bianca.Lorenzana@sdcounty.ca.gov
Phone: 858-694-2216
County of San Diego | Planning & Development Services
5510 Overland Avenue, Suite 310, San Diego, CA 92123

From: Kim Gambino <kimgetthebigidea@yahoo.com>
Sent: Sunday, June 30, 2019 10:11 AM
To: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>; Jacob, Dianne <Dianne.Jacob@sdcounty.ca.gov>
Subject: New 5G towers

San Diego County Citizen

Invitation for comments – Wireless Ordinance

Kim Gambino

23444 Viejas Grade Rd

Descanso, CA 91916

June 27, 2019

San Diego County Board and Planning Commission
County Administration Center
1600 Pacific Hwy, Rm 335
San Diego, CA 92101

Dear County Supervisors and County Planning Commission,

I am writing to express my concern about the installment of 5G/small-cell antennas throughout San Diego County. The threats to public health, safety, privacy and security, property, and more must be addressed in the wireless ordinance. The citizens of San Diego County require your protection. I am grateful that The County is taking measures to incorporate such protections into an updated wireless ordinance, since the version approved in February makes no such provisions.

Based on review of the latest ordinance draft, there are still a number of ways this ordinance could be improved to ensure the best for SD County citizens, which I trust is your primary goal.

- **Restrict small cells in residential areas, and zones where children, elderly and those with special/medical needs will be.** No small cell should be allowed within (a minimum) of 1000 feet from a residential property line, in any direction. Or within 1000 ft of a school, hospital, library, church, daycare, community center, property lines. Verizon has a commercial on YouTube where they measured the distance of a 5G signal (through hills and obstacles) at a distance of greater than 3,000 feet, so there should be zero issue with these setbacks, they are a necessity.
- **Stronger language.** Use words like “must”, “shall”, “must avoid”, “will”, etc which are more clear in meaning and tone, instead of “may not”, “should not”, and “suggest”, which can be ignored.
- **Require a master plan.** The master plan needs to be coordinated across all carriers, and provide information for each antenna project like RF exposure levels, power levels, frequencies, and location address. The master plan should also be published online with ample notice, such that citizens can provide input BEFORE the antenna is installed. REQUIRE that these companies have a plan and strategy for where they place the antennas, and enforce their compliance. This will minimize excessive, haphazard installments.
- **No Co-location!** Co-location means multiple antennas to a single pole. And despite the thinking, it does not reduce clutter. Actually, it produces a huge eyesore of a pole will multiple projections hanging off of it. It DRAWS more attention because of the extra hardware. Col-location allows poles to become scarily top-heavy, and also exposes citizens to higher doses of radiation since multiple antennas will emit from a single location. One antenna per pole, and no antennas within 1000 feet of ANY other antenna.
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- **Provide clear-easy-to-reach County support for citizens.** We need to have a dedicated line/service to contact The County when issues with the small cells arise, such as noise, safety, health problems, or other complaints need to be reported. This service can be funded by the wireless

providers as a part of their application/bond/yearly renewal fees.

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- **Random third-party testing.** Random, independent third party inspections must be required biannually, at expense of the company, to ensure compliance with FCC guidelines.
- **Give notice** for any residence within a mile of a proposed small cell site, to provide ample time for residents to come forward and provide input.
- **Require safety signage on all poles.** All poles must have necessary warning signs and RF safety information.
- **Keep small cells away from parks and ball fields – at least 3000 ft away.**

Thank you for taking the time to consider and apply these suggestions. I look forward to seeing changes in next ordinance draft.

Sincerely,
Dr. Kim Gambino

"You may never know how far reaching something you think, say or do will affect the lives of millions tomorrow." BJ Palmer

www.drgambino.com
http://www.frontiertrainings.com/playtowin/?fn=Kim&ln=Gambino

San Diego County Citizen
Invitation for comments – Wireless Ordinance

Kivetta Kenney
12291 Carmel Vista Rd #209
San Diego, CA 92130

June 27, 2019

San Diego County Board and Planning Commission
County Administration Center
1600 Pacific Hwy, Rm 335
San Diego, CA 92101

Dear County Supervisors and County Planning Commission,

I am writing to express my concern about the installment of 5G/small-cell antennas throughout San Diego County. The threats to public health, safety, privacy and security, property, and more must be addressed in the wireless ordinance. The citizens of San Diego County require your protection. I am grateful that The County is taking measures to incorporate such protections into an updated wireless ordinance, since the version approved in February makes no such provisions.

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- **Restrict small cells in residential areas, and zones where children, elderly and those with special/medical needs will be.** No small cell should be allowed within (a minimum) of 1000 feet from a residential property line, in any direction. Or within 1000 ft of a school, hospital, library, church, daycare, community center, property lines. Verizon has a commercial on YouTube where they measured the distance of a 5G signal (through hills and obstacles) at a distance of greater than 3,000 feet, so there should be zero issue with these setbacks, they are a necessity.
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- **No cutting or disturbance of trees and landscaping – at all.** This must be forbidden! There are other towns and cities with gorgeous, old trees being chopped down or excessively trimmed to allow for small cell deployment. Not going to happen in San Diego!

- **Provide clear-easy-to-reach County support for citizens.** We need to have a dedicated line/service to contact The County when issues with the small cells arise, such as noise, safety, health problems, or other complaints need to be reported. This service can be funded by the wireless providers as a part of their application/bond/yearly renewal fees.
- **Insurance and Bonds.** Require than the companies have increased insurance and bonds to protect against malfunction, accidents, damages, and injury. These provide protection for the county too.
- **ADA language and provisions.** The ordinance lacks language that protects Americans with disabilities, and their use of these rights-of-way, where the small cells structures will be deployed. ADA protection must not be discriminatory toward those who have physical mobility disabilities only. What about citizens with EHS, pacemakers, ADD/ADHD, autoimmune, etc? These rights-of-way belong to us too, and this liability belongs to San Diego County.
- **Random third-party testing.** Random, independent third party inspections must be required biannually, at expense of the company, to ensure compliance with FCC guidelines.
- **Give notice** for any residence within a mile of a proposed small cell site, to provide ample time for residents to come forward and provide input.
- **Require safety signage on all poles.** All poles must have necessary warning signs and RF safety information.
- **Keep small cells away from parks and ball fields – at least 3000 ft away.**

Thank you for taking the time to consider and apply these suggestions. I look forward to seeing changes in next ordinance draft.

Sincerely,

Kivetta Kenney

From: Neal, Stephanie
To: Easland, Camila
Subject: FW: Saftey First! - 5G
Date: Monday, July 01, 2019 9:59:15 AM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Sent: Monday, July 01, 2019 8:22 AM
To: Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>
Cc: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: FW: Saftey First! - 5G

Bianca Lorenzana
Jr. Land Use/Environmental Planner
Pronouns: she/her
Bianca.Lorenzana@sdcounty.ca.gov
Phone: 858-694-2216
County of San Diego | Planning & Development Services
5510 Overland Avenue, Suite 310, San Diego, CA 92123

From: Leon Lamb <leon@sdpermits.com>
Sent: Sunday, June 30, 2019 11:08 AM
To: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>; Jacob, Dianne <Dianne.Jacob@sdcounty.ca.gov>
Subject: Saftey First! - 5G

Leon Lamb
743 10th Ave
San Diego, CA, 92101

June 27, 2019

San Diego County Board and Planning Commission

County Administration Center

1600 Pacific Hwy, Rm 335

San Diego, CA 92101

Dear County Supervisors and County Planning Commission,

I am writing to express my concern about the installment of 5G/small-cell antennas throughout San Diego County. The threats to public health, safety, privacy and security, property, and more must be addressed in the wireless ordinance. The citizens of San Diego County require your protection. I am grateful that The County is taking measures to incorporate such protections into an updated wireless ordinance, since the version approved in February makes no such provisions.

Based on review of the latest ordinance draft, there are still a number of ways this ordinance could be improved to ensure the best for SD County citizens, which I trust is your primary goal.

- **Restrict small cells in residential areas, and zones where children, elderly and those with special/medical needs will be.** No small cell should be allowed within (a minimum) of 1000 feet from a residential property line, in any direction. Or within 1000 ft of a school, hospital, library, church, daycare, community center, property lines. Verizon has a commercial on YouTube where they measured the distance of a 5G signal (through hills and obstacles) at a distance of greater than 3,000 feet, so there should be zero issue with these setbacks, they are a necessity.
- **Stronger language.** Use words like “must”, “shall”, “must avoid”, “will”, etc which are more clear in meaning and tone, instead of “may not”, “should not”, and “suggest”, which can be ignored.
- **Require a master plan.** The master plan needs to be coordinated across all carriers, and provide information for each antenna project like RF exposure levels, power levels, frequencies, and location address. The master plan should also be published online with ample notice, such that citizens can provide input BEFORE the antenna is installed. REQUIRE that these companies have a plan and strategy for where they place the antennas, and enforce their compliance. This will minimize excessive, haphazard installments.
- **No Co-location!** Co-location means multiple antennas to a single pole. And despite the thinking, it does not reduce clutter. Actually, it produces a huge eyesore of a pole will

multiple projections hanging off of it. It DRAWS more attention because of the extra hardware. Col-location allows poles to become scarily top-heavy, and also exposes citizens to higher doses of radiation since multiple antennas will emit from a single location. One antenna per pole, and no antennas within 1000 feet of ANY other antenna.

- **No cutting or disturbance of trees and landscaping – at all.** This must be forbidden! There are other towns and cities with gorgeous, old trees being chopped down or excessively trimmed to allow for small cell deployment. Not going to happen in San Diego!
- **Provide clear-easy-to-reach County support for citizens.** We need to have a dedicated line/service to contact The County when issues with the small cells arise, such as noise, safety, health problems, or other complaints need to be reported. This service can be funded by the wireless providers as a part of their application/bond/yearly renewal fees.
- **Insurance and Bonds.** Require than the companies have increased insurance and bonds to protect against malfunction, accidents, damages, and injury. These provide protection for the county too.
- **ADA language and provisions.** The ordinance lacks language that protects Americans with disabilities, and their use of these rights-of-way, where the small cells structures will be deployed. ADA protection must not be discriminatory toward those who have physical mobility disabilities only. What about citizens with EHS, pacemakers, ADD/ADHD, autoimmune, etc? These rights-of-way belong to us too, and this liability belongs to San Diego County.
- **Random third-party testing.** Random, independent third party inspections must be required biannually, at expense of the company, to ensure compliance with FCC guidelines.
- **Give notice** for any residence within a mile of a proposed small cell site, to provide ample time for residents to come forward and provide input.
- **Require safety signage on all poles.** All poles must have necessary warning signs and RF safety information.
- **Keep small cells away from parks and ball fields – at least 3000 ft away.**

Thank you for taking the time to consider and apply these suggestions. I look forward to seeing changes in next ordinance draft.

Best,

Leon Lamb
(619) 214-0715

SD Permits LLC
Processing Service
743 10th Ave. #2
San Diego, CA 92101
(619) 677-4343

www.sdpermits.com

From: Neal, Stephanie
To: Easland, Camila
Subject: FW: Small Cell Wireless Facilities POD 17-004 comments
Date: Monday, July 01, 2019 9:56:03 AM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: LINDSY RICHARDS <lindsyrichards@me.com>
Sent: Friday, June 28, 2019 5:11 PM
To: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: Small Cell Wireless Facilities POD 17-004 comments

Dear Tara Lieberman & San Diego County Supervisors:

My residence is in *Encinitas* CA. I am writing this letter to the County because I believe that *Encinitas* and other cities within San Diego will be adopting the SD County Ordinance. I am deeply concerned about the new FCC directive making it possible for the telecommunications industry to place cell antennas anywhere in the County right-of-way. I am voicing my strong objection to the FCC's takeover of our County's land as well as due process with respect to our rights. That being said, as zoning planners and Supervisors, can you please take the following requests into the strongest possible consideration? I am (We are) afraid of property devaluation with cell towers in residential areas, as most of us have the majority of our net worth in our homes. Because 5G is an unproven technology, please protect certain sensitive areas:

1. Cell towers are not to be located in "Sensitive" areas. 1000 foot setbacks from sensitive areas as defined by the County are necessary.
2. 500 foot set back from residential. This is in addition to using priority placement schema.
3. Pre application site inspection & survey required for each site application. There must be an on-site inspection prior to approval of the site by the County or agent representing the County. If application is in conflict with a sensitive area, site inspector may suggest the tower relocate so coverage is the same but sensitive area is protected.
4. Setback must meet fall zone length or zoning setback requirements, whichever is greater. Fall zone length must exceed the height of the tower by 20% because the height of the tower may be increased by 10% the next year.
5. Require mandatory live RF compliance testing immediately after tower is installed and "on demand testing" by a third party paid for by carrier.
6. Height restriction 30 feet; next year [under 1903] tower may go 10% higher.
7. Payment, performance and removal bond paid up front.
8. Require a Certificate of Completion.
9. No cutting of trees to facilitate line of sight or initial placement. The general ambience

of the community is to be preserved.
10. Under-grounding of equipment where possible; discretion may be used by staff.
11. The ordinance shall comply with the Americans with Disabilities Act (this includes but is not limited to safe access to private, commercial and public buildings).
12. Noticing for the occupants and building owners of all residences, apartments, and businesses within 1000 feet of the proposed location.

Please consider adopting all of the sections and verbiage of the "City of Hercules CA Wireless Telecommunications Facilities Ordinance (Chapter 16)" at this link, weaving in specific SD County requirements as deemed appropriate. I suggest this because the Hercules Ordinance provides enforceable bullet proof directions on the administration of Telecom applications and siting of antennas with no wiggle room for the Telcoms.
https://www.codepublishing.com/CA/Hercules/#!/Hercules10/Hercules1016.html#10-16

We all know that this is unacceptable and threatening to the quality of life in our own homes and in our towns. How can people in power believe this is right? They must be getting paid quite a lot to put the health of our fellow humans at risk like this. Let's all ban together and say NO to the money and power greedy FCC . This is the definition of corruption and it should be unconstitutional.

Thank you for supporting health and humanity!!

Lindsy Richards
880 Cornish Dr
Encinitas, Ca 92024

Holly Manion
17090 El Mirador
Rancho Santa Fe, CA 92067

June 29, 2019

Tara Lieberman
Land Use / Environmental Planner, Advance Planning
5510 Overland Avenue, Suite 310 / Mail Stop – 0650
San Diego, California 92123

Re: Small Cell Wireless Facilities Ordinance

Dear Tara Lieberman & San Diego County Supervisors:

I am writing to you as a real estate broker of 40 years, and a member of the North San Diego Association of Realtors regarding changes to your draft "Small Cell Wireless Facility Ordinance". My deep concern is for property devaluation as 5G cell sites are permitted and installed in and around residential and "sensitive" areas and properties of the County.

My personal experience as a realtor current literature suggests that any resident who faces 5G, or any cell tower near their property is going to experience difficulty selling their home, and devaluation of their property. I would strongly urge you to include language in your new ordinance that includes substantial setbacks from residential properties and sensitive areas. Other cities and towns in California **"prohibit Small Cells in residential areas"** or have adopted 1000 foot setbacks. Why should San Diego be less protective of residents? I recommend **1000 foot setback** for all residential and sensitive properties. Without these setbacks, I'm afraid the real estate market in San Diego will cease to be desirable, profitable, and an attribute to San Diego County.

In my professional opinion we will lose real estate business and we will lose business overall if families cannot find what they consider to be safe homes in the San Diego area and conversely, if they find that these homes are difficult to sell with cell towers in front of them.

The perception of 5G is one of deep concern because of the failure to test this new technology and the fact the millimeter wave is also used in full body scanners that pregnant women are allowed to "opt out" of at airports. We have to exercise great caution to protect the real estate industry here in San Diego and I would urge you all to be as generous as you possibly can be when it comes to residential setbacks from cell towers of all kinds.

The following are my suggested changes to your draft ordinance:

1. Preference for locations industrial and commercial districts.
2. Minimum 1000 foot setback from residential and sensitive areas & properties.
3. Pre application site inspection & survey to be **required** for each site application. There must be an "on-site visual inspection" prior to approval of the site by the County or agent representing the County. If application is in conflict with a sensitive area/property, site inspector may suggest the tower relocate so sensitive area is protected.
4. Consider a "Tolling Agreement" between the applicant and the County to be part of the application.
5. Fall zone to be at least 100 feet in all directions.
6. Require mandatory live RF compliance testing paid for by the carrier immediately after tower/antenna is installed.
7. "On demand testing" of a site by a third party paid for by carrier.
8. Height restriction to be 30 feet (as they are allowed to go higher over time).
9. Require sound mitigation for each site.
10. Payment, performance and removal bond paid up front. Bond held by the County.
11. Require a Certificate of Completion and a Certificate of Compliance for each application.
12. No cutting of trees to facilitate line of sight or initial placement. The general ambience of the community is to be preserved.
13. Any ground mounted equipment that cannot be installed in/on a pole must be undergrounded flush to the ground.
14. Property owners must be notified within 500 feet of the proposed cell antenna/site with a copy of the photo simulations and RF compliance report.
15. The ordinance shall comply with the (ADA) Americans with Disabilities Act.

Sincerely,

Holly Manion

Rancho Santa Fe Realty

DRE #00646025

Cell Phone Towers Lower Property Values: Documentation and Research on Cellular Base Stations Near Homes- *Environmental Health Trust*

EMF Real Estate Survey Results: "Neighborhood Cell Tower & Antennas - Do They Impact a Property's Desirability? *Electromagnetic Health, 2014*

Proposed 4G and 5G WTFs Lower Property Values Scientist for Wired Technology, Jan 2019

The Impact of Cell Phone Towers on House Prices in Residential Neighborhoods *by* Sandy Bond, PHD and Ko-Kang Wang 2005

Cell Antennas Lower Property Values

Research indicates that over 90% of home buyers and renters are less interested in properties near cell towers *and* would pay less for a property in close vicinity to cellular antennas. Documentation of a price drop up to 20% is found in multiple surveys and published articles as listed below. The US Department of Housing and Urban Development (HUD) considers cell towers as "Hazards and Nuisances."

Once built. Cell towers can go up an additional 20 feet- without community consent.

Most people in the United States are unaware that once a tower is built, it can go *up to 20 feet higher* with no public process due to the passing of Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012. In other words, a 100 foot tower can be increased to 120 feet after it is constructed and the community will have no input. Communities are largely unaware of this law.

The California Association of Realtors' Property Sellers Questionnaire specifically "cell towers" listed on the disclosure form for sellers of real estate. The seller must note "neighborhood noise, nuisance or other problems from.. " and includes cell towers and high voltage transmission lines on the long list problems. Click here to see the California Association of Realtors' Property Sellers Questionnaire (p. 3-4 under K. Neighborhood)

Scroll down this page for resources on property de-valuation.

Read the peer reviewed published science documenting the public health risk at this link.

The realtor industry has written several articles documenting the property devaluation after communication towers are built near property.

National Association of REALTORS® Lists References including EHTs page on their Cell Towers Page . More at https://www.nar.realtor/cell-phone-towers#section-165807

The National Association of REALTORS® and other real estate organizations are urging the Federal Communications Commission to heed caution and ensure that its proposal to expand high-speed 5G networks nationwide doesn't violate property owners' rights.

Read the National Association of REALTORS® Letter

A coalition of real estate groups, including NAR, the National Multifamily Housing Council, the National Apartment Association, and the Institute of Real Estate Management, among others, submitted a letter to the FCC expressing concern over its proposed rule regarding over-the-air reception devices. The coalition says the rule could make it easier for antennas and other devices to be placed on properties without the owners' consent. The coalition flagged these two potential issues:

- The rule could allow residential or commercial tenants to install a 5G small cell or other wireless infrastructure on a balcony or within a leased space to boost individual coverage and also transmit a signal to other customers of the telecom provider.
- The rule could allow a telecom carrier who already leases rooftop space from a property owner (for antennas or other equipment) to be able to attach a 5G small cell or other wireless infrastructure on that existing equipment without having to change their agreement with the property owner.

5G is touted to be 100 times faster and five times more responsive than 4G and 4G LTE, the technology being used today on most smartphones and wireless devices.

- "The real estate associations strongly support the deployment of broadband infrastructure of all kinds because apartment residents, commercial tenants, and their customers need and want the service that the infrastructure supports," the coalition wrote in its letter to the FCC. "With the rise of e-commerce, changes in how consumers access media, and our ever-increasing reliance on the Internet for basic functions, broadband connectivity is a top priority for the industry."
- "The real estate associations believe strongly the marketplace is working, and so we urge the Commission to avoid measures that could prove counterproductive, and thereby harm investment, constrain competition, and limit consumer access to broadband service. We are also concerned that inopportune regulation could raise the cost of developing multifamily housing and commercial real estate."

https://magazine.realtor/daily-news/2019/06/24/nar-fcc-s-5g-plan-could-hurt-property-owners

"Impact of Communication Towers and Equipment on Nearby Property Values" prepared by Burgoyne Appraisal Company, March 7, 2017

The Cost of Convenience: Estimating the Impact of Communication Antennas on Residential Property Values (*Land Economics*, Feb. 2016)

The Lo Down on Cell Towers, Neighborhood Values, and the Secretive Telecoms(link is external) (*The Dissident Voice*, Dec. 19, 2015)

Cell Towers: Not in My Back Yard (*Tedium Blog*, Aug. 5, 2015)

"Examining invisible urban pollution and its effect on real estate value in New York City" – by William Gati in New York Real Estate Journal September 2017

- "Understanding EMF values of business and residential locations is relatively new for the real estate industry. Cell phone towers bring extra tax revenue and better reception to a section of the city, but many are skeptical because of potential health risks and the impact on property values. Increasing numbers of people don't want to live near cell towers. In some areas with new towers, property values have decreased by up to 20%."

"Cell Tower Antennas Problematic for Buyers" published in REALTOR® Magazine:

- An overwhelming 94 percent of home buyers and renters surveyed by the National Institute for Science, Law & Public Policy (NISLAPP) say they are less interested and would pay less for a property located near a cell tower or antenna.
- The NISLAPP survey echoes the findings of a study by Sandy Bond of the New Zealand Property Institute and past president of the Pacific Rim Real Estate Society (PRRES). "The Impact of Cell Phone Towers on House Prices in Residential Neighborhoods," which was published in The Appraisal Journal in 2006, found that buyers would pay as much as 20 percent less for a property near a cell tower or antenna.

2014 Survey by the National Institute for Science, Law and Public Policy (NISLAPP) in Washington, D.C., "Neighborhood Cell Towers & Antennas—Do They Impact a Property's Desirability?"

- Home buyers and renters are less interested in properties located near cell towers and antennas, as well as in properties where a cell tower or group of antennas are placed on top of or attached to a building. 94% said a nearby cell tower or group of antennas would negatively impact interest in a property or the price they would be willing to pay for it.

- Read the Press Release: Survey by the National Institute for Science, Law & Public Policy

Lawyers Write About the Property Value Drop.

Best Best and Krieger Letter to Ms. Marlene H. Dortch, Secretary Federal Communications Commission September 19, 2018 "RE" Smart Communities and Special Districts Coalition – Ex Parte Submission: Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, WT Docket No. 17-79; Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment, WC Docket No. 17-84"

- "Further, the assumption that there is little to consider in a small cell application is belied by the definition the Commission adopts for "small wireless facility": while it justifies its rules based on the assumption that many small cells are the size of a pizza box, a pizza box is about 1/2 cu. ft. in size, while the Commission proposes to expedite permitting of equipment cabinets 28 cu. ft. in size – a stack of 56 pizza boxes – on front lawns throughout the country. Considering that the Smart Communities' prior filings show that the addition of facilities of this size diminish property values, it is strange for the Commission to assume that approval can be granted in the regulatory blink of an eye."
- "A good example lies in the Commission's discussion of undergrounding.62 The Commission at once appears to recognize that communities spend millions of dollars on undergrounding projects, and that allowing poles to go up in areas where poles have been take down has significant impacts on aesthetics (not to mention property values)."

NEWS ARTICLES

New York Times: "A Pushback Against Cell Towers" August 2010

"If they have the opportunity to buy another home, they do."

She said cell antennas and towers near homes affected property values, adding, "You can see a buyer's dismay over the sight of a cell tower near a home just by their expression, even if they don't say anything."

The Times of India: "Property hit where signal masts rise" July 2012

" Property dealers across the city say that buildings which host mobile phone towers have 10-20 % less market value.

"Forget buying these properties , people don't want to take them on rent even, particularly when they have a choice. If a person is going to invest crores, why

would he buy a property with a tower?" asks Pal. According to LK Thakkar, a Defence Colony-based property dealer, while the cost of the building which has the tower is relatively less, other buildings in the vicinity also get affected. "No one wants to buy a house within 100 metres of the building which has the tower. The rates for such properties drop by 10-20 %, and sometimes even more," said Thakkar, co-owner of A-One Associates ."

"Do neighborhood cell towers impact property values?" Pennsylvania Association of Realtors,

2014

- A recent survey by the National Institute for Science, Law & Public Policy (NISLAPP) found that 94 percent of homebuyers are "less interested and would pay less" for a property located near a cell tower or antenna.

"Appraiser: Cell Tower Will Affect Property Values" New Jersey Patch on T Mobile Cell Tower

- "Properties that are approximately close to the tower will suffer substantial degradation to their value based on the nature of the unusual feature in the residential neighborhood."

STUDIES ON IMPACTS OF TOWERS

Sandy Bond, Ph.D., Ko-Kang Wang, "The Impact of Cell Phone Towers on House Prices in Residential Neighborhoods," The Appraisal Journal, Summer 2005; Source: Goliath business content website.

- "Overall, respondents would pay from 10%–19% less to over 20% less for a property if it were in close proximity to a CPBS."

"Cellular Phone Towers: Perceived impact on residents and property values" University of Auckland, paper presented at the Ninth Pacific-Rim Real Estate Society Conference, Brisbane, Australia, January 19-22, 2003; Source: Pacific Rim Real Estate Society website,

A Field Guide to Cell Towers, The National Association of Realtors

The effect of distance to cell phone towers on house prices S Bond, Appraisal Journal, Fall 2007, Source, Appraisal Journal (Found on page 22) See also Using GIS to Measure the Impact of Distance to Cell Phone Towers on House Prices in Florida

Florida State University Law Review Volume 24 | Issue 1 Article 5 1996 The Power Line Dilemma: Compensation for Diminished Property Value Caused by Fear of

Electromagnetic Fields

New Zealand Ministry for the Environment, "Appendix 5: The Impact of Cellphone Towers on Property Values" Source: New Zealand Ministry for the Environment website

Powers, turbines and transmission lines impacts on property value edited by Sally Bond Sally Sims and Peter Dent, 2014

The US Department of Housing and Urban Development (HUD) considers cell towers as "Hazards and Nuisances."

- HUD requires its certified appraisers to take the presence of nearby cell towers into consideration when determining the value of a single family residential property.
- HUD guidelines categorize cell towers with "hazards and nuisances." HUD prohibits FHA underwriting of mortgages for homes that are within the engineered fall zone of a cell tower.
- "The appraiser must indicate whether the dwelling or related property improvements is located within the easement serving a high-voltage transmission line, radio/TV transmission tower, cell phone tower, microwave relay dish or tower, or satellite dish (radio, TV cable, etc)."
- Read it here at the US Department of Housing and Urban Development.

Cell Towers are Discussed in the Written Testimony of Bobbi Borland Acting Branch Chief, HUD Santa Ana Homeownership Center Hearing before the Subcommittee on Insurance, Housing and Community Opportunity U.S. House of Representatives Committee on Financial Services on "The Impact of Overhead High Voltage Transmission Towers and Lines on Eligibility for Federal Housing Administration (FHA) Insured Mortgage Programs" Saturday, April 14, 2012

- With regard to the new FHA originations, the guide provides that: "The appraiser must indicate whether the dwelling or related property improvements are located within the easement serving a high-voltage transmission line, radio/TV transmission tower, cell phone tower, microwave relay dish or tower, or satellite dish (radio, TV cable, etc)."

Once Built, Towers Could be Allowed to go 20 feet Taller

Middle Class Tax Relief and Job Creation Act of 2012, Sec. 6409(a)

The Federal Communications Commission (FCC) has proposed and is currently considering rules to clarify and implement the requirements of Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012. Under section 6409(a), "a State or local government may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station." The FCC considers eligible facilities' requests to include requests for carrier co-locations and for replacing existing antennas and ground equipment with larger antennas/equipment or more antennas/equipment.

The FCC has proposed, as part of these rules, applying a four-pronged test, which could lead to cell towers increasing in height by 20-plus feet beyond their approved construction heights.

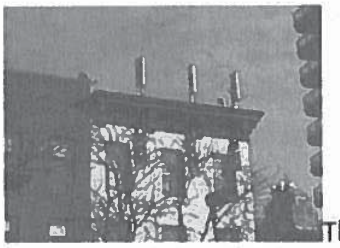
Applying the test may also lead increases in the sizes of compounds, equipment cabinets and shelters, and hazardous materials used for back-up power supplies, beyond what was originally approved.

Under this test, a "substantial increase in the size of the tower" occurs if:
1) [t]he mounting of the proposed antenna on the tower would increase the existing height of the tower by more than 10%, or by the height of one additional antenna array with separation from the nearest existing antenna not to exceed twenty feet, whichever is greater, except that the mounting of the proposed antenna may exceed the size limits set forth in this paragraph if necessary to avoid interference with existing antennas; or
2) [t]he mounting of the proposed antenna would involve the installation of more than the standard number of new equipment cabinets for the technology involved, not to exceed four, or more than one new equipment shelter; or
3) [t]he mounting of the proposed antenna would involve adding an appurtenance to the body of the tower that would protrude from the edge of the tower more than twenty feet, or more than the width of the tower structure at the level of the appurtenance, whichever is greater, except that the mounting of the proposed antenna may exceed the size limits set forth in this paragraph if necessary to shelter the antenna from inclement weather or to connect the antenna to the tower via cable; or
4) [t]he mounting of the proposed antenna would involve excavation outside the current tower site, defined as the current boundaries of the leased or owned property surrounding the tower and any access or utility easements currently related to the site.

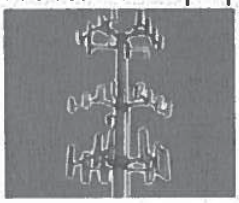
http://apps.fcc.gov/ecfs/document/view?id=7521070994

EMF Real Estate Survey Results: "Neighborhood Cell Towers & Antennas—Do They Impact a Property's Desirability?"

03.07.2014 by emily Category Electromagnetic Health Blog



The National Institute for Science, Law and Public Policy's survey **"Neighborhood Cell Towers & Antennas—Do They Impact a Property's Desirability?"** initiated June 2, 2014, has now been completed by 1,000 respondents as of June 28, 2014. The survey, which circulated online through email and social networking sites, in both the U.S. and abroad, sought to determine if nearby cell towers and antennas, or wireless antennas placed on top of or on the side of a building, would impact a home buyer's or renter's interest in a real estate property.



The overwhelming majority of respondents (94%) reported that cell towers and antennas in a neighborhood or on a building would impact interest in a property and the price they would be willing to pay for it. And 79% said under no circumstances would they ever purchase or rent a property within a few blocks of a cell tower or antenna.

- **94% said a nearby cell tower or group of antennas would negatively impact interest in a property or the price they would be willing to pay for it.**

- **94% said a cell tower or group of antennas on top of, or attached to, an apartment building would negatively impact interest in the apartment building or the price they would be willing to pay for it.**

- **95% said they would opt to buy or rent a property that had zero antennas on the building over a comparable property that had several antennas on the building.**

- **79% said under no circumstances would they ever purchase or rent a property within a few blocks of a cell tower or antennas.**

- **88% said that under no circumstances would they ever purchase or rent a property with a cell tower or group of antennas on top of, or attached to, the apartment building.**

- **89% said they were generally concerned about the increasing number of cell towers and antennas in their residential neighborhood.**

The National Institute for Science, Law and Public Policy (NISLAPP) was curious if respondents had previous experience with physical or cognitive effects of wireless radiation, or if their concern about neighborhood antennas was unrelated to personal experience with the radiation. **Of the 1,000 respondents, 57% had previously experienced cognitive effects from radiation emitted by a cell phone, wireless router, portable phone, utility smart meter, or neighborhood antenna or cell tower, and 43% had not experienced cognitive effects. 63% of respondents had previously experienced physical effects from these devices or neighborhood towers and antennas and 37% had not experienced physical effects.**

The majority of respondents provided contact information indicating they would like to receive the results of this survey or news related to the possible connection between neighborhood cell towers and antennas and real estate decisions.

Comments from real estate brokers who completed the NISLAPP survey:

"I am a real estate broker in NYC. I sold a townhouse that had a cell tower attached. Many potential buyers chose to avoid purchasing the property because of it. There was a long lease."

"I own several properties in Santa Fe, NM and believe me, I have taken care not to buy near cell towers. Most of these are rental properties and I think I would have a harder time renting those units... were a cell tower or antenna nearby. Though I have not noticed any negative health effects myself, I know many people are affected. And in addition, these antennas and towers are often extremely ugly–despite the attempt in our town of hiding them as chimneys or fake trees."

"We are home owners and real estate investors in Marin County and have been for the last 25 years. We own homes and apartment building here in Marin. We would not think of investing in real estate that would harm our tenants. All our properties are free of smart meters. Thank you for all of your work."

"I'm a realtor. I've never had a single complaint about cell phone antennae. Electric poles, on the other hand, are a huge problem for buyers."

Concern was expressed in the comments section by respondents about potential property valuation declines near antennas and cell towers. While the NISLAPP survey did not evaluate property price declines, a study on this subject by Sandy Bond, PhD of the New Zealand Property Institute, and Past President of the Pacific Rim Real Estate Society (PRRES), The Impact of Cell Phone Towers on House Prices in Residential Neighborhoods, was published in *The Appraisal Journal* of the Appraisal Institute in 2006. The Appraisal Institute is the largest global professional organization for appraisers with 91 chapters. The study indicated that **homebuyers would pay from 10%–19% less to over 20% less for a property if it were in close proximity to a cell phone base station.** The 'opinion' survey results were then confirmed by a market sales analysis. **The results of the sales analysis showed prices of properties were reduced by around 21% after a cell phone base station was built in the neighborhood."**

The Appraisal Journal study added,

"Even buyers who believe that there are no adverse health effects from cell phone base stations, knowing that other potential buyers might think the reverse, will probably seek a price discount for a property located near a cell phone base station."

James S. Turner, Esq., Chairman of the National Institute for Science, Law & Public Policy and Partner, Swankin & Turner in Washington, D.C., says,

"The recent NISLAPP survey suggests there is now a high level of awareness about potential risks from cell towers and antennas. In addition, the survey indicates respondents believe they have personally experienced cognitive

(57%) or physical (63%) effects from radiofrequency radiation from towers, antennas or other radiating devices, such as cell phones, routers, smart meters and other consumer electronics. Almost 90% are concerned about the increasing number of cell towers and antennas generally. A study of real estate sales prices would be beneficial at this time in the Unites States to determine what discounts homebuyers are currently placing on properties near cell towers and antennas."

Betsy Lehrfeld, Esq., an attorney and Executive Director of NISLAPP, says,

"The proliferation of this irradiating infrastructure throughout our country would never have occurred in the first place had Section 704 of the Telecommunications Act of 1996 not prohibited state and local governments from regulating the placement of wireless facilities on health or environmental grounds. The federal preemption leaves us in a situation today where Americans are clearly concerned about risks from antennas and towers, some face cognitive and physical health consequences, yet they and their families increasingly have no choice but to endure these exposures, while watching their real property valuations decline."

The National Institute for Science, Law, and Public Policy (NISLAPP) in Washington, D.C. was founded in 1978 to bridge the gap between scientific uncertainties and the need for laws protecting public health and safety. Its overriding objective is to bring practitioners of science and law together to develop intelligent policy that best serves all interested parties in a given controversy. Its focus is on the points at which these two disciplines converge.

NISLAPP contact:
James S. Turner, Esq.
(202) 462-8800 / jim@swankin-turner.com
Emily Roberson
er79000@yahoo.com

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See Commentary by ElectromagneticHealth.org on NISLAPP EMF Real Estate Survey Results and Recommendations for Real Estate Agents and Homebuyers

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SCIENTISTS FOR WIRED TECHNOLOGY

Advocacy based on Scientists' research of the hazards of pulsed, data-modulated, Radiofrequency Microwave Radiation

JANUARY 26, 2019 BY PMG

Proposed 4G and 5G WTFs Lower Property Values

Adapted from original Jan 10, 2019 article here

One reason you would not want a 4G or 5G Close Proximity Microwave Radiation Antenna (CPMRA) or a Wireless Telecommunications Facility (WTF) of any size or shape in front of or near your home is that it will **significantly lower the property value of your home**.

This is one of the reasons why cities and towns should limit and regulate the permitting of CPMRAs to the greatest extent possible. Among other things cities and towns can amend their zoning codes to say that:

- CPMRAs are not allowed in residential zones, only in commercial and industrial zones.
- There must be at minimum distance of 1.500 feet between WTFs of any kind.
- There must be a setback of at least 500′ between a CPMRA and the nearest home.
- There should also be **vertical setbacks for antennas** — no lower than 150 feet higher than the highest roof in a 1500 foot radius of the WTF
- Other than the antenna and wires all of the electrical equipment must be placed underground.
- Finally, towns can insist on installing only Telecom equipment that **has no chance of outputting maximum RF-EMR exposures any higher than 150 μW/m^2** anywhere

where people live, learn, recreate, sleep or heal — metered as peak RF-EMR exposures anywhere outside either on the ground or just outside the highest windows of the closest buildings within a 1,500 foot radius of any WTF.

If you are looking for resources on the relationship between the presence of a CPMRA and property values, either for yourself or to provide to your city or town, try the following links:

- Link to Neighborhood Cell Towers & Antennas: Survey initiated June 2, 2014, has now been completed by 1,000 respondents as of June 28, 2014. Real Estate Survey Results
- Link to Burgoyne Appraisal Company: Impact of Communication Tower and Equipment on Property Values
- Link to National Institute for Science, Law & Public Policy Indicates Cell Towers and Antennas Negatively Impact Interest in Real Estate Properties
- Link to 2006 – Using GIS to Measure the Impact of Distance to Cell Phone Towers on House Prices in Florida
- Link to 2005 – The Impact of CellPhone Towers on House Prices in Residential Neighborhoods
- Link to 2003 – The Impact of Cellular Phone Base Station Towers on Property values
- Link to Burbank Action on Decreased Real Estate Values
- Link to Letters to LA County Regional Planning Commission re: decreased house values near cell towers
- Link to Burbank Real Estate Professionals Statement re: proposed cell tower at Brace Canyon park would affect property values

Legal Obligations To Disclose, When Selling a Home

There is an obligation for a real estate agent or seller to disclose the existence of a WTF within 3,000 feet of a home.

The California Association of Realtors maintains that

> *'sellers and agents must disclose material facts that affect the value or desirability of the property, which includes known conditions outside of and surrounding the property".*

The California Real Estate Transfer Disclosure Statement requires disclosure of

- "Neighborhood noise problems or other nuisances."
- "Whether the subject property is affected by or zoned to allow certain manufacturing or commercial use as set forth in CCP 731a."

Make no mistake — everyone will know the where the Close Proximity Microwave Radiation Antenna (CPMRA) is in relation to your home. Besides the unsightly antennas placed on light poles or utility poles in the public rights-of-way, there will be safety, emergency notification and warning signs that will signal their presence of this industrial equipment in your residential neighborhood.

Also, your neighbors will know and will hopefully speak up agains to prevent installation of any CPMRAs or WTFs in your neighborhood. Of course, there is also the moral obligation to consider in making disclosures when selling one's home. **Would you sell a home to a couple with young children if there was a CPMRA in front of the home?**

You can learn more at My Street, My Choice!

Share this:


3

Related

How Real Is the Race to 5G?
August 7, 2018
In "Pulsed Microwave Radiation"

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January 20, 2019
In "Pulsed Microwave Radiation"

PULSED MICROWAVE RADIATION

Cell Antennas Lower Property Values

Research indicates that over 90% of home buyers and renters are less interested in properties near cell towers *and* would pay less for a property in close vicinity to cellular antennas. Documentation of a price drop up to 20% is found in multiple surveys and published articles as listed below. The US Department of Housing and Urban Development (HUD) considers cell towers as "Hazards and Nuisances."

Once built. Cell towers can go up an additional 20 feet- without community consent.

Most people in the United States are unaware that once a tower is built, it can go *up to 20 feet higher* with no public process due to the passing of Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012. In other words, a 100 foot tower can be increased to 120 feet after it is constructed and the community will have no input. Communities are largely unaware of this law.

The California Association of Realtors' Property Sellers Questionnaire specifically "cell towers" listed on the disclosure form for sellers of real estate. The seller must note "neighborhood noise, nuisance or other problems from.. " and includes cell towers and high voltage transmission lines on the long list problems. Click here to see the California Association of Realtors' Property Sellers Questionnaire (p. 3-4 under K. Neighborhood)

Scroll down this page for resources on property de-valuation.

Read the peer reviewed published science documenting the public health risk at this link.

The realtor industry has written several articles documenting the property devaluation after communication towers are built near property.

National Association of REALTORS® Lists References including EHTs page on their Cell Towers Page . More at https://www.nar.realtor/cell-phone-towers#section-165807

The National Association of REALTORS® and other real estate organizations are urging the Federal Communications Commission to heed caution and ensure that its proposal to expand high-speed 5G networks nationwide doesn't violate property owners' rights.

Read the National Association of REALTORS® Letter

A coalition of real estate groups, including NAR, the National Multifamily Housing Council, the National Apartment Association, and the Institute of Real Estate Management, among others, submitted a letter to the FCC expressing concern over its proposed rule regarding over-the-air reception devices. The coalition says the rule could make it easier for antennas and other devices to be placed on properties without the owners' consent. The coalition flagged these two potential issues:

- The rule could allow residential or commercial tenants to install a 5G small cell or other wireless infrastructure on a balcony or within a leased space to boost individual coverage and also transmit a signal to other customers of the telecom provider.
- The rule could allow a telecom carrier who already leases rooftop space from a property owner (for antennas or other equipment) to be able to attach a 5G small cell or other wireless infrastructure on that existing equipment without having to change their agreement with the property owner.

5G is touted to be 100 times faster and five times more responsive than 4G and 4G LTE, the technology being used today on most smartphones and wireless devices.

- "The real estate associations strongly support the deployment of broadband infrastructure of all kinds because apartment residents, commercial tenants, and their customers need and want the service that the infrastructure supports," the coalition wrote in its letter to the FCC. "With the rise of e-commerce, changes in how consumers access media, and our ever-increasing reliance on the Internet for basic functions, broadband connectivity is a top priority for the industry."
- "The real estate associations believe strongly the marketplace is working, and so we urge the Commission to avoid measures that could prove counterproductive, and thereby harm investment, constrain competition, and limit consumer access to broadband service. We are also concerned that inopportune regulation could raise the cost of developing multifamily housing and commercial real estate."

https://magazine.realtor/daily-news/2019/06/24/nar-fcc-s-5g-plan-could-hurt-property-owners

"Impact of Communication Towers and Equipment on Nearby Property Values" prepared by Burgoyne Appraisal Company, March 7, 2017

The Cost of Convenience: Estimating the Impact of Communication Antennas on Residential Property Values (*Land Economics*, Feb. 2016)

The Lo Down on Cell Towers, Neighborhood Values, and the Secretive Telecoms(link is external) (*The Dissident Voice*, Dec. 19, 2015)

Cell Towers: Not in My Back Yard (*Tedium Blog*, Aug. 5, 2015)

"Examining invisible urban pollution and its effect on real estate value in New York City" – by William Gati in New York Real Estate Journal September 2017

- "Understanding EMF values of business and residential locations is relatively new for the real estate industry. Cell phone towers bring extra tax revenue and better reception to a section of the city, but many are skeptical because of potential health risks and the impact on property values. Increasing numbers of people don't want to live near cell towers. In some areas with new towers, property values have decreased by up to 20%."

"Cell Tower Antennas Problematic for Buyers" published in REALTOR® Magazine:

- An overwhelming 94 percent of home buyers and renters surveyed by the National Institute for Science, Law & Public Policy (NISLAPP) say they are less interested and would pay less for a property located near a cell tower or antenna.
- The NISLAPP survey echoes the findings of a study by Sandy Bond of the New Zealand Property Institute and past president of the Pacific Rim Real Estate Society (PRRES). "The Impact of Cell Phone Towers on House Prices in Residential Neighborhoods," which was published in The Appraisal Journal in 2006, found that buyers would pay as much as 20 percent less for a property near a cell tower or antenna.

2014 Survey by the National Institute for Science, Law and Public Policy (NISLAPP) in Washington, D.C., "Neighborhood Cell Towers & Antennas—Do They Impact a Property's Desirability?"

- Home buyers and renters are less interested in properties located near cell towers and antennas, as well as in properties where a cell tower or group of antennas are placed on top of or attached to a building. 94% said a nearby cell tower or group of antennas would negatively impact interest in a property or the price they would be willing to pay for it.

- Read the Press Release: Survey by the National Institute for Science, Law & Public Policy

Lawyers Write About the Property Value Drop.

Best Best and Krieger Letter to Ms. Marlene H. Dortch, Secretary Federal Communications Commission September 19, 2018 "RE" Smart Communities and Special Districts Coalition – Ex Parte Submission: Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, WT Docket No. 17-79; Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment, WC Docket No. 17-84"

- "Further, the assumption that there is little to consider in a small cell application is belied by the definition the Commission adopts for "small wireless facility": while it justifies its rules based on the assumption that many small cells are the size of a pizza box, a pizza box is about 1/2 cu. ft. in size, while the Commission proposes to expedite permitting of equipment cabinets 28 cu. ft. in size – a stack of 56 pizza boxes – on front lawns throughout the country. Considering that the Smart Communities' prior filings show that the addition of facilities of this size diminish property values, it is strange for the Commission to assume that approval can be granted in the regulatory blink of an eye."
- "A good example lies in the Commission's discussion of undergrounding.62 The Commission at once appears to recognize that communities spend millions of dollars on undergrounding projects, and that allowing poles to go up in areas where poles have been take down has significant impacts on aesthetics (not to mention property values)."

NEWS ARTICLES

New York Times: "A Pushback Against Cell Towers" August 2010

"If they have the opportunity to buy another home, they do."

She said cell antennas and towers near homes affected property values, adding, "You can see a buyer's dismay over the sight of a cell tower near a home just by their expression, even if they don't say anything."

The Times of India: "Property hit where signal masts rise" July 2012

" Property dealers across the city say that buildings which host mobile phone towers have 10-20 % less market value.

"Forget buying these properties , people don't want to take them on rent even, particularly when they have a choice. If a person is going to invest crores, why

would he buy a property with a tower?" asks Pal. According to LK Thakkar, a Defence Colony-based property dealer, while the cost of the building which has the tower is relatively less, other buildings in the vicinity also get affected. "No one wants to buy a house within 100 metres of the building which has the tower. The rates for such properties drop by 10-20 %, and sometimes even more," said Thakkar, co-owner of A-One Associates ."

"Do neighborhood cell towers impact property values?" Pennsylvania Association of Realtors,

2014

- A recent survey by the National Institute for Science, Law & Public Policy (NISLAPP) found that 94 percent of homebuyers are "less interested and would pay less" for a property located near a cell tower or antenna.

"Appraiser: Cell Tower Will Affect Property Values" New Jersey Patch on T Mobile Cell Tower

- "Properties that are approximately close to the tower will suffer substantial degradation to their value based on the nature of the unusual feature in the residential neighborhood."

STUDIES ON IMPACTS OF TOWERS

Sandy Bond, Ph.D., Ko-Kang Wang, "The Impact of Cell Phone Towers on House Prices in Residential Neighborhoods," The Appraisal Journal, Summer 2005; Source: Goliath business content website.

- "Overall, respondents would pay from 10%–19% less to over 20% less for a property if it were in close proximity to a CPBS."

"Cellular Phone Towers: Perceived impact on residents and property values" University of Auckland, paper presented at the Ninth Pacific-Rim Real Estate Society Conference, Brisbane, Australia, January 19-22, 2003; Source: Pacific Rim Real Estate Society website,

A Field Guide to Cell Towers, The National Association of Realtors

The effect of distance to cell phone towers on house prices S Bond, Appraisal Journal, Fall 2007, Source, Appraisal Journal (Found on page 22) See also Using GIS to Measure the Impact of Distance to Cell Phone Towers on House Prices in Florida

Florida State University Law Review Volume 24 | Issue 1 Article 5 1996 The Power Line Dilemma: Compensation for Diminished Property Value Caused by Fear of

Electromagnetic Fields

New Zealand Ministry for the Environment, "Appendix 5: The Impact of Cellphone Towers on Property Values" Source: New Zealand Ministry for the Environment website

Powers, turbines and transmission lines impacts on property value edited by Sally Bond Sally Sims and Peter Dent, 2014

The US Department of Housing and Urban Development (HUD) considers cell towers as "Hazards and Nuisances."

