

American Tower

Rancho Santé Fe (RSF) – Partnering for the Future



AMERICAN TOWER®

Partnering for the Future

- › American Tower - at a glance
- › Proposed Wireless Design – benefits to the community
- › Our Approach – blending into your community
- › Q&A



Our Global Presence⁽¹⁾

13

Countries

1,500+

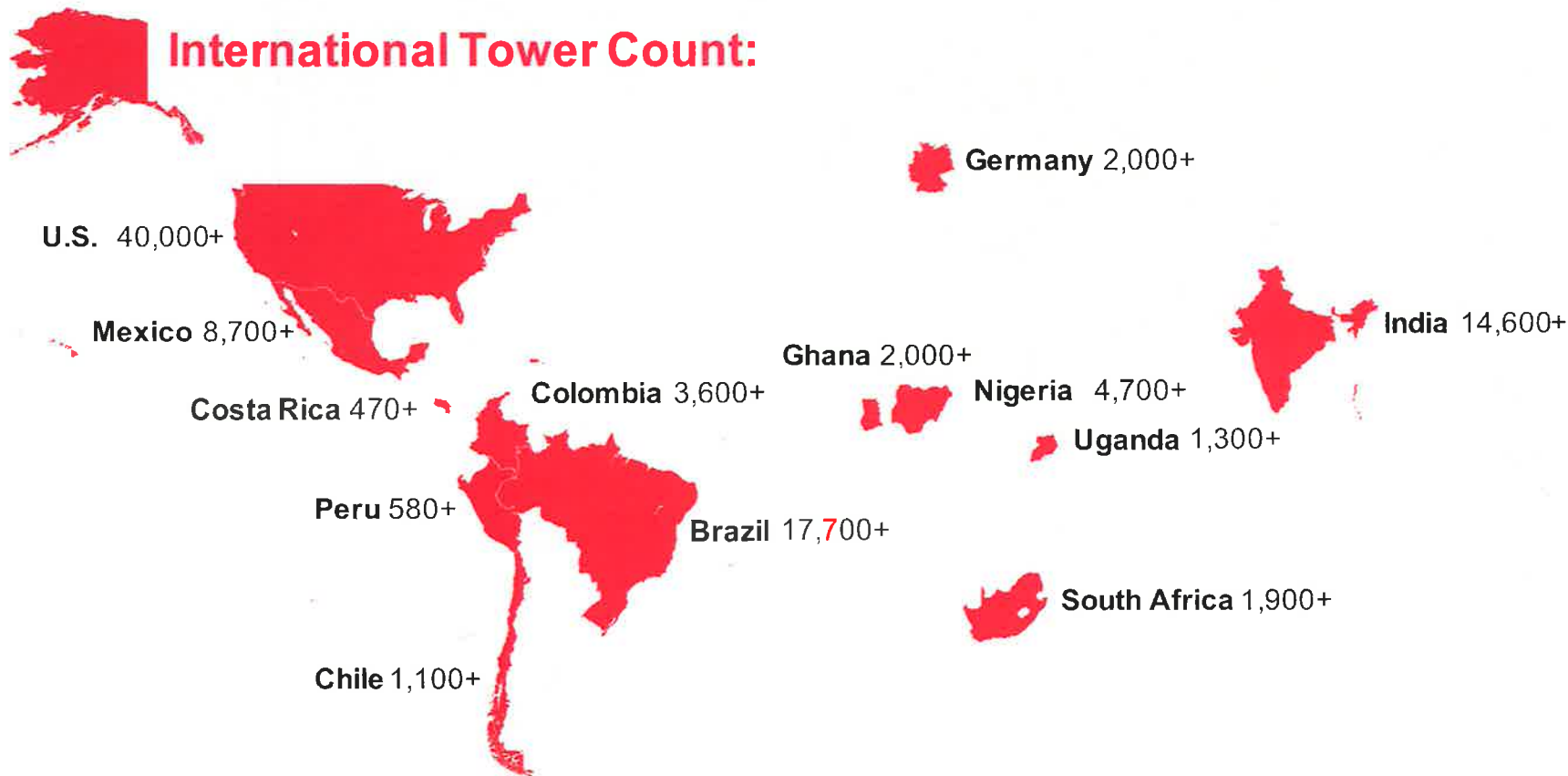
U.S. Employees

3,100+

Global Employees

99,000+

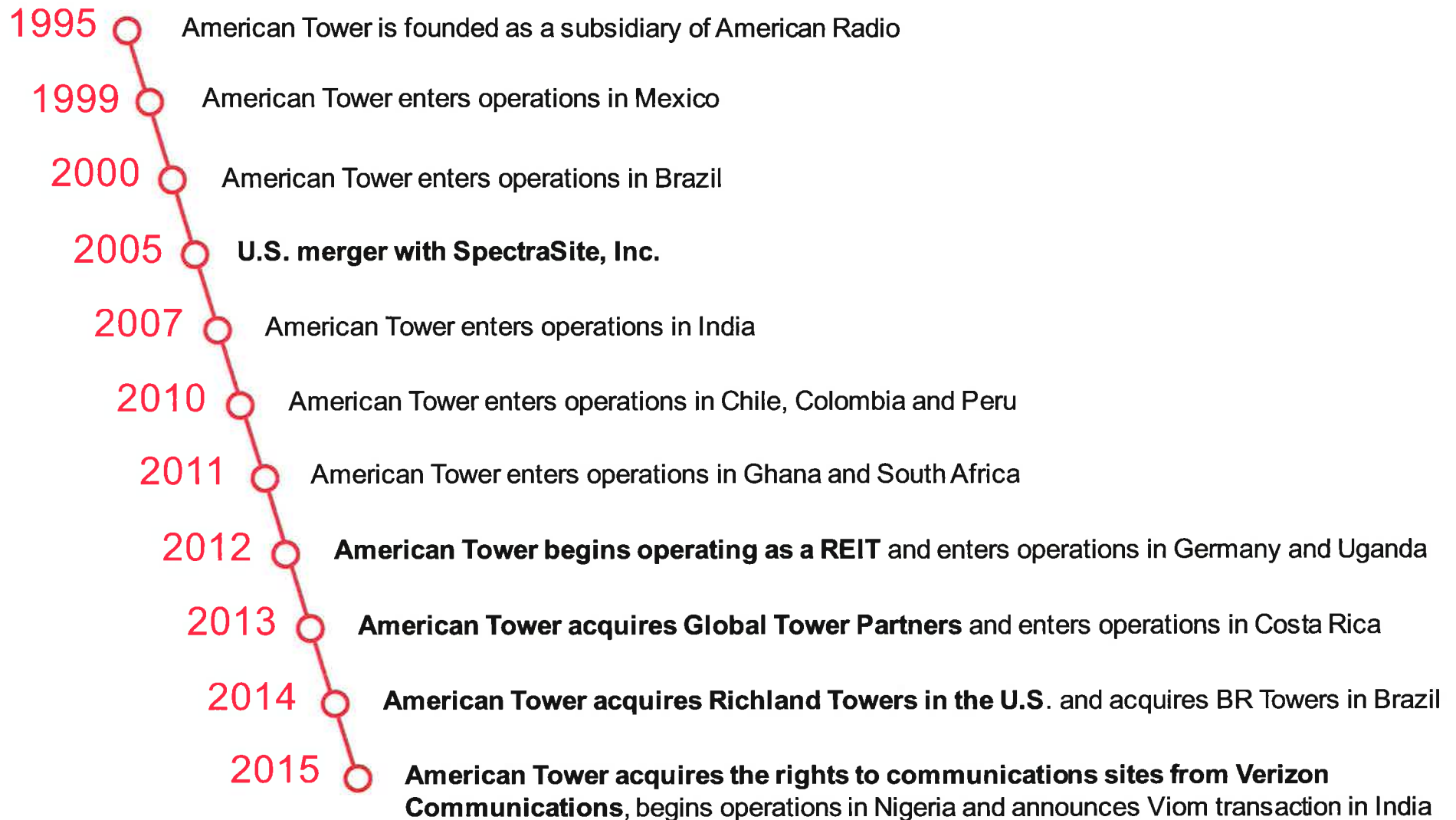
Total Sites



(1) As of the quarter ended September 30, 2015.