- HUD requires its certified appraisers to take the presence of nearby cell towers into consideration when determining the value of a single family residential property.
- HUD guidelines categorize cell towers with "hazards and nuisances." HUD prohibits FHA underwriting of mortgages for homes that are within the engineered fall zone of a cell tower.
- "The appraiser must indicate whether the dwelling or related property improvements is located within the easement serving a high-voltage transmission line, radio/TV transmission tower, cell phone tower, microwave relay dish or tower, or satellite dish (radio, TV cable, etc)."
- Read it here at the US Department of Housing and Urban Development.

Cell Towers are Discussed in the Written Testimony of Bobbi Borland Acting Branch Chief, HUD Santa Ana Homeownership Center Hearing before the Subcommittee on Insurance, Housing and Community Opportunity U.S. House of Representatives Committee on Financial Services on "The Impact of Overhead High Voltage Transmission Towers and Lines on Eligibility for Federal Housing Administration (FHA) Insured Mortgage Programs" Saturday, April 14, 2012

- With regard to the new FHA originations, the guide provides that: "The appraiser must indicate whether the dwelling or related property improvements are located within the easement serving a high-voltage transmission line, radio/TV transmission tower, cell phone tower, microwave relay dish or tower, or satellite dish (radio, TV cable, etc)."

Once Built, Towers Could be Allowed to go 20 feet Taller

Middle Class Tax Relief and Job Creation Act of 2012, Sec. 6409(a)

The Federal Communications Commission (FCC) has proposed and is currently considering rules to clarify and implement the requirements of Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012. Under section 6409(a), "a State or local government may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station." The FCC considers eligible facilities' requests to include requests for carrier co-locations and for replacing existing antennas and ground equipment with larger antennas/equipment or more antennas/equipment.

The FCC has proposed, as part of these rules, applying a four-pronged test, which could lead to cell towers increasing in height by 20-plus feet beyond their approved construction heights.

Applying the test may also lead increases in the sizes of compounds, equipment cabinets and shelters, and hazardous materials used for back-up power supplies, beyond what was originally approved.

Under this test, a "substantial increase in the size of the tower" occurs if:
1) [t]he mounting of the proposed antenna on the tower would increase the existing height of the tower by more than 10%, or by the height of one additional antenna array with separation from the nearest existing antenna not to exceed twenty feet, whichever is greater, except that the mounting of the proposed antenna may exceed the size limits set forth in this paragraph if necessary to avoid interference with existing antennas; or
2) [t]he mounting of the proposed antenna would involve the installation of more than the standard number of new equipment cabinets for the technology involved, not to exceed four, or more than one new equipment shelter; or
3) [t]he mounting of the proposed antenna would involve adding an appurtenance to the body of the tower that would protrude from the edge of the tower more than twenty feet, or more than the width of the tower structure at the level of the appurtenance, whichever is greater, except that the mounting of the proposed antenna may exceed the size limits set forth in this paragraph if necessary to shelter the antenna from inclement weather or to connect the antenna to the tower via cable; or
4) [t]he mounting of the proposed antenna would involve excavation outside the current tower site, defined as the current boundaries of the leased or owned property surrounding the tower and any access or utility easements currently related to the site.

http://apps.fcc.gov/ecfs/document/view?id=7521070994

features

The Impact of Cell Phone Towers on House Prices in Residential Neighborhoods

by Sandy Bond, PhD, and Ko-Kang Wang

abstract

This article examines whether proximity to cellular phone towers has an impact on residential property values and the extent of any impact. First, a survey approach is used to examine how residents perceive living near cellular phone base stations (CPBSs) and how residents evaluate the impacts of CPBSs. Next, a market study attempts to confirm the perceived value impacts reported in the survey by analyzing actual property sales data. A multiple regression analysis in a hedonic pricing framework is used to measure the price impact of proximity to CPBSs. Both the survey and market sales analysis find that CPBSs have a negative impact on the prices of houses in the study areas.

The introduction of cellular phone systems and the rapid increase in the number of users of cellular phones have increased exposure to electromagnetic fields (EMFs). Health consequences of long-term use of cellular phones are not known in detail, but available data indicates that development of nonspecific health symptoms is possible.[1] Conversely, it appears health effects from cellular phone equipment (antennas and base stations) pose few, if any, known health hazards.[2]

A concern associated with cellular phone usage is the siting of cellular phone transmitting antennas (CPTAs) and cellular phone base stations (CPBSs). In New Zealand, CPBS sites are increasingly in demand as the major cellular phone companies there, Telecom and Vodafone, upgrade and extend their network coverage. This demand could provide the owner of a well-located property a yearly income for the siting of a CPBS.[3] However, new technology that represents potential hazards to human health and safety may cause property values to diminish due to public perceptions of hazards. Media attention to the potential health hazards of CPBSs has spread concerns among the public, resulting in increased resistance to CPBS sites.

Some studies suggest a positive correlation between long-term exposure to the electromagnetic fields and certain types of cancer,[4] yet other studies report inconclusive results on health effects.[5] Notwithstanding the research results, media reports indicate that the extent of opposition from some property owners

1. Stanislaw Szmigielski and Elizbieta Sobiczewska, "Cellular Phone Systems and Human Health—Problems with Risk Perception and Communication," *Environmental Management and Health* 11, no. 4 (2000): 352–368.
2. Jerry R. Barnes, "Cellular Phones: Are They Safe?" *Professional Safety* 44, no. 12 (Dec. 1999): 20–23.
3. R. Williams, "Phone Zone—Renting Roof Space to Ma Bell," *The Property Business* 12 (April 2001): 6–7.
4. C. M. Krause et al., "Effects of Electromagnetic Field Emitted by Cellular Phones on the EEG During a Memory Task," *Neuroreport* 11, no. 4 (2000): 761–764.
5. Independent Expert Group on Mobile Phones, *Mobile Phones and Health* (Report to the United Kingdom Government, 2000), http://www.iegmp.org.uk.

affected by the siting of CPBSs remains strong.[6] However, the extent to which such attitudes are reflected in lower property values for homes located near CPBSs is not known.

Understanding the impact of CPBSs on property values is important to telecommunications companies both for planning the siting of CPBSs and for determining likely opposition from property owners. Similarly, property appraisers need to understand the valuation implications of CPBSs when valuing CPBS-affected property. The owners of affected property also want to understand the magnitude of any effects, particularly if compensation claims or an award for damages are to be made based on any negative effects on value.

The research here uses a case study approach to determine residents' perceptions towards living near CPBSs in Christchurch, New Zealand, and to quantify these effects in monetary terms according to an increasing or decreasing percentage of property value. The case study uses both an opinion survey and an econometric analysis of sales transaction data. A comparison of the results can be used to help appraisers value affected property as well as to resolve compensation issues and damage claims in a quantitative way. Further, the results provide a potential source of information for government agencies in assessing the necessity for increased information pertaining to CPBSs.

The following provides a brief review of the cellular phone technology and relevant literature. Then, the next section describes the research procedure used, including descriptions of the case study and control areas. The results are then discussed, and the final section provides a summary and conclusion.

Cellular Telephone Technology[7]

Cellular (mobile) telephones are sophisticated two-way radios that use ultrahigh frequency (UHF) radio waves to communicate information. The information is passed between a mobile phone and a network of low-powered transceivers, called mobile phone sites or cell sites. As mobile sites are very low powered they serve only a limited geographic area (or "cell"), varying from a few hundred meters to several kilometers; they can handle only a limited number of calls at one time. When a mobile phone user on the move leaves one cell and enters another, the next site automatically takes over the call, allowing contact to be maintained.

When a mobile phone call is initiated, the phone connects to the network by using radio signals to communicate with the nearest mobile phone site. The mobile phone sites in a network are interlinked by cable or microwave beam, enabling phone calls to be passed from one cell to another automatically. A mobile phone site is typically made up of a mast with antennas connected to equipment stored in a cabinet. Power is fed into the cabinet by underground cable. The antennas are designed to transmit most of the signal away horizontally, or just below horizontal, rather than at steep angles to the ground.

Mobile phone sites can only accommodate a limited number of calls at any one time. When this limit is reached, the mobile phone signal is transferred to the next nearest site. If this site is full or is too far away, the call will fail.

Cell site capacity is a major issue for telecommunication companies. As the number of people using mobile phones grows, more and more cell sites are required to meet customer demand for reliable coverage. At the end of March 2002, Telecom had more than 1.3 million mobile phone customers and more than 750 mobile phone sites throughout New Zealand. Vodafone had over 1.1 million mobile phone customers.[8] In areas, such as Auckland (the largest city in New Zealand, with close to a third of the NZ population), where almost complete coverage has been achieved, the main issue is ensuring that there is the capacity to handle the ever-increasing number of mobile phones and calls.

Locating Cellular Phone Sites

For cellular phone service providers, the main goals when locating cell sites are (1) finding a site that provides the best possible coverage in the area without causing interference with other cells, and (2) finding a site that causes the least amount of environmental impact on the surrounding area. Service providers usually attempt to locate cell sites on existing structures such as buildings, where antennas can be mounted on the roof to minimize the environmental impact. If this is not possible, a mast will need to be erected to support the antennas for the new cell site.

6. S. Fox, "Cell Phone Antenna Worries Family," *East & Bays Courier*, November 8, 2002, 1.
7. The information in this section was sourced from Telecom, http://www.telecom.co.nz; New Zealand Ministry for the Environment, http://www.mfe.govt.nz; and New Zealand Ministry of Health, http://www.moh.govt.nz.
8. Vodafone, "Cell Sites and the Environment," http://www.vodafone.co.nz/aboutus/vdfn_about_cellsites.pdf (accessed December 19, 2002) and "Mobile Phones and Health," http://www.vodafone.co.nz/aboutus/vdfn_about_health_and_safety.pdf (accessed December 19, 2002); and Telecom, "Mobile Phone Sites and Safety," http://www.telecom.co.nz/content/0,3900,27116-1536,00.html (accessed December 19, 2002).

Service providers prefer to locate cell sites in commercial or industrial areas due to the "resource consent" procedure required by the Resource Management Act 1991[9] for towers located in residential areas.

Despite the high level of demand for better cell phone coverage, the location of cell sites continues to be a contentious issue. The majority of people want better cell phone coverage where they live and work, but they do not want a site in their neighborhood. Thus, cell sites in or near residential areas are of particular concern. Concerns expressed usually relate to health, property values, and visual impact.[10]

In general, uncertainties in the assessment of health risks from base stations are presented and distributed in reports by organized groups of residents who protest against siting of base stations. When the media publishes these reports it amplifies the negative bias and raises public concerns. According to Covello, this leads to incorrect assessment of risks and threats by the public, with a tendency to overestimate risks from base stations and neglect risks from the use of cell phones.[11]

Assessment of Environmental Effects

Under the Resource Management Act 1991 (RMA), an assessment of environmental effects is required every time an application for resource consent is made. Information that must be provided includes "an assessment of any actual or potential effects that the activity may have on the environment, and the ways in which any adverse effects may be mitigated."[12] An assessment of the environmental effects of cell sites would take into consideration such things as health and safety effects; visual effects; effects on the neighborhood; and interference with radio and television reception.

Radio Frequency and Microwave Emissions from CPBSs

According to the Ministry for the Environment, the factors that affect exposure to radiation are as follows:

- Distance. Increasing the distance from the emitting source decreases the radiation's strength and decreases the exposure.
- Transmitter power. The stronger the transmitter, the higher the exposure.
- Directionality of the antenna. Increasing the amount of antennas pointing in a particular direction increases the transmitting power and increases the exposure.
- Height of the antenna above the ground. Increasing the height of an antenna increases the distance from the antenna and decreases the exposure.
- Local terrain. Increasing the intervening ridgelines decreases the exposure.[13]

The amount of radiofrequency power absorbed by the body (the dose) is measured in watts per kilogram, known as the specific absorption rate (SAR). The SAR depends on the power density in watts per square meter. The radio frequencies from cellular phone systems travel in a "line of sight." The antennas are designed to radiate energy horizontally so that only small amounts of radio frequencies are directed down to the ground. The greatest exposures are in front of the antenna so that near the base of these towers, exposure is minimal. Further, power density from the transmitter decreases rapidly as it moves away from the antenna. However, it should be noted that by initially walking away from the base, the exposure rises and then decreases again. The initial increase in exposure corresponds to the point where the lobe from the antenna beam intersects the ground.[14]

Health Effects

According to Szmigielski and Sobiczewska, the analogue phone system (using the 800–900 megahertz band) and digital phone system (using the 1850–1990 megahertz band) expose humans to electromagnetic field (EMF) emissions: radio frequency radiation (RF) and microwave radiation (MW), respectively. These two radiations are emitted from both cellular phones and CPBSs.[15]

For years cellular phone companies have assured the public that cell phones are safe. They state that the particular set of radiation parameters associated with cell phones is the same as any other ra-

9. The Resource Management Act 1991 is the core of the legislation intended to help achieve sustainability in New Zealand; see http://www.mfe.govt.nz/laws/rma.

10. Szmigielski and Sobiczewska; and Barnes.

11. Vincent T. Covello, "Risk Perception, Risk Communication, and EMF Exposure: Tools and Techniques for Communicating Risk Information," in *Risk Perception, Risk Communication and Its Application to EMF Exposure: Proceedings of the World Health Organization and ICNIRP Conference*, ed. R. Matthes, J. H. Bernhardt, M. H. Repucholi, 179–214 (Munich, Germany, May 1998).

12. Section 88(4), (b), Resource Management Act 1991.

13. Ministry for the Environment and Ministry of Health, *National Guidelines for Managing the Effects of Radiofrequency Transmitters*, available at http://www.mfe.govt.nz and http://www.moh.govt.nz (accessed May 21, 2002).

14. Ibid.; and Szmigielski and Sobiczewska.

15. Szmigielski and Sobiczewska.

dio signal. However, reported scientific evidence challenges this view and shows that cell phone radiation causes various effects, such as altered brain activity, memory loss, and fatigue.[16]

According to Cherry, there is also strong evidence to conclude that cell sites are risk factors for certain types of cancer, heart disease, neurological symptoms and other effects.[17] The main concerns related to EMF emissions from CPBSs are linked to the fact that radio frequency fields penetrate exposed tissues.

Public concern regarding both cell phones and CPBSs in many countries has led to establishment of independent expert groups to carry out detailed reviews of the research literature. Research on the health effects of exposures to RF are reviewed by, for instance, the NZ Radiation Laboratory, the World Health Organization, the International Commission on Non-Ionizing Radiation Protection (ICNIRP), the Royal Society of Canada, and the UK Independent Expert Group on Mobile Phones. The reviews conclude that there are no clearly established health effects for low levels of exposure. Such exposures typically occur in publicly accessible areas around radio frequency transmitters. However, there are questions over the delayed effects of exposure.

While present medical and epidemiological studies reveal weak association between health effects and low-level exposures of RF/MW fields, controversy remains among scientists, producers, and the general public. Negative media attention has fuelled the perception of uncertainty over the health effects from cell phone systems. Further scientific or technological information is needed to allay fears of the public about cell phone systems.

Radio Frequency Radiation Exposure Standards

International Standards. The reviews of research on the health effects of exposures to RF have helped establish exposure standards that limit RF exposures to a safe level. Most standards–including those set by the ICNIRP, the American National Standards Institute (ANSI), and New Zealand–are based on the most-adverse potential effects.

The 1998 ICNIRP guidelines have been accepted by the world's scientific and health communities; these guidelines are both consistent with other stated standards and published by a highly respected and independent scientific organization. The ICNIRP is responsible for providing guidance and advice on the health hazards of nonionizing radiation for the World Health Organization (WHO) and the International Labour Office.[18]

The New Zealand Standard. In New Zealand, when a mobile phone site is being planned, radio frequency engineers calculate the level of electromagnetic energy (EME) that will be emitted by the site. The level of EME is predicted by taking into account factors such as power output, cable loss, antenna gain, path loss, and height and distance from the antenna. These calculations allow engineers to determine the maximum possible emissions in a worst-case scenario, i.e., as if the site was operated at maximum power all the time. The aim is to ensure that EME levels are below international and NZ standards in areas where the general public has unrestricted access.

All mobile phone sites in New Zealand must comply in all respects with the NZ standard for radio frequency exposures.[19] This standard is the same as used in most European countries, and is more stringent than that used in the United States, Canada, and Japan. Some local communities in New Zealand have even lower exposure-level standards; however, in reality mobile phone sites only operate at a fraction of the level set by the NZ standard. The National Radiation Laboratory has measured exposures around many operating cell sites, and maximum exposures in publicly accessible areas around the great majority of sites are less than 1% of the exposure limit of the NZ standard. Exposures are rarely more than a few percent of the limit, and none have been above 10%.

Court Decisions

Two court cases in New Zealand have alleged adverse effects due to CPBSs: *McIntyre v. Christchurch City*

16. K. Mann and J. Röschke, "Effects of Pulsed High-Frequency Electromagnetic Fields on Human Sleep," *Neuropsychobiology* 33, no. 1 (1996): 41–47; Krause et al.; Alexander Borbely et al., "Pulsed High-Frequency Electromagnetic Field Affects Human Sleep and Sleep Electroencephalogram," *Neurosci Let*, 275, no. 3 (1999): 207–210; L. Kellenyi et al., "Effects of Mobile GSM Radiotelephone Exposure on the Auditory Brainstem Response (ABR)," *Neurobiology* 7, no. 1 (1999): 79–81; B. Hocking, "Preliminary Report: Symptoms Associated with Mobile Phone Use," *Occup Med* 48, no. 6 (Sept. 1998): 357–360; and others as reported in Neil Cherry, *Health Effects Associated with Mobil Base Stations in Communities: The Need for Health Studies*, Environmental Management and Design Division, Lincoln University (June 8, 2000); http://pages.britishlibrary.net/orange/cherryonbasestations.htm.

17. Cherry.

18. Ministry for the Environment and Ministry of Health.

19. NZS 2772.1:1999, "Radiofrequency Fields Part I: Maximum Exposure Levels – 3kHz to 300GHz." This standard was based largely on the 1998 ICNIRP recommendations for maximum human exposure levels to radio frequency. The standard also includes a requirement for minimizing radio frequency exposure. See National Radiation Laboratory, *Cell Sites* (March 2001), 7; available at http://www.nrl.moh.govt.nz/CellsiteBooklet.pdf.

Council[20] and *Shirley Primary School v. Telecom Mobile Communications Ltd.*[21] Very few cell site cases have actually proceeded to Environment Court hearings. In these two cases the plaintiffs claimed that there was a risk of adverse health effects from radio frequency radiation emitted from cell phone base stations and that the CPBSs had adverse visual effects.

In *McIntyre*, Bell South applied for resource consent to erect a CPBS. The activity was a noncomplying activity under the Transitional District Plan. Residents objected to the application. Their objections were related to the harmful health effects from radio frequency radiation. In particular, they argued it would be an error of law to decide, based on the present state of scientific knowledge, that there are no harmful health effects from low-level radio frequency exposure. It was also argued that the Resource Management Act contains a precautionary policy and also requires a consent authority to consider potential effects of low probability but high impact in reviewing an application.

The Planning Tribunal considered residents' objections and heard experts' opinions as to the potential health effects, and granted the consent, subject to conditions. It was found that there would be no adverse health effects from low levels of radiation from the proposed transmitter, not even effects of low probability but high potential impact.

In *Shirley Primary School*, Telecom applied to the Christchurch City Council for resource consent to establish, operate, and maintain a CPBS on land adjacent to the Shirley Primary School. This activity was a noncomplying activity under the Transitional District Plan. Again, the city council granted the consent subject to conditions. However, the school appealed the decision, alleging the following four adverse effects:

- Risk of adverse health effects from the radio frequency radiation emitted from the cell site
- Adverse psychological effects on pupils and teachers because of the perceived health risks
- Adverse visual effects
- Reduced financial viability of the school if pupils withdraw because of the perceived adverse health effects

The court concluded that the risk of the children or teachers at the school developing leukemia or other cancers from radio frequency radiation emitted by the cell site is extremely low, and the risk to the pupils of developing sleep disorders or learning disabilities because of exposure to radio frequency radiation is higher, but still very small. Accordingly, the Telecom proposal was allowed to proceed.

In summary, the Environmental Court ruled that there are no established adverse health effects from the emission of radio waves from CPBSs and no epidemiological evidence to show this. The court was persuaded by the ICNIRP guidelines that risk of health effects from low-level exposure is very low and that the cell phone frequency imposed by the NZ standard is safe, being almost two and one-half times lower than that of the ICNIRP.

The court did concede that while there are no proven health effects, there was evidence of property values being affected by both of the health allegations. The court suggested that such a reduction in property values should not be counted as a separate adverse effect from, for example, adverse visual or amenities effects. That is, a reduction in property values is not an environmental effect in itself; it is merely evidence, in monetary terms, of the other adverse effects noted.

In a third case, *Goldfinch v. Auckland City Council*,[22] the Planning Tribunal considered evidence on potential losses in value of the properties of objectors to a proposal for the siting of a CPBS. The court concluded that the valuer's monetary assessments support and reflect the adverse effects of the CPBS. Further, it concluded that the effects are more than just minor as the CPBS stood upon the immediately neighboring property.

Literature Review

While experimental and epidemiological studies have focused on the adverse health effects of radiation from the use of cell phones and CPBSs, few studies have been conducted to ascertain the impact of CPBSs on property values. Further, little evidence of property value effects has been provided by the courts. Thus, the extent to which opposition from property owners affected by the siting of CPBSs is reflected in lower property values is not well known in New Zealand.

Two studies have been conducted to ascertain the adverse health and visual effects of CPBSs on property values. Telecom commissioned Knight Frank (NZ) Ltd to undertake a study in Auckland in 1998/

20. NZRMA 289 (1996).
21. NZRMA 66 (1999).
22. NZRMA 97 (1996).

99 and commissioned Telfer Young (Canterbury) Ltd to undertake a similar study in Christchurch in 2001. Although the studies show that there is not a statistically significant effect on property prices where CPBSs are present,[23] the research in both cases involves only limited sales data analysis. Further, no surveys of residents' perceptions were undertaken, and the studies did not examine media attention to the sites and the impact this may have on saleability of properties in close proximity to CPBSs. Finally, as the sponsoring party to the research was a telecommunication company it is questionable whether the results are completely free from bias. Hence, the present study aims to help fill the research void on this contentious topic in an objective way.

CPBSs are very similar structures to high-voltage overhead transmission lines (HVOTLs); therefore it is worthwhile to review the body of literature on the property values effects of HVOTLs. The only recently published study in New Zealand on HVOTLs effects is by Bond and Hopkins.[24] Their research consists of both a regression analysis of residential property transaction data and an opinion survey to determine the attitudes and reactions of property owners in the study area toward living close to HVOTLs and pylons.

The results of the sales analysis indicate that having a pylon close to a particular property is statistically significant and has a negative effect of 20% at 10–15 meters from the pylon, decreasing to 5% at 50 meters. This effect diminishes to a negligible amount after 100 meters. However, the presence of a transmission line in the case study area has a minimal effect and is not a statistically significant factor in the sale prices.

The attitudinal study results indicate that nearly two-thirds of the respondents have negative feelings about the HVOTLs. Proximity to HVOTLs determines the degree of negativity: respondents living closer to the HVOTLs expressed more negative feelings towards them than those living farther away. It appears, however, from a comparison of the results, that the negative feelings expressed are often not reflected in the prices paid for such properties.

There have been a number of HVOTLs studies carried out in the United States and Canada. A major review and analysis of the literature by Kroll and Priestley indicates that in about half the studies, HVOTLs have not affected property values and in the rest of the studies there is a loss in property value between 2%–10%.[25] Kroll and Priestley are generally critical of most valuer-type studies because of the small number of properties included and the failure to use econometric techniques such as multiple regression analysis. They identify the Colwell study as one of the more careful and systematic analyses of residential impacts.[26] That study, carried out in Illinois, finds that the strongest effect of HVOTLs is within the first 15 meters, but the effect dissipates quickly with distance, disappearing beyond 60 meters.

A Canadian study by Des Rosiers, using a sample of 507 single-family house sales, finds that severe visual encumbrance due to a direct view of either a pylon or lines exerts a significant, negative impact on property values; however location adjacent to a transmission corridor may increase value.[27] This was particularly evident where the transmission corridor was on a well-wooded, 90-meter right-of-way. The proximity advantages include enlarged visual field and increased privacy. The decrease in value from the visual impact of the HVOTLs and pylons (on average between 5% and 10% of mean house value) tends to be cancelled out by the increase in value from proximity to the easement.

A study by Wolverton and Bottemiller[28] uses a paired-sale analysis of home sales in 1989–1992 to ascertain any difference in sale price between properties abutting rights-of-way of transmission lines (subjects) in Portland, Oregon; Vancouver, Washington; and Seattle, Washington; and those located in the same cities but not abutting transmission line rights-of-way (comparisons). Subjects sold during the study period were selected first; then a matching comparison was selected that was as similar to the subject as possible. The study results did not support a finding of a price effect from abutting an HVTL right-of-way. In their conclusion, the authors

23. Mark Dunbar, Telfer Young research valuer, personal communication with Bond, 2002. The results of these studies have not been made publicly known. The study by Knight Frank of Auckland was conducted by Robert Albrecht.

24. S. G. Bond and J. Hopkins, "The Impact of Transmission Lines on Residential Property Values: Results of a Case Study in a Suburb of Wellington, New Zealand," *Pacific Rim Property Research Journal* 6, no. 2 (2000): 52–60.

25. C. Kroll and T. Priestley, "The Effects of Overhead Transmission Lines on Property Values: A Review and Analysis of the Literature," Edison Electric Institute (July 1992).

26. Peter F. Colwell, "Power Lines and Land Value," *Journal of Real Estate Research* 5, no. 1 (Spring 1990): 117–127.

27. François Des Rosiers, "Power Lines, Visual Encumbrance and House Values: A Microspatial Approach to Impact Measurement," *Journal of Real Estate Research* 23, no. 3 (2002): 275–301.

28. Marvin L. Wolverton and Steven C. Bottemiller, "Further Analysis of Transmission Line Impact on Residential Property Values," *The Appraisal Journal* (July 2003): 244–252.

warn that the results cannot and should not be generalized outside of the data. They explain that

> limits on generalizations are a universal problem for real property sale data because analysis is constrained to properties that sell and sold properties are never a randomly drawn representative sample. Hence, generalizations must rely on the weight of evidence from numerous studies, samples, and locations.[29]

Thus, despite the varying results reported in the literature on property value effects from HVOTLs, each study adds to the growing body of evidence and knowledge on this (and similar) valuation issue(s). The study reported here is one such study.

Opinion Survey Research Objectives and Methodology

Research by Abelson;[30] Chalmers and Roehr;[31] Kinnard, Geckler and Dickey;[32] Bond;[33] and Flynn et al.,[34] recommend the use of market sales analysis in tandem with opinion survey studies to measure the impact of environmental hazards on residential property values. The use of more than one approach provides the opportunity to compare the results from each and to derive a more informed conclusion than obtained from relying solely on one approach. Thus, the methods selected for this study include a public opinion survey and a hedonic house price approach (as proposed by Freeman[35] and Rosen[36]). A comparison of the results from both of these techniques will reveal the extent to which the market reacts to cell phone towers.

Public Opinion Survey

An opinion survey was conducted to investigate the current perceptions of residents towards living near CPBSs and how this proximity might affect property values. Case study areas in the city of Christchurch were selected for this study. The study included residents in ten suburbs: five case study areas (within 300 meters of a cell phone tower) and five control areas (over 1 kilometer from the cell phone tower). The five case study suburbs were matched with five control suburbs that had similar living environments (in socioeconomic terms) except for the presence of a CPBS.

The number of respondents to be surveyed (800) and the nature of the data to be gathered (perceptions/personal feelings towards CPBSs) governed the choice of a self-administered questionnaire as the most appropriate collection technique. Questionnaires were mailed to residents living in the case study and control areas.

A self-administered survey helps to avoid interviewer bias and to increase the chances of an honest reply where the respondent is not influenced by the presence of an interviewer. Also, mail surveys provide the time for respondents to reflect on the questions and answer these at their leisure, without feeling pressured by the time constraints of an interview. In this way, there is a better chance of a thoughtful and accurate reply.

The greatest limitation of mail surveys is that a low response rate is typical. Various techniques were used to help overcome this limitation, including careful questionnaire design; inclusion of a free-post return envelope; an accompanying letter ensuring anonymity; and reminder letters. An overall response rate of 46% was achieved for this study.

The questionnaire contained 43 individual response items. The first question acted as an identifier to determine whether the respondent was a homeowner or tenant. While responses from both groups were of interest, the former was of greater importance, as they are the group of purchasers/sellers that primarily influence the value of property. However, it was considered relevant to survey both groups as both are affected by proximity to a CPBS to much the same extent from an occupiers' perspective, i.e., they both may perceive risks associated with a CPBS. It was hypothesized that tenants, being less-permanent residents, would perceive the effects in a similar way, but to a much lesser degree.

Other survey questions related to overall neighborhood environmental desirability; the timing of

29. Ibid., 252.

30. P. W. Abelson, "Property Prices and Amenity Values," *Journal of Environmental Economics and Management* 6 (1979): 11–28.

31. James A. Chalmers and Scott Roehr, "Issues in the Valuation of Contaminated Property," *The Appraisal Journal* (January 1993): 28–41.

32. W. N., Kinnard, M. B. Geckler, and S. A. Dickey, "Fear (as a Measure of Damages) Strikes Out: Two Case Studies Comparisons of Actual Market Behaviour with Opinion Survey Research" (paper presented at the Tenth Annual American Real Estate Society Conference, Santa Barbara, California, April 1994).

33. S. G. Bond, "Do Market Perceptions Affect Market Prices? A Case of a Remediated Contaminated Site," in *Real Estate Valuation Theory*, ed. K. Wang and M. L. Wolverton, 285–321 (Boston: Kluwer Academic Publishers, 2002).

34. James Flynn et al., "Survey Approach for Demonstrating Stigma Effects in Property Value Litigation," *The Appraisal Journal* (Winter 2004): 35–45.

35. A. Myrick Freeman, *The Benefits of Environmental Improvement: Theory and Practice* (Baltimore: John Hopkins Press, 1979).

36. Sherwin Rosen, "Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition," *Journal of Political Economy* 82, no. 1 (Jan/Feb 1974): 34–55.

the CPBS's construction and its proximity in relation to the respondent's home; the importance placed on the CPBS as a factor in relocation decisions and on the price/rent the respondent was prepared to pay for the house; how a CPBS might affect the price the respondent would be willing to pay for the property; and the degree of concern regarding the effects of CPBSs on health, stigma, aesthetics, and property values. The surveys were coded to identify the property address of the respondent. This enabled each respondent's property to be located on a map and to show this in relation to the cell site.

Eighty questionnaires[37] were distributed to each of the ten suburbs (five case study and five control areas) in Christchurch. Respondents were instructed to complete the survey and return it in the free-post, self-addressed envelope provided. The initial response rate was 31%. A month later, a further 575 questionnaires with reminder letters were sent out to residents who had not yet responded. A total response rate of 46% was achieved. Response rates from each suburb ranged from 33% (Linwood) to 61% (Bishopdale).

The questionnaire responses were coded and entered into a computerized database.[38] The analysis of responses included the calculation of means and percentage of responses to each question to allow for an overview of the response patterns in each area.

Case Study and Control Areas

The suburbs of Beckenham, Papanui, Upper Riccarton, Bishopdale, and St Albans were selected for the case study because there is at least one CPBS within each of these communities. Census data, providing demographic and socioeconomic characteristics of geographic areas, was used to select the control suburbs of Spreydon, Linwood, Bromley, Avonhead, and Ilam.[39] The control areas are located further away (over 1 kilometer) from the CPBS in their matched case study area. As well as matching demographic and socioeconomic characteristics, each suburb was selected based on its similarity to its matched case study area in terms of living environment and housing stock, distance to the central business district, and geographic size; the only dissimilarity is that there are no CPBSs in the control areas. (See Appendix I for a location map.)

Demographic statistics show that Bromley and Ilam comprise a younger population (median age about 33), with Bishopdale and Upper Riccarton having an older population (median age about 40). The ethnic breakdown of each suburb indicates that Papanui and Spreydon have the highest proportion of Europeans (about 90%), Bromley has the highest proportion of both Maoris and Pacific Islanders (13.9% and 8.5% respectively), while Ilam, Avonhead, and Upper Riccarton have the highest proportion of Asians (16.1% to 18.5%).[40]

Median household and median family incomes (MHI and MFI) are highest in Ilam and Avonhead (MHI: $34,751NZ, $53,405NZ; MFI: $51,530NZ, $65,804NZ, respectively) and lowest in Linwood and Beckenham (MHI: $22,275NZ, $26,398NZ; MFI: $29,673NZ, $33,847NZ respectively).[41] Residents of St Albans West have the highest levels of education (21.7% have a degree or a higher degree) followed by Upper Riccarton (18.7%), Ilam (16.7%), and Avonhead (16.2%). These same suburbs have the highest proportion of professionals by occupational class (20.3% to 27.3%). Residents of Bromley have the lowest education (40% have no qualification) and the lowest proportion of professionals (5.5%).[42]

In summary, the socioeconomic data shows that Ilam is the more superior suburb, followed by Avonhead, Upper Riccarton, St Albans West, and Papanui. The lower socioeconomic areas are, in decreasing order, Spreydon, Bishopdale, Bromley, Beckenham, and Linwood.

Survey Results

A summary of the main findings from the survey is presented in Appendix II, and the survey results are discussed in the following.

Response Rates

Of the 800 questionnaires mailed to homeowners and tenants in the case study and control areas (400 to each group), 50% from the case study area and 41%

37. Approved by the University of Auckland Human Subjects Ethics Committee (reference 2002/185).

38. The computer program SPSS was selected as the appropriate analytical tool for processing the data.

39. The census is conducted in New Zealand every five years, and the data used to define the control areas is from the latest census conducted in 2001, see Christchurch City Area Unit Profile, 2001 at http://www.ccc.govt.nz/Census/ChristchurchCityAreaUnitProfile.xls.

40. Christchurch City Area Unit Profile statistics.

41. $1NZ = $0.65US, thus, $34,751NZ = $22,588US.

42. The median house price for Christchurch city in August 2003 was $185,000NZ/$120,000US (New Zealand national median house price at this time was $215,000NZ/$140,000US), http://www.reinz.co.nz/files/HousingFacts-Sample-Pg1-5.pdf (accessed March 17, 2004). Median house prices in each individual suburb could not be obtained as the median sales data from the Real Estate Institute of NZ (REINZ) contains more than one suburb in each location grouping.

from the control area were completed and returned. Over three-quarters (78.5%) of the case study respondents were homeowners compared to 94% in the control area.

Desirability of the Suburb as a Place to Live

More than half (58.3%) the case study respondents have lived in their suburb for more than five years (compared to 65% in the control group) and a quarter (25%) have lived in their suburb between 1 and 4 years (compared to 28% in the control group).

Around two-thirds (65% of the case study respondents and 68% of the control group respondents) rated their neighborhoods as either above average or superior as a place to live when compared with other similar named suburbs. The reasons given for this include close proximity to amenities (shops, library, medical facilities, public transport, and recreational facilities) and good schools.

Reasons given for rating the case study neighborhoods inferior to other similar neighborhoods include lower house prices, older homes, more student housing and lower-income residents. The reasons given by the control group respondents for an inferior rating include distance from the central business district (Avonhead); smell from the sewerage oxidation ponds and composting ponds (Bromley); and lower socioeconomic area and noise from the airport (Linwood).

Feelings About a CPBS as an Element of the Neighborhood

In the case study areas, a CPBS had already been constructed when only 39% of the respondents bought their houses or began renting in the neighborhood. Some responded that they were not notified that the CPBS was to be built, that they had no opportunity to object to it, and that they felt they should have been consulted about its construction. For the respondents who said that proximity to the tower was of concern to them, the most common reasons given for this were the impact of the CPBS on health, aesthetics, and property values. Nearly three-quarters (74%) of the respondents said they would have gone ahead with the purchase or rental of their property anyway if they had known that the CPBS was to be constructed.

In the control areas nearly three-quarters (72%) of the respondents indicated they would be opposed to construction of a CPBS nearby. The location of a CPBS would be taken into account by 83% of respondents if they were to consider moving. As with the case study respondents, the control group respondents who were concerned about proximity to a CPBS were most often concerned about the effects of CPBSs on health, aesthetics, and property values.

Impact on Decision to Purchase or Rent

In the case study areas, the tower was visible from the houses of 46% of the respondents, yet two-thirds (66%) of these said it was barely noticeable, and one-quarter said it mildly obstructed their view. When asked in what way the CPBS impacts the enjoyment of living in their home, 37% responded that its impact was related to health concerns, 21% said it impacted neighborhood aesthetics, 20% said it impacted property value, and 12% said it impacted the view from their property.

When asked about the impact that the CPBS had on the price/rent they were prepared to pay for their property, over half the case study respondents (53.1%) said that the tower was not constructed at the time of purchase/rental, and 51.4% of the respondents said the proximity to the CPBS did not affect the price they were prepared to pay for the property. Nearly 3% said they were prepared to pay a little less, 2% said they were prepared to pay a little more. For the control group respondents, 45% of the respondents would pay substantially less for a property if a CPBS were located nearby, over one-third (38%) were prepared to pay just a little less for such a property, and 17% responded that a CPBS would not influence the price they would pay.

Only 10% of the case study respondents gave an indication of the impact that the CPBS had on the price/rent they were prepared to pay for the property; one-third of these felt it would decrease price/rent by 1% to 9%. For the control group, over one-third (38%) of the respondents felt that a CPBS would decrease price/rent by more than 20%, and a similar number (36%) said they would be prepared to pay 10% to 19% less for property located near a CPBS. The responses are outlined in Table 1.

Table 1 Impact of a CPBS on Purchase/Rental Price Decision

Price/Rent Effect	Percent of Case Study Respondents (Control Group Responses)
20% more	5% (3%)
10–19% more	10% (2%)
1–9% more	14% (2%)
1–9% less	33% (19%)
10–19% less	24% (36%)
20% or greater reduction in price/rent	14% (38%)

Interestingly, it would seem that those living farther away from the CPBSs (the control group) are far more concerned about proximity to CPBSs than those living near CPBSs (the case study group); they indicated that a CPBS would have a greater price/rent effect. The possible explanations for this are discussed in the survey results section.

Concerns About Proximity to the CPBS

Most case study respondents were not worried about the effects of proximity to a CPBS related to health (50%), stigma (55%), future property value (61%), or aesthetics (63%). About one-quarter to one-third of these respondents were somewhat worried about the impact of proximity to a CPBS on health (38%), stigma (34%), future property value (25%), or aesthetics (25%). From the list of issues, respondents were most worried about future property value, but only 13.5% of the respondents responded this way.

Here again, control group respondents were much more concerned about the effects of proximity to a CPBS than their case study counterparts. Of the possible concerns about CPBSs on which respondents were asked to comment, control group respondents were most worried about the negative effects on future property values and aesthetics. Nearly half the respondents were worried a lot about these issues. Similar responses were recorded for the possibility of harmful health effects in the future from CPBSs (42% were worried a lot about this) and stigma associated with houses near CPBSs (34% were worried a lot). The responses regarding concerns about living near a CPBS are shown in Table 2.

In both the case study and control areas, the issue of greatest concern for respondents was the impact of proximity to CPBSs on future property values. The main concerns related to CPBSs were the unknown potential health effects, the possible socioeconomic implications of the siting of CPBSs, and how CPBSs affect property values. There also were concerns that the city council was not notifying the public about the possible construction of CPBSs.

Discussion of the Survey Results

The results were mixed, with responses from residents ranging from having no concerns to being very concerned about proximity to a CPBS. In general, those people living in areas farther from CPBSs were much more concerned about issues related to proximity to CPBSs than residents who lived near CPBSs.

Over 40% of the control group respondents were worried a lot about future health risks, aesthetics, and future property values compared with the case study areas, where only 13% of the respondents were worried a lot about these issues. However, in both the case study and control areas, the impact of proximity to CPBSs on future property values is the issue of greatest concern for respondents. If purchasing or renting a property near a CPBS, over a third (38%) of the control group respondents said a CPBS would reduce the price of their property by more than 20%. The perceptions of the case study respondents were again less negative, with a third saying they would reduce the price by only 1%–9%, and 24% saying they would reduce the price by 10%–19%.

The lack of concern shown by the case study respondents may be due to the CPBSs being either not visible or only barely visible from their homes. The CPBSs may be far enough away from respondents' properties (as was indicated by many respondents, particularly in St Albans West, Upper Riccarton, and Bishopdale) or hidden by trees and consequently not perceived as affecting the properties. The results may have been quite different had the CPBS being more visually prominent.

Alternatively, the apparent lower sensitivity to CPBSs of case study residents compared to the control group residents may be due to cognitive dissonance reduction. In this case, respondents may be unwilling to admit, due to the large amounts of money already paid, that they may have made a poor purchase or rental decision in buying or renting property located near a CPBS. Similarly, the homeowners may be unwilling to admit there are concerns about CPBSs when the CPBSs were built

Table 2 Concerns about Living Near a CPBS*

Concern	Does not worry me	Worries me somewhat	Worries me a lot
Possibility of harmful health effects	50% (20%)	38% (38%)	12% (42%)
Stigma effect	55% (21%)	34% (45%)	12% (34%)
Effect on future property values	61% (15%)	25% (37%)	13% (47%)
Aesthetics	63% (18%)	25% (37%)	11% (45%)

* Percent of case study respondents having that concern (control group respondents). All numbers are rounded.

after they had purchased their homes, because to do so might have a negative impact on property values.

Regardless of the reasons for the difference in responses from the case study and control groups, the overall results show that residents perceive CPBSs negatively. In both the case study and control areas, the impact of proximity to CPBSs on future property values was the issue of greatest concern for respondents. Overall, respondents felt that proximity to a CPBS would reduce value by from 10% to over 20%. The second part of the study outlined below, involving an econometric analysis of Christchurch property sales transaction data, helps to confirm these results.

Respondents' comments added at the end of the survey indicate that residents have ongoing concerns about CPBSs. Although some people accepted the need for CPBSs, they said that they did not want them built in their back yard, or they preferred that they be disguised to blend better with their environment.

Market Study Research Objectives and Methodology

A market study was undertaken to test the hypothesis that in suburbs where there is a CPBS it will be possible to observe discounts to the selling price of homes located near these structures. Such discounts would be observed where buyers of proximate homes view the CPBSs in negative terms due to a perceived risk of adverse effects on health, aesthetics, and property value.

The literature dealing specifically with the measurement of the impact of environmental hazards on residential sale prices (including proximity to transmission lines, landfill sites, and ground water contamination) indicates the popularity of hedonic pricing models, as introduced by Court[43] and later Griliches,[44] and further developed by Freeman[45] and Rosen.[46] The more recent studies, including those by Dotzour;[47] Simons and Sementelli;[48] and Reichert,[49] focus on proximity to an environmental hazard and demonstrate that this reduces residential house prices by varying amounts depending on the distance from the hazard.[50] However, there are no known published studies that use hedonic housing models to measure the impact of proximity to a CPBS on residential property values.

As in the previous residential house price studies, the standard hedonic methodology was used here to quantify the impact of a CPBS on sale prices of homes located near a CPBS. The results from this study in tandem with the opinion survey results will help test the hypothesis that proximity to a CPBS has a negative impact on property value and will reveal the extent to which the market reacts to CPBSs.

Model Specification

A hedonic price model is constructed by treating the price of a property as a function of its utility-bearing attributes. Independent variables used in the model to account for the property attributes are limited to those available in the data set and known, based on other well-tested models reported in the literature and from valuation theory, to be related to property price. The basic model used to analyze the impact on sale price of a house located near a CPBS, is as follows:

$$P_i = f(X_{1,i}, X_{2,i} \ldots \ldots \ldots \ldots \ldots X_{n,i})$$

where:

P_i = property price at the i th location

$X_{1,i} \ldots X_{n,i}$ = individual characteristics of each sold property (e.g., land area, age of house, floor area, sale date, construction materials, house condition, CPBS construction date, etc.)

The more recent hedonic pricing studies that demonstrate the effects of proximity to an environmental hazard use different functional forms to represent the relationship between price and various property characteristics.[51] In hedonic housing models the linear and log-linear models are most popular. The linear model implies constant partial effects between house prices and housing characteristics, while the log-linear model allows for nonlinear price effects and is shown in the following equation:

43. A. T. Court, "Hedonic Price Indexes with Automotive Examples," in *The Dynamics of Automobile Demand* (New York: General Motors, 1939).

44. Zvi Griliches, ed. *Price Indexes and Quality Change* (Cambridge, Mass.: Harvard University Press, 1971).

45. Freeman.

46. Rosen.

47. Mark Dotzour, "Groundwater Contamination and Residential Property Values," *The Appraisal Journal* (July 1997): 279–285.

48. Robert A. Simons and Arthur Sementelli, "Liquidity Loss and Delayed Transactions with Leaking Underground Storage Tanks," *The Appraisal Journal* (July 1997): 255–260.

49. Alan K. Reichert, "Impact of a Toxic Waste Superfund Site on Property Values," *The Appraisal Journal* (October 1997): 381–392.

50. Only Dotzour found no significant impact of the discovery of contaminated groundwater on residential house prices. This was likely due to the nonhazardous nature of the contamination where the groundwater was not used for drinking purposes.

51. See for example L. Dale et al., "Do Property Values Rebound from Environmental Stigmas? Evidence from Dallas," *Land Economics* 75, no. 2 (May 1999): 311–326; Dotzour; Simons and Sementelli; and Reichert.

$$\ln P_i = b_0 + b_1 \times X_{1,i} + b_2 \times X_{2i} + b_3 \times X_{3i} \\ \ldots \ldots \ldots + b_n \times X_{n+1} + a_o \times D_o + \\ \ldots \ldots + a_m \times D_m + e_0$$

where:

$\ln P_i$ = the natural logarithm of sale price

b_0 = the intercept

$b_1 \ldots b_n$; $a_o \ldots a_m$ = the model parameters to be estimated, i.e., the implicit unit prices for increments in the property characteristics

$X_1 \ldots X_n$ = the continuous characteristics, such as land area

$D_o \ldots D_m$ = the categorical (dummy) variables, such as whether the sale occurred before (0) or after (1) the CPBS was built

Sometimes the natural logarithm of land area and floor area is also used. The parameters are estimated by regressing property sales on the property characteristics and are interpreted as the households' implicit valuations of different property attributes. The null hypothesis states that the effect of being located near a CPBS does not explain any variation in property sale prices.

The Data

Part of the process for selecting appropriate case study areas was identifying areas where there had been a sufficient number of property sales to provide statistically reliable and valid results. Sales were required for the period before and after the CPBS had been built in order to study the impact of the CPBS on the surrounding properties' sale prices.

Further, due to the multitude of factors that combine to determine a neighborhood's character, such as proximity to the central business district, standard of schooling, recreational facilities provided, standard of housing, proximity to amenities, and the difficulty in allowing for these separately, sales located in areas with comparable neighborhood characteristics were preferred.

Four of the suburbs in the survey case study met the criteria for the market study: St Albans, Beckenham, Papanui, and Bishopdale. No sales data was available for Upper Riccarton after the CPBS was built in this suburb, hence this suburb was not included in the market analysis study. As each CPBS was built at a different date, the sales from each suburb were separately analyzed. The uniformity of locational and neighborhood characteristics in each of these suburbs allows the analysis to be simplified and to focus on the properties' physical attributes. The relative homogeneity of housing, locational, and neighborhood attributes was verified through field inspections.

The dependent variable is the property sale price. The data set includes 4283 property sales that occurred between 1986 and 2002 (approximately 1000 sales per suburb).[52]

The independent data set was limited to those variables that correspond to property attributes known and suspected to influence price. These variables are floor area (m^2); land area (ha); age of the house (the year the house was built); tower (a dummy variable indicating whether the sale occurred before or after the CPBS was built); sale date (month and year); time of sale based on the number of quarters before or after the CPBS was built (to help control for movements in house prices over time); category of residential property (stand-alone dwelling, dwelling converted into flats, ownership unit, etc); quality of the principal structure (as assessed by an appraiser); and roof and wall materials. The number of bedrooms was not available in the data set, but would not have been included as an independent variable since the number of bedrooms is highly correlated with floor area.

Since the GIS coordinates of properties for the initial analysis were not available, street name was included as an independent variable instead. To a limited extent, street name helped to control for the proximity effects of a CPBS. It was suspected that houses on a street close to a CPBS may, on average, sell for less than houses on a street farther away from the CPBS.

While views, particularly water views, have been shown in previous empirical studies to be an important attribute affecting sale price, in the present study the flat contour of the landscape where the homes are located, together with the suburban nature of the environment surrounding these, precluded any significant views. Thus, views were not included in the analysis. Further, due to the large number of sales included in the analysis, inspections of each individual property were not made to determine the view, if any, of a CPBS from each house. It was felt that it is not merely the view that may impact on price, but also proximity to a CPBS due to the potential effect this may have on health, cell phone coverage, and neighborhood aes-

52. These sales were obtained from Headway Systems Ltd, a data distribution and system development company. Headway is the major supplier of property market sales information to New Zealand's valuation profession; it is jointly owned by the NZ Institute of Valuers (NZIV) and PT Investments, a consortium of 28 shareholders from within the property industry.

thetics. Hence, view of a CPBS was not included as an independent variable. The variable descriptions are listed in Table 3. Variable codes are shown in Appendix III and basic descriptive statistics for selected quantitative variables are shown in Appendix IV.

Table 3 Variable Descriptions

Variable*	Definition
SLNETX	Sale price of the house (NZ$)
SITSTX	Street name
CATGYX2	Category of dwelling: D, E, etc.†
CATGYX4	Quality of the structure: A, B, C†
TIMESOLD.Q	Using the time the cell phone tower was built as a baseline quarter, the number of quarters before (–) and after (+) it was built
AGE	Year the house was built
LANDAX	Land area (ha)
MATFAX	Total floor area (m^2)
WALLCNX	Wall construction: W, B, C, etc. †
ROOFCNX	Roof construction: W, B, C, etc. †
TOWER	An indicator variable: 0 if before the cell phone tower was built, or 1 after it was built

* Sale price is the dependent variable.

† See Appendix III for explanation of variable codes.

Market Study Results

An econometric analysis of Christchurch property transaction data helped to confirm the opinion survey results. In the analysis of selected suburbs, the sales data from sales that occurred before a CPBS was built was compared to sales data from after a CPBS was built to determine any variance in price, after accounting for all the relevant independent variables.

Empirical Results

The model of choice is one that best represents the relationships between the variables and has a small variance and unbiased parameters. Various models were tested and the results are described in the next section. The following statistics were used to help select the most appropriate model: the adjusted coefficient of determination (adjusted R^2); the standard error of the regression equation; the AIC[53] and BIC[54] statistics; and *t*-test of significance of the coefficients and *F*-statistic.

Significance of Variables and the Equation: St Albans

As hedonic prices can vary significantly across different functional forms, various commonly used functional forms were examined to determine the model specification that best describes the relationship between price and the independent variables. Also, to test the belief that the relationship between *Price* and *Land Area* is not a linear function of *Price*, the variable *LANDAX* (land area) was transformed to reflect the correct relationship. Several transformations were tested including: linear of *SLNETX* (sale price) and log of *LANDAX*; log of *SLNETX* and linear of *LANDAX;* and log of *SLNETX* and log of *LANDAX*. All dummy variables remained in their linear form in each model.

It was found that the best result was obtained from using the log of *SLNETX* and log of *LANDAX*, and the linear form of all the dummy variables. Taking the log of an independent variable implies diminishing marginal benefits. For example, an extra 50 square meters of land area on a 550-square-meter site would be worth less than the previous 50 square meters. The log-log model shows the percent change in price for a one-percent change in the independent variable, while all other independent variables are held constant (as explained in Hill, Griffiths, and Judge).[55]

In the semilogarithmic equation the interpretation of the dummy variable coefficients involves the use of the formula: $100(e^{b_n} - 1)$, where b_n is the dummy variable coefficient.[56] This formula derives the percentage effect on price of the presence of the factor represented by the dummy variable and is advocated over the alternative, and commonly misused, formula of 100. (b_n). The resulting model included all the available variables as follows:

$$\begin{aligned}\log(SLNETX) = \alpha &+ \beta_1 \times TOWER + \beta_2 \times SITSTX \\ &+ \beta_3 \times CATGYX2 + \beta_4 \times CATGYX4 \\ &+ \beta_5 \times TIMESOLD \times Q + \beta_6 \times AGE \\ &+ \beta_7 \times \log(LANDAX) \\ &+ \beta_8 \times MATFAX \\ &+ \beta_9 \times WALLCNX \\ &+ \beta_{10} \times ROOFCNX\end{aligned}$$

53. AIC is the Akaike Information Criterion, and is a "goodness of fit" measure involving the standard error of the regression adjusted by a penalty factor. The model selected is the one that minimizes this criterion (Microsoft SPSSPC Online Guide, 1997).

54. The BIC is the Bayesian Information Criterion. Like the AIC, BIC takes into account both how well the model fits the observed data, and the number of parameters used in the model. The model selected is the one that adequately describes the series and has the minimum SBC. The SBC is based on Bayesian (maximum-likelihood) considerations. (Microsoft SPSSPC Online Guide, 1997).

55. R. Carter Hill, William E. Griffiths, and George G. Judge, *Undergraduate Econometrics* (New York: John Wiley & Sons, 1997).

56. See Robert Halvorsen and Raymond Palmquist, "The Interpretation of Dummy Variables in Semi-Logarithmic Equations," *American Economic Review* 70, no. 3 (1980): 474–475.

From the regression output, the variables *ROOFCNX* and *WALLCNX* were found to be insignificant so these were removed from the model and the regression was rerun. The table in Appendix V summarizes these results. The *F*-statistic (123) shows that the estimated relationship in the model is statistically significant at the 95% confidence level and that at least one of the coefficients of the independent variables within the model is not zero.

Table 4 summarizes the model selection test statistics. Based on the AIC and BIC, the regression that excludes the variables *ROOFCNX* and *WALLCNX* is superior to the regression that includes them (AIC and BIC are minimized). For this reason, the model excluding these variables was selected for analysis, and it is discussed next.

Table 4 Test Statistics — St Albans

	Adjusted R^2	AIC	BIC
Full Model	0.82	-118.38	36.55
Sub Model	0.82	-121.64	5.95

Tests for normality, heteroskedasticity, and multicollinearity generally indicated that the model was adequately specified and that the data were not severely ill conditioned (heteroskedasticity and multicollinearity were diminished when the data were transformed).

The coefficient of determination (R^2) indicates that approximately 82% of the variation in sale price is explained by the variation in the independent variable set. All variable coefficients had the expected signs,[57] except for *TOWER*, which was positive. The positive coefficient for *TOWER* shows that, when all the other variables are held constant, after the installation of a CPBS in St Albans, the price of a house would increase by $e^{0.1135} \approx 1.12$ (12%). A possible explanation is that cell phone technology was quite new at the time (1994), and as there had been little in the media about possible adverse health effects from CPBSs, people may have perceived it as a benefit as they were likely to get better cell phone coverage.

The most significant variables were *TIMESOLD.Q* (the quarter in which the sale occurred before or after the CPBS was built), *log(LANDAX)* (log of land area), and *MATFAX* (total floor area) and all have a positive influence on price. The positive *TIMESOLD.Q* indicates that the market was increasing over time since the CPBS was built (1994), but only to a limited extent (1.38%). The positive log of land area and total floor area shows that prices increase with increasing size.

The regression coefficient on *log(LANDAX)* is 0.3285, which indicates that, on average, a 10% increase in *LANDAX* will generate a 3.285% increase in price. The positive coefficient for *MATFAX* indicates that, when all the other variables are held constant, for each additional m^2 the price would increase by $e^{0.0022514} \approx 1.0022314$ (0.22% increase).

Significance of Variables and the Equation: Papanui

The same functional form used for St Albans was used for Papanui. From the regression output, the variable *CATGYX2* was found to be insignificant so it was removed from the model and the regression was rerun; Appendix VI summarizes the results. The *F*-statistic (152) shows that the estimated relationship in the model is statistically significant at the 95% confidence level and that at least one of the coefficients of the independent variables within the model is not zero.

Table 5 summarizes the model selection test statistics. Based on the AIC and BIC, the regression that excludes the variable *CATGYX2* is superior to the regression that includes it (AIC and BIC are minimized). For this reason, the model excluding this variable was selected for analysis, and is discussed next.

Table 5 Test Statistics — Papanui

	Adjusted R^2	AIC	BIC
Full Model	0.87	-509.91	-371.99
Sub Model	0.87	-510.57	-381.56

The coefficient of determination (R^2) indicates that approximately 87% of the variation in sale price is explained by the variation in the independent variable set. This would be considered high in comparison with the amount of explanation obtained in similar hedonic house studies reported in the literature.[58] All variable coefficients had the expected signs.

The most significant variables were *TIMESOLD.Q*, *MATFAX* (total floor area), and *TOWER*. The former two have a positive influence on price. The positive *TIMESOLD.Q* indicates that the

57. Note that the variable *AGE* is positive as this variable indicates the year the house was built; therefore, the higher the year, the younger the home. Newer houses have less wear and tear than older homes and sell, on average, for more than older homes.

58. For example, Reichert obtained an adjusted R^2 of 84%; Simons and Sementelli, 78%; Abelson, 68%; Dotzour, 56%–61%.

market was increasing over time since the CPBS was built (2000), but only by 1.4% per quarter. The positive coefficient for *MATFAX* indicates that, when all the other variables are held constant, the price would increase by $e^{0.0042576} \approx 1.00427$ (0.43%), with increasing size. The negative coefficient for *TOWER* shows that, when all the other variables are held constant, after the installation of a CPBS in Papanui, the price of a house would decrease by $e^{-0.2340} \approx 0.79$ (21% decrease).

Significance of Variables and the Equation: Beckenham

The same functional form used for Papanui and St Albans was used for Beckenham. From the regression output, the variable *ROOFCNX* was found to be insignificant so it was removed from the model and the regression was rerun; Appendix VII summarizes these results. The *F*-statistic (214) shows that the estimated relationship in the model is statistically significant at the 95% confidence level and that at least one of the coefficients of the independent variables within the model is not zero.

Table 6 summarizes the model selection test statistics. Based on the AIC and BIC, the regression that excludes the variable *ROOFCNX* is superior to the regression that includes it (AIC and BIC are minimized). For this reason, the model excluding this variable was selected for analysis.

Table 6 Test Statistics — Beckenham

	Adjusted R^2	AIC	BIC
Full Model	0.89	-819.00	-641.39
Sub Model	0.89	-818.66	-650.66

The coefficient of determination (R^2) indicates that approximately 89% of the variation in sale price is explained by the variation in the independent variable set. Again, as with the model for Papanui this amount of explanation would be considered high.

The most significant variables were *TIMESOLD.Q*, *MATFAX*, and *TOWER*. The former two have a positive influence on price. The positive *TIMESOLD.Q* indicates that the market was increasing over time since the CPBS was built in 2000, but only by 1.91% per quarter. The positive coefficient for *MATFAX* indicates that, when all the other variables are held constant, the price would increase by $e^{0.0042054} \approx 1.00421$ (0.42%), with increasing size. The negative coefficient for *TOWER* shows that, when all the other variables are held constant, after the installation of a CPBS in Beckenham, the price of a house would decrease by $e^{-0.23019} \approx 0.793$ (20.7% decrease).

Significance of Variables and the Equation: Bishopdale

The same functional form used for the other three suburbs was used for Bishopdale. From the regression output, the variables *ROOFCNX* and *CATGYX* were found to be insignificant so these were removed from the model and the regression was rerun; Appendix VIII summarizes these results. The *F*-statistic (122) shows that the estimated relationship in the model is statistically significant at the 95% confidence level and that at least one of the coefficients of the independent variables within the model is not zero.

Table 7 Test Statistics — Bishopdale

	Adjusted R^2	AIC	BIC
Full Model	0.79	-927.48	-775.71
Sub Model	0.79	-929.32	-796.52

Table 7 summarizes the model selection test statistics. Based on the AIC and BIC, the regression that excludes the variable *ROOFCNX* and *CATGYX* is superior to the regression that includes it (AIC and BIC are minimized). For this reason, the model excluding these variables was selected for analysis.

Again, the most significant variables were *TIMESOLD.Q* and *MATFAX*; the variable of interest, *TOWER*, was not a significant variable in the model so it is not discussed further. The former two variables have a positive influence on price. The positive *TIMESOLD.Q* indicates that the market was increasing over time since the CPBS was built in 1994, but only at 0.98% per quarter. The positive coefficient for *MATFAX* indicates that, when all the other variables are held constant, the price would increase by $e^{0.0039665} \approx 1.004$ (0.40%), with increasing size.

Summary of Results

The above analysis shows that the most significant variables and their impact on price were similar between suburbs. This indicates the relative stability of the coefficients between each model. Interestingly, the impact of *TOWER* on price (a decrease of between 20.7% and 21%) was very similar in the two suburbs where the towers were built in the year 2000. This may be due to the much greater media publicity given to CPBSs after the two legal cases in Christchurch (*McIntryre* and *Shirley Primary School*

in 1996 and 1999, respectively). The two suburbs where *TOWER* was either insignificant or increased prices by around 12%, were suburbs where towers had been built in 1994, prior to the media publicity.

Limitations of the Research

The main limitation affecting this survey was in the selection of the case study areas. Specifically, the areas selected had CPBSs that were not highly visible to residents. If more-visible CPBSs had been selected, the results may have been quite different. Thus, caution must be used in making generalizations from this study or applying the results directly to other similar studies or valuation assignments. Factors that could affect results are the distance of homes from the CPBS, the style and appearance of the CPBS, how visible the CPBS is to residents, the type of home (single family, multifamily, rental, etc.), and the socioeconomic make-up of the resident population.

To help address the proximity factor, a study is in progress examining the role of distance to the CPBSs and price effects; that study uses GIS analysis to determine the impact this has on residential property prices. It is expected that this will provide a more precise estimation of the impact of a CPBS on price.

It must be kept in mind that these results are the product of only one case study carried out in a specific area (Christchurch) at a specific time (2003). The above results indicate that value effects from CPBSs may vary over time as market participants' perceptions change. Perceptions toward CPBSs can change either positively or negatively over time. For example, as the World Health Organization's ten-year study of the health effects from CPBSs is completed and becomes available, consumers' attitudes may become more positive or negative depending on the outcome of that study. Consequently, studies of the price effects of CPBSs need to be conducted over time.

Areas for Further Study

This research has focused on residents' perceptions of negative effects from proximity to CPBSs and how these impact property values, rather than the scientific or technological estimates of these risks. The technologists' objective view of risk is that risk is measurable solely in terms of probabilities and severity of consequences, whereas the public, while taking experts' assessments into account, view risk more subjectively, based on other factors. Further, the results of scientific studies about the health effects of radio frequency and microwave radiation from CPBSs are not consistent. Residents' perceptions and assessments of risk vary according to a wide range of psychological, social, institutional, and cultural processes, and this may explain why their assessments differ from those of the experts.

Given the public concerns about the potential risks arising from being located nearby a CPBS, it is important for future studies to focus more attention on the kinds of risks the public associates with CPBSs and the level of risk perceived. How far away from the CPBS do people feel they have to be to be safe? What CPBS design, size, and surrounding landscape would help CPBSs to be more publicly acceptable? What social, economic, educational, and other demographic variables influence how people perceive the risks from CPBSs? Do residents that are heavy users of cell phones have a different perception of CPBSs than residents who make little use of this technology? Are these perceived risks reflected in property values and to what extent? Do these perceived risks vary over time and to what degree?

Answers to these questions, if shared among researchers and made public, could lead to the development of a global database to assist appraisers in determining the perceived level of risk associated with CPBSs and other similar structures.[59] Knowledge of the extent that these risks are incorporated into property prices and how they vary over time will lead to more accurate value assessments of properties in close proximity to CPBSs and other similar structures.

Summary and Conclusions

Focusing on four case study neighborhoods in Christchurch, New Zealand, this article presents the results from both an opinion survey and market sales analysis undertaken in 2003 to determine residents' perceptions towards living near a CPBS and how this may impact property prices. From the results, it appears that people who live close to CPBSs perceive the sites less negatively than those who live farther away.

The issue of greatest concern for survey respondents in both the case study and control areas is the impact of proximity to CPBSs on future property values. Overall, respondents would pay from 10%–19% less to over 20% less for a property if it were in close proximity to a CPBS.

The opinion survey results were generally confirmed by the market sales analysis using a hedonic house price approach. The results of the sales analysis show prices of properties were reduced by around 21% after a CPBS was built in the neighborhood. How-

59. For example, high-voltage overhead transmission lines.

ever, this result varies between neighborhoods, with a positive impact on price being recorded in one neighborhood, possibly due to the CPBS being built in that suburb before any adverse media publicity about CPBSs appeared in the local Christchurch press.

Research to date reports no clearly established health effects from radio frequency emissions of CPBSs operated at or below the current safety standards, yet recent media reports indicate that people still perceive that CPBSs have harmful effects. Thus, whether or not CPBSs are proven to be free from health risks is only relevant to the extent that buyers of properties near CPBSs perceive this to be true. Even buyers who believe that there are no adverse health effects from CPBSs, knowing that other potential buyers might think the reverse, will probably seek a price discount for a property located near a CPBS.

The comments of survey participants indicate the ongoing concerns that residents have about CPBSs. There is the need to increase the public's understanding of how radio frequency transmitting facilities operate and the strict exposure-limit standards imposed on the telecommunication industry. As more information is discovered that refutes concerns regarding adverse health effects from CPBSs, and as information about the NZ safety standards are made more publicly available, the perception of risk may gradually change, eliminating the discounts for neighboring properties.

Sandy Bond, PhD, MBS, ANZIV, SNZPI, is a senior member of the New Zealand Property Institute (NZPI), a director on the Board of the International Real Estate Society, and a past president of the Pacific Rim Real Estate Society (PRRES). She was awarded the PRRES Achievement Award in 2002 and the NZ Institute of Valuers' Presidential Citation in 1997. Before commencing her academic career in 1991, she worked as an appraiser in both New Zealand and London, UK.
Contact: dr_sandybond@yahoo.com

Ko-Kang (Kevin) Wang is a recent graduate from the University of Auckland and has been a tutor in the Statistics Department at the university. Wang has recently commenced doctoral studies in Australia.
Contact: Kevin.Wang@anu.edu.au

Acknowledgements

The authors thank Mark Dunbar of Telfer Young and Robert Albrecht of DTZ for sharing the results of their cell phone research on valuation impacts from proximity to CPBSs, and Maya Marshall, Project Administrator at Telecom NZ, and Rapheal Hilbron, Community Relations Manager at Vodafone NZ, for information about CPBS locations and environmental impacts from these.

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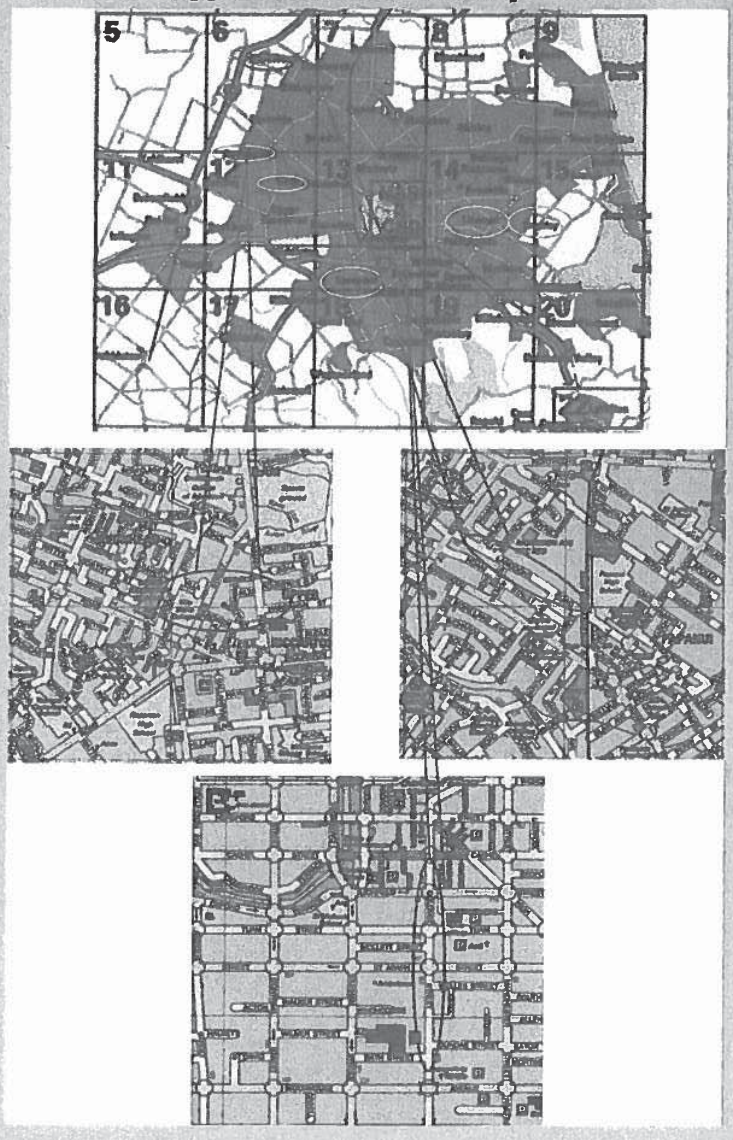
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Appendix I Location Map



Areas circled in white at the top are without a cell phone tower, while areas circled in the bottom three maps have a cell phone tower.
Source: http://www.ccc.govt.nz/maps/Wises/

Appendix II Summary of the Survey Results

Variable	Response	Valid Percent (%) Case Study	Control
Occupancy	Homeowner	78.5	94.2
	Tenant	21.5	5.8
How long have you lived there?	Less than 6 months	8.0	2.6
	6 months–1 year	8.6	4.5
	1–4 years	25.1	27.7
	More than 5 years	58.3	65.2
How would you rate the desirability of your neighborhood?	Superior	27.4	30.9
	Above Average	37.4	36.8
	Average	28.5	27.0
	Below Average	5.6	4.6
	Inferior	1.1	0.7
Would you be opposed to construction of a cell phone tower nearby?	Yes		72.1
	No		27.9
When you purchased/began renting was the cell phone tower already constructed?	Yes	39.3	
	No	60.7	
Was the proximity of the cell phone tower a concern to you?	Yes	20.0	
	No	80.0	
Would you have gone ahead with rental/purchase if you had known a cell phone site was to be constructed?	Yes	73.9	
	No	26.1	
Is location of a cell phone tower a factor you would consider when moving?	Yes		83.4
	No		16.6
Is the cell phone tower visible from your house?	Yes	45.7	
	No	54.3	
If yes, how much does it impact on your view?	Very obstructive	9.6	
	Mildly obstructive	24.5	
	Barely noticeable	66.0	
In what way does it impact on the enjoyment of living in your house?	Views	11.8	
	Aesthetics	20.6	
	Health concerns	36.8	
	Change in property value	19.9	
	Other	11.0	
Effect a nearby cell phone tower would have on the price/rent you would pay for the property	Tower wasn't constructed	53.1	
	Pay substantially more	0.0	0.0
	Pay a little more	2.3	0.0
	Pay a little less	2.8	37.6
	Pay substantially less	0.6	45.4
	Not influence price	51.4	17.0
% Effect a nearby cell phone tower would have on the price/rent you would pay for the property	20% higher or more	5	3.2
	10–19% more	10	1.6
	1–9% more	14	2.4
	1–9% less	33	19.2
	10–19% less	24	36.0
	20% or a greater reduction	14	37.6
Concern about the possibility of harmful health effects in the future	Does not worry me	50.3	19.9
	Worries me somewhat	38.0	38.4
	Worries me a lot	11.7	41.7
Concern about the stigma associated with houses near the cell phone sites	Does not worry me	54.6	20.8
	Worries me somewhat	33.9	45.0
	Worries me a lot	11.5	34.2
Concern about the affect on your properties value in the future	Does not worry me	61.3	15.4
	Worries me somewhat	25.4	37.2
	Worries me a lot	13.3	47.4
Concern about the aesthetic problems caused by the tower	Does not worry me	63.3	18.2
	Worries me somewhat	25.4	37.0
	Worries me a lot	11.3	44.8

Appendix III Variable Codes

Category of Dwelling

Code	Definition
D	Dwelling houses are of a fully detached or semi-detached style situated on their own clearly defined piece of land.
E	Converted dwelling houses that are now used as rental flat.
F	Ownership home units which may be single storey or multi-storey and which do not have the appearance of dwelling houses.
H	Home and income. The dwelling is the predominant use, and there is an additional unit of use attached to or associated with the dwelling house that can be used to produce income.
R	Rental flats that have been purpose built.

Quality of the Principal Structure

Code	Definition
A	Superior design and quality of fixtures and fittings is first class.
B	The design is typical of its era and the quality of the fixtures and fittings is average to good.
C	The design is below the level generally expected for the era, or the level of fixtures and fittings is barely adequate and possibly of below average quality.

Building Materials: Walls and Roof

Code	Definition
W	Wood
B	Brick
C	Concrete
S	Stone
R	Roughcast
F	Fibrolite
M	Malthoid
P	Plastic
I	Iron
A	Aluminium
G	Glass
T	Tiles
X	*

Appendix IV Descriptive Statistics

Variable	Mean	Std. dev.	Median	Minimum	Maximum	Range
St Albans:						
Sale Price ($)	221,957	110,761	200,000	42,000	839,000	797,000
Land Area (ha)	0.0658	0.0331	0.0579	0.0261*	0.3794	0.3533
Floor Area (m^2)	161	70.40	150	50	450	400
Beckenham:						
Sale Price ($)	116,012	50,037	111,000	21,500	385,000	363,500
Land Area (ha)	0.0601	0.0234	0.0553	0.0164*	0.2140	0.1976
Floor Area (m^2)	115	32.50	110	40	340	300
Papanui:						
Sale Price ($)	127,661	51,114	119,000	43,000	375,000	332,000
Land Area (ha)	0.0685	0.0289	0.0675	0.0310	0.3169	0.2859
Floor Area (m^2)	122	34.60	110	56	290	234
Bishopdale:						
Sale Price ($)	136,786	41,390	134,500	56,000	342,000	286,000
Land Area (ha)	0.0679	0.0163	0.0653	0.0400	0.2028	0.1628
Floor Area (m^2)	125	31.20	118	64	290	226

* These small land areas are related to apartments or units in a block of apartments/units that have the land area apportioned on a pro rata basis.

Appendix V Regression Model: St Albans

log(*SLNETX*) = *TOWER* + *CATGYX2* + *CATGYX4* + *TIMESOLD.Q* + *AGE* + log(*LANDAX*) + *MATFAX* + *SITSTX*

Residuals:	Min	1Q	Median	3Q	Max
	-0.72855	-0.15032	0.01593	0.14263	0.72047

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
(Intercept)	9.1781868	0.6769096	13.559	< 2e-16 ***
TOWER	**0.1133186**	0.0318188	**3.561**	0.000395 ***
CATGYX2D	0.1846417	0.0702520	2.628	0.008776 **
CATGYX2O	0.0334663	0.1008594	0.332	0.740134
CATGYX4B	-0.1551409	0.0245485	-6.320	4.75e-10 ***
CATGYX4C	-0.1483169	0.0722959	-2.052	0.040600 *
TIMESOLD.Q	**0.0136663**	**0.0008208**	**16.650**	< 2e-16 ***
AGE	0.0016408	0.0003521	4.660	3.81e-06 ***
log(LANDAX)	**0.3285367**	**0.0283610**	**11.584**	< 2e-16 ***
MATFAX	**0.0022314**	**0.0001962**	**11.373**	< 2e-16 ***
SITSTXAIKMANS RD	0.4029259	0.0533671	7.550	1.41e-13 ***
SITSTXBEVERLEY ST	0.2330787	0.0803137	2.902	0.003827 **
SITSTXBRISTOL ST	0.1706840	0.0521716	3.272	0.001124 **
SITSTXBROWNS RD	0.2492536	0.0720854	3.458	0.000579 ***
SITSTXCOX ST	0.3055798	0.0581672	5.253	2.00e-07 ***
SITSTXGORDON AVE	0.0823422	0.0679833	1.211	0.226236
SITSTXKNOWLES ST	0.1690979	0.0558911	3.025	0.002576 **
SITSTXMANSFIELD AVE	0.2954242	0.0652983	4.524	7.16e-06 ***
SITSTXMCDOUGALL AVE	0.3303105	0.0623720	5.296	1.60e-07 ***
SITSTXMURRAY PL	0.3613773	0.0629166	5.744	1.40e-08 ***
SITSTXOFFICE RD	0.3681146	0.0543368	6.775	2.71e-11 ***
SITSTX Other	0.0618491	0.0736629	0.840	0.401416
SITSTXPAPANUI RD	0.1940369	0.0560474	3.462	0.000570 ***
SITSTXRANFURLY ST	0.1701716	0.0617504	2.756	0.006012 **
SITSTXST ALBANS ST	0.1458665	0.0571172	2.554	0.010873 *
SITSTXWEBB ST	0.1895432	0.0725061	2.614	0.009143 **
SITSTXWESTON RD	0.2084419	0.0527555	3.951	8.60e-05 ***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Residual standard error: 0.2175 on 677 degrees of freedom
Multiple *R*-Squared: 0.8253, Adjusted *R*-squared: 0.8186
F-statistic: 123 on 26 and 677 DF, *p*-value: < 2.2e-16

Appendix VI Regression Model: Papanui

ln(formula = log(*SLNETX*) ~ *TOWER* + *SITSTX* + *TIMESOLD.Q* + *AGE* + log(*LANDAX*) + *MATFAX* + *WALLCNX* + *ROOFCNX* + *CATGYX4*, data = *Papanui.final*)

Residuals:	Min	1Q	Median	3Q	Max
	-0.484987	-0.098006	0.003859	0.106253	0.563126

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
(Intercept)	5.9482316	0.6998186	8.500	< 2e-16 ***
TOWER	**-0.2339640**	0.0240908	-9.712	< 2e-16 ***
SITSTXHOANI ST	-0.1966982	0.0265429	-7.411	4.26e-13 ***
SITSTXLANGDONS RD	-0.1192547	0.0281242	-4.240	2.58e-05 ***
SITSTXLEANDER ST	0.0305555	0.0449437	0.680	0.496853
SITSTXMATSONS AVE	0.0949636	0.0292461	3.247	0.001231 **
SITSTXMORELAND AVE	-0.0892332	0.0397622	-2.244	0.025183 *
SITSTXMORRISON AVE	-0.1984492	0.0289772	-6.848	1.84e-11 ***
SITSTXOther	-0.1543194	0.0337436	-4.573	5.83e-06 ***
SITSTXSAILS ST	-0.0761412	0.0433455	-1.757	0.079490 .
SITSTXSAWTELL PL	0.1840793	0.0393904	4.673	3.66e-06 ***
SITSTXSAWYERS ARMS RD	0.0872393	0.0201388	4.332	1.73e-05 ***
SITSTXST JAMES AVE	0.2497688	0.0289940	8.615	<2e-16 ***
TIMESOLD.Q	**0.0138914**	0.0004137	**33.575**	< 2e-16 ***
AGE	0.0029307	0.0003512	8.345	4.85e-16 ***
log(LANDAX)	0.0904764	0.0270812	3.341	0.000886 ***
MATFAX	**0.0042576**	0.0002410	**17.664**	< 2e-16 ***
WALLCNXC	0.0054100	0.0200666	0.270	0.787558
WALLCNXF	-0.0980851	0.0464442	-2.112	0.035106 *
WALLCNXO	-0.1158407	0.0468334	-2.473	0.013655 *
WALLCNXR	-0.0670051	0.0244382	-2.742	0.006291 **
WALLCNXW	-0.0679166	0.0192628	-3.526	0.000454 ***
WALLCNXX	-0.0571365	0.0358369	-1.594	0.111381
ROOFCNXI	0.1502973	0.1139845	1.319	0.187810
ROOFCNXO	0.0870092	0.1164152	0.747	0.455111
ROOFCNXT	0.0954874	0.1138506	0.839	0.401965
CATGYX4B	-0.0623758	0.0343487	-1.816	0.069872 .
CATGYX4C	-0.3669901	0.0905659	-4.052	5.74e-05 ***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Residual standard error: 0.1579 on 604 degrees of freedom
Multiple *R*-Squared: 0.8718, Adjusted *R*-squared: 0.8661
F-statistic: 152.2 on 27 and 604 DF, *p*-value: < 2.2e-16

Appendix VII Regression Model: Beckenham

ln(formula = log(*SLNETX*) ~ TOWER + *SITSTX* + *CATGYX4* + *TIMESOLD.Q* + *AGE* + log(*LANDAX*) + *MATFAX* + *WALLCNX* + *CATGYX2*, data = *Beckenham.final*)

Residuals:	Min	1Q	Median	3Q	Max
	-0.64490	-0.09026	0.01142	0.10112	0.40993

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
(Intercept)	9.2062865	0.4725194	19.483	< 2e-16 ***
TOWER1	-0.2301918	0.0182774	-12.594	< 2e-16 ***
SITSTXBECKENHAM ST	0.1648069	0.0515406	3.198	0.001436 **
SITSTXBOON ST	-0.0616738	0.0484966	-1.272	0.203817
SITSTXBRADFORD AVE	0.0923843	0.0494942	1.867	0.062300 .
SITSTXCOLOMBO ST	0.0623765	0.0467234	1.335	0.182223
SITSTXDEVON ST	-0.0959430	0.0457562	-2.097	0.036299 *
SITSTXDUNN ST	-0.0207886	0.0427676	-0.486	0.627031
SITSTXFISHER AVE	0.2271245	0.0400288	5.674	1.90e-08 ***
SITSTXLONGFELLOW ST	-0.0186953	0.0451597	-0.414	0.678990
SITSTXOTHER	-0.0222126	0.0467607	-0.475	0.634888
SITSTXPERCIVAL ST	-0.0347190	0.0517740	-0.671	0.502663
SITSTXROXBURGH ST	0.1029109	0.0466753	2.205	0.027729 *
SITSTXSOMERFIELD ST	0.0186495	0.0428968	0.435	0.663851
SITSTXSOUTHAMPTON ST	-0.0243265	0.0402926	-0.604	0.546171
SITSTXSOUTHEY ST	-0.0324513	0.0429880	-0.755	0.450520
SITSTXSTRICKLAND ST	-0.0819418	0.0407196	-2.012	0.044494 *
SITSTXTENNYSON ST	0.1165007	0.0393410	2.961	0.003147 **
SITSTXWEMBLEY ST	0.0648226	0.0458033	1.415	0.157359
CATGYX4B	0.0275481	0.0373405	0.738	0.460864
CATGYX4C	-0.1168640	0.0469787	-2.488	0.013049 *
TIMESOLD.Q	0.0189904	0.0003396	55.928	< 2e-16 ***
AGE	0.0010988	0.0002426	4.530	6.74e-06 ***
log(LANDAX)	0.1548535	0.0195655	7.904	8.19e-15 ***
MATFAX	0.0042054	0.0002138	19.674	< 2e-16 ***
WALLCNXC	-0.0208433	0.0378338	-0.551	0.581833
WALLCNXF	-0.1171637	0.0394091	-2.973	0.003031 **
WALLCNXO	-0.0445073	0.0399745	-1.113	0.265849
WALLCNXR	-0.1119164	0.0235736	-4.748	2.41e-06 ***
WALLCNXW	-0.0629968	0.0222366	-2.833	0.004718 **
WALLCNXX	-0.0992564	0.0398493	-2.491	0.012933 *
CATGYX2D	0.1445276	0.0399650	3.616	0.000316 ***
CATGYX2F	0.3069113	0.0744524	4.122	4.11e-05 ***
CATGYX2R	0.2927391	0.1222453	2.395	0.016847 *

Signif. codes:0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Residual standard error: 0.1515 on 864 degrees of freedom
Multiple *R*-Squared: 0.8911, Adjusted *R*-squared: 0.8869
F-statistic: 214.2 on 33 and 864 DF, *p*-value: < 2.2e-16

Appendix VIII Regression Model: Bishopdale

ln(formula = log(*SLNETX*) ~ *TOWER* + *TIMESOLD.Q* + *AGE* + log(*LANDAX*) + *MATFAX* + *WALLCNX* + *SITSTX*, data = *Bishopdale.final*)

Residuals:	Min	1Q	Median	3Q	Max
	-0.53633	-0.08893	0.01446	0.08850	0.49048

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
(Intercept)	9.0005033	0.6988891	12.878	< 2e-16 ***
TOWER	0.0262575	0.0182796	1.436	0.151259
TIMESOLD.Q	0.0097887	0.0004834	20.251	< 2e-16 ***
AGE	0.0013236	0.0003598	3.679	0.000249 ***
log(LANDAX)	0.1357753	0.0333622	4.070	5.16e-05 ***
MATFAX	0.0039665	0.0001855	21.389	< 2e-16 ***
WALLCNXC	-0.0169935	0.0108641	-1.564	0.118160
WALLCNXO	0.0785660	0.0336688	2.333	0.019863 *
WALLCNXR	-0.0693225	0.0300511	-2.307	0.021313 *
WALLCNXW	-0.0815023	0.0230110	-3.542	0.000420 ***
SITSTXCARDOME ST	0.0610536	0.0314227	1.943	0.052360 .
SITSTXCHEDWORTH AVE	0.0330487	0.0317738	1.040	0.298589
SITSTXCLOTILDA PL	0.2252988	0.0420078	5.363	1.06e-07 ***
SITSTXCOLESBURY ST	0.0528749	0.0302668	1.747	0.081018 .
SITSTXCOTSWOLD AVE	0.0604953	0.0286474	2.112	0.035012 *
SITSTXEASTLING ST	0.0551537	0.0319833	1.724	0.085003 .
SITSTXFARRINGTON AVE	-0.0001768	0.0238544	-0.007	0.994087
SITSTXHAREWOOD RD	0.0204412	0.0252674	0.809	0.418753
SITSTXHIGHSTED RD	0.0391760	0.0253953	1.543	0.123302
SITSTXKILBURN ST	-0.0176756	0.0366951	-0.482	0.630155
SITSTXKINGROVE ST	-0.0052772	0.0375965	-0.140	0.888406
SITSTXLEACROFT ST	0.1058243	0.0333633	3.172	0.001571 **
SITSTXMURMONT ST	0.1825316	0.0365287	4.997	7.12e-07 ***
SITSTXNEWMARK ST	-0.0342136	0.0272490	-1.256	0.209621
SITSTXOTHER	0.0525437	0.0253634	2.072	0.038612 *
SITSTXRALEIGH ST	0.0470151	0.0314032	1.497	0.134740
SITSTXSTACKHOUSE AVE	0.0235719	0.0278844	-0.845	0.398165

Signif. codes:0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Residual standard error: 0.137 on 821 degrees of freedom
Multiple *R*-Squared: 0.7946, Adjusted *R*-squared: 0.7881
F-statistic: 122.1 on 26 and 821 DF, *p*-value: < 2.2e-16

Susan Dana Foster

15957 Avenida Calma
Rancho Santa Fe, California 92091
susan.foster04@gmail.com
(858) 756-3532

June 30, 2019

Tara Lieberman, Eric Lardy, Stephanie Neal
Land Use / Environmental Planners
5510 Overland Avenue, Suite 310 / Mail Stop – 0650
San Diego California 92123

Re: Small Cell Wireless Facilities Ordinance

Attached please see my comments to Supervisor Dianne Jacob regarding the FCC's small cell directive and this County's attempt to synchronize our ordinance with the regulations that went into effect on January 1, 2019. Also attached is my filing with the FCC from 2013 regarding the brain study I organized of California firefighters exposed to a cell tower on their station for over five years, as well as Judge Hillman's pretrial ruling in the Fay School Wi-Fi case.

I am presenting a case for the legitimacy of a subset of San Diego County's residents suffering from electro-hypersensitivity (EHS). Through Judge Hillman's pretrial ruling on the application of the Americans with Disabilities Act, I believe San Diego County would be justified in providing ADA accommodations and frankly, I believe San Diego County would be derelict in its duty if it did not.

Acknowledgment of EHS, also known as radiofrequency radiation exposure, is not a debatable issue. The Centers for Medicare and Medicaid offer a number of billing codes related to RF radiation exposure. If the government pays for it on one hand, it cannot pretend it does not exist on the other.

I sat on San Diego County's 2002 cell tower ordinance siting committee, and I am a stakeholder in the shaping of the current ordinance through repeated community input by way of your county staff. It is an honor and a privilege to be able to offer the following in hopes of facilitating San Diego County being a leader in including those with a life altering disability.

Respectfully yours,

Susan Foster

Attachment

Susan Dana Foster

15957 Avenida Calma
Rancho Santa Fe, California 92091
susan.foster04@gmail.com
(858) 756-3532

June 30, 2019

Supervisor Dianne Jacob, Chair
County Administration Center
1600 Pacific Highway, Room 335
San Diego, CA 92101

SAN DIEGO COUNTY SMALL CELL 5G ORDINANCE: ADA & MORATORIUM

Dear Chairwoman Jacob:

San Diego County, like communities across the country, has been forced to synchronize our existing cell tower ordinance with the new FCC directive paving the way for the rollout of 5G.

I would like to offer my comments to the Ordinance you passed on February 27, 2019 and remanded to staff for further review and amendment. My comments have to do with the County's obligation to its residents and to those who visit our County from neighboring communities for education, business, recreation, medical care, legal remedies and obligations, shopping, and family reasons.

In order to adequately recognize, address, and prepare a plan for remediation of the hazards that will be created for a subset of the San Diego County population when 5G is rolled out and activated, **I strongly urge you to call upon Gov. Gavin Newsom and request a moratorium on the implementation of 5G throughout the state of California.**

Most County residents do not know the 5G cell towers are soon going to be placed so close to their lives 24/7, an unknown number of people are already sensitive to the radiation, and an unknown but potentially significant portion of those people will become more disabled, more restricted, and shut out of life as they know it in San Diego County. It may not happen the day the towers are activated. In may happen gradually over a period of weeks. It may happen insidiously over a period of several years. But I would predict, based upon exposures our firefighters have had to cell towers on their stations, the longer and stronger the exposure, the greater the risk imposed upon the residents of San Diego County. My question of you and all the supervisors is this: What plans have you made for this possibility?

Within the framework of this letter I would like to begin to address the Americans with Disabilities Act and the importance of appreciating that the planned proliferation of 5G towers placed throughout our community is going to significantly diminish the quality of life for those

individuals who are currently sensitive to the radiation emissions from cell towers. There is a subset of sensitive individuals who may find 5G so harmful to their health – with a power density estimated to be 10 to 100 times greater than currently exists – that life is not sustainable for them.

If this sounds like hyperbole, it is not. It is the reality of countless people around this world – estimated to be between 5% and 20% of the population. When people become sensitive to environmental toxins, there is very often a dose-response relationship. The bottom line is that the more people are exposed to an environmental toxin they are sensitive to, the worse their symptoms can become, and the less likely they may be to recover their original health status. Once an individual has become sensitized to RF radiation – be it radiofrequency radiation or some other form of nonionizing radiation, it is very difficult for them to be around even small amounts of RF radiation. Military exposure 40 and 50 years ago to RF radiation helped define the term "radiation sickness". In today's world this sensitivity is often referred to as electro-hypersensitivity or EHS.

Prior to the 5G buildout which will include 4G and 5G towers emitting microwave and millimeter waves, San Diego County has not concerned itself with EHS. You have heard primarily from industry attorneys, lobbyists and many telecom owners and investors who live in this vicinity. You have heard less from individuals who are electrosensitive. Most of them cannot come to the county office buildings. Their health is compromised, and they cannot advocate for themselves and their families in a Wi-Fi/cell tower environment.

The industry would have you believe this is an illegitimate claim of disability. I can assure you it was not illegitimate in the military. I can assure you it is not been considered illegitimate with the firefighters. And is not illegitimate with an important subset of your population here in San Diego County. Sensitive individuals need to be protected, and the County needs to recognize that with this proliferation of towers going into our living, working and education environments, this EHS subset of the population is going to grow, their needs must be addressed, and accommodations must be made.

It is unfortunate that the telecommunications industry has taken the approach of, at times, mocking individuals who suffer from what is commonly referred to as EHS.
Yet this is a common misconception because much of the industry funded science centered around the EHS uses provocative testing which is meaningless for those individuals who experience a delayed reaction following initial exposure.

I would like to point out to the Chairwoman and to all the Supervisors that the Centers for Medicare and Medicaid (CMS) have billing codes for exposure to RF radiation, inclusive of the initial encounter, the subsequent encounter, and "Exposure to radiofrequency, sequela" which is the cascade of events that can occur after someone has become sensitized.

When I hear the argument that those individuals who suffer from electrosensitivity would not be covered under the ADA because it is not a legitimate illness, I would simply point to the billing codes offered by CMS. The government cannot on one hand offered to pay for an illness or disease process and on the other hand deny that it exists. It is a point of simple logic, and given

the fact the billing codes exist through CMS which provides the "gold standard" for acceptance of billing codes among the insurance industry as a whole, we need to ask five questions:

1) Are we prepared for a substantial increase in electrosensitivity and other illnesses related to the imminent increase in the dose and duration of RF radiation – including the untested 5G millimeter wave – as we are forced to comply with the FCC directive for small cells/5G towers?

2) Does the County have in place a plan to notify its residents of towers that are going to be placed in close proximity (1000' or less) to their homes, workplaces, school, sporting events, and other facilities used in daily life?

3) Does the County have in place a plan to receive applications from those individuals whose claims of EHS are substantiated by such a history, and is the county prepared to suggest alternate placement to telecommunications carriers to avoid sensitive areas, i.e. home, school, or workplace of sensitive individuals, as long as coverage is sufficiently maintained in accordance with the Telecommunications Act (i.e. there is no significant gap in coverage). Bottom line: Can the towers be redirected away from sensitive individuals so that their quality of life, freedom to live, to be educated and travel to work may be preserved in the face of this FCC directive?

4) Is the County prepared to write into your leases with the telecom carriers a provision that states that if an individual becomes sensitized after a tower is placed within close proximity to that individual either at home, at work, or at school, the County may then demand of the carrier that shielding/RF remediation be provided for the homeowner, at least a portion or a classroom of the school, and the workspace in which that sensitized individual must function on a daily basis in order to earn a living?

5) Is San Diego County, and is California as a whole, truly ready for the infrastructure buildout and implementation of 5G, or is it premature given what appears to be a collision of the rights of the telecom industry versus the rights of the residents of San Diego County. Are we improving the communications at the cost of denying a very important subset of the population their rights under the Americans with Disabilities Act?

If these questions are not sufficiently addressed, should you, as Chairwoman of the San Diego County Board of Supervisors ask Gov. Gavin Newsom for an immediate moratorium on the expansion of the 5G network until these crucial issues are worked out?

I am not coming to you with these requests lightly, or without standing. I was one of two community members appointed to the 2002 San Diego County Cell Tower Ordinance Siting Committee. As you know that ordinance was litigated through two appeals in the 9th Circuit Court of Appeals, and upheld with our four-tiered order of preference. Variations of our ordinance were adopted throughout by communities across the country. Some 17 years later, I have had regular meetings and input with staff following the February 27, 2019 passage of the current Ordinance.

Additionally, I am a medical writer, I have written about the RF radiation and health for 19 years, and I am very proud to say I am an honorary firefighter with the San Diego Fire Department.

In 2001 I was asked by San Diego firefighters to write an appeal when cell towers were permitted for their station. I began hearing more and more stories of firefighters who literally could not function in the job that clearly establishes firefighters as the guardians of society. Once cell towers were activated on or adjacent to their stations, many of them could no longer function due to severe headache, inability to sleep, and foggy thinking. These are not symptoms we wish to see in our First Responders.

In 2004 I organized a SPECT brain scan pilot study of firefighters who has been exposed to a cell tower on their station for over five years. We found brain abnormalities in all firefighters tested. Attached is my 2013 filing with the FCC detailing this study. [Attachment A]

In 2004 I co-authored Resolution 15 which was passed overwhelmingly by the International Association of Firefighters. Res. 15 urged a moratorium on the placement of cell towers on fire stations in the US and Canada. I then helped the Los Angeles IAFF locals as they aligned with law enforcement unions to fight FirstNET towers on their stations. In large part because of the 2004 brain scan study, the California firefighters as a whole fought for and received exemptions to 5G towers on their stations in AB 57 and SB 649. [The FCC directive allows for no such exemption.] I am currently following a brain tumor cluster in a California fire station with a wireless hub next door to their station.