Corporate Timeline



Core Infrastructure Solutions⁽¹⁾

Towers

40,000+

towers in the U.S.

- › Including 320+ “tall,” over 500 feet broadcast towers, x stealth towers
- › 630+ Build-to-Suit towers constructed in 2014



Backup Power

3,100+

sites with Backup Power

- › Ensuring network uptime
- › Helping Customers meet requirements and reduce costs



Rooftops

15,000+

properties under management

- › Filling capacity gaps when towers are not available
- › Enhancing networks in densely populated areas



In-Building DAS

290+

networks on air in the U.S.

- › 1,400+ properties under management
- › Including properties such as malls, campuses, hospitals, airports, resorts, casinos and more



Outdoor DAS

600+

DAS nodes built and in deployment

- › Ideal for tough permitting environments
- › Public utility status and access rights across most of the U.S. allow use of public rights-of-way



Development Rights

52,000+

miles of railroad rights-of-way

- › Land for new tower development
- › Millions of acres across the U.S.
- › Including USPS portfolio with 8,900+ sites

(1) As of the quarter ended June 30, 2015.



Dedicated Support for our Customers



We have dedicated resources in place that are focused on the needs of our build-to-suit projects.

Our build-to-suit resources allow us to address our customer's needs, focus on speed-to-market and delivering solutions that meet yours and our strict compliance and safety standards.

Network Development

- › 100+ team members nationally
- › Field-based build-to-suit project and construction management

• **Network Development Personnel**

Network Development and Operations Staff



Network Operations

- › 280+ regionally located Field Operations Technicians
- › Oversees American Tower assets, assists our Network Development team to fill gaps

• **Network Operation Personnel**

Program Management Office (PMO)

- › Provides national-level exposure of progress to build-to-suit projects

Compliance, Legal and Engineering

- › Ensures sites meet standards, are unencumbered and tenant ready

Leasing Operations

- › Coordinates and reviews collocations and Site Lease Agreements



Build-to-Suit Experience and Expertise



- › 1,700+ towers built under our Build-to-Suit Program since 2001
- › 630+ constructed in 2014⁽¹⁾



- › Recordable injury/illness rate 32% lower than the Telecommunications Industry average
- › 63% lower than the All Industry average



- › In-house Engineering team establishes standards and loading criteria for new towers
- › Ensures new towers conform to agreed-upon specifications

Our Build-to-Suit Program is integral to our core business. Our experience, commitment to safety, compliance and engineering expertise make us an ideal partner.

(1) As of December 31, 2014.



Why American Tower for RSF

- Largest Cell Tower provider in the US – here for the long term
 - Significant experience in supporting Communities and the Wireless Carriers
- Neutral Cell Tower Developer – motivated to drive broad Carrier adoption
 - Tried and proven processes and procedures for cell development, zoning and permitting, stealth augmentation, fiber backhaul and land lease management
- Robust End-to-End network design providing excellent coverage across the community and better In-building penetration allowing:
 - Improved coverage for Medical and Emergency Services (70% of all 911 calls are made on a cellular device)
 - Platform to support next generation services across the community
 - Adherence to all FCC, State and County requirements
- Socially conscience organization focused on meeting the needs of RSF and the County of San Diego (Bernal Heights San Francisco CA, Jackson Hole WY, Vail CO, Martha's Vineyard MA, Medina WA)



Blending into the Community

Bernal Heights Tower Medicine Wheel Mural Project Narrative San Francisco CA

The initial concept of this project was inspired by the building's natural surroundings, and its alignment with the cardinal directions, corresponding to the Ohlone (Aboriginal peoples of the greater Bay Area) medicine wheel.