The symptoms experienced by the firefighters who participated in the SPECT brain scan study were similar to firefighters in other stations who live in the shadow of cell towers. Yet specific to the men we studied, it is important to note all the men had passed rigorous physical and cognitive exams prior to being hired by the fire department. Their symptoms included:

- headaches
- extreme fatigue
- cognitive impairment
- anesthesia-like sleep where the men woke up for 911 calls "as if they were drugged"
- inability to sleep
- depression
- anxiety
- unexplained anger
- immune-suppression manifest in frequent colds and flu-like symptoms

Real life examples of these symptoms are best briefly characterized by:

1) Firefighters got lost on 911 calls in the town they grew up on several occasions.
2) In one instance, four firefighters sat in the rig in a stupor with the alarm sounding in the background, unable to remember how to start the engine.
3) A medic with 20 years of experience who had never made a mistake forgot basic CPR in the midst of resuscitating a coronary victim.

The brain scans of these six men revealed a pervasive, hyper-excitability of the neurons in certain parts of the brain. These findings suggested the exposure to RF (microwave) radiation was causing the neurons to continually fire in these areas without benefit of rest. When neurons (brain cells) cannot rest, they ultimately die. The scans further revealed that other sections of the brain that should have been functional showed hypoperfusion, or decreased blood flow, suggesting impairment in these particular areas.

The firefighters most important lesson to us as a county, as a state, and as a nation, may be that if we allow a buildout of cell towers such that they are as commonplace in front of homes and schools as they are now on fire stations, we may be facing a tsunami of neurodegenerative disorders, including Alzheimer's and dementia, as well as learning disabilities and the possibility of even higher increases in the rate of Autism.

The firefighters we tested have symptoms that are consistent with the precise description of EHS. In terms of Medicare and Medicaid billing, it would likely fall under one of these codes:

- Billable - W90.0XXA Exposure to radiofrequency, initial encounter
- Billable - W90.0XXD Exposure to radiofrequency, subsequent encounter
- Billable - W90.0XXS Exposure to radiofrequency, sequela

Chairwoman Jacob, I believe after activation of the 5G system that has been imposed on San Diego County and the rest of the country as a result of the FCC directive, every community – not just San Diego County – is going to see an increase across the board of illness. The symptoms experienced by the firefighters following activation of the tower outside their station will likely be felt by the community as a whole. This is a County that has taken a strong stand on protecting its citizens and protecting the health of the community. What are we going to do if the symptoms experienced by the California firefighters – and numerous firefighters across the country who also have cell towers outside their station – become a reality for even 20% of our population?

The 2017 Census put the population of San Diego County at 3,338,000 people. If 20% experience symptoms of EHS, potentially to the point where their work, school, and home lives are severely disrupted, we would be talking about 667,000 residents.

In a 2006 Letter to the Editor of *Electromagnetic Biology and Medicine*, two preeminent experts in the field, Orjan Hallberg and Gerd Oberfeld, offered the following answer to the question asked "Will We All Become Electrosensitive?" Dr. Hallberg is an independent researcher in Trångsund, Sweden and Dr. Oberfeld, at the time, was the director of the Public Health Department in Salzburg, Austria.

Mainstream medicine in 2006 was of the opinion that EHS was a psychological phenomenon. The military studies would disagree with that, as would the firefighters, as did the authors of this Letter to the Editor. Drs. Hallberg and Oberfeld plotted the rise in groups of electrosensitive people from around the world from data collected in Austria, Germany, Great Britain, Ireland, Sweden, Switzerland, and the US. The extrapolated trend indicates that 50% of the population can be expected to become electrosensitive by the year 2017. Keep in mind this was written in

2006. We now have billing codes for Medicare and Medicaid that verified this illness, and frankly, I believe the symptoms expressed by the firefighters following activation of the tower outside their station are very much in keeping with EHS symptoms. We are surrounded by increases in headaches, distractibility, depression, anxiety, and difficulty sleeping. Could 50% of us be reacting to wireless now, with only a relatively small number of people making the causal link within their own lives?

AMERICANS WITH DISABILITIES ACT & THE FAY SCHOOL CASE

I would like to make the further point that there is a common misperception about what the Americans with Disabilities Act is really for.

The ADA does not just cover physical access for those individuals in a wheelchair or walking with a walker. It covers all physical and mental conditions that impair access. The degree and the extent of the individual's history are factors.

The County currently addresses the ADA in the ordinance passed in February 27, 2019 with respect to installation of the facilities. I would encourage the County to include broader language to ensure the County does not discriminate among disabilities. The County is obligated to comply with the ADA, yet it would be advisable for the county to adopt language that is more inclusive in a very general statement such as: This Ordinance shall comply with the Americans with Disabilities Act. We must comply with the Act as a whole, not simply address mobility.

The person in a wheelchair has no greater right than the individual who has a history of vertigo in the presence of RF radiation, or another individual who has medical metal within their bodies and thus may conduct more radiation, and potentially more heat from the millimeter wave, because of this metal. For individuals who are sensitive neurologically, or due to a cardiac condition, or even a respiratory condition in the presence of RF radiation, their accommodations should be taken just as seriously as for the individual in a wheelchair. It would be unsafe for these individuals to have a cell tower located near their home, school, or place of work. As long as the county has the latitude to adjust the placement in the same general location, towers should be located away from individuals who are known to be sensitive. Section 704 of the Telecom Act does not trump the ADA. How these two Acts interact had some thoughtful logic applied by a District Court judge in a pretrial ruling that offers some insight for San Diego County.

In the Fay School case which was a Wi-Fi lawsuit, the case timed out because the plaintiff, a 12-year-old boy, became too old to return to this particular private school. Yet from that case an interesting pretrial ruling exists regarding the defendant's motion to exclude the plaintiff's experts and the defendant's motion for Summary Judgment.

Dated September 29, 2017, District Judge Timothy S. Hillman ruled in the District Court of Massachusetts that in this case the ADA provided a legitimate remedy. In Judge Hillman's words:

> "In considering the motion for summary judgment, the Court can avoid the need to evaluate the highly technical questions raised by the parties in great depth. As the Court provisionally accepts the expert opinion of Dr. Carpenter offered by the Plaintiff as to

> general causation, the Court thereby allows, for the sake of argument, that EHS is a genuine, albeit rare, affliction. Given that the FCC has declined to regulate RFs with respect to biological (non-thermal) effects, especially any impact to those that might be hypersensitive, the ADA provides a legitimate remedy to any unusual harm that might be caused to a small subset of individuals exposed to something that is generally, genuinely, and legitimately accepted as safe for the wider population."

The reality is the Americans with Disabilities Act includes physical and mental disabilities, and any illness which fits into the description below. The term disability may apply to cardiac, respiratory, and neurological conditions that significantly interfere with at least one major life activity, sometimes with life itself. Examples of neurological conditions, which tend to be the most common when one is electrosensitive, include any of the following: vertigo, severe headache, cognitive impairment, disorientation, or inability to stay awake or inability to sleep.

Many EHS individuals frequently cannot function safely. People with heart conditions may have arrhythmia, chest pain, and some people have shock reactions. Shock reactions can involve the immune system and the central nervous system, and they can include anaphylaxis/inability to breathe which is obviously a life-threatening condition. Anaphylaxis is the immune system's overreaction to exposure to an allergen. RF radiation can trigger an allergic reaction response in some sensitive individuals. The blood pressure drops suddenly and the airways narrow, blocking breathing. In the milder form, a blood pressure drop may cause somebody to pass out. Each time there is a re-exposure to the same external agent, most often the body has a more pronounced reaction. Everything I just described is a disability.

Reasonable accommodations are required under the ADA, and it seems it would be "reasonable" for the county to ask the carrier to move to a different monopole or a different location further away from the house of the affected individual. It is not denying coverage, but it is meeting the needs of the residents as well as facilitating mandated telecommunications.

With severe cases of sensitivity or life-threatening illness, perhaps moving the tower away from the carrier's initial preferred location to an alternate one further away from a critically ill person's home could be one remedy. An additional remedy could be shielding for specific portions of that home, depending upon what was deemed medically necessary.

In the Fay School case the defendant, the Fay School, argued that EHS was preempted because of Section 704. Electrosensitivity or electro-hypersensitivity (EHS) is considered to be a phenomenon of reaction to non-thermal effects, and the FCC has in fact declined to rule on those or regulate nonthermal effects because they choose to ignore them in a previous case, *Cellular Phone Taskforce v F.C.C.*

In my meetings with zoning staff members I became aware that shielding against RF radiation was at least discussed, and telecom representatives have claimed that shielding would be preempted under Section 704. I think it is worth taking a look at the District judges ruling in pretrial motions under *A. Jurisdiction* [page 15].

> Defendants assert that all of Plaintiffs' claims fail for lack of jurisdiction because they are preempted by the exclusive jurisdiction of the Federal Communications Commission

("FCC"). Specifically, Defendants claim that the heart of this case is whether or not electromagnetic radiation in the radio frequency portion of the spectrum ("RF") are the cause of harm to Plaintiff G, and argue that, as Congress has tasked the FCC with establishing safe limits for such signal strengths, the issue before the Court lies within the exclusive domain of FCC rule making, and is not subject to review by District Courts. The Defendants highlight that other courts have consistently denied challenges to the FCC's safety limit, and further argue that even if the Plaintiffs don't directly challenge the FCC limits, their suit is a collateral attack on FCC guidelines.

Congress created the FCC to regulate "communication by wire and radio so as to make available, so far as possible, to all the people of the United States, without discrimination ... wire and radio communication service with adequate facilities at reasonable charges, for the purpose of the national defense, for the purpose of promoting safety of life and property through the use of wire and radio communications, and for the purpose of securing a more effective execution of this policy by centralizing authority...." 47 U.S.C. §151. However, with respect to low level RF impact on rare individuals who might be hypersensitive to RF radiation, as clarified in *Cellular Phone Taskforce*, the FCC found it "impracticable" to "evaluate the significance of studies purporting to show biological effects," and that this was "especially true for such controversial issues as non-thermal effects and whether certain individuals might be 'hypersensitive' or 'electrosensitive.'" *Cellular Phone Taskforce v. F.C.C.*,205 F.3d 82, 90 (2d Cir. 2000) (quoting *Procedures for Reviewing Requests for Relief from State and Local Regulations Pursuant to Section 332(c)(7)(B)(v) of the Communications Act of 1934*, 12 F.C.C. Rcd. 13494, at 31, 1997 WL 522796 (1997)). The Court went on to note that "[t]he FCC concluded that requiring exposure to be kept as low as reasonably achievable in the face of scientific uncertainty would be inconsistent with its mandate to balance between the need to protect the public and workers from exposure to potentially harmful RF electromagnetic fields and the requirement that industry be allowed to provide telecommunications services to the public in the most efficient and practical manner possible." *Cellular Phone Taskforce*, 205 F.3d at 92 (internal quotations omitted). The FCC thus *considered* risks to those with unusual sensitivity to electromagnetic radiation in the regulated spectrum and declined to craft regulation for such matters based on a lack of scientific consensus. Rather than precluding the possibility that a few individuals might be particularly sensitive to RF emissions below the established threshold, the FCC actually leaves the door open on this issue.

Judge Hillman's following peanut butter analogy illustrates his point that the FCC's regulatory powers were not attacked by the Wi-Fi lawsuit, and I believe the same logic could be applied to San Diego County's request for accommodation of EHS individuals, those who experience safety issues in the presence of RF radiation, and the request for shielding for sensitive individuals in at least some public places and possibly in some homes. [Page 16]

Defendants' argument that this suit represents an illegitimate collateral attack on the FCC's regulatory powers is without merit. When a plaintiff seeks accommodation under the ADA for an unusual sensitivity to RF, they no more attack the FCC's general

> regulation of RF than a person seeking an accommodation for a peanut allergy attacks or undermines the FDA's general powers to regulate the peanut butter industry.

Judge Hillman points out what could be called an inconsistency in the defendant's argument that the ADA should not apply, when in fact the Americans with Disabilities Act is cited in the Telecommunications Act of 1996 in an attempt to provide access by persons with disabilities to telecommunication equipment. [Page 17]

> Defendants also assert that the claim premised on the Americans with Disabilities Act is preempted by the Telecommunications Act of 1996 ("TCA"), specifically 47 U.S.C. § 255(f). This provision states that "[n]othing in this section shall be construed to authorize any private right of action to enforce any requirement *of this section* or any regulation thereunder. The Commission shall have exclusive jurisdiction with respect to any complaint *under this section.*" 47 U.S.C. § 255(f) (emphasis added). However, Section 255, entitled "Access by persons with disabilities," is clearly directed toward telecommunications providers and manufacturers of telecommunications equipment, and mandates that these entities ensure that equipment and services are "accessible" to disabled individuals. Thus, the provision Defendants cite is inapposite here.

[Page 17]

> Moreover, the TCA contains explicit language that narrows the reach of the statute. Section 414 provides that "nothing in this chapter contained shall in any way abridge or alter the remedies now existing at common law or by statute, but the provisions of this chapter are in addition to such remedies," which indicates that Congress intended that the rest of Chapter 5 of Title 47 would not abrogate provisions of other federal statutes.
>
> Finally, Defendants contend the Court should defer to the FCC under the doctrine of primary jurisdiction. The doctrine of primary jurisdiction, "informed by principles of deference to agency decision making, gives effect to the eminently sensible notion that 'in cases raising issues of fact not within the conventional experience of judges or cases requiring the exercise of administrative discretion, agencies created by Congress for regulating the subject matter should not be passed over.' " *Com. of Mass. v. Blackstone Valley Elec. Co.*, 67 F.3d 981, 992 (1st Cir. 1995) (quoting *United States v. Western Pacific Railroad Co.*, 352 U.S. 59, 64, 77 S. Ct. 161, 165 (1956)).In determining whether deference of a matter to an agency under primary jurisdiction doctrine is appropriate, the court considers
>
> > (1) whether the agency determination lies at the heart of the task assigned the agency by Congress; (2) whether agency expertise is required to unravel intricate, technical facts; and (3) whether, though perhaps not determinative, the agency determination would materially aid the court.
>
> *Blackstone*, 67 F.3d at 992.

> The safety or otherwise of RF radiation clearly does lie at the heart of the tasks assigned to FCC by Congress in 47 U.S.C. § 151,and it is likely true that FCC is better placed than this Court to determine the extent and nature of non-thermal effects of RF emissions to people generally, and to those who might be particularly sensitive to them. However, the FCC has previously decided that there was insufficient evidence to form a rule within their broad mandate to balance safety and commerce, and has, as yet, not updated that guidance. Moreover, given the balancing function assigned to the FCC under 47 U.S.C. § 151,the agency's determination will not materially aid the Court here, where the matter is not the regulation of technology, but the mitigation of the impact of technology on a very small subset of the population that may have an unusual affliction mediated by RF radiation.
>
> In considering the motion for summary judgment, the Court can avoid the need to evaluate the highly technical questions raised by the parties in great depth. As the Court provisionally accepts the expert opinion of Dr. Carpenter offered by the Plaintiff as to general causation, the Court thereby allows, for the sake of argument, that EHS is a genuine, albeit rare, affliction. Given that the FCC has declined to regulate RFs with respect to biological (non-thermal) effects, especially any impact to those that might be hypersensitive, the ADA provides a legitimate remedy to any unusual harm that might be caused to a small subset of individuals exposed to something that is generally, genuinely, and legitimately accepted as safe for the wider population. To be clear, this Court declines to determine whether or not Wi-Fi or other RF sources below the FCC energy safety threshold do or do not have deleterious impact on hypersensitive individuals. It suffices here for the Court to note that the FCC has acknowledged the possibility and controversy concerning EHS, and declined to regulate on that issue, while a qualified expert has testified that EHS is a real but rare condition. The Court accepts that it is *possible* that EHS is a genuine phenomenon and that, absent a technical determination to the contrary, or other clarification of the scope, nature, and impact of EHS in relation to regulated emissions by the FCC, that jurisdiction to consider this matter as a potential disability under the ADA is not preempted here.

District Judge Timothy S. Hillman is saying that because the FCC chooses to ignore non-thermal effects, they cannot on the one hand ignore them and on the other hand they are preempted. They cannot have it both ways, and the ADA provides a remedy, albeit a limited one in this increasingly wireless world. [Attachment B]
https://www.casewatch.net/civil/wifi/130_order_excluding_experts.pdf

I believe Judge Hillman's ruling would suggest the County can consider requiring shielding for individuals who are sensitive to non-thermal levels of RF radiation. Generally non-thermal is everything under 1000 µW/cm2. To give you an idea of how much radiation we are talking about, I would like to reference the firefighter study we did in 2004. I hired Peter Sierck of Environmental Testing and Technologies in Carlsbad to test the tower outside fire station on two separate occasions. Keeping in mind that we found brain damage in all six firefighters tested after a five-year exposure to this tower outside their station, it is important to note that Peter Sierck, one of the top measurements experts in the world, found the tower output to be 1/1000th of what the FCC allows on one occasion, and 1/500th of what the FCC allows on another.

Let's take that first measurement of 1/1000th of what the FCC allows. We know this was a powerful tower. We know it made all of these previously healthy firefighters symptomatic, some of them severely so. We know it caused cognitive impairment, delayed reaction time, and lack of impulse control functionally, and we know portions of the brains of all six firefighters tested appeared to sustain permanent damage.

Using the firefighters' cell tower to illustrate a point, I would like to show just how much power density there can be in this non-thermal range – a range which, according to Judge Hillman, you may apply the ADA to. I believe it is important to illustrate what it would take to reach that permissible limit established by the FCC. We are led to believe that anything under 1000 μW/cm2 is "safe". This illustration should give one pause.

To reach 1000 μW/cm2 imagine placing that fire station cell tower on the pitcher's mound in downtown San Diego's Petco Park. Now imagine adding 999 more cell towers filling the infield and the outfield, all of them emitting the same level of radiation as the tower in front of the fire station. If they are all activated simultaneously, the power density will reach 1000 μW/cm2. Everything below that is non-thermal. And everything below non-thermal is not preempted.

Thus the County can accommodate individuals who legitimately claim disability under the Americans with Disabilities Act. And according to the law, the County must.

FAIR HOUSING, ADA & THE REHABILITATION ACT

Both the Federal Fair Housing Act (FHA) and Title II of the Americans with Disabilities Act (ADA), impose an affirmative duty on local government to make reasonable accommodations (or exceptions) in their zoning laws and other land use regulations and practices when such accommodations "may be necessary to afford" a person with a disability "an equal opportunity to use and enjoy a dwelling". "City governments are required to make reasonable modifications to policies, practices, or procedures to prevent discrimination on the basis of disability. In addition, city governments may consider granting exceptions to the enforcement of certain laws as a form of reasonable modification." U.S. Dept. of Justice – www.ada.gov/comprob.pdf

"A public entity shall make reasonable modifications in policies, practices, or procedures when the modifications are necessary to avoid discrimination on the basis of disability, unless the public entity can demonstrate that making the modifications would fundamentally alter the nature of the service, program or activity." ADA, Title II - 28 C.F.R. § 35.130(b)(7).

State and Local Governments are required to ensure access to civil life by people with disabilities by a number of laws including: The Fair Housing Amendments Act of 1988, specifically, 42 U.S.C. 3604(f)(3)(A) & (B), Americans with Disabilities Act of 1990, Title II, 42 U.S.C. §§ 12131–12165, Section 504 of the Rehabilitation Act of 1973 and O.R.C. 4112.02(H)(18)(a) & (19). These laws exist to ensure that people with disabilities can take part in, and benefit from, the programs and services of State and local government.

RF RADIATION & ISSUES OF SAFETY

In addition to EHS, I am including three examples of other medical conditions causing a serious safety concern from the presence of RF radiation. All three examples are San Diego County residents; all three are examples of individuals who would qualify for ADA in the presence of cell towers:

- Vertigo: Person #1 is an adult female who has episodes of vertigo that have occurred only since a cell tower was placed near her property in 2005. Is one portion of her property where radiation is particularly high, this woman was descending some concrete steps and experienced vertigo which resulted in a fall, injuring her face and upper torso. Her face was so swollen she underwent a surgical procedure to relieve the pressure from a hematoma.

- Insomnia: Person #2 is an adult male who has resided in San Diego County for over a decade. He has been exposed to a cell tower near his condo during that time. Initially this gentleman had difficulty during which time he tried sleeping at friends' homes to see if could find a location in their home where "his brain would turn off". He finally has added shielding to his home which has reduced the level of radiation such that he is able to sleep for hours at a time, but this individual is chronically sleep deprived and has recognized that he is a danger to himself and to others if he drives more than very short distances. Because of his EHS resulting in chronic sleep deprivation he is unable to work, and he would describe his life as one more of survival than of living.

- Medical Metal: Person #3 is an adult female who had significant medical metal surgically implanted following a serious auto accident. She has metal in her jaws, her neck, and rods, plates, and screws along most of her spine. Most of the metal is titanium which is the least conductive of the medical metals, but there is some stainless steel and other metals, as well. Because she knew 5G was coming this individual purposefully went through a body scanner at a major airport that had the millimeter wave. She wanted to get a sense of how sensitive the metal in her body might be to this 5G millimeter wave. As she turned to exit the scanner, three guards blocked her way. She was quickly taken off to the side, a cursory exam was done, and that she was asked if she had medical metal. Person #3 asked to see the scanner results. The scanner, using the millimeter wave, detected heat (it was drawn to the medical metal) most significantly in her jaw and head, though various "heat squares" lit up throughout her body close to the location of the medical metal implants. Additionally, Person #3 was alerted to the safety hazards associated with her medical metal in the presence of microwave radiation when she stood in front of a microwave oven while heating water approximately ten years ago. She passed out as a result of a sudden blood pressure drop consistent with a variation of an allergic reaction, presumably to the microwave that was one foot in front of her head, and sustained a significant $2^{nd}/3^{rdo}$ burn on her leg where the boiling water soaked her clothing. She was hospitalized for three days.

These three examples present real people in San Diego County. These three are very likely the tip of the iceberg. Because I have been a stakeholder twice in the San Diego County cell tower ordinance creation, amendment, and discussions, I am hearing from people I have never met before. They are reaching out with their stories of becoming electrosensitive – EHS – in this

increasingly wireless world, and they are understandably concerned about how life may change in some unimaginable always when 5G is built out as per the directive from the FCC.

Sensitivity to radiation is truly a safety issue for many. I can address both issues – EHS and the threat to personal safety imposed by exposure to RF radiation.

I have been diagnosed with EHS. I underwent a functional MRI scan for the purposes of scientific discovery to see if my functional MRI, along with nine other subjects in the pilot study, showed abnormalities in our brains consistent with EHS. We all had overlapping brain abnormalities. The changes in my brain were not unremarkable. I have all the symptoms the firefighters described. I am what is known as a delayed reactor. I can be exposed to strong Wi-Fi or a cell tower, and not necessarily have an immediate reaction. Many times there is an approximately 30 – 45 minute delay in the onset of symptoms, and then symptoms may become severe and last for days following an exposure that took place over just a period of minutes.

When I gave the three real life examples of people with safety concerns related to RF exposure, vertigo, insomnia, and medical metal, I was writing in the latter case about myself. I was hit by truck 26 years ago, and have had over a dozen surgeries, most of the surgeries were corrective surgeries for my spine, and I am able to walk today because of the medical metal in me. Yet that medical metal makes me, in a sense, a walking antenna. So my exposure is greater than the person next to me who does not have the inherent electro-sensitivity, and who does not have medical metal in their body.

We are all different. We have all been through different experiences. We were born with different DNA and immune systems and central nervous systems. As a brief example, I know teachers who have taught in Wi-Fi schools who are fine eight years after Wi-Fi was introduced; yet I know other teachers who were fine in the beginning but several months into the experience of routers in the classroom and over 30 antenna radiating at the same time from children's tablets or computers, they reached their threshold and are no longer able to function in the classroom. Some have experienced cognitive impairment to the degree that they have difficulty functioning at home on a daily basis. Headaches are severe, their sleep is profoundly disrupted, and the social isolation created by the wireless world in which we live is devastating for previously high functioning individuals who were contributing to society.

This is happening to schoolchildren and young adults, as well. The level of exposure children have in today's world is untested and it makes them a massive unwitting experiment. In a sense, it is a collective guinea pig generation. According to Blue Cross Blue Shield in its report focusing on the 55 million millennial Americans that are commercially insured, there is a startling decline in the health of millennials as compared to their predecessors, Gen X. From their recent report:

> BCBS Health Index data underscores the urgency for the healthcare community to recognize that millennial Americans are experiencing double-digit increases in prevalence for eight of the top 10 health conditions. Additionally, millennials had significantly higher prevalence rates than did their Gen X counterparts at the same age. The health status of millennials will likely have substantial effects on the American economy over the next two decades—including workplace productivity and healthcare costs. BCBS is partnering with Moody's Analytics to forecast how the health of

millennials will impact the future economy, with results highlighted in an upcoming BCBS Health of America report.

There are likely multiple factors involved, yet this is the generation that has grown up in a wireless world. There are thousands of peer-reviewed studies connecting RF radiation we various disease processes, including cancer.

THE NEEDS OF TELECOM V. THE NEED TO BE HEALTHY

At some point we are going to have a collision – and perhaps we are in the midst of it at this very moment – of the rights of telecom to erect towers and transmit untested modulations of combined microwaves and millimeter waves next to children's bedroom windows versus the right of human beings to be healthy.

I go back to what I have said since we conducted a pilot study of California firefighters exposed to cell tower in front of their station in 2004. To find brain abnormalities and damage among all six men tested was daunting. When firefighters – the strongest of the strong among us – become the canaries in the coal mine, I can guarantee the entire population is adversely affected to varying degrees. Every individual's tipping point is an invisible line which may be crossed in one's lifetime, and it may not.

Yet if firefighters complain of neurological symptoms that are backed up by SPECT brain scans, and now report cancer clusters at various fire stations across the country, then we have a problem.

Chairwoman Jacob, we have a quietly injured and marginalized subset of the population of San Diego County suffering from the very same electrosensitivity that plagued the firefighters until the tower was eventually turned off in front of their station.

I am imploring you to help this community within the confines – the very limited confines – of the law. I believe what I am presenting to you and to the County planners is an opportunity to follow the law as described by Judge Hillman in the Fay School Wi-Fi case, and accommodate those who are currently suffering, while planning for accommodation of those who inevitably will suffer subsequent to the 5G build out, and let San Diego become a leader once again with its cell tower ordinance. We did this in 2002. We can do it again in 2019. We can set an example for the country, and this time San Diego County's example will be one of compassion for and inclusion of the disabled.

As we work to discuss the finer points of giving access to County facilities to those with EHS and other disabilities related to wireless, as well as appropriate zoning protection once people notice the County that they are indeed electrosensitive, we are faced with a tremendous problem. The industry is starting to build out 5G infrastructure, and once in place it will not be moved. People who deserve ADA accommodation are going to be left out in the cold, and we need to urgently update leases between the County and the carriers so that the carriers pay for necessary shielding, not the County. I believe you have some idea of the profits they reap.

To that end, I watched a May 9, 2019 hearing before the San Diego City Council in which a gentleman stood up and said that he had measured the power density in his bedroom because he awakened one morning to find four [5G] small cells outside his bedroom window. The measurement of RF radiation in his bedroom was the same as it was one foot from his microwave oven which detectably leaked. Councilmember Doug Austin listened with concern and, to paraphrase, said: "I know we are not supposed to talk about this but I'm going to talk about it. Will someone from T-Mobile please come up and answer some questions? This man does not want to get cooked."

The T-Mobile rep stood before the dais and said that T-Mobile would not be providing the shielding that this gentleman was asking for because it was not in the terms of the lease. The telecom representative did not say shielding could not be provided under any circumstances; she said it was not in the terms of the lease.

Therefore, I think it is urgent and imperative that San Diego lead the way in California to enact a moratorium on the deployment of 5G until we can get some of these absolutely crucial issues addressed.

ASK GOV. GAVIN NEWSOM FOR A MORATORIUM

I am imploring you as Chairwoman of San Diego Board of Supervisors to contact Gov. Newsom today and ask him to impose a moratorium on 5G in California. We need time and a concrete plan to accommodate those who are electrosensitive and those who will have safety issues as a result of the anticipated exponential increase in exposure to RF radiation with the placement 5G towers throughout our lives. We are not ready. We are marching to the rapid drumbeat imposed by the FCC and as a result we are leaving people behind. We are not a nation to dismiss the disabled. Yet that is precisely what is happening. Some municipality, some state has to stand up and say enough – STOP. We are leaving disabled people behind and that is not the county, not the state, not the nation we were intended to be. Let's get this figured out before we move forward with an unproven technology.

The state of California granted a health exemption to the firefighters for 5G towers on their stations in AB 57 and SB 649. That would have been the first ever health exemption in the country. Gov. Brown vetoed SB 649, which was the California version of what the FCC just mandated. When the firefighters go for a 5G exemption for their stations because they know they otherwise will not be able to serve the public with the mental acuity and the physical stamina that is required of First Responders, a message is being sent to leaders everywhere. Please hear them. They know what they're talking about. They are suffering, and so are many of us.

Please ask Gov. Newsom for a moratorium, and let's get this right.

5G is supposed to be about everything being better and faster. It is about this nation being first. Perhaps we will be the first to rush into a massive human catastrophe. Ask your fellow supervisors with they think 5G is for. I asked your staff. At first nobody said anything. Then someone said they thought it was for driverless cars. Do you hear people clamoring for driverless cars? Then someone else said they thought it was for faster downloads of videos. Have we become a nation that is so inpatient that we need to put cell towers in front of people's homes, schools, and businesses so that we can have faster downloads?

When talking to those who understand 5G behind the scenes, they talk about the money that is going to be made from selling the data that is collected from all of the consumers whose every activity is recorded by 5G chips in real time. The whole concept of our appliances talking to each other doesn't have to do with our convenience. It has to do with the data that is collected and sold to companies that will then market to us in a more precise way. Perhaps it is time to pause and ask if we want a healthy nation or a nation of consumers whose data is being collected while we watch videos that were downloaded rapidly as we sit in our driverless cars.

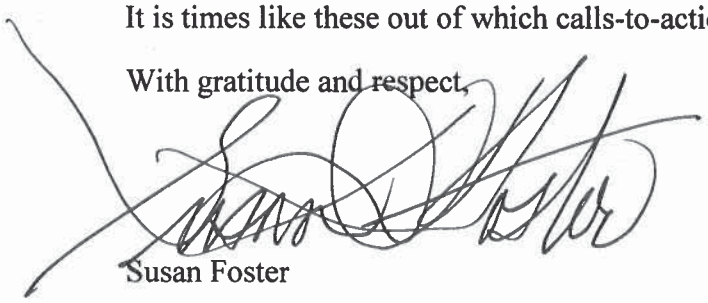
We don't talk about health because we are not allowed to talk about health because of Section 704 of the Telecommunications Act of 1996. It has been this way for 23 years. At the core of it this is one of the most un-American clauses in an act of Congress imaginable. It was intended to quiet people like me – and there are millions of us. We have been appropriately quiet. You will notice I have not once asked San Diego County to not site a tower based on health concerns. Even when I have written appeals for the firefighters, I have done so on safety grounds, not health grounds. I have followed the law. Today I am asking you to help those of us who are ill because you *must* allow telecom to have its way. You have no choice when it comes to the 5G mandate issued by the FCC. However, you *do* have a choice to help us.

We are ill, we do not deserve to live our lives this way, and we implore you for help. Perhaps it is time that Sec 704 is repealed and this country has the debate that it has been unable to have for 23 years. If I could have one wish this 4th of July, it would be that the health of this nation is given a higher priority than the collection of our data to be sold to companies intent on marketing to us.

I prize the health of my children and my grandchildren and the generations to come over the highly questionable benefits of an untested technology. We are on a direct collision course with the 5G mandate, we are not ready, and the residents of San Diego County implore you to speak for us. We need to pause, we need to be protected, and perhaps we need to reflect.

It is times like these out of which calls-to-action are born.

With gratitude and respect,



Susan Foster

Cc: Gov. Gavin Newsom
Supervisor Greg Cox, District 1
Supervisor Kristin Gaspar, District 3
Supervisor Nathan Fletcher, District 4
Supervisor Jim Desmond, District 5
Tara Lieberman, Environmental Planner
Eric Lardy, AICP, Planning & Development Services
Stephanie Neal, Environmental Planner

Attachment A

FCC 13-39

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Reassessment of Federal Communications Commission Radiofrequency Exposure Limits and Policies	)	ET Docket No. 13-84
	)	
Proposed Changes in the Commission's Rules Regarding Human Exposure to Radiofrequency Electromagnetic Fields	)	ET Docket No. 03-137

To: Office of the Secretary
Federal Communications Commission
Washington, DC 20554

Comment Filed by: Susan D. Foster, MSW
15957 Avenida Calma
Rancho Santa Fe, CA 92091
susan.foster04@gmail.com
858 756-3532

September 2, 2013

AFFIDAVIT OF Susan D. Foster, MSW

State of California]

San Diego County]

I, Susan D. Foster, MSW, attest that my statements are true to the best of my knowledge.

Comment round for FCC ET Docket No. 13-84 and ET Docket No. 03-137

1. My name is Susan D. Foster, MSW. My address is 15957 Avenida Calma, Rancho Santa Fe, CA 92091.

2. I am a medical writer and the organizer of a brain study of California firefighters exposed to RF radiation from a cell tower adjacent to their fire station of over 5 years.

3. In 2004 I organized a pilot study of California firefighters who worked up to ninety (90) hours per week in fire stations with cell towers in close proximity to the two (2) stations where the firefighters work, eat, and sleep. The men were experiencing profound neurological symptoms following activation of the towers in 1999.

4. The symptoms experienced by the firefighters, all of whom had passed rigorous physical and cognitive exams prior to being hired by the fire department, included but were not limited to the following: headaches, extreme fatigue, sleep disruption, anesthesia-like sleep where the men woke up for 911 calls "as if they were drugged", inability to sleep, depression, anxiety, unexplained anger, getting lost on 911 calls in the town they grew up in, a twenty (20) year medic forgetting basic CPR in the midst of resuscitating a coronary victim, immune-suppression manifest in frequent colds and flu-like symptoms.

5. The neurological testing and SPECT scans [single-photon emission computed tomography] of the brain were conducted by Gunnar Heuser, MD, PhD and J. Michael Uszler, MD. All six (6) firefighters were found to have brain abnormalities on SPECT scan. The doctors thought they would find areas of limited function in the brain based on the

symptomatology. Instead, they found a pervasive, hyper-excitability of the neurons which suggested the exposure to RF (microwave) radiation was causing the neurons to continually fire, without rest. RF radiation appeared to act as a constant stimulant even when the men were away from the station, and in repose. The SPECT scans were considered abnormal in all 6 firefighters.

6. Cognitive function, reaction time, and impulse control were measured objectively using T.O.V.A. testing [Test of Variables of Attention]. In all six (6) firefighters, impairment was found with cognitive function, reaction time and impulse control. Three (3) of the six (6) firefighters were captains. The captain on each shift is in charge of making life altering decisions for all firefighters and potential victims. They order firefighters into a burning building, and conversely, they order them out before a roof may collapse, for example. Impairment of all three critical functions could cost firefighters and the community they serve either life or limb.

7. The testing was conducted in 2004. The cell towers are in place at the two (2) fire stations where the test subjects work for the duration of a twenty-two (22) year lease. The men we tested have remained at the stations as this is the only work they know in the only community they have ever lived in. One (1) of the six (6) men tested did move to another department after his wife gave birth to to a boy who was diagnosed with Autism at age 2. This was the first live birth experienced by the "firefighter family" at this department since activation of the tower three (3) years earlier.

8. I have followed up with the firefighters who report continued symptoms as described in paragraph 4. Additionally, all firefighters report profound memory loss.

9. Two (2) of the firefighters, men we did not test in the pilot study but men who were exposed to RF radiation from the cell tower since their installation and activation in 1999, have gone out on psychiatric disability. This is almost unheard of among firefighters. The diagnosis was Post Traumatic Stress Disorder for one firefighter; he went out on an emergency run, and simply stopped talking after he returned to the station. The second

firefighter suffered an apparent break with reality. This occurred in the fire station when he returned following a short term disability for an unrelated injury. This break with reality was followed by an abrupt collapse and loss of consciousness. Because two (2) women have suffered strokes while in the fire station with the towers fully activated, Vascular Spasm Stroke (VSS) is suspected as a possible cause by Dr. Heuser and myself of having caused not only the strokes, but it is suspected in the potentially inaccurate diagnoses of the two (2) "psychiatric" cases among the firefighters. If not treated with rest and supplemental oxygen, it is possible for some VSS patients to have difficulty regaining speech and full cognitive abilities. This may be a case of misdiagnosis by the treating physicians who were unfamiliar with the potential of cell towers to create thermal effects well under the FCC limit of 1,000 uW/cm2, thus heating blood in the brain and inducing VSS. Further study of these men is imperative.

10. What is particularly germane to the critical decisions the FCC is currently facing regarding RF safety guidelines is the fact the FCC currently allows 1,000 microwatts per centimeter squared (uW/cm2) as an emission standard from cell towers. Yet all the symptoms attributed by the firefighters, as well as measurable brain and central nervous system abnormalities described above, occurred within close proximity to a cell tower measured at between 1 - 2 uW/cm2 by Peter Sierck, BBEC, CEO of Environmental Testing & Technology in Encinitas, CA. Thus the emissions from towers were measured at approximately 1/1000th to 1/500th of the FCC's allowable limit. "Hot spots" of reflected radiation were measured at 15 and 30 uW/cm2, yet these "hot spots" were still a fraction of what the FCC allows. Therefore, **I strongly suggest the FCC is not basing its standards on biological effects by taking into consideration non-thermal effects, but rather physics with respect to the belief only thermal effects can be deleterious.** The FCC must recognized the principles of physics do not protect the brains and central nervous systems of the strongest among us, our firefighters.

11. The failure to protect our populations based on biological effects of exposure to RF (microwave) radiation at non-thermal levels is an inherent shortcoming of the current FCC policy with respect to cell tower emissions and cell phone absorption. The adverse biological

impact of these exposures are grossly underestimated. The FCC does not have independent science that can justify the massive exposure to RF radiation that currently exists from cell towers and cell phones. The story told by our small pilot study of firefighters in California should be a warning with respect to the current failure to recognize **harmful neurological impact of non-thermal levels of RF radiation.**

12. Based on the neurological abnormalities Dr. Heuser and I found in the firefighters, including hyper-excitability of the neurons which can results in cell death and consequent neuro-degenerative diseases such as Alzheimer's, Parkinson's Disease and ALS, I urge the FCC to reflect on the gravity of the decision facing you now, and I implore all Commissioners to reduce the allowable level of RF radiation immediately, and to not only recognize the adverse health effects from non-thermal levels of RF radiation, but to actively and aggressively protect and education the general public through policy change and PSAs.

13. Finally, the FCC is not a health agency, yet it is entrusted with making decisions that impact the health of every American, including the unborn and those who cannot – through inability or lack of knowledge of the issues and dangers at hand – speak for themselves. Many consumers are encouraged through industry advertising to believe that their children will be disadvantaged if they do not have the latest wireless technology. Given the most recent culling of science in the BioInitiative Report 2012, this reckless promotion without any proof of safety puts them and their progeny at risk for neurological, immunological and reproductive harm. Furthermore, the "revolving door"-culture between the FCC and the telecommunications industry works against the best interest of consumers' health and safety. Both the FCC and the industry reach for a common refrain to hang on to their egregiously high regulatory limits which the FCC tries to pass off as "safety limits", but clearly they are not. That refrain tells the public time and again that "there is a lack of scientific consensus about the adverse health effects" at exposure levels at or below the existing FCC limits. **No, there is not a true lack of consensus.** There is a flagrant disregard by the FCC for excellent, peer review science showing adverse health effects at less than 1% of what the FCC allows. Even if this were not the case, when have we determined everyone must be on the same side, the same page, before precautionary approaches are implemented? Did we

wait for this 100% accord on the science regarding DDT? No, if we had done that, Dow Chemical would never have agreed their product was dangerous and the world would be a less safe place than it is now. The same argument can be used for tobacco. It is past time for the FCC to lean toward the side of protecting human life rather than telecommunications industry profits. I contend a true Precautionary Approach would be both efficient and practical. It would protect human life, the quality of those lives, prevent disease, enhance the opportunity for human potential by not insidiously eroding our greatest natural resource – the human brain, and it would keep health care costs down. I implore the FCC to recognize that six (6) out of six (6) SPECT brain scans were abnormal for the firefighter subjects, and they are the strongest of the strong among us.

Respectfully submitted by

Susan D. Foster, MSW
15957 Avenida Calma
Rancho Santa Fe, CA 92091
September 2, 2013

Susan D. Foster, MSW

(Electronically submitted)

Attachment B

UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

G, a 12-year-old minor suing by a fictitious name for privacy reasons, MOTHER, and FATHER, suing under fictitious names to protect the identity and privacy of G, their minor child,	**CIVIL ACTION**
Plaintiffs,	**NO. 4:15-CV-40116-TSH**
v.	
THE FAY SCHOOL, INC. (by and through its Board of Trustees) and ROBERT J. GUSTAVSON, JR.	
Defendants.	

MEMORANDUM AND ORDER ON DEFENDANTS' MOTION TO EXCLUDE PLAINTIFFS' EXPERTS (Docket No. 58) AND DEFENDANTS' MOTION FOR SUMMARY JUDGMENT (Docket No. 95)

September 29, 2017

HILLMAN, D.J.

Plaintiffs "G," a 12-year old minor suing by a fictitious name for privacy reasons, and G's parents brought the present action against defendants The Fay School, Inc. ("Fay School" or "School") and Robert Gustavson, its Head of School ("Gustavson") after the Defendants' refused to remove Wi-Fi from his classrooms. Plaintiff G, a former student of the Fay School, alleges that he suffers from Electromagnetic Hypersensitivity Syndrome, and experiences a spectrum of symptoms, including headaches and nosebleeds, because of the Wi-Fi at the School. Plaintiffs claim that the School's refusal to take down the Wi-Fi in G's classrooms, and replace it with Ethernet access, amounts to a failure to make a reasonable accommodation in violation of the

Americans with Disabilities Act, 42 U.S.C. §12101 *et seq.* ("ADA") (Count I). Plaintiffs also claim that the Fay School retaliated against them in violation of the ADA (Count II), and further assert common law claims for breach of contract (Count III), misrepresentation (Count IV), and negligence (Count V) against the Fay School and Gustavson. Defendants move to exclude several of the Plaintiffs' expert witnesses, and for summary judgment on all Counts. For the reasons set forth below, the Defendants' motion to exclude experts (Docket No. 58) is ***granted-in-part and denied-in-part***, and Defendants' motion for summary judgment (Docket No. 95) is ***granted-in-part and denied-in-part***.

Background

The Fay School is an independent private school in Southborough, MA, for children in pre-K through 9th grades. Plaintiff G attended the Fay School from September 2009 through January 2016 (midway through his 7th grade year). The Fay School's curriculum is, in large part, delivered electronically, with each student equipped with a laptop that connects to the School's network using Wi-Fi.

At least as early as October 2012, G's parents came to believe that Wi-Fi was generally harmful, and expressed their concerns to the School and other parents. By May 2014, after discussing the issue with G's parents, the School had decided that there was insufficient evidence to require any mitigation of their Wi-Fi system. Around the same time, G's mother took G to his primary care provider complaining that her son suffered from Wi-Fi-related symptoms, including headaches, nosebleeds, and chest tightness, and subsequently sought the advice of specialists. The parents continued to advocate against Wi-Fi within the School community, to which the School administration objected.

In November 2014, G's parents formally asserted that G had a disability known as Electromagnetic Hypersensitivity Syndrome ("EHS"), and requested accommodation, including reducing the level of radio frequency emissions ("RF") at the School. The School verified that it was in compliance with the Federal Communications Commission's Wi-Fi safety limits, but declined to recognize G's EHS, requesting additional medical evidence. The parents and the School continued to dispute the steps necessary to establish the medical evidence needed to support an EHS diagnosis. Plaintiffs filed the present action on August 12, 2015.

From mid-2015, G's parents and the School participated in negotiation concerning mitigation of G's Wi-Fi exposure. In an attempt to mitigate G's Wi-Fi exposure, the School arranged for G to access curriculum using an Ethernet cable, and have at least an 8 ft. separation from Wi-Fi emission sources, principally other laptops in the classroom. In November 2015, G's parents advised that G continued to suffer symptoms, despite the reductions in his Wi-Fi exposure achieved by the mitigations, and demanded further accommodation.

G took leave from the School on December 1, 2015, and on December 18, 2015, the parents requested that the School provide only wired connections to all students in G's classrooms, or provide G with a Wi-Fi-free classroom, and rotate G's classes into that room. The School formally declined this request as impractical on January 4, 2016. G's parents withdrew him from the School on January 13, 2016.

The Plaintiffs noted several sequelae to their dispute with the School that they have alleged were retaliatory. During G's Fall 2015 medical leave (due to headaches), the School declined to allow G's classes to be recorded, or for him to listen to classes remotely. The Fay School also declined to allow G to participate in school athletics during the period that he was on leave, studying away from the School. The School omitted G's brother's name from the written program

of an 8th grade graduation dinner, and did not recognize him by name at the dinner, causing distress to the child. When it emerged that G had been carrying a dosimeter at the School to measure RF emissions, the School threatened to expel him on the grounds that carrying the device breached the terms of the Fay School student handbook ("Handbook"). In discovery, it emerged that some of the Fay School staff derided the parents' claims concerning Wi-Fi, and suggested that the school ignore or otherwise frustrate their claims. For example, , a member of the Fay School staff sent an email to teachers entitled "Rabbit Ears and Aluminum Foil," that instructed teachers not to respond to emails from G's mother about Wi-Fi issues. In a reply email, one of the teachers wrote back, "Blahahahahahahahaha!" Docket No. 62-7. The President of Fay's Board of Trustees sent an email to other Trustees accusing G's parents of harassment, and claiming that G's mother misrepresented herself, a claim that G's parents have suggested the Headmaster knew to be false but failed to correct. The Plaintiffs assert that, as a result of such misrepresentations, the Parents' Association removed G's mother from her long-standing committee service.

The School publishes a Handbook for each academic year that sets out, *inter alia*, standards of behavior in the school community, as well as making declaratory statements about the School's commitments to civility, diversity and equality of opportunity. The Handbook provides that

> [t]he School keeps "as a 'core value…the wellness of mind, body and spirit of each student;'" "will provide each student with a 'safe and supportive environment that recognizes, respects, and celebrates the full range of human diversity;'" "will help when students are in physical need;" "will 'recognize and celebrate…disabilities;'" "affirms the necessity of respect for individual differences;" the School maintains an environment where "all community members feel supported;" and, the School affords its students "all rights, privileges, programs, and activities generally accorded or made available to students at Fay School. The School does not discriminate on the basis of such factors in the administration of its educational policies, employment policies…or other school administered policies." The Handbook also states that "[h]onesty, respect, responsibility, empathy and kindness inform our conduct" and that "[t]he development of manners, civility, and integrity are hallmarks of our school."

Docket No. 121, p. 13. Plaintiffs also highlight that the Handbook states

> Fay School promotes and affirms the concept of human dignity. We expect all members of the community to respect the rights of others and to behave appropriately at all times. Fay recognizes and celebrates the diversity of our school community regarding racial, cultural, ethnic and religious backgrounds, gender identity, disability, sexual orientation...and the school affirms the necessity of respect for individual differences....

Docket No. 121, p. 13.

Plaintiffs filed the present action on August 12, 2015. Defendants now move to exclude the Plaintiffs' expert witnesses, and for summary judgment on all Counts.

Motion to Exclude Plaintiffs' Experts

Defendants move to exclude the reports, opinions, and testimony of five of Plaintiffs' disclosed expert witnesses: David Carpenter, M.D. ("Dr. Carpenter"), Jeanne Hubbuch, M.D. ("Dr. Hubbuch"), Martha Herbert, M.D. ("Dr. Herbert"), Karl Maret, M.D., Ph.D. ("Dr. Maret"), and Robert Bowdoin ("Mr. Bowdoin").

Per Federal Rule of Evidence 702, a witness who is qualified as an expert may testify in the form of an opinion or otherwise provided that

> (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
> (b) the testimony is based on sufficient facts or data;
> (c) the testimony is the product of reliable principles and methods; and
> (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Evid. 702. In applying Rule 702, the court qualifies expert testimony by "ensuring that [it] ... both rests on a reliable foundation and is relevant to the task at hand." *Daubert v. Merrell Dow Pharm.*, 509 U.S. 579, 597, 113 S.Ct. 2786 (1993). In seeking to introduce expert

testimony, the plaintiff has the burden of establishing its reliability. *See U.S. ex rel. Loughren v. UnumProvident Corp.*, 604 F. Supp. 2d 259, 264 (D. Mass. 2009).

A. David Carpenter, M.D.

Plaintiffs provided the expert testimony of Dr. Carpenter to prove general causation – that EHS is a real, albeit rare, phenomenon. Dr. Carpenter received his medical degrees from Harvard Medical School, is the Director of the Institute for Health and the Environment at the University of Albany, and a Professor of Environmental Health Sciences within the School of Public Health. He is a researcher and educator on the subject of environmental causes of human disease, and his education and experience support his opinions as set forth in his expert Statement. Docket No. 59-3.

Dr. Carpenter generally opines that exposure to electromagnetic fields ("EMFs") can, in some people, cause EHS, the symptoms of which are consistent with those reported by G. Dr. Carpenter also suggests that it is biologically plausible that the symptoms described could be caused by the known biological effects of EMFs. Defendants move to exclude Dr. Carpenter's testimony on the grounds that his opinions are not based on reliable methods of assessing scientific evidence, and are outside the consensus of the relevant scientific community.

If an expert's testimony is within "the range where experts might reasonably differ," the jury, not the trial court, should be the one to "decide among the conflicting views of different experts." *United States v. Zolot*, 968 F. Supp. 2d 411, 417 (D. Mass. 2013). As the First Circuit instructed in *Ruiz-Troche v. Pepsi Cola of Puerto Rico Bottling Co.*, 161 F.3d 77, 85 (1st Cir. 1998),

> Daubert does not require that a party who proffers expert testimony carry the burden of proving to the judge that the expert's assessment of the situation is

> correct. As long as an expert's scientific testimony rests upon 'good grounds, based on what is known,' it should be tested by the adversary process—competing expert testimony and active cross-examination—rather than excluded from jurors' scrutiny for fear that they will not grasp its complexities or satisfactorily weigh its inadequacies. In short, Daubert neither requires nor empowers trial courts to determine which of several competing scientific theories has the best provenance. It demands only that the proponent of the evidence show that the expert's conclusion has been arrived at in a scientifically sound and methodologically reliable fashion.

Ruiz-Troche, 161 F.3d at 85 (citing *Daubert*, 509 U.S. at 590, 596 113 S.Ct. 2786; *Kannankeril v. Terminix Int'l, Inc.*, 128 F.3d 802, 806 (3d Cir.1997); *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 744 (3d Cir.1994)).

The Defendants most pointed attack on the admissibility of Dr. Carpenter's opinion is that it is not based on reliable methods of scientific evidence. Defendants note that Dr. Carpenter credits studies and parts of studies that support the hypothesis that EHS exists, and discards or rejects studies or parts of studies that do not confirm this. Defendants refer to this as "cherry picking," and evidence that Dr. Carpenter lacks objectivity, and is merely an advocate or "hired gun." However, if the Court looks at the heart of Dr. Carpenter's opinion – EHS is a rare but real phenomenon – then the fact that a few studies confirm that some individuals manifest EHS while most studies do not, is entirely consistent with his opinion. Rather than "cherry picking," Dr. Carpenter offers detailed methodological criticism of certain studies by providing an expert opinion as to why they might be unable to detect EHS. Such differences of opinion between experts need to be weighed by fact finders.

Regarding Defendants' arguments that Dr. Carpenter's opinions are outside the consensus of the relevant scientific community, the Court notes that it does not exclude a minority view merely because it is a minority view. To the extent Defendants argue that Dr. Carpenter's opinion concerning "no safe threshold" cannot be validated, the "no safe threshold" argument is

not essential to the testimony that he offers. Dr. Carpenter's education and Considering Dr. Carpenter's report and testimony as a whole, the Court finds it meets reliability requirements under a Rule 702 analysis. Accordingly, Defendants motion to exclude him is denied.

B. Jeanne Hubbuch, M.D.

Plaintiffs offer Dr. Hubbuch's opinion as evidence of specific causation. It is her opinion, "to a reasonable degree of medical certainty," that the Fay School's Wi-Fi causes EHS in G. Docket No. 59-19. Dr. Hubbuch uses the traditional method of "differential diagnosis" to conclude that G suffers from EHS, and then makes the extraordinary leap that this can only be attributed to the Fay School's Wi-Fi.

In *Milward v. Rust-Oleum Corp.*, 820 F.3d 469, 476 (1st Cir. 2016), the First Circuit noted that plaintiffs were "certainly correct that a differential diagnosis can be a reliable method of medical diagnosis," but that the plaintiffs "still must show that the steps taken as part of that analysis—the "ruling out" and the "ruling in" of causes—were accomplished utilizing scientifically valid methods." *Milward*, 820 F.3d at 476 (internal citations omitted). Differential diagnosis proceeds by assembling possible causes for the symptom or symptoms, and conducting inquiries designed to provide evidence that possible causes are more or less likely, until one possibility emerges as a reasonable conclusion as to the actual cause, essentially a "process of elimination." *Id.* at 472. In a context where an incident of the plaintiff's condition is frequently found to occur for no known cause (idiopathic etiology), the First Circuit has asked experts to provide a reliable means to exclude an idiopathic cause prior to concluding that a specific cause is acting, where "the record does not contain a scientifically reliable basis to 'rule in' [that cause]." *Id.* at 476. Thus, in *Milward*, the Court found that failing to fully accommodate a major

possibility on a list of possible causes renders a process of elimination from that list inherently unreliable. *Id.*

In the instant case, Dr. Hubbuch fails to articulate a scientifically reliable basis linking the constellation of symptoms reported by G with EHS in order to "rule in" that particular diagnosis. She also neglects to account for the possibility of an idiopathic etiology, which is ironic as "idiopathic" was included in the actual diagnostic code she assigned to G.[1] Reviewing all the facts on the record, the Court sees a pattern of symptoms associated with G being at the Fay School. While the Fay School has a Wi-Fi system, that is not the totality of the environmental factors that might impact the child at the School. Despite the fact that the School is identified by the Plaintiffs as the geographical nexus of G's affliction, Dr. Hubbuch failed to document or testify to her efforts to identify and exclude other environmental factors at the School that might cause or contribute to G's symptoms. Dr. Hubbuch's opinion and hearing testimony fail to establish that she considered any environmental factor at the school except Wi-Fi. Rather, as the Plaintiffs themselves state, "Dr. Hubbuch weaves the circumstantial facts with her medical opinion in a way that could persuade a rational juror." Docket No. 122 at p. 32. However, the "weaving-in" of circumstantial evidence is simply a façade for her unsupported conclusion. Given that Dr. Hubbuch's differential was based on her presumptive diagnosis of an environmental cause, the Court finds that her subsequent use of the differential diagnosis method failed to reasonably survey other potential causes of G's symptoms at the geographic nexus she identified. Thus, her opinion is excluded under Fed. R. Evid. 702(d).

[1] Dr. Hubbuch provided a letter to G's mother addressed "To Whom it May Concern" on April 14, 2015, which stated that G had been "diagnosed with Electromagnetic Hypersensitivity," and identified the corresponding diagnostic code as "Idiopathic Environmental Intolerance." Docket No. 97-44.

In addition to the unreliable and inconsistent application of her diagnostic method to conclude that G's suffered from EHS, Dr. Hubbuch's further conclusion that the EHS was caused by Wi-Fi with "reasonable medical certainty" is based on insufficient data. Dr. Hubbuch's opinion adds nothing to G's mother's assertions that the Fay School's Wi-Fi harmed her son. She presents nothing that would allow any reasonable arbiter of the facts to distinguish between the possibility that Fay's Wi-Fi causes or exacerbates G's EHS, and the alternate hypothesis that some other factor at the school is responsible for his symptoms. Those facts and data are simply not present in the record here, and thus Dr. Hubbuch's only argument is to assign causation based solely on correlative data. Because her conclusions cannot be supported by the facts and data she is working from, Dr. Hubbuch's testimony lacks sufficient facts or data (nothing that actually links G's symptoms to Fay's Wi-Fi), and thus falls short under Rule 702(b).

As previously discussed, because the principles and method of differential diagnosis were not reliably applied, Dr. Hubbuch's testimony falls short on Rule 702(d), and thus ultimately under 702(a) as well, especially given the misleadingly forceful wording of her conclusions. Any of these would suffice to exclude Dr. Hubbuch's testimony. Accordingly, this Court finds that Dr. Hubbuch's opinion does not rest on a reliable foundation, and Defendant's motion to exclude her is granted.

C. Martha Herbert, M.D.

Dr. Herbert is offered as an expert as to specific causation. Specifically, her opinion outlines why she finds G's EHS diagnosis to be appropriate and medically correct. She notes the temporal association of the symptoms as reported by G's mother with G's presence at the Fay School, and

opines that the symptoms, as reported, are consistent with those reported for some other patients believed to be afflicted by EHS. Dr. Herbert's qualification as an expert in this case is based on a Rule 702 analysis of her March 12, 2016 expert opinion disclosure (Docket No. 59-20), as she did not testify in the *Daubert* hearing in this case.

The Defendants have faulted Dr. Herbert's qualification as an expert on several grounds. First, they argue that Dr. Herbert is not qualified to diagnose G with EHS. This Court disagrees. Accepting, *arguendo*, that EHS is a real but rare phenomenon, the very existence of which is doubted by many, it is unreasonable to expect the Plaintiffs to produce an expert who is specifically qualified as an EHS diagnostician. Dr. Herbert's education and experience as a pediatric neurologist and neuroscientist at Massachusetts General Hospital, and Assistant Professor in the Department of Neurology at Harvard Medical School, is sufficient to support her opinion as documented in the Expert Opinion Disclosure. Docket No. 59-20.

Defendants further argue that Dr. Herbert's application of the differential diagnosis is unreliable because she considered factors not deemed relevant by other physicians, and conflated correlation with causation in concluding that the School's Wi-Fi caused G's EHS. Again, the Court disagrees. While experts may differ on how Dr. Herbert has used the method, she does not appear to have misused it. Dr. Herbert's report is carefully framed and, in stark contrast to Dr. Hubbuch's report and testimony discussed above, does not present her conclusions as certainties unsupported by argument and data. Specifically, it is noteworthy that Dr. Herbert is careful to describe that other patients diagnosed with EHS have reported a wide range of symptoms, ranging from "none" to "other symptoms," and confines herself to concluding that G's reported symptoms are consistent with some of the symptoms on this very broad list. Dr. Herbert outlines a plausible mechanism ("oxidative stress") hitherto not coherently articulated anywhere in the case, while

being careful to note that many other environmental factors could cause the observed oxidative stress, thus leaving the door open to other explanations. The Court also notes that Dr. Herbert draws attention to a possible mitigation of EMF-induced oxidative stress (other than decreasing exposure), which she supports with four literature citations.

As for the claim that Dr. Herbert conflates temporal correlation with actual causation (the *post hoc, ergo propter hoc* fallacy), this is simply untrue. Dr. Herbert carefully notes the temporal correlation and that the symptom reporting is based on the mother's account, and reaches a tentative conclusion that an EHS diagnosis is correct in the absence of another explanation. This conspicuously lacks the hyperbolic "medical certainty" asserted by Dr. Hubbuch. The Defendants go on to assert that Dr. Herbert lacks sufficient facts and data to support her opinion, but for the same reasons, this argument is rejected. Dr. Herbert maintains a thread of argument from facts and data to her conclusions that is plausible and scientific.

Finally, the Defendants argue that Dr. Herbert's opinion should be excluded because it is cumulative to Dr. Hubbuch's opinion, and solely based on tests and evaluations performed by others. If the latter assertion was true, which it is not, this is not a proper grounds to exclude expert opinion. Rule 702 simply asks that the expert offer a useful opinion based on a reliable method, used properly, and based in sufficient data. An expert need not generate the data with her own hands. Even if this Court had not excluded Dr. Hubbuch's testimony, Dr. Herbert's opinion is not simply cumulative: it brings mechanistic explanations, knowledge of the relevant literature, and a clarity of analysis that, however much the Defendants and their experts disagree with, is useful to the Court in understanding the controversies at the heart of this case. The Defendants' motion to exclude Dr. Herbert as an expert is denied.

D. Karl Maret, M.D., Ph.D.

Dr. Maret if offered as an expert on the workings of a dosimeter. The workings of a dosimeter are not in dispute. The Defendants concede that G was exposed to Wi-Fi, and that in principle, the exposure can be quantitated by a dosimeter. Dr. Maret is technically well qualified to give the opinion he offers. However, because he cannot substantiate how the dosimeter was used in this case, or the correlation of dosimeter readings with location and other events, his testimony will not be helpful in understanding evidence or a fact at issue here, and thus his qualification as an expert in this case fails under Rule 702(a), and his testimony is excluded.

E. Robert Bowdoin

Mr. Bowdoin is an electrician offered to give expert testimony on the potential for rewiring one or more classrooms as part of a proposed accommodation aimed at eliminating Wi-Fi exposure in one or more classrooms. The Defendants seek to exclude him because the portion of his testimony that relates to the potential for wiring one or more classrooms for Ethernet (in order to remove the necessity for Wi-Fi) is not in dispute, while any portions of his testimony that go beyond the potential for physical rewiring to address the impact to curriculum delivery or compatibility with the Fay School's current equipment is either beyond his expertise, or would be based on insufficient facts and data. The Court concurs that Mr. Bowdoin would be unable to reliably assess the impact to the classroom, and does not appear to have considered that many of the School's laptops are not designed to use Ethernet. The testimony Mr. Bowdoin is qualified to offer will not be helpful to the Court or a jury, and his testimony is therefore excluded under Rule 702(a).

Motion for Summary Judgment

Rule 56 of the Federal Rules of Civil Procedure provides that the court shall grant summary judgment if the moving party shows, based on the materials in the record, "that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." A factual dispute precludes summary judgment if it is both "genuine" and "material." *See Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247-48 (1986). For a fact to be "genuine," the "evidence relevant to the issue, viewed in the light most flattering to the party opposing the motion, must be sufficiently open-ended to permit a rational factfinder to resolve the issue in favor of either side." *National Amusements, Inc. v. Town of Dedham*, 43 F.3d 731, 735 (1st Cir. 1995) (citation omitted). A fact is "material" when it might affect the outcome of the suit under the applicable law. *Id.*

When considering a motion for summary judgment, the Court construes the record in the light most favorable to the nonmoving party and makes all reasonable inferences in favor thereof. *Sensing v. Outback Steakhouse of Florida*, LLC, 575 F.3d 145, 153 (1st Cir. 2009). The moving party bears the burden of demonstrating the absence of a genuine issue of material fact within the record. *Id.* at 152. "The test is whether, as to each essential element, there is sufficient evidence favoring the nonmoving party for a jury to return a verdict for that party." *Id.* (quoting *DeNovellis*, 124 F.3d 298, 306 (1st Cir. 1997)) (citation omitted). A trial judge acts well within his authority on a summary judgment motion in assessing the reasonableness of the inferences that might be drawn from the circumstantial evidence. *Ricci v. Alternative Energy, Inc.*, 211 F.3d 157 (1st Cir. 2000).

"[N]either 'conclusory allegations, improbable inferences, and unsupported speculation,' nor '[b]rash conjecture coupled with earnest hope that something concrete will materialize, is []sufficient to block summary judgment.'" *Crawford v. Lamantia*, 34 F.3d 28, 31 (1st Cir. 1994)

(quoting *Medina–Munoz v. R.J. Reynolds Tobacco Co.*, 896 F.2d 5, 8 (1st Cir.1990); *Dow v. United Bhd. of Carpenters*, 1 F.3d 56, 58 (1st Cir.1993)).

A. Jurisdiction

Defendants assert that all of Plaintiffs' claims fail for lack of jurisdiction because they are preempted by the exclusive jurisdiction of the Federal Communications Commission ("FCC"). Specifically, Defendants claim that the heart of this case is whether or not electromagnetic radiation in the radio frequency portion of the spectrum ("RF") are the cause of harm to Plaintiff G, and argue that, as Congress has tasked the FCC with establishing safe limits for such signal strengths, the issue before the Court lies within the exclusive domain of FCC rule making, and is not subject to review by District Courts. The Defendants highlight that other courts have consistently denied challenges to the FCC's safety limit, and further argue that even if the Plaintiffs don't directly challenge the FCC limits, their suit is a collateral attack on FCC guidelines.

Congress created the FCC to regulate "communication by wire and radio so as to make available, so far as possible, to all the people of the United States, without discrimination … wire and radio communication service with adequate facilities at reasonable charges, for the purpose of the national defense, for the purpose of promoting safety of life and property through the use of wire and radio communications, and for the purpose of securing a more effective execution of this policy by centralizing authority…." 47 U.S.C. § 151. However, with respect to low level RF impact on rare individuals who might be hypersensitive to RF radiation, as clarified in *Cellular Phone Taskforce*, the FCC found it "impracticable" to "evaluate the significance of studies purporting to show biological effects," and that this was "especially true for such controversial issues as non-thermal effects and whether certain individuals might be 'hypersensitive' or 'electrosensitive.'" *Cellular Phone Taskforce v. F.C.C.*, 205 F.3d 82, 90 (2d

Cir. 2000) (quoting *Procedures for Reviewing Requests for Relief from State and Local Regulations Pursuant to Section 332(c)(7)(B)(v) of the Communications Act of 1934*, 12 F.C.C. Rcd. 13494, at 31, 1997 WL 522796 (1997)). The Court went on to note that "[t]he FCC concluded that requiring exposure to be kept as low as reasonably achievable in the face of scientific uncertainty would be inconsistent with its mandate to balance between the need to protect the public and workers from exposure to potentially harmful RF electromagnetic fields and the requirement that industry be allowed to provide telecommunications services to the public in the most efficient and practical manner possible." *Cellular Phone Taskforce*, 205 F.3d at 92 (internal quotations omitted). The FCC thus *considered* risks to those with unusual sensitivity to electromagnetic radiation in the regulated spectrum and *declined* to craft regulation for such matters based on a lack of scientific consensus. Rather than precluding the possibility that a few individuals might be particularly sensitive to RF emissions below the established threshold, the FCC actually leaves the door open on this issue.

Defendants' argument that this suit represents an illegitimate collateral attack on the FCC's regulatory powers is without merit. When a plaintiff seeks accommodation under the ADA for an unusual sensitivity to RF, they no more attack the FCC's general regulation of RF than a person seeking an accommodation for a peanut allergy attacks or undermines the FDA's general powers to regulate the peanut butter industry.

Defendants also assert that the claim premised on the Americans with Disabilities Act is preempted by the Telecommunications Act of 1996 ("TCA"), specifically 47 U.S.C. § 255(f). This provision states that "[n]othing in this section shall be construed to authorize any private right of action to enforce any requirement *of this section* or any regulation thereunder. The Commission shall have exclusive jurisdiction with respect to any complaint *under this section*." 47 U.S.C. §

255(f) (emphasis added). However, Section 255, entitled "Access by persons with disabilities," is clearly directed toward telecommunications providers and manufacturers of telecommunications equipment, and mandates that these entities ensure that equipment and services are "accessible" to disabled individuals. Thus, the provision Defendants cite is inapposite here.

Moreover, the TCA contains explicit language that narrows the reach of the statute. Section 414 provides that "nothing in this chapter contained shall in any way abridge or alter the remedies now existing at common law or by statute, but the provisions of this chapter are in addition to such remedies," which indicates that Congress intended that the rest of Chapter 5 of Title 47 would not abrogate provisions of other federal statutes.

Finally, Defendants contend the Court should defer to the FCC under the doctrine of primary jurisdiction. The doctrine of primary jurisdiction, "informed by principles of deference to agency decisionmaking, gives effect to the eminently sensible notion that 'in cases raising issues of fact not within the conventional experience of judges or cases requiring the exercise of administrative discretion, agencies created by Congress for regulating the subject matter should not be passed over.'" *Com. of Mass. v. Blackstone Valley Elec. Co.*, 67 F.3d 981, 992 (1st Cir. 1995) (quoting *United States v. Western Pacific Railroad Co.*, 352 U.S. 59, 64, 77 S.Ct. 161, 165 (1956)). In determining whether deference of a matter to an agency under primary jurisdiction doctrine is appropriate, the court considers

> (1) whether the agency determination lies at the heart of the task assigned the agency by Congress; (2) whether agency expertise is required to unravel intricate, technical facts; and (3) whether, though perhaps not determinative, the agency determination would materially aid the court.

Blackstone, 67 F.3d at 992.

The safety or otherwise of RF radiation clearly does lie at the heart of the tasks assigned to FCC by Congress in 47 U.S.C. § 151, and it is likely true that FCC is better placed than this Court

to determine the extent and nature of non-thermal effects of RF emissions to people generally, and to those who might be particularly sensitive to them. However, the FCC has previously decided that there was insufficient evidence to form a rule within their broad mandate to balance safety and commerce, and has, as yet, not updated that guidance. Moreover, given the balancing function assigned to the FCC under 47 U.S.C. § 151, the agency's determination will not materially aid the Court here, where the matter is not the regulation of technology, but the mitigation of the impact of technology on a very small subset of the population that may have an unusual affliction mediated by RF radiation.

In considering the motion for summary judgment, the Court can avoid the need to evaluate the highly technical questions raised by the parties in great depth. As the Court provisionally accepts the expert opinion of Dr. Carpenter offered by the Plaintiff as to general causation, the Court thereby allows, for the sake of argument, that EHS is a genuine, albeit rare, affliction. Given that the FCC has declined to regulate RFs with respect to biological (non-thermal) effects, especially any impact to those that might be hypersensitive, the ADA provides a legitimate remedy to any unusual harm that might be caused to a small subset of individuals exposed to something that is generally, genuinely, and legitimately accepted as safe for the wider population. To be clear, this Court declines to determine whether or not Wi-Fi or other RF sources below the FCC energy safety threshold do or do not have deleterious impact on hypersensitive individuals. It suffices here for the Court to note that the FCC has acknowledged the possibility and controversy concerning EHS, and declined to regulate on that issue, while a qualified expert has testified that EHS is a real but rare condition. The Court accepts that it is *possible* that EHS is a genuine phenomenon and that, absent a technical determination to the contrary, or other clarification of the

scope, nature, and impact of EHS in relation to regulated emissions by the FCC, that jurisdiction to consider this matter as a potential disability under the ADA is not preempted here.

B. Count I – Failure to make reasonable accommodation in violation of the ADA, 42 U.S.C. § 12101

Defendants assert that Plaintiffs cannot prove that the school's Wi-Fi is the cause of G's symptoms, and thus summary judgment is appropriate. Plaintiffs do not dispute that they have "the burden of establishing, through expert testimony, general and specific causation." *Milward*, 820 F.3d at 471. In order to prove causation, the Plaintiffs followed the approach of seeking to establish that Wi-Fi can cause such symptoms (general causation) and that, in this case, it actually did cause G's symptoms (specific causation).

With regard to general causation, a genuine dispute exists as to whether Wi-Fi can cause EHS. Accepting Dr. Carpenter's expert report on its face, he concludes that Wi-Fi can cause EHS, and thus his expert opinion furnishes enough for Plaintiffs' claim to survive summary judgment as to the issue of general causation.

As to specific causation, however, the Defendants have met their burden in demonstrating the absence of a genuine issue of fact as to this element because, considering all the evidence on the record in the light most favorable to the Plaintiffs, and making all reasonable inferences in favor of the Plaintiffs, there is simply insufficient evidence to permit a logical conclusion that G suffers from EHS caused by Wi-Fi.

A diagnosis is a medical hypothesis as to what might be the cause of a complaint; a hypothesis to be tested by therapy or empiric observation of the patient's progress, but not establishing a certainty, or even necessarily a likelihood. Dr. Herbert helps to frame the uncertainty associated

with G's EHS diagnosis when she testifies that G's symptoms are consistent with those reported by other alleged EHS sufferers, but acknowledges that the breadth of symptoms associated is broad and inconsistent. Dr. Herbert testifies that G suffered from oxidative stress, an established result of RF exposure in animal studies, and a plausible explanation for some of G's symptoms, but points out that many other environmental causes could also result in oxidative stress. The Plaintiffs then invite us to take a logical leap and accept Dr. Herbert's carefully framed conclusions as sufficient to prove that Fay's Wi-Fi is the cause of G's afflictions. Dr. Herbert's opinion concludes only that it is plausible that G suffers from EHS: G's symptoms don't rule out EHS, but she also notes that many other environmental phenomena could account for them. Dr. Herbert was thus unable to bridge the logical gap to make a firm assertion that Wi-Fi was the cause of G's symptoms, and thus on the basis of the record, neither can a jury.

Taking all the evidence on the record in the light most favorable to the plaintiff, there is insufficient evidence to show specific Wi-Fi-mediated causation. There is sufficient circumstantial evidence for a reasonable jury to find that something at the Fay school was impacting G, and this *might* be Wi-Fi, but it is impossible to conclude that the evidence on the record would allow a reasonable jury to find that a causal link has been proved without "unsupported speculation" or "brash conjecture." *Crawford*, 34 F.3d at 31. It would be unreasonable for a jury to fall into the logical trap of determining that evidence of correlation is sufficient to prove specific causation of an environmental sensitivity as alleged in this case. Absent any legal basis to establish that G has a disability that the Fay School could accommodate, it is not possible to establish what a reasonable accommodation beyond the Wi-Fi mitigation efforts

already found ineffective would be. Summary judgment on the primary ADA claim (Count I) is therefore granted in favor of the Defendants.

C. Count II – Retaliation in violation of the ADA, 42 U.S.C. § 12203

A plaintiff's retaliation claim "does not depend on the success of her disability claim." *Jones v. Walgreen Co.*, 679 F.3d 9, 20 (1st Cir. 2012) (citing *Colón–Fontánez v. Municipality of San Juan*, 660 F.3d 17, 36 (1st Cir.2011); *Carreras v. Sajo, García & Partners*, 596 F.3d 25, 35–36 (1st Cir.2010)). Claims alleging retaliation in violation of the ADA are evaluated under the burden-shifting framework outlined in *McDonnell-Douglas Corp v. Green*, 411 U.S. 792 (1973). To establish a *prima facie* case of retaliation, the Plaintiffs must prove that they, (1) "engaged in protected conduct"; (2) there was an adverse action taken against them; and (3) "there was a causal connection between the protected conduct and the adverse action." *Jones*, 679 F.3d at 21 n.7 (internal quotations omitted). Once a plaintiff has established his *prima facie* case of retaliation, the defendant is then required to provide a rationale that shows that the allegedly retaliatory activity was in fact taken for legitimate non-retaliatory reasons, thus shifting the burden back to the plaintiff, who is then required to show that this rationale was a pretext for retaliation. *McDonnell Douglas*, 411 U.S. at 793.

Plaintiffs claim that the Defendants retaliated against their family in various ways as a result of their good faith efforts to seek accommodation for a disability that they believe impacted a major life activity (schooling) of G. Generally, the Plaintiffs claim that the Fay School reacted in a "derisive" and "hostile manner" due to their "annoyance that G's parents had raised a disability claim." Docket No. 122 at 3. The Plaintiffs illustrate their allegations of derision and hostility with selected quotations from the School's correspondence that could certainly be read as disingenuous,

and that do demonstrate a few instances of immaturity of tone that shows the School's staff in a poor light, such as the email entitled "Rabbit ears and Aluminum Foil" sent by a School staff member referencing G's mother. However, as none were actually directed to the Plaintiffs or their family members, the Court cannot recognize them as reprisals simply because they were rude.

Plaintiffs further allege that G's mother was removed from committee service with the Parents' Association due to the consequences of the defamatory statements made concerning G's parents by the President of the Board of Trustees in his response to their anti-Wi-Fi activism. While the Court accepts that the Board of Trustees and the Parents' Association are instrumentalities of the Defendants, the email to which G's parents take offense was sent before the Plaintiffs claimed that G suffered from EHS. The email cannot be read as a retaliation because it occurred before any protected activity, and is not considered further.

The Plaintiffs also assert that the School's refusal of their request to allow G to listen remotely or to listen to recordings of classes was retaliatory. The School articulated a non-retaliatory rationale for this decision: such an arrangement is contrary to the School's practice of requiring class attendance, no medical documentation was provided to support that request, and an independent medical evaluation of G concluded that G should "attend school regularly." Docket No. 96, p. 35. Plaintiffs make no showing in their Opposition that this rationale was a pretext for retaliation. Likewise, the Plaintiffs' allegations that the School's request for independent medical examinations and the dispute over G's carrying a concealed dosimeter in school constituted retaliation were addressed by the Defendants, who provided a non-retaliatory rationale for these actions,[2] however, Plaintiffs failed to articulate any argument that the rationale provided was a

[2] Specifically, the School asserts that its request for further medical evaluations was reasonable and non-retaliatory because Dr. Hubbuch had provided only a "preliminary diagnosis" to the School at that point. With regard to the dispute over G's carrying a dosimeter while in class, the School asserted that the Handbook rules make plain that

mere pretext for reprisal. Accordingly, Plaintiffs have failed to meet their burden as to these specific instances of alleged retaliatory conduct.

Finally, the Plaintiffs contend that the School's refusal to allow G to participate in after-school athletics during the period that he was studying at home to avoid allegedly school-related headaches was also retaliatory, as was the omission of G's brother from the written program and verbal presentation at a dinner celebrating his transition from 8th grade. The Plaintiffs have established that they were seeking an accommodation for an alleged disability, an activity protected under the ADA. Plaintiffs have also established sufficient unrebutted facts to show that adverse actions were taken against them with regards to the School's refusal to allow G to participate in athletic activities and that G's brother was omitted from the 8th grade transition program. As the School's refusal to allow G to participate in athletics is directly related to the nexus of the case, it appears that these actions were taken as a consequence of the School's response to the protected activity. The omission of G's brother from 8th grade graduation dinner program appears to go beyond a mere snub, and because there is no suggestion that any other child was excluded, taking into account the nature of the dispute between the Plaintiffs and the Defendants, and also noting that *no explanation has been offered by the Defendants*, the Court concludes that it was sufficiently likely that it was motivated by animus against the Plaintiffs to survive as a *prima facie* allegation of retaliation.

Although the Defendants attack the Plaintiffs' entire retaliation argument on the grounds that the predicate ADA claim was not made in good faith, the Court cannot accept that argument. In reading the record in the light most favorable to the non-moving party, the Court concludes that this was a good-faith ADA claim. Even if the Court were to assume that the Plaintiffs deluded

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students may not have or use electronic devices in class, and that any disciplinary action was therefore not retaliatory. Docket No. 96 at p.32-34.

themselves into believing that their son suffered from EHS as a result of their long-term general concerns about the safety of Wi-Fi, this does not preclude the likelihood that the ADA claims were made in good faith, and none of the speculative attacks on the motivation of the Plaintiffs articulated throughout the Defendants' briefs achieves the standard required for the Court to find to the contrary on a motion for summary judgment.

Each of the two residual events comprise an allegation of retaliation, and neither of them are rebutted by the Defendants with a legitimate non-retaliatory rationale, despite the fact that the Plaintiffs reiterated these allegations in their Opposition. Docket No. 122, pgs. 2-7, 40. The Court notes that the Defendants are well aware of the parties' obligations with respect to the burden-shifting framework, having briefed it themselves. Docket No. 96, p. 29. Having failed to assert any non-retaliatory rationale for prohibiting G from participating in athletics and omitting his brother from the 8th grade program, under the *McDonnell-Douglas* burden-shifting framework, the Court is left to assume that the Defendants have no defense. The Defendants' motion for summary judgment is thus denied as to Count II.

D. Count III- Breach of Contract (against Fay School and Gustavson)

The Plaintiffs claim that the Defendants breached a contract memorialized by the School's Handbook, while the Defendants argue that the Handbook terms that form the basis of the Plaintiff's allegations are not contractual in nature. In considering whether student handbook provisions are or are not contractual, courts have found that a student's reasonable expectations under handbook provisions are contractually enforceable. *See, e.g., Cloud v. Trustees of Boston Univ.*, 720 F.2d 721, 724-25 (citing *Lyons v. Salve Regina College*, 565 F.2d 200, 202 (1st Cir. 1977)). However, where a handbook contains generalized representations that are aspirational or

too vague to form a certain and definite promise, such provisions are not contractually enforceable. *See Morris v. Brandeis Univ.*, 60 Mass. App. Ct. 1119, *3 n.6 (2004); *Shin v. Massachusetts Inst. of Tech.*, 2005 WL 1869101, at *7 (Mass. Super. June 27, 2005); *DMP v. Fay Sch. ex rel. Bd. of Trustees*, 933 F. Supp. 2d 214, 223 (D. Mass. 2013).

In *Morris*, a commitment to treat students with "fairness and beneficence" was too insufficiently defined to form an enforceable contract term. *Morris*, 60 Mass. App. Ct. at *3 n.6. Similarly, in *Shin*, a promise by MIT to make clinicians available to "care for your physical and psychological needs" was too open ended to form a basis for a breach of contract claims. *Shin*, 2005 WL 1869101 at *7. In contrast, in considering a previous edition of the same handbook in dispute here in *DMP*, this Court found that provisions outlining a specific sequence of disciplinary procedures were sufficiently specific to be contractual. *DMP*, 933 F. Supp. 2d. at 224-25.

Plaintiffs suggest that the Handbook entitles them to a reasonable expectation as to performance of its terms. Specifically, Plaintiffs allege the school failed to fulfill its commitments to "recognize[], respect[], and celebrate[] the full range of human diversity," to treat student health as a "core value," to "help when students are in physical need," to "recognize and celebrate… disabilities," respect individual differences, ensure that "all community members feel supported," and to not discriminate in affording all students the rights, privileges, programs and activities enjoyed by students in general. Docket No. 62-4. Plaintiffs argue that because the school was not sufficiently "forthcoming" in meeting these commitments, and that because it met the parents' concerns for their child's alleged disability with "derision", the Defendants breached the contractual provisions contained in the Handbook. However, Plaintiffs have failed to point to any specific provisions that are contractual in the definite sense articulated in *DMP*. Rather, the provisions that they do point to are aspirational and indefinite in the same sense as the generalized

representations in *Morris* and *Shin*. None of the Handbook provisions that the Plaintiffs suggest were breached are sufficiently definite or certain to form a contractual obligation, and thus Plaintiffs' claim for breach of contract fails. The Defendants' motion for summary judgment on Count III is granted.

E. Count IV – Misrepresentation (against Fay School and Gustavson)

To prevail on a claim for misrepresentation, a plaintiff must show that a defendant

> (1) made a false representation of a material fact; (2) with knowledge of its falsity; (3) for the purpose of inducing [the plaintiff] to act thereon; and (4) that he reasonably relied upon the representation as true and acted upon it (5) to his damage.

Robert Reiser & Co. v. Scriven, 130 F.Supp.3d 488, 493-94. The Plaintiffs claim that they relied on the Defendants assertions concerning the standards of conduct to be expected from the school administration as outlined in the Handbook, and that they were harmed by their assumption that the Fay School and its staff would comport themselves in accordance with the standards laid out in the Handbook. The Defendants assert that the Plaintiffs arguments with respect to misrepresentation merely reprise their breach of contract claims. In this the Defendants are mistaken. While Plaintiffs' breach of contract claim, as discussed above, focused on specific provisions in the Handbook which they mistakenly believed were contractual, their misrepresentation claim is broader and encompasses the promises in the Handbook as a whole, as well as certain specific promises that the Plaintiffs see as particularly relevant to their situation. Complaint at 24. The Defendants also argue that "the School never misrepresented any fact," which from the context, the Court takes to mean any fact represented in the Handbook, further claiming that misrepresentation claims cannot be based on statements that are "vague, optimistic,

and kind of general rosy affirmations." Docket No. 125 at 19. However, when considering the Handbook as a whole, despite the fact that the Handbook is genuinely packed with assertions that are indeed "vague, optimistic and generally rosy affirmations," there are concrete, definite statements with respect to behavior at the School that are not aspirational or forward looking, but rather purport to represent the School as it is. Specifically, the Handbook states that "[h]onesty, respect, responsibility, empathy and kindness inform our conduct" and that "[t]he development of manners, civility, and integrity are hallmarks of our school." It is no stretch to conclude that a jury might find that the School has not acted with empathy, kindness, civility, or integrity, and that the representations in the Handbook were thus materially false in this case. However, there is nothing in the record that supports a finding that these statements were made with knowledge of their falsity, and thus the Defendants' motion is granted with respect to Count IV as to Defendant Fay School.

As to the claim of misrepresentation made individually against the headmaster, Mr. Gustavson, there is likewise insufficient evidence to support Plaintiffs' claim. To pierce the corporate veil, Plaintiffs must show that an officer of a corporation has personal liability for the corporation's tort by virtue of participating in *and benefiting from* the action in question. *See Jones v. Experian Info. Solutions, Inc.*, 141 F. Supp. 3d. 159, 162 (D. Mass. 2015) (emphasis added). While the Plaintiffs have clearly alleged Mr. Gustavson's participation in the misrepresentations, they have never suggested or provided any evidence with regard to how he might have benefitted from his actions

in this regard. Accordingly, summary judgement is granted in favor of Defendant Gustavson with respect to Count IV.

F. Count V – Negligence (against Fay School and Gustavson)

As discussed extensively above, the Plaintiffs failed to produce sufficient evidence to prove that G suffers from EHS caused by Wi-Fi, or was harmed in any way by the School's Wi-Fi system, so Plaintiffs' negligence claim fails on that basis. However, it should also be noted that Defendants correctly argue that assuring that a device is operating within the federally established safety limits as the School did in this case, while it might not satisfy the requirements of the ADA, does fulfill an ordinary duty of care where a Defendant's special needs have not been established. *See, e.g., Farina v. Nokia*, 625 F.3d 97, 133-34 (3d Cir. 2010) (dismissing claims relating to cell phones that complied with FCC's emission safety thresholds).

Conclusion

For the reasons set forth above, Defendants' motion to exclude the Plaintiffs' experts (Docket No. 58) is ***granted*** with regards to Dr. Jeanne Hubbuch, Dr. Karl Maret, and Mr. Robert Bowdoin, and is ***denied*** with respect to Dr. David Carpenter and Dr. Martha Herbert. Defendants' motion for summary judgment (Docket No. 95) is ***granted*** on Counts I, III, IV and V, and is ***denied*** as to Count II.

SO ORDERED.

/s/ Timothy S. Hillman
TIMOTHY S. HILLMAN
DISTRICT JUDGE

Susan Dana Foster

15957 Avenida Calma
Rancho Santa Fe, California 92091
susan.foster04@gmail.com
(858) 756-3532

June 30, 2019

Tara Lieberman, Eric Lardy, Stephanie Neal
Land Use / Environmental Planners
5510 Overland Avenue, Suite 310 / Mail Stop – 0650
San Diego California 92123

Re: Small Cell Wireless Facilities Ordinance

Staff has asked me to find other ordinances that have 500 foot setbacks for residential. Please see the attached ordinances from:

1) Mill Valley, California
2) Walnut, California
3) Petaluma, California
4) Fairfax, California

All of the attached ordinances call for 500 foot setbacks or more for residential.

Sincerely,

Susan Foster
Attachments

MILL VALLEY

STAFF REPORT

TO: Mayor and City Council

FROM: Danielle Staude, Senior Planner

SUBJECT: Introduction of Urgency Ordinance No 18-____ Amending the Mill Valley Municipal Code to add Chapter 20.73 establishing Wireless Telecommunication Facilities Regulations and Amending Mill Valley Municipal Code Sections 11.16.100; 20.24.020; 20.26.020; 20.36.030; 20.40.030; 20.52.020; and 20.56.030 to incorporate Wireless Telecommunication Facilities.

DATE: September 6, 2018

Approved for Forwarding:

James C. McCann, City Manager

ISSUE:

Consideration of an urgency ordinance modifying Title 20 "Zoning" of the Mill Valley Municipal Code ("Zoning Code"), adding Section 20.73 "Wireless Telecommunications Facilities Regulations" establishing comprehensive regulations for the installation, operation and maintenance of wireless telecommunications within the City on private property and within the City right-of-way.

RECOMMENDATION:

Receive presentation, introduce and adopt the urgency ordinance (ATTACHMENT 1) with a four-fifths vote.

BACKGROUND:

As the wireless telecommunications industry works to meet the growing demand for broadband and data services, service providers are seeking to deploy smaller cell and distributed antenna systems (also known as "DAS"), with many of these facilities installed in the public right-of-way. The Mill Valley Municipal Code does not currently provide regulations specific to the installation, operation and maintenance of wireless telecommunication facilities.

Item 8

Federal Law

Both federal and state laws preempt local authority to regulate certain aspects of wireless telecommunications facilities, including regulations related to:

- radio frequency or electromagnetic waves that comply with FCC regulations, the collocation on existing wireless telecommunications facilities,
- certain modifications to existing wireless telecommunications facilities, and
- the installation of wireless telecommunications facilities on existing utility poles in the public rights of way.

Key among these limitations is that local regulations cannot have the effect of prohibiting the provision of personal wireless services. *These laws, however, preserve local authority to regulate the placement, construction and aesthetics of wireless telecommunications facilities.*

Federal law also requires the City to act on an application for wireless telecommunication facilities within a limited amount of time. These "shot clocks" provide the City:

- 60 days to act on an application for an eligible facility that does not substantially change the physical dimensions of the existing wireless telecommunication facilities tower or base station;
- 90 days to act on an application for a collocation facility; and
- 150 days to act on all other applications.

These timeframes may change with federal laws. As such the actual "shot clock" and/or timeframes are not discussed in the ordinance, but will be provided as part of the application and informational handouts.

Urgency Ordinance

The proposed urgency ordinance is intended to prescribe clear and reasonable criteria to process applications for wireless telecommunications facilities in a consistent and expeditious manner and within the limits of federal and state law.

This proposed ordinance provides an extensive and comprehensive list of procedures and regulations that allow the community, applicant and internal City Departments to understand how facilities are regulated, installed, maintained and operate within the City. The regulations contained in the proposed ordinance:

1. Ensures that the FCC standards regulating radio frequency emissions are strictly followed.
2. Establishes an application process for a conditional use permit (CUP) and design review.
3. Limits the location of new or updated wireless facilities to private property within commercial zoning districts (outside of single family and multi-family residential districts) and the public right-of-way with an order of preference in terms of location within commercial areas and configuration aimed toward existing facilities.
4. Limits the installation of new wireless facilities in the public right-of-way to existing poles that must be 1,500 feet away from the nearest facility.

5. Establishes design standards for the appearance and maintenance of facilities, including limiting the height and bulk of facilities and requires the concealment of accessory equipment to the extent feasible.
6. Imposes strict noise standards.
7. Where feasible, requires upgrades to existing facilities as new technology becomes available to replace larger more visually intrusive facilities with smaller facilities.
8. Requires the relocation of any facility in the public right-of-way that would interfere with a future public project or improvements.
9. Requires a performance bond to ensure that facilities are promptly removed when they are no longer permitted or needed.
10. Requires the permittee to defend and indemnify the City from any liabilities arising from the permits issued by the City and the installation, operation and maintenance of the facilities.

The ordinance is being proposed as an urgency ordinance which would be adopted pursuant to Government Code Section 36937(b). Under that section, ordinances adopted to protect the health, safety, and welfare with a four-fifths vote of the City Council become effective immediately adoption by 4/5ths vote is required by state law). Given the increased interest in construction of small-cell facilities in the public right-of-way, it is critical that the City update its regulations to reflect current federal and state law and recent trends in wireless facilities. The adoption of urgency standards will ensure that the City is able to limit disruption to the public right-of-way as well as impose aesthetic regulations on new facilities.

Staff is also working to establish permanent regulations which require additional public notice, Planning Commission and City Council review, followed by City Council adoption.

DISCUSSION:

The proposed urgency ordinance provides uniform and comprehensive regulations for the permitting, development, siting, installation, design, operation and maintenance of wireless telecommunications facilities in the City. The ordinance is similar to recent regulations enacted in San Anselmo and Ross. The ordinance also imposes some additional requirements on telecommunications facilities that are pole mounted to the existing public utility infrastructure (known as "small cell wireless facilities") based on community interest and recent regulations established in Petaluma (see staff report, lines 171-205).

Applicable Projects (20.73.030)

The urgency ordinance becomes effective immediately. Those applications not approved prior to the effective date of the urgency ordinance will be subject to the regulations. All other wireless facilities currently in operation will also be subject to the new regulations with regard to operation, maintenance and use.

Conditional Use Permit (CUP) Required (20.73.040)

The permitting process described in the table below reflects the requirements of federal and state law, which mandate ministerial approval of collocations on and minor modifications to existing wireless telecommunications facilities.

Description Wireless Facility	*Private Property*		*Public Right-of Way*
	RS, RSP, DR, RM Zoning Districts	*All Other Zoning Districts*	*All Zoning Districts*
Roof-mounted facility, building-mounted facility, or facility mounted on an existing pole	Not Permitted	Conditional Use Permit/ Design Review	Conditional Use Permit/ Design Review
Facility mounted on a replacement pole or new telecommunications tower	Not Permitted	Conditional Use Permit/ Design Review	Conditional Use Permit/ Design Review
New wireless telecommunications collocation facility	Not Permitted	Conditional Use Permit/ Design Review	Conditional Use Permit/ Design Review
Eligible facilities request [1] or application pursuant to California Government Code Section 65850.6 [2]	Permitted	Permitted	Permitted

[1] See requirements of section 20.73.140.
[2] See requirements of section 20.73.150.

Application for CUP Permit (20.73.050)

The proposed ordinance prescribes the content for an application for a wireless telecommunications facility permit. The application requires the submission of detailed site and engineering plans, photographs of facility equipment, a visual impact analysis with photo simulations, a noise study, documentation demonstrating compliance with the FCC standards for radio frequency emissions, and certification that the applicant has a right under state law to install facilities in the public right-of-way if that is the proposed location of the facilities. Also, the City may hire a technical consultant to assist the City in the review of the application at the expense of the applicant.

Based on existing provisions of the City's Zoning Code, initial wireless facility CUP applications will be heard by the Planning Commission. Smaller subsequent amendments to wireless facility CUPs, such as modifying or collocating equipment, will undergo Zoning Administrator approval. Amendments to CUPs that involve significant design review issues, or are deemed as significant projects by the Planning Director will be heard by Planning Commission. There are also specific design standards, findings and conditions of approval required as part of the approval process for these applications (discussed below).

Location and Configuration Preferences (20.73.060)
The proposed ordinance establishes preferences in terms of location and configuration of wireless facilities.

Configuration preferences are as follows:

1. Collocation with existing facilities,
2. Roof-mounted,
3. Building-mounted,
4. Mounted on an existing utility pole or a new utility pole that will replace an existing utility pole,
5. Mounted on a new telecommunication tower.

Location preferences are as follows:

1. Commercial zoning districts (CG, CN, CL, CD),
2. Public right-of-way within commercial zoning districts,
3. Public right-of-way within RM zoning districts,
4. Mounted on a new telecommunication tower.

Design and Development Standards for All Facilities (20.73.070)
The proposed ordinance provides specific guidance on the design techniques for camouflaging wireless facilities, and set development standards including the preference in collocating facilities, landscaping screening, signage, lighting, noise restrictions, and security requirements.

Additional Standards for Facilities Outside the Public Right-of-Way (20.73.080)
Additional design and development standards are identified for wireless facility applications that are *outside* the right-of-way including the requirement that the facility cannot interfere with designated parking spaces and additional screening criteria for roof mounted facilities, towers and accessory equipment.

Additional Standards for Facilities in the Public Right-of-Way (20.73.060-090)
Additional design and development standards are identified for wireless facility applications that are *inside* the right-of-way including establishing maximum height limits on utility and streetlight poles for antennas, occupation of space, obtaining an encroachment permit, and adhering to Americans with Disability Act (ADA) Compliance, and specific development standards.

Additional design and development standards have been incorporated based on the City of Petaluma's recently adopted ordinance, and interest from some community members that are concerned about potential health impacts associated with pole mounted wireless facilities (see ATTACHMENT 2 for public comments). Staff has incorporated a distance requirement (1,500 ft. apart) for pole mounted telecommunications facilities, but has not gone as far as establishing a restriction on the proximity of pole mounted wireless telecommunication to any residence. The City of Petaluma also establishes a 500 foot buffer from any residence as part of its ordinance. Due to the size and scale of Mill Valley, staff recommends moving forward with the following standards, and incorporating a buffer, if legally feasible, as part of the regular ordinance. Additional

qcode.us/codes/walnut/?view=desktop&topic=vi-25-xxv-25_253_5

Walnut City Code
Walnut, California

Current through Ordinance 17-08 and the October 2017 code supplement. For more recent amendments to this code, refer to the CodeAlert page.

This document is provided for informational purposes only. Please read the full disclaimer.

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Contact:

City Clerk: (909) 595-7543

finds that using a setback area is necessary to achieve the best design.

(c) Telecommunication towers and antennas shall not be located within one thousand five hundred feet of a property with an existi proposed facility will be co-located or designed to be screened, camouflaged, or otherwise made visually unobtrusive. This shall not in for individual residents.

(d) Reserved.

(e) Monopoles and alternative antenna support structures shall be located a minimum of one half mile from any other monopole or

(f) All towers, antennas and associated structures shall be architecturally designed, located, screened, concealed, and/or disguised t achieve compatibility with adjacent or nearby structures, neighborhoods and streetscapes. Alternative antenna support structures (e.g., of monopoles where there would otherwise be a substantial negative visibility impact, and it is technically feasible.

(g) All towers, antennas and associated structures shall have a matte finish to avoid reflection or glare, and be of a color and design background and neighborhood.

(h) Satellite dishes, other than microwave dishes, shall be of mesh construction, except where technical evidence, reasonably accept director, show that this is infeasible.

(i) Ground level support facilities shall be no taller than one story or seventeen feet, whichever is less, in height and shall be treated typically found in the area. Said facilities shall be located below grade wherever aesthetically desirable.

(j) Security fences shall not be less than six feet in height. Chain link may be used in those areas where accessory support facilities view as determined by the community development director.

(k) All satellite dishes greater than one meter in diameter and located in residential zones shall have at least seventy-five percent of ground level from any adjacent public rights-of-way, parks, schools, or residentially zoned properties. Such screening may include peri combination of thereof, and must achieve its screening effect within sixty days of installation. Specimen size plants may be required to mounted installation may incorporate features of the existing roof (e.g., a parapet, the slope of a pitched roof), landscaping, or fencing and material of the existing development of the site.

(l) Backup generators shall only be used during power outages and for testing and maintenance purposes. Noise attenuation shall b an exterior level of a maximum sixty dBA at the property line when adjacent to a residential use and a maximum forty-five dBA in oth maintenance shall only take place on weekdays between the hours of 8:30 a.m. and 4:30 p.m.

(m) All areas disturbed during the construction, other than required road or parking areas, shall be replanted as it existed prior to con compatible with the vegetation in the surrounding area. Also, any existing trees or significant vegetation, on the facilities site or along during or within six months after construction shall be replaced or planted with native trees and vegetation of a comparable size and sp community development director, unless the director is submitted reasonable proof that the vegetation did not die as a result of develop

(n) All telecommunication facilities shall be unlit except for: (1) a manually operated motion sensor light above the equipment shed a person is actually present; (2) the minimum identification tower lighting that is required under FAA regulations; or (3) such lighting security. Where lighting is required, it shall be shielded or directed away from adjacent properties.

(o) Building and roof mounted antennas shall be mounted on the parapet, penthouse wall, or building façade unless the antennas are impacts to adjacent properties and/or public rights-of-way. Building mounted antennas shall be painted or otherwise architecturally int building.

(p) Telecommunication towers and antennas shall not be located within one thousand five hundred feet of any school (nursery, elem school), trail, park or outdoor recreation area, sporting venues, and residential zones. (Ord. No. 13-02, § 3; Ord. No. 15-07, § 1)

The Petaluma Municipal Code is current through Ordinance 2674, passed November 19, 2018.

Disclaimer: The City Clerk's Office has the official version of the Petaluma Municipal Code. Users should contact the City Clerk's Office for ordinances passed subsequent to the ordinance cited above.

City Website: http://www.cityofpetaluma.net/ (http://www.cityofpetaluma.net/)
City Telephone: (707) 778-4360
Code Publishing Company (https://www.codepublishing.com/)

14.44.095 Small cell facilities — Basic requirements.

Small cell facilities as defined in Section 14.44.020 may be installed, erected, maintained and/or operated in any commercial or industrial zoning district where such antennas are permitted under this title, upon the issuance of a minor conditional use permit, so long as all the following conditions are met:

A. The small cell antenna must connect to an already existing utility pole that can support its weight.

B. All new wires needed to service the small cell must be installed within the width of the existing utility pole so as to not exceed the diameter and height of the existing utility pole.

C. All ground-mounted equipment not installed inside the pole must be undergrounded, flush to the ground, within three feet of the utility pole.

D. Each small cell must be at least one thousand five hundred feet away from the nearest small cell facility.

E. Aside from the transmitter/antenna itself, no additional equipment may be visible.

F. Each small cell must be at least five hundred feet away from any existing or approved residence.

G. An encroachment permit must be obtained for any work in the public right-of-way. (Ord. 2662 NCS § 2 (part), 2018)

14.44.100 Minor facilities — Referral.

The planning director may refer a conditional use permit for a minor telecommunications facility that meets all of the above standards if he/she determines, in his/her sole discretion, that the public interest would be furthered by having the planning commission review this matter. In that case and the case of any proposed facility that fails to meet one or more of the standards listed above, a use permit approved by the planning commission shall be required to construct the facility in question. (Ord. 2029 NCS (part), 1996.)

14.44.130 Telecommunications facilities — Minimum application requirements.

The following are the minimum criteria applicable to all telecommunications facilities, except exempt facilities as defined in Section 14.44.020.S. 1. In the event that a project is subject to discretionary and/or environmental review, mitigation measures or other conditions may also be necessary. All telecommunications facilities shall comply with the following:

A. The planning director shall establish and maintain a list of information that must accompany every application for the installation of a telecommunications facility. Said information may include, but shall not be limited to, completed supplemental project information forms, a specific maximum requested gross cross-sectional area, or silhouette, of the facility; service area maps, network maps, alternative site analysis, visual impact demonstrations including mock-ups and/or photomontages, visual impact analysis, NIER (non-ionizing electromagnetic radiation) exposure studies, title reports identifying legal access, security considerations, lists of other nearby telecommunications facilities known to the city, master plan for all related facilities within the city limits of Petaluma and within one-quarter mile therefrom; and facility design alternatives to the proposal and deposits for peer review, if deemed necessary by the director. The planning director may release an applicant from having to provide one or

ORDINANCE NO. 819

AN URGENCY ORDINANCE OF THE TOWN COUNCIL OF THE TOWN OF FAIRFAX ENACTING TITLE 20 ("TELECOMMUNICATIONS") OF THE FAIRFAX MUNICIPAL CODE TO ESTABLISH NEW REGULATIONS FOR WIRELESS TELECOMMUNICATION FACILITIES

WHEREAS, This Ordinance is adopted as an urgency ordinance pursuant to Government Code Section 36937(b). The facts constituting the urgency are as follows:

(1) The purpose of this Ordinance is to update the Town's Municipal Code to provide uniform and comprehensive standards, regulations and permit requirements for the installation of wireless telecommunications facilities in the Town including on private property and in the Town's public right-of-way.

(2) The wireless telecommunications industry has expressed interest in submitting applications for the installation of "small cell" wireless telecommunications facilities in the Town 's public rights-of-way. Other California cities have already received applications for small cells to be located within the public right-of-way.

(3) If not adequately regulated, installation of small cell and other wireless telecommunications facilities within the public right-of-way can pose a threat to the public health, safety and welfare, including disturbance to the public right-of-way through the installation and maintenance of wireless facilities; traffic and pedestrian safety hazards due to the unsafe location of wireless facilities; impacts to trees where proximity conflicts may require unnecessary trimming of branches or require removal of roots due to related undergrounding of equipment or connection lines; land use conflicts and incompatibilities including excessive height or poles and towers; creation of visual and aesthetic blights and potential safety concerns arising from excessive size, heights, noise or lack of camouflaging of wireless facilities including the associated pedestals, meters, equipment and power generators; and the creation of unnecessary visual and aesthetic blight by failing to utilize alternative technologies or capitalizing on collocation opportunities which may negatively impact the unique quality and character of the Town .

(4) The Town currently regulates wireless telecommunications facilities through the zoning permit process that was enacted as Title 19 in 1999. The existing standards have not been updated to reflect current telecommunications trends or necessary legal requirements. Further the primary focus of the zoning regulations is wireless telecommunications facilities located on private property, and the existing Code provisions were not specifically designed to address the unique legal and practical issues that arise in connection with wireless telecommunications facilities deployed in the public right-of-way.

(5) The Federal Telecommunications Act of 1996 preempts and declares invalid state or local rules that "prohibit" the provision of interstate or intrastate telecommunications service or personal wireless services.

Section 3. Severability. If any section, subsection, sentence, clause, phrase, or word of this Ordinance is, for any reason, deemed or held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, or preempted by legislative enactment, such decision or legislation shall not affect the validity of the remaining portions of this Ordinance. The Town Council of the Town of Fairfax hereby declares that it would have adopted this Ordinance and each section, subsection, sentence, clause, phrase, or word thereof, regardless of the fact that any one or more sections, subsections, clauses, phrases, or word might subsequently be declared invalid or unconstitutional or preempted by subsequent legislation.

Section 4. Notice. The Town Clerk shall certify to the passage and adoption of this Ordinance and shall cause this Ordinance to be posted within fifteen (15) days after its passage, in accordance with Section 36933 of the Government Code.

Section 5. Effective Date. This ordinance is adopted as an urgency ordinance for the immediate preservation of the public peace, health and safety within the meaning of Government Code Section 36937(b) and therefore shall be passed immediately upon its introduction and shall become effective immediately, and shall be posted in three public places in the Town, to wit: 1. Bulletin Board, Town Hall Offices; 2. Bulletin Board, Fairfax Post Office; 3. Bulletin Board, Fairfax Women's Club.

PASSED AND ADOPTED at a special meeting of the Town Council of the Town of Fairfax on the 26th day of September 2018, by the following vote:

AYES: **ACKERMAN, COLER, GODDARD, LACQUES, REED**
NOES: **None**
ABSENT: **None**
ABSTAIN: **None**

Peter Lacques, Mayor

ATTEST:

Michele Gardner, Town Clerk

2. Backup generators shall only be operated during periods of power outages, and shall not be tested on weekends or holidays, or between the hours of 5:00 p.m. and 7:00 a.m.

3. At no time shall equipment noise from any facility exceed an exterior noise level of 55 dBA at the facility's property line if the facility is located in a business or commercial zone that permits those uses, provided, however, that for any such facility located within 500 feet of any property zoned residential or improved with a residential use, such equipment noise shall not exceed an exterior noise level of 40 dBA at the property line of any such residential property. For any facility located within a residential zone, such equipment noise shall at no time be audible at the property line of any residentially improved or residential zoned property.

4. Any equipment, including but not limited to air conditioning units, that may emit noise that would be audible from beyond three feet from the facility in the case of a facility located in the right-of-way, or in the case of other facilities the facility's property line, shall be enclosed or equipped with noise attenuation devices to the extent necessary to ensure compliance with applicable noise limitations under the Fairfax Municipal Code.

J. **Security.** Each wireless telecommunications facility shall be designed to be resistant to, and minimize opportunities for, unauthorized access, climbing, vandalism, graffiti and other conditions that would result in hazardous situations, visual blight, or attractive nuisances. The reviewing authority may require the provision of warning signs, fencing, anti-climbing devices, or other techniques to prevent unauthorized access and vandalism when, because of their location or accessibility, a facility has the potential to become an attractive nuisance.

K. **Modification**. At the time of modification of a wireless telecommunications facility, existing equipment shall, to the extent feasible, be replaced with equipment that reduces visual, noise, and other impacts, including, but not limited to, undergrounding the equipment and replacing larger, more visually intrusive facilities with smaller, less visually intrusive facilities.

20.04.080 Additional Design and Development Standards for Facilities Outside the Public Right-of-Way

A. **Basic Requirements.** Facilities located outside the public right-of-way are subject to the design and development standards set forth in this section in addition to all design and development standards that apply to all facilities.

B. **No parking interference.** In no event shall the installation of facilities replace or interfere with parking spaces in such a way as to reduce the total number of parking spaces below the number that is required.

C. **Roof-mounted facilities.** Roof-mounted facilities shall be designed and constructed to be fully concealed or screened in a manner compatible with the existing architecture of the building the facility is mounted to in color, texture, and type of material. Screening shall not increase the bulk of the structure nor alter the character of the structure.

From: Neal, Stephanie
To: Easland, Camila
Subject: FW: small cell wireless facilities ordinance
Date: Monday, July 01, 2019 9:58:53 AM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Sent: Monday, July 01, 2019 8:11 AM
To: Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>
Cc: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: FW: small cell wireless facilities ordinance

Bianca Lorenzana
Jr. Land Use/Environmental Planner
Pronouns: she/her
Bianca.Lorenzana@sdcounty.ca.gov
Phone: 858-694-2216
County of San Diego | Planning & Development Services
5510 Overland Avenue, Suite 310, San Diego, CA 92123

From: Mair Rathburn <mairrathburn@sbcglobal.net>
Sent: Saturday, June 29, 2019 6:41 PM
To: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Subject: small cell wireless facilities ordinance

M Rathburn
4615 Hinson place
San Diego, CA. 92115

June 28, 2019

to Stephanie Neal

Re: Small Cell Wireless Facilities Ordinance

Dear Ms Neal, Tara Lieberman & San Diego County Supervisors:

My residence is in San Diego, CA. I am writing this letter to the County because I believe that San Diego will be adopting the SD County Ordinance. I am deeply concerned about the new FCC directive making it possible for the telecommunications industry to place cell antennas anywhere in the County right-of-way. I am voicing my strong objection to the FCC's takeover of our County's land as well as due process with respect to our rights. That being said, as zoning planners and Supervisors, can you please take the following requests into the strongest possible consideration? I am afraid of becoming extremely ill with these unproven technologies. I am electrosensitive and am concerned for all of us, as I believe cancer, reproductive harm and general illnesses will increase with these unnecessary technologies. Because 5G is an unproven technology, please protect certain sensitive areas:

1. Cell towers are not to be located in "Sensitive" areas. 1000 foot setbacks from sensitive areas as defined by the County are necessary.

2. 500 foot set back from residential. This is in addition to using priority placement schema.

3. Pre application site inspection & survey required for each site application. There must be an on-site inspection prior to approval of the site by the County or agent representing the County. If application is in conflict with a sensitive area, site inspector may suggest the tower relocate so coverage is the same but sensitive area is protected.

4. Setback must meet fall zone length or zoning setback requirements, whichever is greater. Fall zone length must exceed the height of the tower by 20% because the height of the tower may be increased by 10% the next year.

5. Require mandatory live RF compliance testing immediately after tower is installed and "on demand testing" by a third party paid for by carrier.

6. Height restriction 30 feet; next year [under 1903] tower may go 10% higher.

7. Payment, performance and removal bond paid up front.

8. Require a Certificate of Completion.

9. No cutting of trees to facilitate line of sight or initial placement. The general ambience of the community is to be preserved.

10. Under-grounding of equipment where possible; discretion may be used by staff.

11. The ordinance shall comply with the Americans with Disabilities Act (this includes but is not limited to safe access to private, commercial and public buildings).

12. Noticing for the occupants and building owners of all residences, apartments, and businesses within 1000 feet of the proposed location.

thank you, M Rathburn.

From: Neal, Stephanie
To: Easland, Camila
Subject: FW: wireless technology sickness
Date: Monday, July 01, 2019 9:58:59 AM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

-----Original Message-----
From: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Sent: Monday, July 01, 2019 8:12 AM
To: Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>
Cc: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: FW: wireless technology sickness

Bianca Lorenzana
Jr. Land Use/Environmental Planner
Pronouns: she/her
Bianca.Lorenzana@sdcounty.ca.gov
Phone: 858-694-2216
County of San Diego | Planning & Development Services
5510 Overland Avenue, Suite 310, San Diego, CA 92123

-----Original Message-----
From: Mair Rathburn <mairrathburn@sbcglobal.net>
Sent: Saturday, June 29, 2019 6:52 PM
To: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Subject: wireless technology sickness

I am writing a second letter begging you to reconsider this terrible
small cell, 5g technology. I am extremely sensitive to wireless technologies. I have a small cabin in Pine Valley. I drive out there from San Diego to have an escae from all the wireless in San Diego.
Now I hear that you will be using unincororated areas for the laboratory mice!!!! I beg you to please not do this to me, to us.

Thank you very much,
Ms Rathburn

From: Neal, Stephanie
To: Easland, Camila
Subject: FW: small cell wireless facilities ordinance
Date: Monday, July 01, 2019 9:56:13 AM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: Mair Rathburn <mairrathburn@sbcglobal.net>
Sent: Friday, June 28, 2019 7:35 PM
To: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: small cell wireless facilities ordinance

M Rathburn
4615 Hinson place
San Diego, CA. 92115

June 28, 2019

to Stephanie Neal

Re: Small Cell Wireless Facilities Ordinance

Dear Ms Neal, Tara Lieberman & San Diego County Supervisors:

My residence is in San Diego, CA. I am writing this letter to the County because I believe that San Diego will be adopting the SD County Ordinance. I am deeply concerned about the new FCC directive making it possible for the telecommunications industry to place cell antennas anywhere in the County right-of-way. I am voicing my strong objection to the FCC's takeover of our County's land as well as due process with respect to our rights. That being said, as zoning planners and Supervisors, can you please take the following requests into the strongest possible consideration? I am afraid of becoming extremely ill with these unproven technologies. I am electrosensitive and am concerned for all of us, as I believe cancer, reproductive harm and general illnesses will increase with these unnecessary technologies. Because 5G is an unproven technology,

please protect certain sensitive areas:

1. Cell towers are not to be located in “Sensitive” areas. 1000 foot setbacks from sensitive areas as defined by the County are necessary.

2. 500 foot set back from residential. This is in addition to using priority placement schema.

3. Pre application site inspection & survey required for each site application. There must be an on-site inspection prior to approval of the site by the County or agent representing the County. If application is in conflict with a sensitive area, site inspector may suggest the tower relocate so coverage is the same but sensitive area is protected.

4. Setback must meet fall zone length or zoning setback requirements, whichever is greater. Fall zone length must exceed the height of the tower by 20% because the height of the tower may be increased by 10% the next year.

5. Require mandatory live RF compliance testing immediately after tower is installed and “on demand testing” by a third party paid for by carrier.

6. Height restriction 30 feet; next year [under 1903] tower may go 10% higher.

7. Payment, performance and removal bond paid up front.

8. Require a Certificate of Completion.

9. No cutting of trees to facilitate line of sight or initial placement. The general ambience of the community is to be preserved.

10. Under-grounding of equipment where possible; discretion may be used by staff.

11. The ordinance shall comply with the Americans with Disabilities Act (this includes but is not limited to safe access to private, commercial and public buildings).

12. Noticing for the occupants and building owners of all residences, apartments, and businesses within 1000 feet of the proposed location.

thank you, M Rathburn.

Mark & Linda Saxon
PO Box 3824
Rancho Santa Fe, CA 92067

June 26, 2019

Tara Lieberman
Land Use / Environmental Planner, Advance Planning
5510 Overland Avenue, Suite 310 / Mail Stop – 0650
San Diego California 92123

Re: Small Cell Wireless Facilities Ordinance

Dear Ms. Lieberman & San Diego County Supervisors:

We are deeply concerned about the new FCC directive making it possible for the telecommunications industry to place cell towers anywhere in the county right-of-way. We are voicing our strong objection to the FCC's takeover of our county's land as well as due process with respect to our rights. That being said, as zoning planners and Supervisors, please consider our following requests. We are afraid of property devaluation with cell towers in residential areas, as most of us have the majority of our net worth in our homes. Because 5G is an unproven technology, please protect certain sensitive areas:

1. Cell towers should not to be located in "Sensitive" areas. 1000 foot setbacks from sensitive areas as defined by the County are necessary.
2. 500 foot set back from residential.
3. Pre-application site inspection & survey required for each site application. There must be an on-site inspection prior to approval of the site by the County or agent representing the County. If application is in conflict with a sensitive area, site inspector may suggest the tower relocate so coverage is the same but sensitive area is protected.
4. Fall zone must exceed the height of the tower by 20% because the height of the tower may be increased by 10% the next year. Setback must meet fall zone length at a minimum.
5. Require mandatory live RF compliance testing immediately after tower is installed and "on demand testing" by a third party paid for by carrier.
6. Height restriction 30 feet; next year [under 1903] tower may go 10% higher.
7. Payment, performance and removal bond paid up front.
8. Require a Certificate of Completion.
9. No cutting of trees to facilitate line of sight or initial placement. The general ambience of the community is to be preserved,
10. Co-location up to two carriers is encouraged
11. Under-grounding of equipment where possible; discretion may be used by staff.
12. The ordinance shall comply with the Americans with Disabilities Act.

Thank you for your consideration of this very important issue.

Sincerely,

M Saxon L Saxon

Mark & Linda Saxon

County of San Diego

ANDREW POTTER, CCB
EXECUTIVE OFFICER/CLERK

CLERK OF THE BOARD OF SUPERVISORS
1600 PACIFIC HIGHWAY, ROOM 402, SAN DIEGO, CALIFORNIA 92101-2471
PHONE (619) 531-5600 FAX (619) 338-8146
www.sandiegocob.com

ERIN DEMOREST
ASSISTANT CLERK OF THE BOARD

June 10, 2019

TO: Supervisor Dianne Jacob, Chairwoman
Supervisor Greg Cox, Vice Chairman
Supervisor Kristin Gaspar
Supervisor Nathan Fletcher
Supervisor Jim Desmond

FROM: Andrew Potter
Clerk of the Board of Supervisors

REFERRAL

Attached, for your information, is correspondence from Melynnique Seabrook regarding the dangers of 5G cell antennas. Thank you.

Respectfully,

ANDREW POTTER

Attachment

cc: Helen Robbins-Meyer, Chief Administrative Officer
Sarah Aghassi, Deputy Chief Administrative Officer, Land Use and Environment Group
Board of Supervisors Communications Received

AJP: dl

From: Jacob, Dianne
Sent: Monday, June 10, 2019 9:14 AM
To: FGG-DL, LSDOCS
Subject: FW: The Dangers of 5G Radiation

From: Melynnique <ms@awakeninglight.com>
Sent: Sunday, June 09, 2019 4:48 PM
To: Jacob, Dianne <Dianne.Jacob@sdcounty.ca.gov>
Subject: The Dangers of 5G Radiation

Esteemed Supervisor Dianne Jacob:

Currently there is much controversy regarding the roll-out of the 5G technology. Because of the abundance of technology companies

in our area which have a stake in the propagation of this type of radiation, you may not be aware of the negative health aspects of this technology.

It has been rejected in Europe in many areas that have come to realize how dangerous it is for health and well-being.

I attach the link below which states the concern many of us here in Escondido have.

We do NOT want this type of radiation polluting our environment and our health, regardless of how fast it may speed up our lives.

Please listen to the information attached below and let me know if the San Diego County Board of Supervisors can restrict the placement of these cell towers to

avoid them being placed in residential areas, so that the radiation does not affect either humans or animals. We really wish this 5G could be rejected in totality.

Please do whatever you can to protect us here in San Diego County by NOT allowing the cell towers to be placed anywhere near our homes. We very much appreciate your help with this. Please respond to me to the e-mail below and let me know how you can help.

https://www.radiationhealthrisks.com/5g-cell-towers-dangerous

Sincerely,

Melynnique Seabrook

Escondido, Ca.

ms@awakeninglight.com

San Diego County Citizen
Invitation

Mike Stephenson
1415 Rincon Ave
Escondido CA 92026

June 27, 2019

San Diego County Board and Planning Commission
County Administration Center
1600 Pacific Hwy, Rm 335
San Diego, CA 92101

Dear County Supervisors and County Planning Commission,

I am writing to express my concern about the installment of 5G/small-cell antennas throughout San Diego County. The threats to public health, safety, privacy and security, property, and more must be addressed in the wireless ordinance. The citizens of San Diego County require your protection. I am grateful that The County is taking measures to incorporate such protections into an updated wireless ordinance, since the version approved in February makes no such provisions.

Based on review of the latest ordinance draft, there are still a number of ways this ordinance could be improved to ensure the best for SD County citizens, which I trust is your primary goal.

- **Restrict small cells in residential areas, and zones where children, elderly and those with special/medical needs will be.** No small cell should be allowed within (a minimum) of 1000 feet from a residential property line, in any direction. Or within 1000 ft of a school, hospital, library, church, daycare, community center, property lines. Verizon has a commercial on YouTube where they measured the distance of a 5G signal (through hills and obstacles) at a distance of greater than 3,000 feet, so there should be zero issue with these setbacks, they are a necessity.
- **Stronger language.** Use words like “must”, “shall”, “must avoid”, “will”, etc which are more clear in meaning and tone, instead of “may not”, “should not”, and “suggest”, which can be ignored.
- **Require a master plan.** The master plan needs to be coordinated across all carriers, and provide information for each antenna project like RF exposure levels, power levels, frequencies, and location address. The master plan should also be published online with ample notice, such that citizens can provide input BEFORE the antenna is installed. REQUIRE that these companies have a plan and strategy for where they place the antennas, and enforce their compliance. This will minimize excessive, haphazard installments.
- **No Co-location!** Co-location means multiple antennas to a single pole. And despite the thinking, it does not reduce clutter. Actually, it produces a huge eyesore of a pole will multiple projections hanging off of it. It DRAWS more attention because of the extra hardware. Col-location allows poles to become scarily top-heavy, and also exposes citizens to higher doses of radiation since multiple antennas will emit from a single location. One antenna per pole, and no antennas within 1000 feet of ANY other antenna.
- **No cutting or disturbance of trees and landscaping – at all.** This must be forbidden! There are other towns and cities with gorgeous, old trees being chopped down or excessively trimmed to allow for small cell deployment. Not going to happen in San Diego!
- **Provide clear-easy-to-reach County support for citizens.** We need to have a dedicated line/service to contact The County when issues with the small cells arise, such as noise, safety, health

problems, or other complaints need to be reported. This service can be funded by the wireless providers as a part of their application/bond/yearly renewal fees.

- **Insurance and Bonds.** Require than the companies have increased insurance and bonds to protect against malfunction, accidents, damages, and injury. These provide protection for the county too.
- **ADA language and provisions.** The ordinance lacks language that protects Americans with disabilities, and their use of these rights-of-way, where the small cells structures will be deployed. ADA protection must not be discriminatory toward those who have physical mobility disabilities only. What about citizens with EHS, pacemakers, ADD/ADHD, autoimmune, etc? These rights-of-way belong to us too, and this liability belongs to San Diego County.
- **Random third-party testing.** Random, independent third party inspections must be required biannually, at expense of the company, to ensure compliance with FCC guidelines.
- **Give notice** for any residence within a mile of a proposed small cell site, to provide ample time for residents to come forward and provide input.
- **Require safety signage on all poles.** All poles must have necessary warning signs and RF safety information.
- **Keep small cells away from parks and ball fields – at least 3000 ft away.**

Thank you for taking the time to consider and apply these suggestions. I look forward to seeing changes in next ordinance draft.

Sincerely,

Mike Stephenson

From: Neal, Stephanie
To: Easland, Camila
Subject: FW: Small cell wireless facilities
Date: Monday, July 01, 2019 9:59:26 AM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Sent: Monday, July 01, 2019 8:23 AM
To: Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>
Cc: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: FW: Small cell wireless facilities

Bianca Lorenzana
Jr. Land Use/Environmental Planner
Pronouns: she/her
Bianca.Lorenzana@sdcounty.ca.gov
Phone: 858-694-2216
County of San Diego | Planning & Development Services
5510 Overland Avenue, Suite 310, San Diego, CA 92123

From: Nancy Lemke <bookhandler@cox.net>
Sent: Sunday, June 30, 2019 2:12 PM
To: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Subject: Small cell wireless facilities

Hello,
I appreciate the chance to comment on this topic which is extremely important to me.

Placement of the devices is a secondary issue to me. I would rather have you explore the health issues caused by 4G that will only be made worse with 5G, and I hope you will realize that 5G is not something that should be allowed at all.

First, I feel like the canary in the coal mine. Please heed my warning. I am sensitive to wifi. I was okay with 3G, but when wifi went up to 4G, I began having headaches and sometimes my skin even

feels like its on fire. Right now as I type this, I have a headache from being near my computer. Any time I am near wifi emitters (computers, cell phones, cell phone towers, TVs, my new sewing machine, restaurants with strong wifi, etc.), my head aches, and it gets more painful the more time I spend near the wifi source. Recently I had to check out from a hotel in because in the room I had an awful headache and burning skin. The hotel had just strengthened their wifi and said other guests had complained also. When I first experienced these headaches, I thought I was nuts, and it would go away. But as the headaches persisted, I began reading and found there are a growing number of people who have symptoms around wifi. And there is a growing field of reputable scientific testing that shows the electro magnetic energy (EMF) from wifi damages life at a cellular level. There is evidence linking brain tumors to cell phone use, testicular cancer to cell phones carried in pockets, ADHD behavior in children with frequent cell phone exposure. Honey bee die off in areas with pervasive wifi signals, and a large variety of other health problems. The World Health Organization validates that EMF sensitivity is a real health condition. So why allow the installation of small cell wireless devices that would spread an even more powerful electronic poison through every neighborhood than G4 already does? You don't need to take my word for it. Here is a link to a letter sent to the city of Sebastopol by EMF Safety Network protesting the installation of small cell towers. It includes many citations of reputable scientific studies that support the danger of wifi. http://emfsafetynetwork.org/wp-content/uploads/2018/05/Letter-to-Seb-Verizon-5G.pdf

European countries are far more concerned than the US is about the problem of EMF. Some have set limits well below 5G for the strength of acceptable wifi emissions. Russia's are the most stringent. The FCC says EMF is not a problem. This point of view is based on studies from the 1990s. The electronic world has changed dramatically in that time. The FCC's more recent studies have been delayed and are not conclusive. As you can imagine, there is a great deal of money to be made from wifi, so my confidence is not very strong that the FCC is the right agency at this time on which to put such a responsibility, since much of their research is paid for by the industries they monitor.

I so hope you will reconsider even allowing these wireless facilities. I dread what 5G will do to me and others like me. And I wonder how many more people will begin to feel the symptoms of cell destruction caused by powerful wifi. It is your job to protect the citizens of the county. Please do so.

Thank you,
Nancy Lemke
3597 Lomacitas Ln.
Bonita, CA 91902

From: Neal, Stephanie
To: Easland, Camila
Subject: FW: Small cell wireless facilities
Date: Monday, July 01, 2019 9:57:44 AM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: Nancy Lemke <bookhandler@cox.net>
Sent: Sunday, June 30, 2019 7:29 PM
To: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: Small cell wireless facilities

I know the county is considering placement of small cell wireless facilities for 5G in the county. I appreciate the chance to comment on this topic which is extremely important to me.

Placement of the devices is a secondary issue to me. I would rather have you study the health issues caused by 4G that will only be made worse with 5G, and I hope you will realize that 5G is not something that should be allowed at all.

First, I feel like the canary in the coal mine. Please heed my warning. I am sensitive to wifi. I was okay with 3G, but when wifi went up to 4G, I began having headaches and sometimes my skin even feels like it's on fire. Right now as I type this, I have a headache from being near my computer. Any time I am near wifi emitters (computers, cell phones, cell phone towers, TVs, my new sewing machine, restaurants with strong wifi, etc.), my head aches, and it gets more painful the more time I spend near the wifi source. Recently I had to check out of a hotel because in the room I had an awful headache and burning skin. The hotel had just strengthened their wifi and said other guests had complained also.

When I first experienced these headaches, I thought I was nuts. But as the headaches persisted, I began reading and found there are a growing number of people who have symptoms like me around wifi. And there is a growing field of reputable scientific testing that shows the electro magnetic energy (EMF) from wifi damages life at a cellular level. There is evidence linking brain tumors to cell phone use, testicular cancer to cell phones carried in pockets, ADHD behavior in children with frequent cell phone exposure. Honey bee die off in areas with pervasive wifi signals, and a large variety of other health problems. The World Health Organization validates that EMF sensitivity is a real health condition. So why allow the installation of small cell wireless devices that would spread an even more powerful electronic poison through every neighborhood than G4 already does? You don’t need to take my word for it. Here is a link to a letter sent to the city of Sebastopol by EMF Safety Network protesting the installation of small cell towers there. It is just as applicable to San

Diego and includes many citations of reputable scientific studies that support the danger of wifi. http://emfsafetynetwork.org/wp-content/uploads/2018/05/Letter-to-Seb-Verizon-5G.pdf A Google search on WIFI will bring up more good websites (as well as some unreliable ones) that continue showing the alarming results scientists have found regarding the pervasive integration of strong EMF into our daily lives.

European countries are far more concerned than the US is about the problem of EMF. Some have set limits well below 5G for the strength of acceptable wifi emissions. The FCC says EMF is not a problem. This point of view is based on studies from the 1990s. The electronic world has changed dramatically in that time. The FCC's more recent studies have been delayed and are not conclusive. As you can imagine, there is a great deal of money to be made from wifi, so my confidence is not very strong that the FCC is the right agency at this time on which to put such a responsibility. Much of their research is paid for by the industries they monitor.

I so hope you will reconsider even allowing these wireless facilities. I dread what 5G will do to me and others like me. And I wonder how many more people will begin to feel the symptoms of cell destruction caused by powerful wifi. It is your job to protect the citizens of the county. Please do so.

Thank you,
Nancy Lemke
3597 Lomacitas Ln.
Bonita, CA 91902

From: Neal, Stephanie
To: Easland, Camila
Subject: FW: 5G/small-cell antennas ordinance concerns
Date: Monday, July 01, 2019 9:59:46 AM
Importance: High

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Sent: Monday, July 01, 2019 8:25 AM
To: Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>
Cc: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: FW: 5G/small-cell antennas ordinance concerns
Importance: High

Bianca Lorenzana
Jr. Land Use/Environmental Planner
Pronouns: she/her
Bianca.Lorenzana@sdcounty.ca.gov
Phone: 858-694-2216
County of San Diego | Planning & Development Services
5510 Overland Avenue, Suite 310, San Diego, CA 92123

From: Natalie Federe <NFedere@symitar.com>
Sent: Sunday, June 30, 2019 10:25 PM
To: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>; Jacob, Dianne <Dianne.Jacob@sdcounty.ca.gov>
Subject: 5G/small-cell antennas ordinance concerns
Importance: High

June 30, 2019
San Diego County Board and Planning Commission
County Administration Center
1600 Pacific Hwy, Rm 335
San Diego, CA 92101

Dear County Supervisors and County Planning Commission,

I am writing to express my concern about the installment of 5G/small-cell antennas throughout San Diego County. I looked up our neighborhood Princess Del Cerro park and it is slated for 10 (TEN!) small-cell antennas on EVERY light pole in the park! This park is frequented by many families with infants and small children who spend the entire day there. The antennas are near the playground , baseball field, soccer field and bike / walking paths where our children play for multiple hours a day every day! This park is also frequented by a lot of elderly citizens who have health conditions are sensitive to electro smog.

I looked up other parks in the area and it looks like small cell towers are slated to go up on every light pole in other parks as well. 5G effects have not been studied on developing brains of our children and our government should be protecting our children and the elderly as they are the most vulnerable to the consequences of wireless radiation. The threats to public health, safety, privacy and security, property, and more must be addressed in the wireless ordinance. The citizens and children of San Diego County require your protection. I am grateful that The County is taking measures to incorporate such protections into an updated wireless ordinance, since the version approved in February makes no such provisions.

Based on review of the latest ordinance draft, there are still a number of ways this ordinance could be improved to ensure the best for SD County citizens, which I trust is your primary goal.

· Restrict small cells in residential areas, and zones where children, elderly and those with special/medical needs will be. No small cell should be allowed within (a minimum) of 1000 feet from a residential property line, in any direction. Or within 1000 ft of a school, hospital, library, church, daycare, community center, property lines. Verizon has a commercial on YouTube where they measured the distance of a 5G signal (through hills and obstacles) at a distance of greater than 3,000 feet, so there should be zero issue with these setbacks, they are a necessity.

· Stronger language. Use words like “must”, “shall”, “must avoid”, “will”, etc which are more clear in meaning and tone, instead of “may not”, “should not”, and “suggest”, which can be ignored.
· Require a master plan. The master plan needs to be coordinated across all carriers, and provide information for each antenna project like RF exposure levels, power levels, frequencies, and location address. The master plan should also be published online with ample notice, such that citizens can provide input BEFORE the antenna is installed. REQUIRE that these companies have a plan and strategy for where they place the antennas, and enforce their compliance. This will minimize excessive, haphazard installments.
· No Co-location! Co-location means multiple antennas to a single pole. And despite the thinking, it does not reduce clutter. Actually, it produces a huge eyesore of a pole will multiple projections hanging off of it. It DRAWS more attention because of the extra hardware. Col-location allows poles to become scarily top-heavy, and also exposes citizens to higher doses of radiation since multiple antennas will emit from a single location. One antenna per pole, and no antennas within 1000 feet of ANY other antenna.
· No cutting or disturbance of trees and landscaping – at all. This must be forbidden! There are other towns and cities with gorgeous, old trees being chopped down or excessively trimmed to allow for small cell deployment. Not going to happen in San Diego!

· Provide clear-easy-to-reach County support for citizens. We need to have a dedicated line/service to contact The County when issues with the small cells arise, such as noise, safety, health problems, or other complaints need to be reported. This service can be funded by the wireless providers as a part of their application/bond/yearly renewal fees.
· Insurance and Bonds. Require than the companies have increased insurance and bonds to protect against malfunction, accidents, damages, and injury. These provide protection for the county too.
· ADA language and provisions. The ordinance lacks language that protects Americans with disabilities, and their use of these rights-of-way, where the small cells structures will be deployed. ADA protection must not be discriminatory toward those who have physical mobility disabilities only. What about citizens with EHS, pacemakers, ADD/ADHD, autoimmune, etc? These rights-of-way belong to us too, and this liability belongs to San Diego County.
· Random third-party testing. Random, independent third party inspections must be required biannually, at expense of the company, to ensure compliance with FCC guidelines.
· Give notice for any residence within a mile of a proposed small cell site, to provide ample time for residents to come forward and provide input.
· Require safety signage on all poles. All poles must have necessary warning signs and RF safety information.

· Keep small cells away from parks and ball fields – at least 3000 ft away.

Thank you for taking the time to consider and apply these suggestions. I look forward to seeing changes in next ordinance draft.

Sincerely,

Natalie Federe

5951 Eldergardens Street

San Diego, CA 92120

NOTICE: This electronic mail message and any files transmitted with it are intended exclusively for the individual or entity to which it is addressed. The message, together with any attachment, may contain confidential and/or privileged information. Any unauthorized review, use, printing, saving, copying, disclosure or distribution is strictly prohibited. If you have received this message in error, please immediately advise the sender by reply email and delete all copies.

From: AdvancePlanning, PDS
To: Shute, Madeline
Cc: Lieberman, Tara
Subject: FW: 5g is scary!
Date: Wednesday, June 19, 2019 11:30:34 AM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

-----Original Message-----
From: nickperkin@yahoo.com [mailto:nickperkin@yahoo.com]
Sent: Tuesday, June 18, 2019 6:38 AM
To: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Subject: 5g is scary!

To those in charge of making decisions that will affect the masses, please stop the 5g nonsense. Those who are not blinded by monetary value of 5g notice the huge potential dangers of it. Sadly our world revolves around profit margins and the future of our health is not priority. You have the power to make this right. Please do the right thing. 5g is bad. This is becoming common knowledge. The greed and corruption of the FCC will not last. People are slowly waking up to the fact that faster internet is not worth risking the health of the children of this world. Thanks for your service.
Sent from my iPhone

From: AdvancePlanning, PDS
To: Lieberman, Tara
Subject: FW:
Date: Monday, June 03, 2019 9:02:32 AM

Bianca Lorenzana
Jr. Land Use/Environmental Planner
Pronouns: she/her
Bianca.Lorenzana@sdcounty.ca.gov
Phone: 858-694-2216
County of San Diego | Planning & Development Services
5510 Overland Avenue, Suite 310, San Diego, CA 92123

From: Pro-Air [mailto:Pro-Air@cox.net]
Sent: Saturday, June 01, 2019 7:44 AM
To: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Subject:

WHAT LOCATION?

From: Neal, Stephanie
To: Easland, Camila
Subject: FW: 5G is a hazard to human"s, animals and insects
Date: Monday, July 01, 2019 9:59:45 AM
Attachments: 5G-w-danger-1-768x405.jpg
5G studies paper.pdf
5G La Jolla Dr Golomb .pdf

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Sent: Monday, July 01, 2019 8:25 AM
To: Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>
Cc: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: FW: 5G is a hazard to human's, animals and insects

Bianca Lorenzana
Jr. Land Use/Environmental Planner
Pronouns: she/her
Bianca.Lorenzana@sdcounty.ca.gov
Phone: 858-694-2216
County of San Diego | Planning & Development Services
5510 Overland Avenue, Suite 310, San Diego, CA 92123

From: Yahoo <robsurfin@yahoo.com>
Sent: Sunday, June 30, 2019 8:04 PM
To: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Subject: 5G is a hazard to human's, animals and insects

Please research. Experts not connected to Govt or telecom say it's harmful.



SECTION 24

Key Scientific Evidence and Public Health Policy Recommendations

(Supplement 2012)

Cindy Sage, MA

Sage Associates

Santa Barbara, CA USA

David O. Carpenter, MD

Director, Institute for Health and the Environment

University at Albany, Rensselaer, NY USA

Prepared for the BioInitiative Working Group

December 2012

I. INTRODUCTION

In public health and environmental policy-making, asking the right questions is a highly evolved art form. It is necessary to periodically look for '*not-so-early-now warnings'* from new science and medical information. At some point it becomes '*old news'* in the real-world process of commercializing new technologies* and is ignored. Precious time is lost if the '*evidence curve'* does not come quickly enough to '*change the rollout curve*' and result in early enough interventions. EMF may be a highly preventable source of disease but not without early enough translation of the science into action. The time for arguing whether EMF health effects exist is over. We know they exist and that they result in human disease.

Asking the right questions and looking for proportionate responses necessarily involves make mid-course corrections guided by new evidence. This is particularly true when the consequences of doing nothing are too great to ignore – because they will affect billions of people in societies around the world. "*While there are many unanswered questions, the cost of doing nothing will result in an increasing number of people, many of them young, developing cancer*." (Carpenter, 2010).

What questions should be asked now, to move forward on the body of evidence? How much evidence do we need to act? Do we have enough? What standard of evidence should be used to judge (purely scientific vs precautionary public health). What is a relevant biological 'dose'? How long does a biological effect last? Are we accounting for differences among individuals or different types of cells?

Which of the studies are truly measuring chronic exposures (is a one-month or a one-year study really revealing chronic effects; if mid-length studies show no effect, does this tell us anything useful)? Why is it still considered reasonable to base safety standards on time-averaged radiofrequency exposures when the technologies today use pulsed RFR?

*Electronics, the internet, cellular telecommunications, wireless medical technologies, and wireless sensors for energy conservation, electric utilities management, transportation, education, banking and national security.

For example, the collective behavior of neurons is established through synchrony. "*Individual neurons have a time window of tens of milliseconds range for single neurons, but oscillatory coalitions of neurons can expand the effect window of synchronization from hundreds of milliseconds to many seconds"* (Buzsaki, 2006). This means the time span a bioeffect can last long enough to overlap with the next environmental provocation (pulsed RFR in this case) so that repetitive exposures may induce an unending cascade of neurological firing that eventually disrupts normal homeostasis and causes chronically abnormal function in cooperative assemblies of cells like neurons. RFR is bioactive and already classified as a Possible Human Carcinogen but the relevant RFR bursts are camouflaged and their relevant metrics are diluted away by time averaging. Why is it reasonable to use safety standards that were developed to guard against induced currents in tissue (ELF-EMF) or that heat or burn tissue (RFR)?

Briefly stated, here is what we knew in 2007.

- Bioeffects and adverse health effects of chronic exposure to low-intensity (non-thermal) non-ionizing radiation are established.
- Existing FCC and ICNIRP public safety limits are not sufficiently protective of public health.
- The World Health Organization has classified ELF-EMF as a Group 2B Possible Human Carcinogen (2001).
- New, biologically-based public exposure standards are critically needed.
- It is not in the public interest to wait.

Here is what we know in 2012. There is more evidence, over a broader range of studies. The levels of biological responses are extraordinarily low (down to the nanowatt and picowatt power density level).

New studies address fertility and reproduction, fetal and neonatal effects, cognitive and behavioral problems in children and neurological damage. There are more mobile phone base station studies with longer testing periods, much more information on genetic damage and confirmation of increased risk of brain cancers from not one or two

studies, but from many studies and many authors including the World Health Organization's massive 13-country INTERPHONE STUDY (Interphone Study Group, 2010).

There are many studies reporting effects of cell phone radiation (even on standby-mode), wireless laptop exposure, cell phone use by mothers resulting in altered fetal brain development in the offspring, and more evidence that the blood-brain barrier and memory are at risk from cell phone use. There is evidence from human and animal studies that key areas of the brain are negatively affected by RFR at legal levels.

There is better understanding of the important physical and biological factors that make ELF-EMF and RFR potent disruptors of living tissues and basic metabolic processes. More and more, EMF devices are being used for medical treatments in cancer, bone and wound healing and re-tuning the nervous system. Increased depth of evidence in many threads is presented in this report by well-regarded scientists and researchers from around the world. The number of good studies has grown. The exposure levels causing effects are documented to be much lower than in the past. The epidemiological evidence is now showing risks for a variety of adverse health outcomes. All this should be taken seriously by governments, and translated quickly into more protective safety standards, and in the interim, into strong preventative actions, warnings and substitution of safer technologies and redesigned devices.

Bioeffects are clearly established and occur at very low levels of exposure to electromagnetic fields and radiofrequency radiation. Bioeffects can occur in the first few minutes at levels associated with cell and cordless phone use. Bioeffects can also occur from just minutes of exposure to mobile phone masts (cell towers), WI-FI, and wireless utility 'smart' meters that produce whole-body exposure. Chronic base station level exposures can result in illness.

Many of these bioeffects can reasonably be expected to result in adverse health effects if the exposures are prolonged or chronic. This is because they interfere with normal body processes (disrupt homeostasis), prevent the body from healing damaged DNA, produce immune system imbalances, metabolic disruption and lower resistance to disease across multiple pathways. Essential body processes can eventually be disabled by incessant external stresses (from system-wide electrophysiological interference) and lead to pervasive impairment of metabolic and reproductive functions.

What does the WHO IARC Classification of ELF-EMF and RFR as Group 2B Possible Human Carcinogens Mean?

The World Health Organization International Agency for Cancer Research (IARC) designated ELF-EMF as a Group 2B (Possible) Carcinogen in 2001. This is the kind of exposure from power lines, battery switching in cell phone devices, laptop computers and appliances. The World Health Organization specifically reaffirmed its finding that EMF is classifiable as a Group 2B Possible Human Carcinogen in 2006 in their Health Criteria Monograph #238 (WHO, 2007).

World Health Organization International Agency for Research on Cancer (IARC) Cancer Classifications

Group 1	Known Carcinogen
Group 2A	Probable Carcinogen
Group 2B	Possible Human Carcinogen
Group 3	Insufficient Information
Group 4	Not a Carcinogen

In 2011, IARC determined that scientific evidence is sufficient now to classify radiofrequency radiation as a Group 2B Possible Human Carcinogen (Baan et al, 2011). This is the kind of exposure coming from cell and cordless phones, cell towers, WI-FI, wireless laptops, electronic baby monitors and wireless 'smart' utility meters.

So, what does this mean? According to the classification categories, it is again clear IARC did NOT find so little clear and consistent evidence that it should support a finding of "Not A Carcinogen". That would be the valid test that RFR is safe, as best public health experts can judge the evidence. Nor did IARC find that the evidence sufficient so as to make a stronger classification (Probably or Known Carcinogen). Rather, IARC found the evidence supports classification as a "Possible" cancer-causing

agent. That is not a weak or reckless judgment made with few facts. It should be a strong warning to governments to reconsider their safety standards, particularly in light of the billions of people at potential health risk from new wireless technologies. Studies of cell and cordless phones and of wireless whole-body RFR exposures consistently show human health impacts that have become 'epidemiologically visible' (Sections 11 and 21).

ELF-EMF AND RFR ARE CLASSIFIED AS POSSIBLE CANCER-CAUSING AGENTS – WHY ARE GOVERNMENTS NOT ACTING?

The World Health Organization International Agency for Research on Cancer has classified wireless radiofrequency as a Possible Human Carcinogen (May, 2011). The designation applies to low-intensity RFR in general, covering all RFR-emitting devices and exposure sources (cell and cordless phones, WI-FI, wireless laptops, wireless hotspots, electronic baby monitors, wireless classroom access points, wireless antenna facilities, etc). The IARC Panel could have chosen to classify RFR as a Group 4 – Not A Carcinogen if the evidence was clear that RFR is not a cancer-causing agent. It could also have found a Group 3 designation was a good interim choice (Insufficient Evidence). IARC did neither.

II. KEY SCIENTIFIC EVIDENCE (2006- 2012)

Many thousand scientific studies over four decades have provided warnings of serious biological effects and potential health harm from EMF and RFR. About 1800 new, scientific papers published in the last five years report more bioeffects and adverse health effects of EMF and RFR, and are presented in great detail in the BioInitiative Report 2012.

These studies since 2006 give critical support to the argument that current safety standards are grossly inadequate. They cannot be protecting public health if they do not prevent harm to a variety of types of human cells, human sperm and the developing fetus *in-utero*. These are all effects reported today due to cell phone radiation exposures that are both legal and common in daily home, business and school environments. These effects are shown to occur at very low-intensity permissible levels that have become 'typical' for pregnant women, the fetus, the infant, the child, and for adults. Such effects are occurring at hundreds to thousands of times lower intensity exposure levels than the current FCC public safety limits allow. These exposure levels are common in the

environment, but worst in close proximity to wireless devices like cell and cordless phones, 'smart' wireless utility meters, wireless routers, wireless classroom access points and laptops, to baby surveillance devices, and in the first few hundred meters of cell towers. WI-FI levels of RFR and cell phones-on-standby mode are sufficient to cause effects that, if chronic, may be damaging to the health of cellular DNA, reproductive germ cells (sperm) and the male reproductive organs.

Overall, these new studies report abnormal gene transcription (Section 5); genotoxicity and single-and double-strand DNA damage (Section 6); stress proteins because of the fractal RF-antenna like nature of DNA (Section 7); chromatin condensation and loss of DNA repair capacity in human stem cells (Sections 6 and 15); reduction in free-radical scavengers - particularly melatonin (Sections 5, 9, 13, 14, 15, 16 and 17); neurotoxicity in humans and animals (Section 9), carcinogenicity in humans (Sections 11, 12, 13, 14, 15, 16 and 17); serious impacts on human and animal sperm morphology and function (Section 18); effects on offspring behavior (Section 18, 19 and 20); and effects on brain and cranial bone development in the offspring of animals that are exposed to cell phone radiation during pregnancy (Sections 5 and 18). This is only a snapshot of the evidence presented in the BioInitiative 2014 updated report.

Many of these bioeffects are associated with disruption of normal biological functioning in the genes, and in the physiology of the nervous and cardiac systems of the body (brain, blood-brain barrier, heart, vascular system). Sleep disruption (insomnia) is a hallmark bioeffect of RFR. Hypersensitivity disorders like allergies and asthma are reported from exposure to environmental chemicals and to EMF. A pregnant woman's exposure to EMF has been linked to increased asthma and behavioral problems in the human child after *in-utero* exposure. Pregnant mice exposed to cell phone radiation give birth to baby mice with attention disorders, hyperactivity and impaired memory function, similar to effects seen in human babies as reported by Divan et al (2008).

A. Stress, Stress Proteins and DNA as a Fractal Antenna: The word stress invokes different concepts for people, but needs to be understood as a physiological response. BioInitiative author Martin Blank has described how both ELF-EMF and RFR produce stress proteins at very low exposure levels, and why this is only adaptive in the short-

term. Chronic exposures that trigger stress responses (stress proteins) regardless of their environmental cause are mal-adaptive if they go on too long. Any agent (EMF, ionizing radiation, chemicals, heavy metals, etc) that continuously generates stress proteins is not adaptive, and is harmful, if it is a constant provocation.

The work of Martin Blank and Reba Goodman of Columbia University has established that stress proteins are produced by ELF-EMF and RFR at levels far below current safety standards allow. Further, they think DNA is actually a very good fractal RF-antenna which is very sensitive to low doses of EMF, and may induce the cellular processes that result in chronic 'unrelenting' stress. That daily environmental levels of ELF-EMF and RFR can and do throw the human body into stress protein response mode (out of homeostasis) is a fundamental and continuous insult. Chronic exposures can then result in chronic ill-health**.**

B. Fetal Effects and Fetal Development Studies: Effects on the developing fetus from *in-utero* exposure to cell phone radiation have been observed in both human and animal studies since 2006. Divan et al (2008) found that children born of mothers who used cell phones during pregnancy develop more behavioral problems by the time they have reached school age than children whose mothers did not use cell phones during pregnancy. The July 2008 issue of Epidemiology reports that children whose mothers used cell phones during pregnancy had 25% more emotional problems, 35% more hyperactivity, 49% more conduct problems and 34% more peer problems (Divan et al, 2008).

Aldad et al (2012) showed that cell phone radiation significantly altered fetal brain development and produced ADHD-like behavior in the offspring of pregnant mice. Exposed mice had a dose-dependent impaired glutamatergic synaptic transmission onto Layer V pyramidal neurons of the prefrontal cortex. The authors conclude the behavioral changes were the result of altered neuronal developmental programming *in utero*. Offspring mice were hyperactive and had impaired memory function and behavior problems, much like the human children in Divan et al (2008).

A new study from Greece reports altered development of the cranial bones of the mouse fetus from low intensity (0.6 to 0.9 W/kg) *in-utero* 900 MHz cell phone radiation (Fragopoulou et al, 2009). They report *"our results clearly show that even modest exposure (e.g., 6-min daily for 21 days) is sufficient to interfere with the normal mouse developmental process."*

Other new studies by Fragopoulou et al report that brain astrocyte development followed by proteomic studies is adversely affected by DECT (cordless phone radiation) and mobile phone radiation (Fragopoulou et al, 2012); and that whole body exposure with GSM 900MHz affects spatial memory in mice (Fragopoulou et al, 2010).

FETAL BRAIN DEVELOPMENT MAY BE ALTERED

There is increasing evidence that fetal (*in-utero*) and early childhood exposures to cell phone radiation and wireless technologies in general is a risk factor for hyperactivity, learning disorders and behavioral problems in school.

Neonatal physician Carlo Bellieni of Italy found that heart rate variability is adversely affected in infants hospitalized in isolettes or incubators where ELF-EMF levels are in the 0.8 to 0.9 μT range (8 to 9 mG) (Bellieni, 2008). Infants suffer adverse changes in heart rate variability, similar to adults. He also reported that newborns cared for in the high ELF-EMF environments of isolettes have disrupted melatonin levels (Bellieni et al, 2012a).

C. Studies of Sperm: Several international laboratories have replicated studies showing adverse effects on sperm quality, motility and pathology in men who use and particularly those who wear a cell phone, PDA or pager on their belt or in a pocket (Agarwal et al, 2008; Agarwal et al, 2009; Wdowiak et al, 2007; De Iuliis et al, 2009; Fejes et al, 2005; Aitken et al, 2005; Kumar, 2012). Other studies conclude that usage of cell phones, exposure to cell phone radiation, or storage of a mobile phone close to the testes of human males affect sperm counts, motility, viability and structure (Aitken et al, 2004; Agarwal et al, 2007; Erogul et al., 2006). Animal studies have demonstrated oxidative and DNA damage, pathological changes in the testes of animals, decreased sperm mobility and viability, and other measures of deleterious damage to the male germ line

(Dasdag et al, 1999; Yan et al, 2007; Otitoloju et al, 2010; Salama et al, 2008; Behari et al, 2006; Kumar et al, 2012). There are fewer animal studies that have studied effects of cell phone radiation on female fertility parameters. Panagopoulous et al. 2012 report decreased ovarian development and size of ovaries, and premature cell death of ovarian follicles and nurse cells in *Drosophila melanogaster.* Gul et al (2009) report rats exposed to stand-by level RFR (phones on but not transmitting calls) caused decrease in the number of ovarian follicles in pups born to these exposed dams. Magras and Xenos (1997) reported irreversible infertility in mice after five (5) generations of exposure to RFR at cell phone tower exposure levels of less than one microwatt per centimeter squared (μW/cm2).

Agarwal et al (2009) evaluated the effect of cell phone radiation during talk mode on human sperm samples. The authors found *"radiofrequency electromagnetic waves emitted from cell phones may lead to oxidative stress in human semen. We speculate that keeping the cell phone in a trouser pocket in talk mode may negatively affect spermatozoa and impair male fertility."*

Aitken et al (2005) studied the effect of 900 MHz cell phone radiation on mice (7 days, 12-hr per day at 0.09 W/kg). The authors found statistically significant damage to the mitochondrial genome of epididymal spermatozoa ($p<0.05$).

Avendano et al, 2012 provided evidence that a 4-hr exposure to WI-FI at exceeding low levels (0.5-1.0 μW/cm2) near a laptop computer caused decreased sperm viability and DNA fragmentation in human sperm samples. Avendado says "(*T)o our knowledge, this is the first study to evaluate the direct impact of a laptop use on human spermatozoa. Ex vivo exposure of human spermatozoa to a wireless internet-connected laptop decreased motility and induced DNA fragmentation by a nonthermal effect. We speculate that keeping a laptop connected wirelessly to the internet on the lap near the testes may result in decreased male fertility."*

De Iuliis et al (2009) reported that *"RF-EMR in both the power density and frequency range of mobile phones enhances mitochondrial reactive oxygen species generation by human spermatozoa, decreasing the motility and vitality of these cells*

while stimulating DNA base adduct formation, and ultimately DNA fragmentation." They warned their findings *"have clear implications for the safety of extensive mobile phone use by males of reproductive age, potentially affecting both their fertility and the health and wellbeing of their offspring"* based on damage from a 6-hr exposure to 1800 MHz cell phone radiation in human sperm cells. This 6-hr exposure caused reduced sperm motility and viability and caused a significant increase in reactive oxygen species (free radicals that are associated with oxidative damage to DNA), and the effects were worse with more exposure (a significant dose-response was observed). Atasoy (2012) also questioned the safety of 2400 MHz exposure to those of reproductive age. This study reports that WI-FI internet access devices can damage DNA and reduce DNA repair when the exposures are very low(exposure level of 0.091 W/kg) and chronic; damage can occur even at levels that comply with 802.11 g WI-FI public safety limits.

Behari et al (2006) reported that chronic exposure of rats to cell phone radiation caused double-strand DNA breaks in sperm cells (35 days, 2-hr per day). This study also showed that the mobile radiation exposure at 900 MHz (at 0.9 W/kg) and at 2.45 GHz (at 0.1 W/kg) caused a statistically significant decrease in sperm count and the weight of testes.

Otitoloju et al., (2010) graphically describe sperm head abnormalities in mice exposed for six months to base-station level RF/MW at 70 to 100 nanowatts/cm2 (0.07 – 0.1 μW/cm2). Only 2% of controls but a stunning 39% to 46% of exposed mice had damaged sperm.

> *"The major abnormalities observed were knobbed hook, pin-head and banana-shaped sperm head. The occurrence of sperm head abnormalities was also found to be dose dependent. The implications of the observed increased occurrence of sperm head abnormalities on the reproductive health of humans living in close proximity to GSM base stations were discussed*."

These studies taken together should provide a strong warning that 'normal' use of a cell phone presents risks that warrant strong preventative actions to protect the integrity of the human genome from de novo mutations and loss of fertility across entire male populations of cell phone users. Further, even the much lower exposure levels associated with mobile phone base station (cell tower) RFR levels are deleterious over time.

HUMAN SPERM AND THEIR DNA ARE DAMAGED

Human sperm are damaged by cell phone radiation at very low intensities (0.00034 – 0.07 μW/cm2). There is a veritable flood of new studies reporting sperm damage in humans and animals, leading to substantial concerns for fertility, reproduction and health of the offspring (unrepaired de novo mutations in sperm). Exposure levels are similar to those resulting from wearing a cell phone on the belt, or in the pants pocket, or using a wireless laptop computer on the lap. Sperm lack the ability to repair DNA damage.

D. Human Stem Cell Studies: Markova et al (2010) reported that 915 MHz microwave exposure significantly affects human stem cells. They found that very low-intensity microwave radiation from mobile phones can inhibit DNA repair processes in human stem cells. By placing a mobile phone at one meter distance from human stem cells in petri dishes (SAR = 0.037 W/Kg), they found a significant reduction in 53BP1 foci. These foci are a measure of DNA repair in cells with double strand DNA damage. The damage was greater to stem cells (derived from adipose tissue in humans) than in fibroblasts. Stem cells did not repair over time - and the damage was done within one hour of microwave exposure. Fibroblasts were similarly affected (inhibited 53BP1 foci) but repaired over time. The effects are carrier-frequency dependent. The effects occurred with GSM exposure at 915 MHz, but not at 905 MHz. The failure of DNA repair also occurred at the mobile phone UTMS carrier frequency of 1947 MHz. Analysis of the 53BP1 foci is a sensitive technique to measure double-strand DNA breaks in both unexposed cells and in cells exposed to cytotoxic agents. In the authors' words, "*this represents a direct mechanistic link to epidemiological data showing an association of MW exposure with increased cancer risk*." The data obtained from human stem cells is of "*utmost relevance for assessment of possible health risks of MW exposure from mobile phones*." Most, if not all adult tissues and organs including blood, skin and brain contain stem cells. Therefore, "*stem cells like blood cells and fibroblasts are always subjected to exposure from mobile phones*." With respect to children, because "*almost all organs and tissues possess stem cells and stem cells are more active in children, the possible relationship of chronic MW exposure and various types of tumors and leukemia especially in children should be investigated.*"

Czyz et al (2004) reported that GSM cell phone exposure affected gene expression levels in embryonic stem cells (p53-deficient); and significantly increased heat shock protein HSP 70 production.

HUMAN STEM CELL DNA DOES NOT ADAPT OR REPAIR

Human adipose tissue stem cells lack the ability to repair DNA damage caused by chronic exposure to non-thermal microwaves. Damage to DNA in some other cells may be incompletely repaired.

E. Mobile Phone Base Station (Cell Tower) Studies

Human Studies: Hutter et al (2006) reported that short-term exposure to GSM cell phone radiation resulted in complaints of headache, neurological problems, sleep and concentration problems in adults with 0.01 - 0.05 μW/cm2 exposure levels. Kundi and Hutter (2009) reviewed human effects in fourteen (14) mobile phone base station studies and reported *"(F)rom available evidence it is impossible to delineate a threshold below which no effect occurs, however, given the fact that studies reporting low exposure were invariably negative it is suggested that power densities around 0.5–1 mW/m2 [*0.05 – 0.1 uW/cm2*] must be exceeded in order to observe an effect."*

Buchner and Eger (2012) conducted an eighteen (18) month study to assess changes in stress hormones in 60 persons exposed before and after a mobile phone base station went into operation in the Rimbach village in Germany. The study showed that chronic exposure to base station RF (whole-body) at 0.006 - 0.01 μW/cm2 in humans had significant impacts on stress hormones over time. In the beginning months, adrenaline levels first increased in a dose-dependent fashion according to exposure level ($p < 0.002$) and then decreased below normal levels ($p < 0.005$). Both the average as well as the median adrenaline values increased after the activation of the transmitter and decreased again after one year with exposure levels >0.006 μW/cm2. Chronically ill subjects and children showed especially strong responses; except for some "outliers," no effect was observed in healthy adults (Buchner and Eger, 2012). For dopamine, inverse effects to

those for adrenaline and noradrenaline were observed. The median dopamine levels decreased from 199 to 115 µg/g creatinine between January and July 2004. The fact that the dopamine levels of the study subjects decreased during this period is highly significant ($p<0.0002$). Thereafter, the median increased again: In January 2005, it was at 131 µg/g creatinine, in July of 2005. This increase is also significant between July 2004 and July 2005 ($p<0.05$).

Buchner (2012) indicates that the RFR transmitter induced changes in stress hormones that follow the classic stress syndrome of adaptation, then exhaustion established by Hans Seyle in the 1950's. *"After the stages of alarm and resistance, the last stage of exhaustion sets in. The parameters investigated in the Rimbach study follow this pattern"*.

A long-term 6-yr study assessed the role of exposure to radio frequency radiation (RFR) emitted either from mobiles or base stations and its relations with human's hormone profiles. The study revealed significant RFR effects on pituitary–adrenal axis, resulting in reduction of ACTH, cortisol, thyroid hormones, prolactin in young females, and testosterone levels in males (Eskander et al, 2012). But no direct measurements of RFR power density levels were made, only categories of distance from transmitter.

Oberfeld et al (2004) reported that populations exposed to base stations transmitting cell phone frequencies had more fatigue, depressive tendency, sleeping disorders, concentration difficulties, and cardio-vascular problems reported with exposure to GSM 900/1800 MHz cell phone signal.

Navarro et al (2003) reported that exposure levels of 0.01 - 0.11 µW/cm2 resulted in fatigue, headaches, sleeping problems in populations around mobile phone base stations.

Thomas et al (2008) reported an increase in adult complaints of headaches and concentration difficulties with short-term cell phone use at 0.005 to 0.04 µW/cm2 exposure levels.

Heinrich et al (2010) reported that children and adolescents (8-17 years old) with short-term exposure to base-station level RFR experienced headache, irritation, and concentration difficulties in school. RFR levels were 0.003 - 0.02 µW/cm2.

Thomas et al (2010) reported that RFR levels of 0.003 - 0.02 μW/cm2 resulted in conduct and behavioral problems in children and adolescents (8-17 years old) exposed to short-term cell phone radiation in school.

Mohler et al (2010) reported that adults exposed to 0.005 μW/cm2 cell phone radiation (base-station exposure levels) had sleep disturbances with chronic exposure, but this effect was not significantly increased across the entire population.

Human Studies at Base Station Exposure Levels (Cell Towers)

At least five new cell tower studies with base-station level RFR at levels ranging from 0.003 μW/cm2 to 0.05 uW/cm2 published since 2007 report headaches, concentration difficulties and behavioral problems in children and adolescents; and sleep disturbances, headaches and concentration problems in adults. This is highly consistent with studies done prior to 2007, but the 'effect levels' are significantly lower (dropping from the microwatt to the nanowatt range per square centimeter).

Public safety standards are 1,000 – 10,000 or more times higher than levels now commonly reported in mobile phone base station studies to cause bioeffects.

Sperm studies are showing DNA damage, impaired sperm quality, motility and viability from cell phones on standby mode and wireless laptop use at exposures of 0.00034 μW/cm2 to 0.07 μW/cm2. Several studies report sperm damage effects at 'standby model' cell phone emission levels, which are in the low nanowatt to picowatt per square centimeter range.

F. Electrohypersensitivity (EHS) Studies: McCarty et al (2011) studied electrohypersensitivity in a patient (a female physician). The patient was unable to detect the presence or absence of EMF exposure, largely ruling out the possibility of bias. In multiple trials with the fields either on or not on, the subject experienced and reported temporal pain, feeling of usease, skipped heartbeats, muscle twitches and/or strong headache when the pulsed field (100 ms, duration at 10 Hz) was on, but no or mild symptoms when it was off. Symptoms from continuous fields were less severe than with pulsed fields. The differences between field on and sham exposure were significant at the $p < 0.05$ level. The authors conclude that electromagnetic hypersensitivity is a neurological syndrome, and statistically reliable somatic reactions could be provoked in this patient by exposure to 60-Hz electric fields at 300 volts per meter (V/m). They

conclude *"EMF hypersensitivity can occur as a bona fide environmentally inducible neurological syndrome*." In their response to a letter to the editor of the journal, the authors say: *"(W)e followed an empirical approach and demonstrated a cause-and-effect relationship ($p < 0.05$) under conditions that permitted us to infer the existence of electromagnetic hypersensitivity (EHS), a novel neurological syndrome*." (Marino et al., 2012)

Further, the authors explain the significance of detecting EHS effects by non-linear methods.

> *"The important issue at this point is not whether EMF can produce symptoms (we empirically demonstrated that it can) but rather why this effect historically has been difficult to detect. It occurred to us that EHS has remained elusive because of the way it was studied. The experiments designed to detect EHS had been based on the assumption that if it existed, it was a linear phenomenon, whereas EHS is actually a nonlinear phenomenon." "Our study was designed to detect whether EHS was a linear or nonlinear phenomenon, and we were successful in showing a link between acute EMF exposure and somatic responses ($p < 0.05$). This finding – taken together with the unfailingly negative results of the linear studies – is good evidence that EHS is a nonlinear phenomenon, as we suspected."*

With the exception of the McCarty study there have not been clear demonstrations in controlled circumstances showing that persons reporting to be electrophypersensitive can distinguish whether or not RFR is being applied. There are, however, multiple reports of symptoms experienced by individuals exposed to EMFs in uncontrolled circumstances.

A. Johansson et al (2010) studied symptoms, personality traits and stress in people with mobile phone-related symptoms and electromagnetic hypersensitivity. They reported there is support for a difference between people with symptoms related to specific EMF sources and people with general EHS. The symptoms are anxiety, depression, somatization, exhaustion and stress. The EHS group reported more neurasthenic symptoms.

Two publications on electrohypersensitivity by O. Johansson (2007, 2009) provide an extensive overview of the relevant literature on electrohypersensitivity. Both

publications document symptoms and conditions giving rise to increased sensitivity to ELF-EMF and RFR. The need for new, biologically-based public exposure standards is recommended in both publications, in order to address electrohypersensitivity.

Landgrebe et al (2007) reported that their study of electrosensitive patients showed participants had a reduced intracortical facilitation as compared to two control groups. The EHS group of patients showed altered central nervous system function. In a follow-up study, the authors reported that EHS patients but not controls "*demonstrated significant cognitive and neurobiological alterations pointing to a higher genuine individual vulnerability of electromagnetic hypersensitive patients." (Landgrebe et al, 2008).*

The team of Sandstrom, Hansson Mild and Lyskov produced numerous papers between 1994 and 2003 involving people who are electrosensitive (Lyskov et al, 1995; Lyskov et al, 1998; Sandstrom et al, 1994; Sandstrom et al, 1995; Sandstrom et al, 1997; Sandstrom et al, 2003). Sandstrom et al (2003) presented evidence that heart rate variability is impaired in people with electrical hypersensitivity and showed a dysbalance of the autonomic nervous system. "*EHS patients had a disturbed pattern of circadian rhythms of HRF and showed a relatively 'flat' representation of hourly-recorded spectral power of the HF component of HRV"*. This research team also found that *"EHS patients have a dysbalance of the autonomic nervous system (ANS) regulation with a trend to hyper-sympathotonia, as measured by heart rate (HR) and electrodermal activity, and a hyperreactivity to different external physical factors, as measured by brain evoked potentials and sympathetic skin responses to visual and audio stimulation*." (Lyskov et al, 2001 a,b; Sandstrom et al, 1997). The reports referenced above provide evidence that persons who report being electrosensitive differ from others in having some abnormalities in the autonomic nervous system, reflected in measures such as heart rate variability. At present it remains unclear whether EHS is actually caused by RF/EMF exposure, or rather is a self-identifying syndrome of excessive responsiveness to a variety of stimuli. But given the relatively high percentage of persons reported to be electrosensitive (5% of the general population of Switzerland according to Schreier et al,

2006), with some being severely disabled as a consequence, it is critical that there be more study of this syndrome.

Tuengler and von Klitzing et al (2012) reported EHS people that were tested showed significant changes in regulation of the autonomic nervous system, including changes in capillary blood flow (microcirculation), heart rate variability, and electric skin potentials. The continuous detection of capillary blood flow is an important tool in analyzing the capacity of the autonomic nervous system. In EHS patients, von Klitzing finds that intestinal motility may also be disregulated and show no activity at all for some time after exposure.

G. Effects on the Blood-brain Barrier (BBB): The Lund University (Sweden) team of Leif Salford, Bertil Persson and Henrietta Nittby has done pioneering work on effects of very low level RFR on the human brain's protective lining – the barrier that protects the brain from large molecules and toxins that are in the blood.

THE BLOOD-BRAIN BARRIER IS AT RISK

The BBB is a protective barrier that prevents the flow of toxins into sensitive brain tissue. Increased permeability of the BBB caused by cell phone RFR may result in neuronal damage. Many research studies show that very low intensity exposures to RFR can affect the blood-brain barrier (BBB) (mostly animal studies). Summing up the research, it is more probable than unlikely that non-thermal EMF from cell phones and base stations do have effects upon biology. A single 2-hr exposure to cell phone radiation can result in increased leakage of the BBB, and 50 days after exposure, neuronal damage can be seen, and at the later time point also albumin leakage is demonstrated. *The levels of RFR needed to affect the BBB have been shown to be as low as 0.001 W/kg, or less than holding a mobile phone at arm's length. The US FCC standard is 1.6 W/kg; the ICNIRP standard is 2 W/kg of energy (SAR) into brain tissue from cell/cordless phone use. Thus, BBB effects occur at about 1000 times lower RFR exposure levels than the US and ICNIRP limits allow.* *(Salford, 2012)*

The consequence to modern life is that cell and cordless phone use may cause a pathological leakage of the BBB with very short use periods, and the damage may be long-lasting. Harmful substances may enter the brain. If the damage is ongoing (if cell and cordless phone use continues to occur over months and years), the potential for

harmful effects increases. There is already 'epidemiologically visible' evidence of increased brain cancer risk in humans (Section 11).

Volkow et al (2011a, b) reported increased glucose metabolism in the brain with cell phone use in humans. This important investigation of 47 human subjects used a randomized crossover design and labeled fluorodeoxyglucose to measure the metabolisms of the brain when the cell phone was activated but muted for 50 minutes as compared to not being activated. "*Our study showed that cell phone activation was associated with metabolic increases in brain regions closest to the antenna and that the increases showed a negative linear correlation with distance from the antenna. While the effect was small, the negative correlation of the effect with distance was statistically significant (R = −0.91; P <.001).* This study is particularly important in that it demonstrates definitively that an active cell phone, placed on the ear as one would normally be used, alters brain metabolic activity, but only in the region close to the cell phone.

H. Brain Cancer Studies: The Orebro University (Sweden) team led by Lennart Hardell, MD, an oncologist and medical researcher, has produced an extraordinary body of work on environmental toxins of several kinds, including the effects of radiofrequency/microwave radiation and cancer. Their 2012 work concludes:

> *"Based on epidemiological studies there is a consistent pattern of increased risk for glioma and acoustic neuroma associated with use of mobile phones and cordless phones. The evidence comes mainly from two study centres, the Hardell group in Sweden and the Interphone Study Group. No consistent pattern of an increased risk is seen for meningioma. A systematic bias in the studies that explains the results would also have been the case for meningioma. The different risk pattern for tumor type strengthens the findings regarding glioma and acoustic neuroma. Meta-analyses of the Hardell group and Interphone studies show an increased risk for glioma and acoustic neuroma. Supportive evidence comes also from anatomical localisation of the tumor to the most exposed area of the brain, cumulative exposure in hours and latency time that all add to the biological relevance of an increased risk. In addition risk calculations based on estimated absorbed dose give strength to the findings.*

In summary:

- *There is reasonable basis to conclude that RF-EMFs are bioactive and have a potential to cause health impacts.*

- *There is a consistent pattern of increased risk for glioma and acoustic neuroma associated with use of wireless phones (mobile phones and cordless phones) mainly based on results from case-control studies from the Hardell group and Interphone Final Study results.*
- *Epidemiological evidence gives that RF-EMF should be classified as a human carcinogen.*
- *Based on our own research and review of other evidence the existing FCC/IEE and ICNIRP public safety limits and reference levels are not adequate to protect public health.*
- *New public health standards and limits are needed.* (Hardell et al, 2012)

I**. Genetic Damage (Genotoxicity Studies):** There are at least several hundred published papers that report EMF affects cellular oxidative processes (oxidative damage). Increased free radical activity and changes in enzymes involved in cellular oxidative processes are the most consistent effects observed in cells and animals after EMF exposure. Aging may make an individual more susceptible to the detrimental effects of ELF EMF from oxidative damage, since anti-oxidants may decline with age. Clearly, the preponderance of genetic studies report DNA damage and failure to repair DNA damage.

Eighty six (86) new papers on genotoxic effects of RFR published between 2007 and mid-2012 are profiled. Of these, 54 (63%) showed effects and 32 (37%) showed no effects (Lai, 2012)

Forty three (43) new ELF-EMF papers and two static magnetic field papers that report on genotoxic effects of ELF-EMF published between 2007 and mid-2012 are profiled. Of these, 35 (81%) show effects and 8 (19%) show no effect (Lai, 2012).

J. Nervous System Damage: Factors that act directly or indirectly on the nervous system can cause morphological, chemical, or electrical changes in the nervous system that can lead to neurological effects. Both RF and ELF EMF affect neurological functions and behavior in animals and humans.

One hundred fifty five (155) new papers that report on neurological effects of RFR published between 2007 and mid-2012 are profiled. Of these, 98 (63%) showed effects and 57 (37%) showed no effects.

Sixty nine (69) new ELF-EMF papers (including two static field papers) that report on genotoxic effects of ELF-EMF published between 2007 and mid-2012 are profiled. Of these, 64 (93%) show effects and 5 (7%) show no effect. (Lai, 2012)

L. Children are More Vulnerable: Many studies demonstrate that children are more sensitive to environmental toxins of various kinds (Barouki et al, 2012; Preston, 2004; WHO, 2002; Gee, 2009; Sly and Carpenter, 2012).

> The Presidential Cancer Panel (2010) found that children '*are at special risk due to their smaller body mass and rapid physical development, both of which magnify their vulnerability to known carcinogens, including radiation*.'

> The American Academy of Pediatrics, in a letter to Congressman Dennis Kucinich dated 12 December 2012 states "*Children are disproportionately affected by environmental exposures, including cell phone radiation. The differences in bone density and the amount of fluid in a child's brain compared to an adult's brain could allow children to absorb greater quantities of RF energy deeper into their brains than adults. It is essential that any new standards for cell phones or other wireless devices be based on protecting the youngest and most vulnerable populations to ensure thay are safeguarded through their lifetimes.*"

II. ISSUES AND ANSWERS IN THE EMF DEBATE

Much of the emphasis in the 2007 Bioinititative Report focused on cancer, which is still the best documented disease of concern from exposure to EMF/RF. The evidence that exposure to EMF/RF increases the risk of cancer has only gotten significantly stronger since then, and we have a better, albeit still incomplete, understanding of the mechanisms involved. However, in terms of threshold exposures that result in human disease, new research on male reproduction and neurobehavioral alterations provide evidence for harm at even lower exposure levels. RFR has been shown in this Report to act as an external synchronizer of neural activity, capable of disrupting sleep, circadian rhythms, diurnal hormone fluctuations, brain wave activity and heart rate variability by exposure to artificial electromagnetic signals (as opposed to natural evolutionary frequencies) and to do so at exceedingly low intensities.

Much of the debate over the body of EMF science ignores simple questions that would help to discriminate among studies with apparently conflicting results. Section 15 by Dr. Belyaev is helpful in identifying key factors which must be known and controlled for in experiments (biological variables and physical parameters include bandwidth, frequency, modulation, polarization, intermittence and coherence time of exposure, static

magnetic field, electromagnetic stray fields, sex, age, individual traits, and cell density during exposure). Dr. Andrew Marino emphasizes that detection of EMF/RFR effects require investigation of non-linear phenomena, a critical difference that if ignored, may miss important biological effects (Marino, 2012).

A unifying hypothesis for a plausible biological mechanism to account for very weak field EMF bioeffects other than cancer may lie with weak field interactions of pulsed RFR and ELF-modulated RFR as disrupters of synchronized neural activity. Electrical rhythms in our brains can be influenced by external signals. This is consistent with established weak field effects on coupled biological oscillators in living tissues. Biological systems of the heart, brain and gut are dependent on the cooperative actions of cells that function according to principles of non-linear, coupled biological oscillations for their synchrony, and are dependent on exquisitely timed cues from the environment at vanishingly small levels (Buzsaki, 2006; Strogatz, 2003). The key to synchronization is the joint actions of cells that co-operate electrically - linking populations of biological oscillators that couple together in large arrays and synchronize spontaneously according to the mathematics described for Josephson junctions (Brian Josephson, the 1993 Nobel prize winner for this concept). This concept has been professionally presented in journal articles and also popularized in print by Prof. Steven Strogatz, a mathematician at Cornell University who has written about 'sync' as a fundamental organizing principle for biological systems (Strogatz, 2001; 2003).

> *"Organisms are biochemically dynamic. They are continuously subjected to time-varying conditions in the form of both extrinsic driving from the environment and intrinsic rhythms generated by specialized cellular clocks within the organism itself. Relevant examples of the latter are the cardiac pacemaker located at the sinoatrial node in mammalian hearts and the circadian clock residing at the suprachiasmatic nuclei in mammalian brains. These rhythm generators are composed of thousands of clock cells that are intrinsically diverse but nevertheless manage to function in a coherent oscillatory state. This is the case, for instance, of the circadian oscillations exhibited by the suprachiasmatic nuclei, the period of which is known to be determined by the mean period of the individual neurons making up the circadian clock. The mechanisms by which this collective behavior arises remain to be understood."(Strogatz, 2003)*

Synchronous biological oscillations in cells (pacemaker cells) can be disrupted by artificial, exogenous environmental signals, resulting in desynchronization of neural

activity that regulates critical functions (including metabolism) in the brain, gut and heart and circadian rhythms governing sleep and hormone cycles (Strogatz, 1987). The brain contains a population of oscillators with distributed natural frequencies, which pull one another into synchrony (the circadian pacemaker cells). Strogatz has addressed the unifying mathematics of biological cycles and external factors disrupt these cycles. Buzsaki (2006) says "*rhythms can be altered by a wide variety of agents and that these perturbations must seriously alter brain performance. Rhythms are a robust phenomenon*."

The heart's natural pacemaker center is the sinoatrial node, a cluster of about 10,000 cells that generate electrical rhythm that commands the rest of the heart to beat. Diseases related to disruption of that synchronization include epilepsy, chronic insomnia, and cardiac arrhythmias (Strogatz, 2003). Some EMF diseases are those where desynchronization of neural activity results in physiological changes that, if chronic, result in chronically disrupted homeostasis, and eventually ill-health and chronic diseases. Such a future burdens health care systems in an irreversible way.

The late Dr. Ross Adey in his last publication in Bioelectromagnetic Medicine (P. Roche and M. Markov, eds. 2004) concluded:

> "*There are major unanswered questions about possible health risks that may arise from exposures to various man-made electromagnetic fields where these human exposures are intermittent, recurrent, and may extend over a significant portion of the lifetime of the individual.*"
>
> *"Epidemiological studies have evaluated ELF and radiofrequency fields as possible risk factors for human health, with historical evidence relating rising risks of such factors as progressive rural electrification, and more recently, to methods of electrical power distribution and utilization in commercial buildings. Appropriate models describing these bioeffects are based in nonequilibrium thermodynamics, with nonlinear electrodynamics as an integral feature. Heating models, based in equilibrium thermodynamics, fail to explain an impressive new frontier of much greater significance. Though incompletely understood, tissue free radical interactions with magnetic fields may extend to zero field levels."*

Our society appears determined to make everything wireless, and the consequence is to increase cumulative exposure to RFR. Many homes and almost every Starbucks or McDonalds has WiFi. Smart phones, tablets, video iPods and other wireless devices are even given to children as playthings. The result is a significant increase in cumulative RFR exposure of the whole population, but particularly of those who have and use wireless devices for prolonged periods of time. No national or international standard of RFR exposure considers cumulative effects, all being developed to avoid local tissue heating from acute exposures.

The issues around exposure of children to RFR is of critical importance. There is overwhelming evidence that children are more vulnerable than adults to many different exposures (Sly and Carpenter, 2012), including RFR, and that the diseases of greatest concern are cancer and effects on neurodevelopment. Yet parents place RFR baby monitors in cribs, provide very young children with wireless toys, and give cell phones to young children, usually without any knowledge of the potential dangers. A growing concern is the movement to make all student computer laboratories in schools wireless. A wired computer laboratory will not increase RFR exposure, and will provide safe access to the internet.

An urgent example for the need to address the lack of adequate public protection from inadequate safety standards for pulsed RFR exposures is the rapid, global rollout of wireless utility meters ('smart' meters for electricity, gas and water meters). Current safety standard calculations that rely on time-averaging of RFR almost entirely dilute out the power density of RFR levels that are delivered in millisecond bursts, but occur at intervals of every second, or multiple times per second when in use within a wireless mesh network. Said differently, the RFR power density levels are usually legal. While there have been no long term studies of adverse effects of smart meters on human health (primarily because they are so new), there are increasing reports from electrosensitive individuals of harm. Added together, these RFR pulses that now appear to be a highly bioactive agent but are essentially erased or made energetically invisible by time-averaging the pulses as current FCC safety rules mandate.

The wireless meters transmit RF signals like a mini-cell tower antennas in the cell phone radiation frequencies. Currently, they are being deployed in the US and are on the drawing boards around the world including many European countries. The 'smart meter' infrastructure represents the largest single commercial saturation of living space with pulsed RFR yet rolled out by industry. This program places a wireless device (like a mini-mobile phone base station) on the wall, replacing the electromechanical (spinning dial) meter. They will be installed on every home and classroom (every building with an electric meter). Utilities from California to Maine have installed tens of millions already, despite health concerns of experts who already are seeing thousands of health complaints. The wireless meters produce spikes of pulsed radiofrequency radiation on a continuous basis (24/7), and in typical operation, will saturate living space at levels that can be much higher than already reported to cause bioeffects and adverse health effects for some people. These meters, depending on where they are placed relative to occupied space in the home or classroom, can produce RFR exposure levels similar to that within the first 100 feet to 600 feet of a mobile phone base station (cell tower). In the not-so-distant future the plan is to have a wireless device implanted in every household appliance, which will communicate with the smart meter whenever electricity is being used. This will likely make the kitchen a major source of exposure to RFR.

The cumulative RFR burden within any community is largely unknown. Both involuntary sources (like cell towers, smart meters and second-hand radiation from the use of wireless devices by others) plus voluntary exposures from ones' personal use of cell and cordless phones, wireless routers, electronic baby surveillance monitors, wireless security systems, wireless hearing aids, and wireless medical devices like implanted insulin pumps all add up. No one is tallying up the combined exposure levels. Billions of new RFR transmitters from a global smart meter rollout will significantly add to the existing RFR body-burden of pulsed RFR for millions of people. The health concerns are the same as with all other sources of EMF/RFR. Cancer is a serious adverse effect, but damage to male reproduction and central nervous system effects may results from even lower levels of exposure. The work by Strogatz (2001, 2003) and Buzsaki (2006) on weak-field effects on non-linear biological oscillators (brain waves and synchronization of neural activities that regulate body processes) is directly relevant to an understanding

of the profound biological disruptions and health symptoms that continued exposures of pulsed RFR may produce.

The Commons of the Air

Turning to questions of social equity and the individuals' choice not to be exposed to harmful levels of environmental toxins, there has been little inclusion of the public in discussions of wireless radiofrequency exposure. Wireless technologies have become infused in daily habits of billions of people; often choices for wired equivalents are lacking (or those that exist are disappearing). Involuntary exposure to EMF and RFR is becoming more the norm, even where it runs counter to individual choice (second-hand radiation, like second-hand smoke is difficult to avoid).

> *"Wireless technologies drive electromagnetic energy through our air, into and through virtually all indoor and outdoor living environments. The protective air cushion around our planet holds breathable air, buffers us from space radiation, and supports and sustains life in tandem with the natural electromagnetic signature of the earth itself. We are changing this 'commons of the air' in major ways. Wireless signals from broadcast and communications technologies are crowding out and overpowering the natural background. The 'commons of the air' is being altered in unprecedented ways that have enormous consequences for life on earth."(Sage, 2010).*

The rush to 'buy the airwaves' and to market them for commercial purposes is loading '*the commons of the air*' with unsustainable levels of exposure (Sage, 2010). Commercial markets for wireless spectrum successfully lobby government regulators to allocate even more spectrum, once the existing frequencies are allocated. Sage (2010) asks:

> *"Who owns the 'commons of the air'? Who should be allowed to pollute it? What are the limits? On what basis should carrying capacity be defined? Who defines the limits? Do these limits conserve the resource for the future? Do they protect public health and welfare, and the health and well-being of other living things on earth? Who bears the burden of proof of safety or of harm? How should the 'new commons' be managed for the greater good? Do we know enough to act responsibly? Who decides? When should limits be placed on utilization?"*

With no regard to cumulative harm, this commercial rush to buy up wireless spectrum territorial rights has vast implications for public health and well-being. Environmental protections afforded to other natural resources under the National Environmental Policy Act have been ignored. The cumulative impacts and irretrievable commitments on humans, wildlife, and natural resources have never been assessed.

> *"Societies must now define carrying capacity for chronic electromagnetic and wireless exposures. Taking into account the large individual variability to withstand it, new limits must conserve and sustain the 'commons of the air' so that is sustainable for all—and this includes sensitive populations, the young, the elderly, and those with existing sensitivity. Some countries of the world already have surpassed sustainable wireless exposure levels as demonstrated by significant percentages that have already become electrosensitive." (Sage, 2010)*

Homeostasis and Human Health Rights

Chronic exposure to low-intensity RFR and to ELF-modulated RFR at today's environmental levels in many cities will exceed thresholds for increased risk of many diseases and causes of death (Sage and Huttunen, 2012). RFR exposures in daily life alter homeostasis in human beings. These exposures can alter and damage genes, trigger epigenetic changes to gene expression and cause de novo mutations that prevent genetic recovery and healing mechanisms. These exposures may interfere with normal cardiac and brain function; alter circadian rhythms that regulate sleep, healing, and hormone balance ; impair short-term memory, concentration, learning and behavior; provoke aberrant immune, allergic and inflammatory responses in tissues; alter brain metabolism; increase risks for reproductive failure (damage sperm and increase miscarriage risk); and cause cells to produce stress proteins. Exposures now common in home and school environments are likely to be physiologically addictive and the effects are particularly serious in the young (Sage and Huttunen, 2012). This declaration of human health rights below (Sage and Huttunen, 2012) is based on specific reference to health impacts of EMF and RFR that are reasonably well established to occur (Sage and Carpenter, 2009).

Human Health Rights Declaration
Fundamental Human Health Rights ***(Sage and Huttunen, 2012)***

The right to homeostasis in our own bodies.
The right to normal central nervous system function.
The right to natural environmental cues that synchronize our circadian rhythms.
The right to sleep.
The right to heal.
The right to hear.
The right to reproduce.
The right to learn and retain memories.
The right to an intact genome.

If even one of these rights is compromised – placed at risk from involuntary wireless exposures in daily life, it is a breach of human health rights. When many of these human health rights are compromised without the consent of the individual, then the deployment of wireless technologies should be halted and existing exposures reduced or eliminated, in accord with the scientific and public health findings on chronic exposure to low-intensity radiofrequency radiation, and other forms of potentially harmful electromagnetic fields (Sage and Huttunen, 2012)

V. CONCLUSIONS FOR PRUDENT PUBLIC HEALTH PLANNING

Methodology and Approach for Precautionary Action Limits

In 2007, the BioInititive Report chapter on Key Scientific Evidence and Public Health Policy Implications, proposed a specific, interim radiofrequency radiation target level of 0.1 μW/cm2 for cumulative, outdoor RFR exposure (for AM, FM, TV and wireless). It was based on best-available scientific studies to that date. There were few studies prior to 2006 that reported effects at less than 0.1 to 1 μW/cm2 chronic RFR exposures.

In 2009, the journal Pathophysiology produced many peer-reviewed articles in a special two-volume edition on EMF (both ELF-EMF and RFR) essentially publishing the contents of the BioInitiative Report and updating some information. One of these 2009 Pathophysiology papers presented a review of mobile phone base station studies (Kundi and Hutter, 2009). It concluded that the overall studies did not detect effects (headache,

fatigue, tinnitus, concentration difficulties, sleep disruption, etc) at levels of RFR exposure below 0.05 to 0.1 μW/cm2.

New base station-level RFR studies are available in 2012 that can be analyzed to determine if new (and lower) RFR recommendations are warranted. The approach in this chapter relies on "lowest levels at which effects are not seen" akin to the "no observed effect level (NOEL)" used for chemical exposures, as a sufficient basis to establish scientific benchmarks for harm (or alternately, the lowest observed effects level of exposure). It is the province of the science and public health evaluation we do here to report the evidence regardless of what political or strategic complications it may create. An objective presentation of what the studies reveal for 'effects levels' is our goal; not to pre-judge or dilute the evidence because it may present strategic or political hurdles to achieve consensus on policy and regulatory changes. What this report does not intend to do is take into account"how could we do this" or "what would it mean". The purpose is to lay out the science, and make some defensible reductions for factors that studies cannot or do not yet test for, and compensate with deductions for them (safety margins). As interim targets for precautionary action, they will serve as guides for decision-makers who will take up the issues of health, the quality of the future gene pool, social equity and cost.

There is no one study alone that meets impeccable standards for exposure assessment or totally eliminates all possibility for bias, but the constellation of studies together gives adequate support to delineate a 'lowest observed effects level', that in turn, with added safety margins, can serve as a guideline for precautionary action.

A reduction from the BioInitiative 2007 recommendation of 0.1 uW/cm2 (or one-tenth of a microwatt per square centimeter which is the same as 100 nanowatts/cm2) for cumulative outdoor RFR down to something three orders of magnitude lower (in the low nanowatt per square centimeter range) is justified on a public health basis. We use the new scientific evidence documented in this Report to identify 'effect levels' and then apply one or more reduction factors to provide a safety margin. We do note however, even a precautionary action level of several tenths of a nanowatt per square centimeter (or

several hundred picowatts per square centimeter) would still allow for cell phone transmissions (that can operate down to about 0.00003 V/m).

Even so, these levels may need to go lower in the future, as new and better studies are completed. This is what the authors said in 2007 (Carpenter and Sage, 2007, BioInitiative Report) and it remains true today in 2012. We leave room for future studies that may lower today's observed 'effects levels' and should be prepared to accept new information as a guide for new precautionary actions.

Establishing A Scientific Benchmark for 'Lowest Observed Effect Levels'

Studies that provide information at 'new levels of observed effect' have been identified. These serve as scientific benchmarks for possible risk to health and well-being. Next, we indentify reduction factors to compensate for sensitive subpopulations and apply them to the scientific benchmarks (lowest observed effect levels).

A ten-fold reduction factor is warranted (or higher) for studies that report effects from only short-term (i.e., acute) rather than chronic (i.e., long-term) exposures. Longer duration of exposure can cause bioeffects at lower exposures where these effects are NOT seen with shorter (acute) exposures (Belyaev, 1997; Belyaev, 2012). Chronic exposures with longer durations of weeks, months or years is what most populations face with respect to wireless classrooms, wireless offices and locations near base stations.

A second ten-fold reduction (or higher) is justified as a buffer for sensitive populations including children, the elderly and other adult groups that may be ill, already sensitized, in remission or suffer from ailments made worse by physiological stress and insomnia.

Studies which contribute together can reasonably contribute to delineating a new RFR lower effects level are primarily mobile phone (cell phone) base station studies of healthy human populations and studies of sperm damage in men who use and/or wear their wireless devices on or around the belt or pants pocket.

Power Density Studies (Mobile Phone Base Stations and Sperm/Fertility Studies)

A scientific benchmark of 0.003 uW/cm2 or three nanowatts per centimeter squared for 'lowest observed effect level' for RFR is based on mobile phone base station-level studies. The Thomas et al, (2008) study shows effects at a LOEL of 0.005 uW/cm2 on adults exposed to short-term cell phone radiation only (it is not a chronic exposure study). Other studies that are relevant are Thomas et al (2010) with a LOEL of 0.003 uW/cm2 and Heinrich et al (2010) with a LOEL of 0.003 uW/cm2. Both studied mixed child/adolescent populations of students, but have short-term test periods (are not chronic exposure studies) and have LOELs of 0.003 uW/cm2. Buchner et al (2012) shows a 0.006 uW/cm2 'effect level' and tests adult populations, but achieves 'chronic' exposure testing criterion (over 18 months). Applying a ten-fold reduction to compensate for the lack of long-term exposure (to provide a safety buffer for chronic exposure) or for children as a sensitive subpopulation yields a 300 to 600 picowatts per square centimeter precautionary action level. This is also equal to a 0.3 nanowatts to 0.6 nanowatts per square centimeter as a reasonable, precautionary action level.

Of the studies that deal with children and base-station level RFR exposures, none studied children exclusively, so the results may dilute out any apparent effects accruing to the younger test subjects. Thomas et al (2010) is a short-term exposure study of children and adolescents 8 to 17 years in age. Heinrich et al (2010) is a further study of the same population of 8 to 17 year olds over the short-term. A 100-fold reduction could be defended as reasonably conservative in this instance.

Behari et al (2006) provides the one sperm study expressed in power density units with a LOEL of 0.00034 uW/cm2. It is a chronic exposure study. The majority of sperm studies with good exposure information are expressed in SARs (W/kg). These range from LOELs of 0.014 (Kumar et al, 2012) to 0.091 W/kg (Atasoy et al, 2012) to 0.43 W/kg (Salama et al, 2008) to 0.795 W/kg (Panagopoulous et al, 2012) to 0.9 W/kg (Kesari et al, 2012). All the other sperm damage or ovarian damage studies have SARs

of greater than 1.0 W/kg (7 more studies). All are short-term studies. There are more sperm damage studies but without any measurements or other specific exposure information. These are studies that place sperm, or mice, or give prenatal exposures to animals close to sources of cell phone radiation. Such studies give weight to the argument that low-intensity RFR exposures can cause damage, but do not help in delineating LOELs because they have no specific exposure numbers, just distances.

Most of the sperm studies and base station studies which have exposures expressed power density (microwatts per square centimeter) have 'effect' levels in the nanowatt range (0.34 nanowatt/cm2 to 100 nanowatt/cm2)*. They include Behari and Kesari, 2006; Buchner and Eger, 2012; Oberfeld et al, 2004; Thomas et al, 2008, 2010; Heinrich et al, 2010; Navarro et al, 2003; and Otitoloju et al 2010. Avendano et al (2012) report that WI-FI exposure from a 4-hr laptop exposure decreased sperm viability and caused DNA fragmentation in human sperm samples (exposure in petri dishes) at 0.5 to 1.0 uW/cm2. The Kundi-Hutter 2009 Pathophysiology Journal review paper of base station studies through 2006 reports an overall NOEL below 0.05 to 0.1 uW/cm2. Overall, the new 2007-2012 power density studies are reporting 'lowest effects levels' two or three orders of magnitude lower than in 2006, down from the microwatt/cm2 range to the nanowatt/cm2 range.

SAR Studies (Sperm Studies and Ovarian Damage with Cell Phone Radiation Exposures)

Studies on male fertility (adverse effects on sperm, on the testes size and morphology, etc) coming from cell phone-in-the-pocket-on-stand-by-mode and wireless laptop studies provide us with a flood of new data showing very low-intensity effects to guide precautionary actions and to educate the public about potential risks to health, fertility and reproduction.

*The RF Color Charts in this Report are a guide to reported biological effects and those RFR levels reported to cause them.

Sperm and fertility studies with 'effects levels' in the 9 microwatt/kg to 80 milliwatt/kg range are Kumar et al (2012) (male infertility) and Aitken et al (2005) (sperm DNA damage). Sperm studies with 'effect levels' in the 90 to 900 milliwatt/kg range are De Iuliis et al (2009) (human sperm cell damage), Salama et al (2008) (decrease in sperm mobility and concentration), Panagopoulous et al (2012) (ovarian damage) and Kesari et al (2012) (sperm damage). Studies from 1 W/kg to 1.8 W/kg that report sperm or reproductive damage are Gul et al (2009) (toxic effect on ovaries), Agarwal et al (2008) (sperm damage), Agarwal et al (2009) (sperm damage) and Yan et al (2007) (deformed sperm cells, disabled for swimming).

The WI-FI laptop study by Atasoy et al (2012) reports that exposures to laptops estimated at 0.091 W/kg increase DNA damage and reduce DNA repair in damaged sperm, and "*raise questions about safety of radiofrequency exposure from WI-FI internet access dvices for growing organisms of reproductive age, with a potential effect on fertility and integrity of germ lines*."

Altered fetal development in mice exposed to RFR at SARs of 0.3 to 60 milliwatt/kg is reported to result in consequent adverse effects on learning and behavior (Aldad et al, 2012). Fragopoulou et al (2009) reported changes at 600 to 900 milliwatts/kg in mouse embryos.

General Approach to Delineating a Precautionary Action Level

As a methodology, is not necessary or wise to use an averaging approach among studies. The technique itself is too vulnerable to weighting problems by the older studies that did not test for effects at the lowest range of exposures to RFR (or did not have the power to assess effects). Averaging also is insensitive in giving proper visibility to important NEW results at the very low-intensity (nanowatt, picowatt and femtowatt/cm2 range). Even when they are averaged together, these studies contribute vanishingly small influence when averaged together with studies of much higher power density to determine a scientific benchmark for harm.

One limitation of the sperm studies using base station-level RFR exposures is that good estimates of exposure are available if sperm are tested outside the body (in petri dishes), but that does not reflect the more realistic situation of sperm exposed in humans themselves (using or carrying a mobile phone near the testes) where exposure estimates are more difficult to determine. So, it is useful and informative to observe the combined results of both in-vivo and ex-vivo studies as a guide. For base station studies on human populations, the quality of exposure assessments is variable, and in some cases inadequate. Further, very few base station studies are conducted so that test subjects do not know if/when they are subjected to elevated RFR (blinded studies), so that some bias may influence results. People often report more ill effects because they are aware of the exposure (from a nearby base station, for example). These variations in quality across the studies, however, do not offset their usefulness in the aggregate for delineating what the lowest observable effect exposures are, and helping to guide decision-making for public health and precautionary actions.

A further concern is that time-averaging of RFR to give a single numeric recommendation for a precautionary action guideline does not address the critical difference between peak power levels (RFR spikes that occur intermittently) and measurements that hide how high peak power spikes are by dilution. Biological responses can last over seconds of time, or have even longer effects on proteins and enzymes, while the RFR pulses may be in microseconds or milliseconds in duration. It is entirely possible that what causes bioeffects is the high, intermittent RFR spikes that the body perceives and responds to as one continuous, high-power assault. For example, the DECT phone peak power is about 100 times larger than what RFR is measured with time-averaging. A person near a cell tower that produces an RFR measurement of 0.1 microwatts/cm2 is probably getting RFR power density spikes of eight times higher, if one could measure the spikes individually. None of the studies profiled in this section deal with peak power pulses and biological response times that are longer than the 'intermission' between RFR spikes. Thus, precautionary action levels should err on the side of being conservative.

The planning of base stations, and other site evaluations needs to have a scientific benchmark below which effects have not (not yet) been characterized, published or vetted. Then, a reasonable safety buffer should be added - remembering that the design life of such facilities may be 30-50 years long. This is standard procedure for environmental planning constraints.

Health Agencies Should Act Now

Health agencies and regulatory agencies that set public safety standards for ELF-EMF and RFR should act now to adopt new, biologically-relevant safety limits that key to the lowest scientific benchmarks for harm coming from the recent studies, plus a lower safety margin. Existing public safety limits are too high by several orders of magnitude, if prevention of bioeffects and resulting adverse health effects are to be minimized or eliminated. Most safety standards are a thousand times or more too high for healthy populations, and even less effective in protecting sensitive subpopulations.

New, biologically-based public exposure standards are critically needed now and should key to scientific benchmarks for harm, plus a safety margin below that level.

Standard of Evidence for Judging the Science

The standard of evidence for judging the scientific evidence should be based on good public health principles rather than demanding scientific certainty before actions are taken.

Sensitive Populations Require Special Protections

Safety standards for sensitive populations will need to be set at lower levels than for healthy adult populations to protect the developing fetus, the infant and young child, school-age children, the elderly, those with pre-existing chronic diseases, and those with

developed electrical sensitivity (EHS). Men of child-bearing age should not wear wireless devices on their body in order to protect the integrity of sperm DNA. Sperm should be considered a 'sensitive population'. Scientific benchmarks for lowest effect levels should be identified, and applied with additional safety margin reductions to safeguard populations against excessively high exposure to chronic ELF-EMF and RFR.

Protect Children Against Chronic Exposure to Wireless Devices

Strong precautionary action and clear public health warnings are universally warranted for use of cordless and cell phones to help prevent a global epidemic of brain tumors. This is especially important for children, adolescents and young adults, while new safety standards are established and implemented. Children should not use wireless devices except in the case of emergencies, or be exposed on an involuntary and chronic basis to wireless in their living, sleeping or learning environments.

Common Sense Precautionary Measurees are Warranted Now

Common sense measures to limit both ELF-EMF and RFR in the fetus and newborn infant are needed, especially with respect to avoidable exposures like baby monitors in the crib and baby isolettes (incubators) in hospitals that can be modified; and where education of the pregnant mother with respect to laptop computers, mobile phones and other sources of ELF-EMF and RFR are easily instituted.

Wireless laptops and other wireless devices should be strongly discouraged in schools for children of all ages, and wireless systems already installed should be replaced with wired (cable) alternatives. While without question it is important for children to have access to the internet, wired computer laboratories will have no elevated exposure to RFR. What might be lost in flexibility of moving rooms arounds will be more than gained by reducing exposure to RFR if wired connections, rather than wireless, are used. Pregnant women should be strongly cautioned not to use wireless devices during pregnancy. If a school already has wireless facilities, classrooms without wireless should

be made available to students, teachers and staff during the transition if sensitivities to EMF are reported by the individual. Special education classroom teaching environments should offer wired teaching environments (not wireless), nor should they be exposed to off-site wireless radiofrequency radiation from other sources that elevate interior levels for children.

Special Protections for the Integrity of the Genome and Reproduction

Reducing life-long health risks should begin in the earliest stages of embryonic and fetal development. Development pace is accelerated for the infant and very young child compared to adults, and is not complete in young people (as far as brain and nervous system maturation) until the early 20's. Windows of critical development mean that risk factors once laid down in the cells, or in epigenetic changes in the genome may have grave and life-long consequences for health or illness for every individual, and furthermore these genetic and epigenetic changes may be passed to the next generation. All relevant environmental conditions, including biologically active exposures to EMF and RFR that can degrade the human genome, and impair normal health and development of all species including humans - should be given weight in defining and implementing strong precautionary actions now to protect public health. The consequence of ignoring clear evidence of large-scale health risks to global populations, when the risk factors are largely avoidable or preventable is too high a risk to take.

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Beatrice Alexandra Golomb, MD, PhD
Professor of Medicine
UC San Diego School of Medicine
9500 Gilman Drive, #0995
La Jolla, CA 92093-0995
Phone: 858 558-4950 x201

August 22, 2017

To whom it may concern,

I urge in the strongest terms that you vigorously oppose California SB 649.

If this bill passes, many people will suffer greatly, and needlessly, as a direct result.

This sounds like hyperbole. It is not.
My research group at UC San Diego alone has received hundreds of communications from people who have developed serious health problems from electromagnetic radiation, following introduction of new technologies. Others with whom I am in communication, have independently received hundreds of similar reports. Most likely these are a tip of an iceberg of tens or perhaps hundreds of thousands of affected persons. As each new technology leading to further exposure to electromagnetic radiation is introduced – and particularly introduced in a fashion that prevents vulnerable individuals from avoiding it – a new group becomes sensitized to health effects. This is particularly true for pulsed signals in the radiowave and microwave portion of the spectrum, the type for which the proposed bill SB 649 will bypass local control.

Mechanisms by which health effects are exerted have been shown to include oxidative stress (the type of injury against which antioxidants protect, see optional section below), damage to mitochondria (the energy producing parts of cells), damage to cell membranes[1, 21], and via these mechanisms, an impaired "blood brain barrier"[3-5] (the blood brain barrier defends the brain against introduction of foreign substances and toxins; additionally, disruption can lead to brain edema[6]), constriction of blood vessels and impaired blood flow to the brain[7], and triggering of autoimmune reactions[8, 9]. Following a large exposure, that depresses antioxidant defenses, magnifying vulnerability to future exposures, some persons no longer tolerate many other forms and intensities of electromagnetic radiation that previously caused them no problem, and that currently cause others no problem. But this group deserves – nay needs -- the right to be able to avoid these exposures.

Affected individuals not only experience "symptoms" that "merely" cause them distress and suffering, when they are exposed – symptoms like headaches[10, 11], ringing ears[10, 11] and chest pain[10] from impaired blood flow, heart rhythm abnormalities[10, 11], and inability to sleep[10, 11]. These symptoms arise from physiological injury. Moreover, **many experience significant health problems that can include seizures[11], heart failure, hearing loss[12-14] and severe cognitive impairment[11, 15].** The mechanisms

involved are those also involved in development and progression of neurodegenerative conditions including Alzheimer's disease[16].

Fully half who were employed when their problems developed lost their job because of the problem, among participants of a survey we conducted. They reported that their condition had cost them up to 2 million dollars to date. Many had lost their homes. A number became homeless, and have swelled the ranks of so-called "EMF refugees"[17-19]. Many were previously high functioning individuals – engineers, doctors, and lawyers. The best and the brightest are among those whose lives – and ability to contribute to society –will be destroyed. High profile individuals with acknowledged electrohypersensitivity include, for instance, Gro Harlem Brundtland – the former 3-time Prime Minister of Norway and former Director General of the World Health Organization[20]; Matti Niemela, former Nokia Technology chief[21]; as well as the wife of Frank Clegg[22], who formerly headed Microsoft Canada and is current head of Canadians for Safe Technology[23].

Each new roll-out of electromagnetic technology for which exposure is obligatory, swells the ranks of those who develop problems with electromagnetic fields (EMF).- particularly following a significant exposure to pulsed radiowave-microwave radiation, and particularly when people have no ability to avoid it.

Many state that they didn't give credence to the problem (if they had heard of it at all) **until they themselves fell prey to it.**

This is not a psychologically driven condition. Multiple objective physiological changes reflecting mechanisms of injury have been shown in persons with this condition[24, 25].

The role for oxidative stress, that has been shown in innumerable studies (below)**, is affirmed by evidence of a link of this condition to genetic variants in antioxidant defenses**, that are less avid in defending against oxidative stress[307]. People cannot manipulate their genes, to produce such an outcome by suggestibility.

An analysis by a University of Washington researcher showed that most studies funded by industry reported failure to show physiological effects. However, most studies without such industry bias affirmed effects. This is redolent of findings shown in medicine[26], regarding which the former editor in chief of the BMJ (the British Medical Journal), Richard Smith, noted, based on findings of a study, "This {result} suggests that, far from conflict of interest being unimportant in the objective and pure world of science where method and the quality of data is everything, it is the main factor determining the result of studies."[27]. So where articles deny injury from nonionizing radiowave-microwave radiation, there is commonly a stake aligned with financial benefit from such denial.

Those who are affected are in desperate need of *protection* by our elected officials. They need creation of safe spaces and housing, and roadways to allow travel, not removal of any prospect of one; protection of local rights to make decisions - **not removal of any recourse or ability to avoid what injures them**. They are far more strongly in need of protections than a great many protected classes – their problems arose due to actions of others, against which they were given no control – *and can be reversed,* in most cases, if the assault on them is rolled back. Through no fault of their own, and in some cases against their will (e.g. before opt out was permitted with smart meters), they were subjected to an exposure that has altered their lives as they knew them, and forced them – needlessly - to the margins of society.

Let our focus be on safer, wired and well shielded technology – not more wireless.

This legislation, if passed, and the resulting unrestricted roll-out of this technology, will predictably and directly injure and disable a new group, and add depth of suffering to those already affected.

In other spheres we abridge freedoms to protect the vulnerable few. We require that every schoolchild be vaccinated, supposedly to protect the vulnerable few who may not respond effectively to a vaccine. The need to protect the vulnerable group is deemed to be so great that it justifies the decision to abridge individual rights.

In contrast, this bill seeks to abridge individual freedoms, and local rights, in the service of *harming* a vulnerable group, and creating a new one.
(The common factor appears to be that in both cases, the direction is aligned with a powerful industry that influences political decisions.)
Luckily, no abridgment of individual rights and freedoms is required to protect,t here.

If any group can opt out (such as, I understand, firefighters*)[28]; **then *every* group deserves that equal right**. Others should not be second class citizens, subject to fewer protections.

It would go far to helping this cause if anyone complicit in promoting or passing the legislation (and then after that, *their* families) were required to be the first subjected, for a substantial test period, to the *greatest* amount of exposure that anyone *else* (and their families) may be subjected to, when new policies of this type are rolled out. It will still not do them equal damage; because they may not represent the vulnerabilities that others will have; but such a policy might help them to think twice. *That* is a bill I would strongly endorse.

Most who are now affected – were not, until they were. This may become you – or your child or grandchild. Moreover, if you have a child, or a grandchild, his sperm, or her eggs (all of which she will

already have by the time she is a fetus in utero), will be affected by the oxidative stress damage created by the electromagnetic radiation, in a fashion that may affect your future generations irreparably.

It was noted above that, among survey completers, fully half of those who were employed at the time they developed electrosensitivity, lost employment *due to* this problem. (This may understate the scope of the tragedy, since this most-affected group may be least likely to be able to respond to an online survey.) **Many who previously had no problem navigating in the world are now restricted from access to basic services** like hospital care, post offices and libraries because of these problems. With each new introduction of technology that exposes many to yet a new nondiscretionary source of electromagnetic radiation, particularly (but not exclusively) that which emits pulsed radiation in the radiowave-microwave part of the spectrum, a new group of people are affected; and the suffering of those who are already affected increases greatly.

Please, defend the public and our future. Protect the rights of the individual and the locality, against a form of incursion that will lead to serious harm to some – and set a terrible precedent. **Vote no on California SB 649**, and urge that everyone else do the same.

Sincerely,

Beatrice Alexandra Golomb, MD, PhD
Professor of Medicine
UC San Diego School of Medicine

*****Comment on the fire fighter exemption:"The legislature granted an exemption from SB 649 to the firefighters who requested it for health reasons. Throughout California firefighters have long complained of often disabling symptoms from cell towers on their stations. Cities frequently rent out space on fire stations to add to city revenue. …Symptoms experienced by the firefighters have included neurological impairment including severe headache, confusion, inability to focus, lethargy, inability to sleep, and inability to wake up for 911 emergency calls. Firefighters have reported getting lost on 911 calls in the same community they grew up in, and one veteran medic forgot where he was in the midst of basic CPR on a cardiac victim and couldn't recall how to start the procedure over again…Prior to the installation of the tower on his station, this medic had not made a single mistake in 20 years. A pilot study (2004) of California firefighters showed brain abnormalities, cognitive impairment, delayed reaction time, and lack of impulse control in all 6 firefighters tested (https://ecfsapi.fcc.gov/file/7022117660.pdf). This study led to the overwhelming passage of Resolution 15 by the International Association of Firefighters in Boston in August 2004. Res. 15 called for further study and was amended to impose a moratorium on the placement of cell towers on fire stations throughout the US and Canada."[15 28]
Clearly, others who experience similar problems also deserve protections.

Optional – More on the Science

There is a robust literature showing that electromagnetic radiation, including in nonionizing frequencies, and at *levels*[29, 30] *below* those that are cause thermal effects (heating) – causes physiological effects, injury, and cell death –not only in humans but many animals and plants[3, 7, 31-49]. Unsurprisingly, industry has sought – against the tide of evidence to the contrary - to maintain that radiation must be ionizing or heating to cause injury.

Scores or hundreds of studies show that radiation, including specifically radiowave-microwave spectrum radiation, and including low-level exposure, can impair antioxidant defenses, increase "oxidative stress" (free radical injury) and damage mitochondria, the energy producing parts of cells[1, 2, 34, 50-6930, 70-104105-13646, 137-171]. These effects occur with ionizing and nonionizing radiation, at thermal and subthermal levels. (Indeed, much or most of the damage by ionizing radiation, and radiation above the thermal limit, occurs by mechanisms also documented to occur without ionization, and below the thermal limit.) These mechanisms cohere with the mechanisms documented to play a role in symptoms and health conditions that are reported in those who are electrosensitive – extending to seizures[172-176], heart failure[177-184] and cognitive decline[5, 32, 57, 108, 185-195].

These mechanisms have known involvement in induction of **brain cancer, metabolic diseases like obesity and diabetes, autism, autoimmune disease, and neurodegenerative conditions**, conditions that have exploded. In each case these have been linked, or presumptively linked, in some studies to electromagnetic radiation[8, 9, 16, 34, 196-219].

Such radiation also has effects on sperm[33, 100, 220-228]; and the DNA of sperm[229] (consistent with recent news reports of marked recent declines in sperm counts and function)..

Such radiation also has toxic effects in pregnancy[230], to the fetus and subsequent offspring[231-235] including at low levels[236], and is tied to developmental problems in later life, including attention deficit and hyperactivity[31, 235-241]. It is critical to defend pregnant women (and eggs of girls who may at a later time become pregnant) from exposures with such toxicity.

Electromagnetic radiation across much or most of the spectrum (not excluding visible light) has been shown to depress levels of melatonin[40, 72, 242-252]**,** which is best known for its role in sleep (and indeed, impaired sleep is the most consistent symptom in affected individuals[10, 11]).

Melatonin is in fact a critical antioxidant that defends the body against harm from *many* toxic exposures[253-266] **including electromagnetic radiation itself** [61, 66, 67, 82, 101, 107, 118, 121, 138, 144, 151, 204, 249, 267-284]**- reducing the oxidative stress** that is implicated in cancer, metabolic diseases like obesity and diabetes, autism, autoimmune disease, bipolar disorder and neurodegenerative conditions, and that also plays a role in heart attack and stroke[9, 285-329330-343].

Radiation, and specifically radiation in the radiowave-microwave portion of the spectrum can also depress levels of other critical antioxidant systems that also defend the body against chemical, radiation, and other sources of injury. These other antioxidant systems include the glutathione system, superoxide dismutase and catalase[81, 102, 115, 116, 233, 344-358] - which are also involved in defending against health problems.

This suggests that depression of antioxidant defenses due to electromagnetic radiation may magnify risk of chemically induced health effects (and depression of antioxidant systems due to some chemicals may amplify risk of harm from electromagnetic radiation). Indeed just such effects have been reported[359, 360].

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From:	Neal, Stephanie
To:	Shute, Madeline
Cc:	Lieberman, Tara
Subject:	FW: 5G Cell Towers in San Diego County
Date:	Friday, June 28, 2019 2:03:43 PM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Sent: Friday, June 28, 2019 1:59 PM
To: Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>; Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: FW: 5G Cell Towers in San Diego County

Camila Easland
Junior Land Use / Environmental Planner, Advance Planning
Planning & Development Services
5510 Overland Ave., Suite 310, San Diego, CA, 92123
camila.easland@sdcounty.ca.gov
(858) 495-5491

From: The Unfortunate Truth <sjschuit53@gmail.com>
Sent: Friday, June 28, 2019 11:28 AM
To: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Subject: 5G Cell Towers in San Diego County

Sandra Schuit
3326 Otto Ave.
Alpine, CA 91901

6/28/19

Planning Committee,

I strongly object to the implementation of 5G Cell Towers anywhere in San Diego County.
Research is clear about the harmful effects on health and the environment.
There are no studies that prove that 5G is safe.
Please listen to we the public on this vital issue.

Respectfully,

Sandra Schuit

From: Neal, Stephanie
To: Shute, Madeline
Cc: Lieberman, Tara
Subject: FW: 5G Cell Towers
Date: Friday, June 28, 2019 2:03:50 PM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Sent: Friday, June 28, 2019 2:00 PM
To: Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>; Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: FW: 5G Cell Towers

From: The Unfortunate Truth <sjschuit53@gmail.com>
Sent: Friday, June 28, 2019 11:32 AM
To: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Subject: 5G Cell Towers

Sandra Schuit
3326 Otto Ave.
Alpine, CA 91901
6/28/19

Tara Lieberman,

I strongly object to the implementation of 5G Cell Towers anywhere in San Diego County. Research is clear about the harmful effects on health and the environment. There are no studies that prove that 5G is safe.
Please listen to we the public on this vital issue.

Respectfully,

Sandra Schuit

From: Neal, Stephanie
To: Easland, Camila
Subject: FW: Small Cell Wireless Facilities POD 17-004 comments
Date: Monday, July 01, 2019 9:58:27 AM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Sent: Monday, July 01, 2019 8:09 AM
To: Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>
Cc: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: FW: Small Cell Wireless Facilities POD 17-004 comments

Bianca Lorenzana
Jr. Land Use/Environmental Planner
Pronouns: she/her
Bianca.Lorenzana@sdcounty.ca.gov
Phone: 858-694-2216
County of San Diego | Planning & Development Services
5510 Overland Avenue, Suite 310, San Diego, CA 92123

From: Sarah Nissen <sarah_nissen@yahoo.com>
Sent: Saturday, June 29, 2019 2:37 PM
To: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Subject: Re: Small Cell Wireless Facilities POD 17-004 comments

> Dear Tara Lieberman & San Diego County Supervisors:
>
> My residence is in San Marcos, CA. I am writing this letter to the County because I believe that San Marcos and other cities within San Diego will be adopting the SD County Ordinance.
>
> I am deeply concerned about the new FCC directive making it possible for the telecommunications industry to place cell antennas anywhere in the County right-of-way. I am

voicing my strong objection to the FCC's takeover of our County's land as well as due process with respect to our rights. That being said, as zoning planners and Supervisors, can you please take the following requests into the strongest possible consideration?

I am afraid of property devaluation with cell towers in residential areas, as most of us have the majority of our net worth in our homes. Because 5G is an unproven technology, please protect certain sensitive areas:

1. Cell towers are not to be located in "Sensitive" areas. 1000 foot setbacks from sensitive areas as defined by the County are necessary.

2. 500 foot set back from residential. This is in addition to using priority placement schema.

3. Pre application site inspection & survey required for each site application. There must be an on-site inspection prior to approval of the site by the County or agent representing the County. If application is in conflict with a sensitive area, site inspector may suggest the tower relocate so coverage is the same but sensitive area is protected.

4. Setback must meet fall zone length or zoning setback requirements, whichever is greater. Fall zone length must exceed the height of the tower by 20% because the height of the tower may be increased by 10% the next year.

5. Require mandatory live RF compliance testing immediately after tower is installed and "on demand testing" by a third party paid for by carrier.

6. Height restriction 30 feet; next year [under 1903] tower may go 10% higher.
7. Payment, performance and removal bond paid up front.

8. Require a Certificate of Completion.

9. No cutting of trees to facilitate line of sight or initial placement. The general ambience of the community is to be preserved.

10. Under-grounding of equipment where possible; discretion may be used by staff.

11. The ordinance shall comply with the Americans with Disabilities Act (this includes but is not limited to safe access to private, commercial and public buildings).

12. Noticing for the occupants and building owners of all residences, apartments, and businesses within 1000 feet of the proposed location.

Please consider adopting all of the sections and verbiage of the "City of Hercules CA Wireless Telecommunications Facilities Ordinance (Chapter 16)" at this link, weaving in specific SD County requirements as deemed appropriate. I suggest this because the Hercules Ordinance provides enforceable bullet proof directions on the administration of Telecom applications and siting of

antennas with no wiggle room for the Telcoms.
https://www.codepublishing.com/CA/Hercules/#!/Hercules10/Hercules1016.html#10-16

Thank you,
Sarah Nissen

From: Lieberman, Tara
To: Shute, Madeline
Cc: Neal, Stephanie
Subject: FW: 5g planning
Date: Monday, June 10, 2019 12:49:44 PM

-----Original Message-----
From: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Sent: Monday, June 10, 2019 9:28 AM
To: Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>
Subject: FW: 5g planning

Bianca Lorenzana
Jr. Land Use/Environmental Planner
Pronouns: she/her
Bianca.Lorenzana@sdcounty.ca.gov
Phone: 858-694-2216
County of San Diego | Planning & Development Services
5510 Overland Avenue, Suite 310, San Diego, CA 92123

-----Original Message-----
From: Sarah Renee [mailto:sarahrenee444@gmail.com]
Sent: Saturday, June 08, 2019 12:21 AM
To: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Subject: 5g planning

Hi Tara!
I received an email about the small cell wireless plan. Is this for 5G? I am extremely against 5g and so are most residents. I know cities are voting to ban it due to health concerns, I hope San Diego will be one of them.
Please let me know where we can come to protest or sign petitions or what we would need to do to possibly stop this from happening.
Thank you so much!
Sarah

Sent from my iPhone

From: Neal, Stephanie
To: Easland, Camila
Subject: FW: Wireless Ordinance
Date: Monday, July 01, 2019 9:56:54 AM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: Sarah Frazer <smfrazer13@gmail.com>
Sent: Saturday, June 29, 2019 1:49 PM
To: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: Wireless Ordinance

San Diego County Citizen
Invitation for comments – Wireless Ordinance

Sarah Frazer
1342 N Date St
Escondido, Ca 92026

June 29, 2019

San Diego County Board and Planning Commission
County Administration Center
1600 Pacific Hwy, Rm 335
San Diego, CA 92101

Dear County Supervisors and County Planning Commission,

I am writing to express my concern about the installment of 5G/small-cell antennas throughout San Diego County. The threats to public health, safety, privacy and security, property, and more must be addressed in the wireless ordinance. The citizens of San Diego County require your protection. I am grateful that The County is taking measures to incorporate such protections into an updated wireless ordinance, since the version approved in February makes no such provisions.

Based on review of the latest ordinance draft, there are still a number of ways this ordinance could be improved to ensure the best for SD County citizens, which I trust is your primary goal.

Restrict small cells in residential areas, and zones where children, elderly and those with pecial/medical needs will be. No small cell should be allowed within (a minimum) of 1000 feet from a esidential property line, in any direction. Or within 1000 ft of a school, hospital, library, church, aycare, community center, property lines. Verizon has a commercial on YouTube where they easured the distance of a 5G signal (through hills and obstacles) at a distance of greater than 3,000 et, so there should be zero issue with these setbacks, they are a necessity.

Stronger language. Use words like “must”, “shall”, “must avoid”, “will”, etc which are more clear in eaning and tone, instead of “may not”, “should not”, and “suggest”, which can be ignored.

Require a master plan. The master plan needs to be coordinated across all carriers, and provide formation for each antenna project like RF exposure levels, power levels, frequencies, and location ddress. The master plan should also be published online with ample notice, such that citizens can rovide input BEFORE the antenna is installed. REQUIRE that these companies have a plan and strategy r where they place the antennas, and enforce their compliance. This will minimize excessive, aphazard installments.

No Co-location! Co-location means multiple antennas to a single pole. And despite the thinking, it oes not reduce clutter. Actually, it produces a huge eyesore of a pole will multiple projections hanging ff of it. It DRAWS more attention because of the extra hardware. Col-location allows poles to become arily top-heavy, and also exposes citizens to higher doses of radiation since multiple antennas will mit from a single location. One antenna per pole, and no antennas within 1000 feet of ANY other ntenna.

No cutting or disturbance of trees and landscaping – at all. This must be forbidden! There are other owns and cities with gorgeous, old trees being chopped down or excessively trimmed to allow for small ell deployment. Not going to happen in San Diego!

Provide clear-easy-to-reach County support for citizens. We need to have a dedicated line/service o contact The County when issues with the small cells arise, such as noise, safety, health problems, or ther complaints need to be reported. This service can be funded by the wireless providers as a part of eir application/bond/yearly renewal fees.

Insurance and Bonds. Require than the companies have increased insurance and bonds to protect gainst malfunction, accidents, damages, and injury. These provide protection for the county too.

ADA language and provisions. The ordinance lacks language that protects Americans with disabilities, nd their use of these rights-of-way, where the small cells structures will be deployed. ADA protection ust not be discriminatory toward those who have physical mobility disabilities only. What about tizens with EHS, pacemakers, ADD/ADHD, autoimmune, etc? These rights-of-way belong to us too, nd this liability belongs to San Diego County.

Random third-party testing. Random, independent third party inspections must be required annually, at expense of the company, to ensure compliance with FCC guidelines.

Give notice for any residence within a mile of a proposed small cell site, to provide ample time for esidents to come forward and provide input.

Require safety signage on all poles. All poles must have necessary warning signs and RF safety formation.

Keep small cells away from parks and ball fields – at least 3000 ft away.

Thank you for taking the time to consider and apply these suggestions. I look forward to seeing changes in next ordinance draft.

Sincerely,

Sarah Frazer

From: Neal, Stephanie
To: Easland, Camila
Subject: FW: Changes to 5G draft ordinance
Date: Monday, July 01, 2019 10:00:00 AM

Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

From: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Sent: Monday, July 01, 2019 8:41 AM
To: Neal, Stephanie <Stephanie.Neal@sdcounty.ca.gov>
Subject: FW: Changes to 5G draft ordinance

Bianca Lorenzana
Jr. Land Use/Environmental Planner
Pronouns: she/her
Bianca.Lorenzana@sdcounty.ca.gov
Phone: 858-694-2216
County of San Diego | Planning & Development Services
5510 Overland Avenue, Suite 310, San Diego, CA 92123

From: Sophia Tracht <satracht@hotmail.com>
Sent: Sunday, June 30, 2019 4:23 PM
To: Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>; Jacob, Dianne <Dianne.Jacob@sdcounty.ca.gov>; AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Subject: Changes to 5G draft ordinance

Dear County Supervisors and County Planning Commission,

I am writing to express my alarm about the rollout of 5G/small-cell antennas throughout San Diego County. It is bad enough that I see and live near small cell antennas throughout the CITY of San Diego. As a registered voter and taxpayer, I do NOT want these in the unincorporated areas. The rural areas should remain as

untouched as possible. Small cell antennas on every block, or more ubiquitously, will not only be a certain danger to human health but a blight on our neighborhoods. The draft ordinance is not nearly as strong as it needs to be. There still is too much room for the wireless industry to neglect or ignore rules.

Please include the following changes:

· PROHIBIT SMALL CELLS IN RESIDENTIAL AREAS/ZONES WHERE CHILDREN, ELDERLY, SPECIAL/MEDICAL NEEDS MAY BE. No small cell should be allowed within (a minimum) of 3000 feet from a residential property line, in any direction. Or within 3000 ft of a school, hospital, library, church, daycare, community center, property lines. Verizon has a commercial on YouTube where they measured the distance of a 5G signal (through hills and obstacles) at a distance of greater than 3,000 feet, so there should be zero issue with these setbacks, they are a necessity.

· PROHIBIT SMALL CELLS FROM PARKS, PLAYGROUNDS, AND BALL FIELDS. Keep small cells away from parks and ball fields – at least 3000 ft away.

· STRONGER LANGUAGE. Use words like “must”, “shall”, “must avoid”, “will”, etc which are more clear in meaning and tone, instead of “may not”, “should not”, and “suggest”, which can be ignored.

· REQUIRE A MASTER PLAN. The master plan needs to be coordinated across all carriers, and provide information for each antenna project like RF exposure levels, power levels, frequencies, and location address. The master plan should also be published online with ample notice, such that citizens can provide input BEFORE the antenna is installed. REQUIRE that these companies have a plan and strategy for where they place the antennas, and enforce their compliance. This will minimize excessive, haphazard installments.

· NO CO-LOCATION! Co-location means multiple antennas to a single pole. And despite the thinking, it does not reduce clutter. Actually, it produces a huge eyesore of a pole will multiple projections hanging off of it. It DRAWS more attention because of the extra hardware. Co-location allows poles to become scarily top-heavy, and also exposes citizens to higher doses of radiation since multiple antennas will emit from a single location. One antenna per pole, and no antennas within 1000 feet of ANY other antenna.

· NO CUTTING OF TREES/LANDSCAPING. This must be forbidden! There are other towns and cities with gorgeous, old trees being chopped down or excessively trimmed to allow for small cell deployment. Not going to happen in San Diego!

· POST CLEAR/EASY-TO-REACH COUNTY SUPPORT FOR CITIZENS. We need to have a dedicated line/service to contact The County when issues with the small cells arise, such as noise, safety, health problems, or other complaints need to be

reported. This service can be funded by the wireless providers as a part of their application/bond/yearly renewal fees.

· REQUIRE INSURANCE/BONDS. Require than the companies have increased insurance and bonds to protect against malfunction, accidents, damages, and injury. These provide protection for the county too.

· ADA LANGUAGE/PROVISIONS. The ordinance lacks language that protects Americans with disabilities, and their use of these rights-of-way, where the small cells structures will be deployed. ADA protection must not be discriminatory toward those who have physical mobility disabilities only. What about citizens with EHS, pacemakers, ADD/ADHD, autoimmune, etc? These rights-of-way belong to us too, and this liability belongs to San Diego County.

· RANDOM, 3RD PARTY TESTING. Random, independent third party inspections must be required biannually, at expense of the company, to ensure compliance with FCC guidelines.

· REQUIRE RESIDENT NOTIFICATION AS SOON AS AN APPLICATION IS FILED. Give notice for any residence within a mile of a proposed small cell site, to provide ample time for residents to come forward and provide input.

· REQUIRE SAFETY SIGNAGE ON ALL POLES. All poles must have necessary warning signs and RF safety information.

Thank you for taking public comment on these wireless ordinance changes. I look forward to seeing the above changes in the next ordinance draft.

Sincerely,

Sophia Tracht

San Diego County Citizen
Invitation for comments – Wireless Ordinance

Stephanie Hegemier
13647 Calais Drive
Del Mar, CA 92014

June 30, 2019

San Diego County Board and Planning Commission
County Administration Center
1600 Pacific Hwy, Rm 335
San Diego, CA 92101

Dear County Supervisors and County Planning Commission,

I am writing to express my extreme concern about the installment of 5G/small-cell antennas throughout San Diego County. The threats to public health, safety, privacy and security, property, and more must be addressed in the wireless ordinance. The citizens of San Diego County require your protection and protective action. I am grateful that The County is taking measures to incorporate such protections into an updated wireless ordinance, since the version approved in February makes no such provisions.

Based on review of the latest ordinance draft, there are still a number of ways this ordinance could be improved to ensure the best for SD County citizens, which I trust is your primary goal.

- **Restrict small cells in residential areas, and zones where children, elderly and those with special/medical needs will be.** No small cell should be allowed within (a minimum) of 1000 feet from a residential property line, in any direction. Or a minimum of 1000 ft of a school, hospital, library, church, daycare, community center, personal property line, public park or playing field. Verizon has a commercial on YouTube where they measured the distance of a 5G signal (through hills and obstacles) at a distance of greater than 3,000 feet, so there should be zero issue with these setbacks, they are a necessity.
- **Stronger language.** Use words like “must”, “shall”, “must avoid”, “will”, etc which are more clear in meaning and tone, instead of “may not”, “should not”, and “suggest”, which can be ignored.
- **Require a master plan.** The master plan needs to be coordinated across all carriers, and provide information for each antenna project like RF exposure levels, power levels, frequencies, and location address. The master plan should also be published online with ample notice, such that citizens can provide input BEFORE the antenna is installed. REQUIRE that these companies have a plan and strategy for where they place the antennas, and enforce their compliance. This will minimize excessive, haphazard installments.
- **No Co-location!** Co-location means multiple antennas to a single pole. And despite the thinking, it does not reduce clutter. Actually, it produces a huge eyesore of a pole will multiple projections hanging off of it. It DRAWS more attention because of the extra hardware. Col-location allows poles to become scarily top-heavy, and also exposes citizens to higher doses of radiation since multiple antennas will emit from a single location. One antenna per pole, and no antennas within 1000 feet of ANY other antenna.

- **No cutting or disturbance of trees and landscaping – at all.** This must be forbidden! There are other towns and cities with gorgeous, old trees being chopped down or excessively trimmed to allow for small cell deployment. This should not be allowed to happen in our beautiful county!
- **Provide clear-easy-to-reach County support for citizens.** We need to have a dedicated line/service to contact The County when issues with the small cells arise, such as noise, safety, health problems, or other complaints need to be reported. This service can be funded by the wireless providers as a part of their application/bond/yearly renewal fees.
- **Insurance and Bonds.** Require that the telecom companies have increased insurance and bonds to protect against malfunction, accidents, damages, and injury. These provide protection for the county and ultimetely tax payers
- **ADA language and provisions.** The ordinance lacks language that protects Americans with disabilities, and their use of these rights-of-way, where the small cells structures will be deployed. ADA protection must not be discriminatory toward those who have physical mobility disabilities only. What about citizens with EHS, pacemakers, ADD/ADHD, autoimmune, etc. These rights-of-way belong to us too, and this liability belongs to San Diego County.
- **Random third-party testing.** Random, independent third party inspections must be required biannually, at the expense of the company, to ensure compliance with FCC guidelines.
- **Give notice** for any residence within a mile of a proposed small cell site, to provide ample time for residents to come forward and provide input.
- **Require safety signage on all poles.** All poles must have necessary warning signs and RF safety information.

Thank you for taking the time to consider and apply these suggestions. I look forward to seeing changes in next ordinance draft.

Sincerely,

Stephanie Hegemier

From: AdvancePlanning, PDS
To: Lieberman, Tara
Subject: FW: Cell phone access
Date: Monday, June 03, 2019 8:55:26 AM

Bianca Lorenzana
Jr. Land Use/Environmental Planner
Pronouns: she/her
Bianca.Lorenzana@sdcounty.ca.gov
Phone: 858-694-2216
County of San Diego | Planning & Development Services
5510 Overland Avenue, Suite 310, San Diego, CA 92123

From: Steve Davis [mailto:sddmefree@gmail.com]
Sent: Friday, May 31, 2019 6:03 PM
To: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Subject: Cell phone access

Do what is best for all.

From: Lieberman, Tara
To: Shute, Madeline; Neal, Stephanie
Subject: RE: Small cell wireless facilities ordinance
Date: Thursday, June 27, 2019 11:17:30 AM

From: TANYA Middleton <tanyamiddleton@icloud.com>
Sent: Thursday, June 27, 2019 10:45 AM
To: Lieberman, Tara <Tara.Lieberman@sdcounty.ca.gov>
Subject: Small cell wireless facilities ordinance

Message from Tanya but typo's from
iPhone.

San Diego County Citizen
Invitation for comments – Wireless Ordinance

Terry Upton
745 Bracero Road
Encinitas, CA 92024

June 27, 2019

San Diego County Board and Planning Commission
County Administration Center
1600 Pacific Hwy, Rm 335
San Diego, CA 92101

Dear County Supervisors and County Planning Commission,

I am writing to express my concern about the installment of 5G/small-cell antennas throughout San Diego County. The threats to public health, safety, privacy and security, property, and more must be addressed in the wireless ordinance. The citizens of San Diego County require your protection. I am grateful that The County is taking measures to incorporate such protections into an updated wireless ordinance, since the version approved in February makes no such provisions.

Based on review of the latest ordinance draft, there are still a number of ways this ordinance could be improved to ensure the best for SD County citizens, which I trust is your primary goal.

- **Restrict small cells in residential areas, and zones where children, elderly and those with special/medical needs will be.** No small cell should be allowed within (a minimum) of 1000 feet from a residential property line, in any direction. Or within 1000 ft of a school, hospital, library, church, daycare, community center, property lines. Verizon has a commercial on YouTube where they measured the distance of a 5G signal (through hills and obstacles) at a distance of greater than 3,000 feet, so there should be zero issue with these setbacks, they are a necessity.
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- **Require a master plan.** The master plan needs to be coordinated across all carriers, and provide information for each antenna project like RF exposure levels, power levels, frequencies, and location address. The master plan should also be published online with ample notice, such that citizens can provide input BEFORE the antenna is installed. REQUIRE that these companies have a plan and strategy for where they place the antennas, and enforce their compliance. This will minimize excessive, haphazard installments.
- **No Co-location!** Co-location means multiple antennas to a single pole. And despite the thinking, it does not reduce clutter. Actually, it produces a huge eyesore of a pole will multiple projections hanging off of it. It DRAWS more attention because of the extra hardware. Col-location allows poles to become scarily top-heavy, and also exposes citizens to higher doses of radiation since multiple antennas will emit from a single location. One antenna per pole, and no antennas within 1000 feet of ANY other antenna.
- **No cutting or disturbance of trees and landscaping – at all.** This must be forbidden! There are other towns and cities with gorgeous, old trees being chopped down or excessively trimmed to allow for small cell deployment. Not going to happen in San Diego!

- **Provide clear-easy-to-reach County support for citizens.** We need to have a dedicated line/service to contact The County when issues with the small cells arise, such as noise, safety, health problems, or other complaints need to be reported. This service can be funded by the wireless providers as a part of their application/bond/yearly renewal fees.
- **Insurance and Bonds.** Require than the companies have increased insurance and bonds to protect against malfunction, accidents, damages, and injury. These provide protection for the county too.
- **ADA language and provisions.** The ordinance lacks language that protects Americans with disabilities, and their use of these rights-of-way, where the small cells structures will be deployed. ADA protection must not be discriminatory toward those who have physical mobility disabilities only. What about citizens with EHS, pacemakers, ADD/ADHD, autoimmune, etc? These rights-of-way belong to us too, and this liability belongs to San Diego County.
- **Random third-party testing.** Random, independent third party inspections must be required biannually, at expense of the company, to ensure compliance with FCC guidelines.
- **Give notice** for any residence within a mile of a proposed small cell site, to provide ample time for residents to come forward and provide input.
- **Require safety signage on all poles.** All poles must have necessary warning signs and RF safety information.
- **Keep small cells away from parks and ball fields – at least 3000 ft away.**

Thank you for taking the time to consider and apply these suggestions. I look forward to seeing changes in next ordinance draft.

Sincerely,

Terry Upton

From:	AdvancePlanning, PDS
To:	Shute, Madeline
Cc:	Lieberman, Tara
Subject:	FW: County of San Diego - PDS - Public Review of draft Zoning Ordinance Update for Small Cell Wireless Facilities
Date:	Tuesday, June 04, 2019 4:16:33 PM
Attachments:	Additional Options for the Board to consider related to Small Cell Wirel....pdf DRAFT Application for Small Cell Wireless Facility Permits.pdf DRAFT Small Cell Wireless Facility Questionnaire.pdf DRAFT Zoning Ordinance Update for Small Cell Wireless Facilities - Clean....pdf DRAFT Zoning Ordinance Update for Small Cell Wireless Facilities - Strik....pdf Visuals illustrating staff recommendations for configuration preferences....pdf

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Stephanie Neal
Junior Land Use/Environmental Planner, Advance Planning
County of San Diego | Planning & Development Services
5510 Overland Ave. Ste. 310 | San Diego, CA 92123
Stephanie.Neal@sdcounty.ca.gov
(858) 495-5341

-----Original Message-----
From: Zanne Aurilio [mailto:saurilio@tutamail.com]
Sent: Tuesday, June 04, 2019 4:13 PM
To: AdvancePlanning, PDS <PDS.AdvancePlanning@sdcounty.ca.gov>
Subject: FWD: County of San Diego - PDS - Public Review of draft Zoning Ordinance Update for Small Cell Wireless Facilities

To Whom It May Concern,
I find the questionnaire somewhat problematic in that it forces applicants to choose an answer that may be partially accurate or inaccurate. I'm not familiar with how public policies are put into action and who the audience for this questionnair is. Will the audience be expected to have all these decisions made? Will they know of this expectation ahead of taking the survey?
Excuse my ignorance, I'm only speaking from a researcher's standpoint on questionnaire design and to that end suggest adding an "Unsure" or "Other" option with space for short text explanations. Respondents will then be encouraged to provide you with more accurate responses.

Sincerely,
Zanne Aurilio

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Zanne Aurilio, PhD

Date: May 31, 2019, 4:44 PM
From: Eric.Lardy@sdcounty.ca.gov
Cc: PDS.AdvancePlanning@sdcounty.ca.gov
Subject: County of San Diego - PDS - Public Review of draft Zoning Ordinance Update for Small Cell Wireless Facilities

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> On February 27, 2019, the Board of Supervisors (Board) directed staff to return to the Board in 180 days with additional requirements for small cell wireless facilities for reducing cluttering, avoidance of sensitive sites, co-location, distance between poles, placement of utility boxes, residential preferred locations, undergrounding of equipment, and additional public noticing. This project proposes changes to the Zoning Ordinance to address the Board direction and to comply with the September 2018 FCC Order.
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>
> The draft Zoning Ordinance Update for Small Cell Wireless Facilities is available for public review from > May 31, 2019 – June 30, 2019> .
>
>
> The draft ordinance and supporting documents are available for download at the project website: > https://www.sandiegocounty.gov/content/sdc/pds/advance/smallcellwirelessfacilities.html <https://www.sandiegocounty.gov/content/sdc/pds/advance/smallcellwirelessfacilities.html>
>
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> Supporting documents include the following:
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> ·> > Additional Options for the Board to consider related to Small Cell Wireless Facilities
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>
> ·> > Draft Small Cell Wireless Facility Questionnaire (to be completed by applicant)
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> ·> > Draft Application for Small Cell Wireless Facility Permits (to be completed by applicant)
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>
> ·> > Visuals illustrating staff recommendations for configuration preferences (Section 6992.A.8) <>
>
>
> Please provide comments on the draft Zoning Ordinance Update for Small Cell Wireless Facilities by June 30, 2019.
>
>
> Sent comments via email to: > PDS.AdvancePlanning@sdcounty.ca.gov <mailto:PDS.AdvancePlanning@sdcounty.ca.gov>
>
>
> Send comments via mail to: Attn: Tara Lieberman
>
>
> 5510 Overland Avenue, Suite 310
>
>
> San Diego, CA 92123 [MS O-650]>
>
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> The proposed schedule leading to Board consideration is outlined below:
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> May 31 – June 30
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> Draft Ordinance Available for Public Review

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> June
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> Public Outreach
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> June
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> CPSG Coordination
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> July 19
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> Planning Commission
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>
> August 7
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>
> Board of Supervisors
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>
> Staff will continue to provide project updates as they become available, through the stakeholder email list and through the project web page at >
https://www.sandiegocounty.gov/content/sdc/pds/advance/smallcellwirelessfacilities.html
<https://www.sandiegocounty.gov/content/sdc/pds/advance/smallcellwirelessfacilities.html>
>
>
> For any questions, please contact Tara Lieberman | > PDS.AdvancePlanning@sdcounty.ca.gov
<mailto:PDS.AdvancePlanning@sdcounty.ca.gov>> (project email address) | (858) 495-5466 (project phone line)
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