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Rancho Santé Fe (RSF) – Proposed Wireless Design



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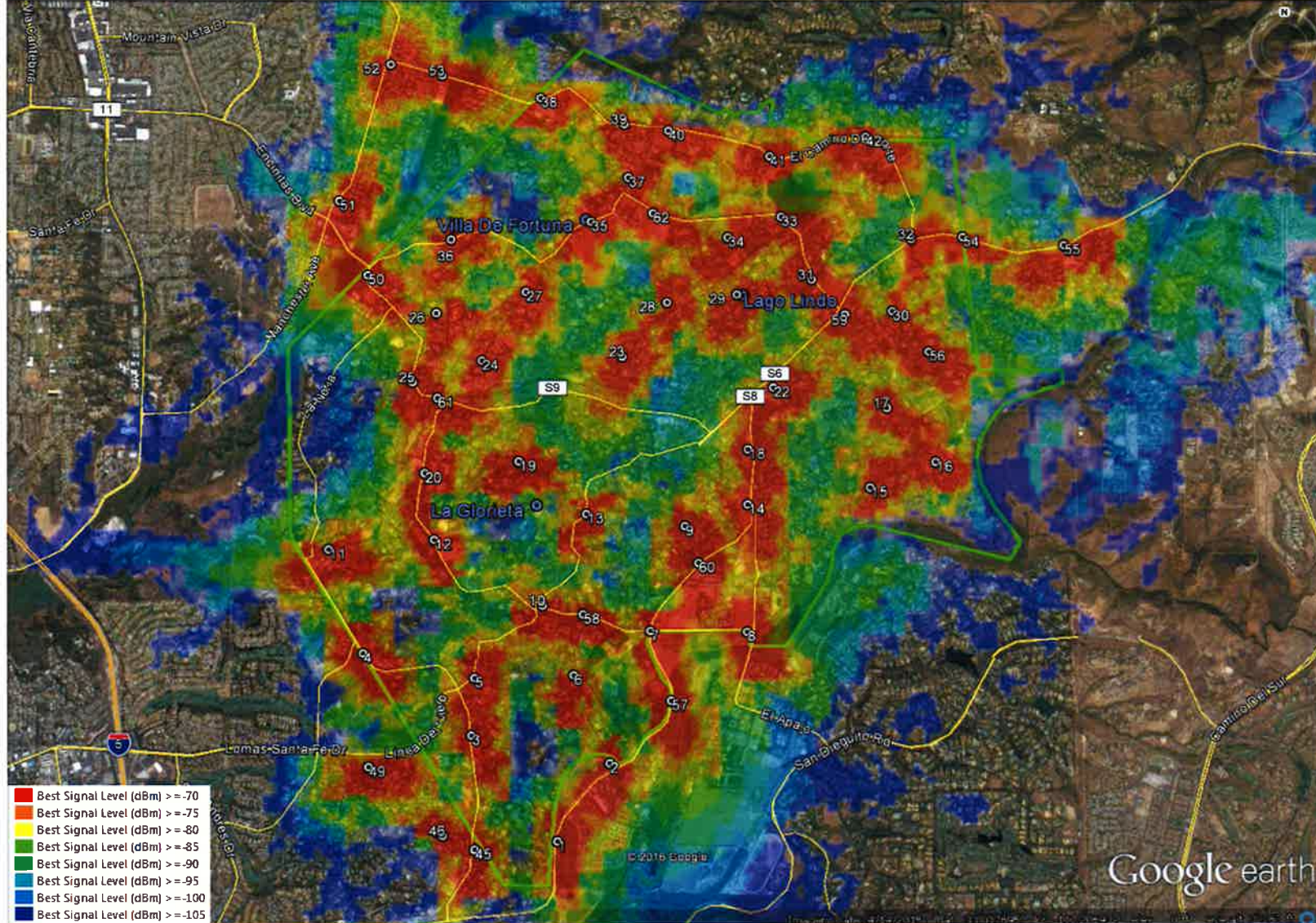


Current Coverage and DAS Analysis

- Current DAS Network was designed for 2G/3G RF Coverage, primarily optimized for voice calling.
- Antennas are lower gain panel antennas configured in “bowtie” configuration, which is typically used to primarily cover roads.
- Lower gain antennas and lack of full 360 degree pattern is likely causing wireless smartphones of users in area to transmit RF at higher levels to reach back to DAS node antennas, especially when phones used indoors.
- Antenna height is lower than the existing treeline in many areas, which affects the performance.
- Configuration cannot take advantage of many 4G capabilities including MIMO and higher order modulation to maximize data throughput.
- Addition of macrocells will not only enhance call and data performance, but will also enable the smartphones and other devices to transmit at lower levels, reducing EMF significantly.



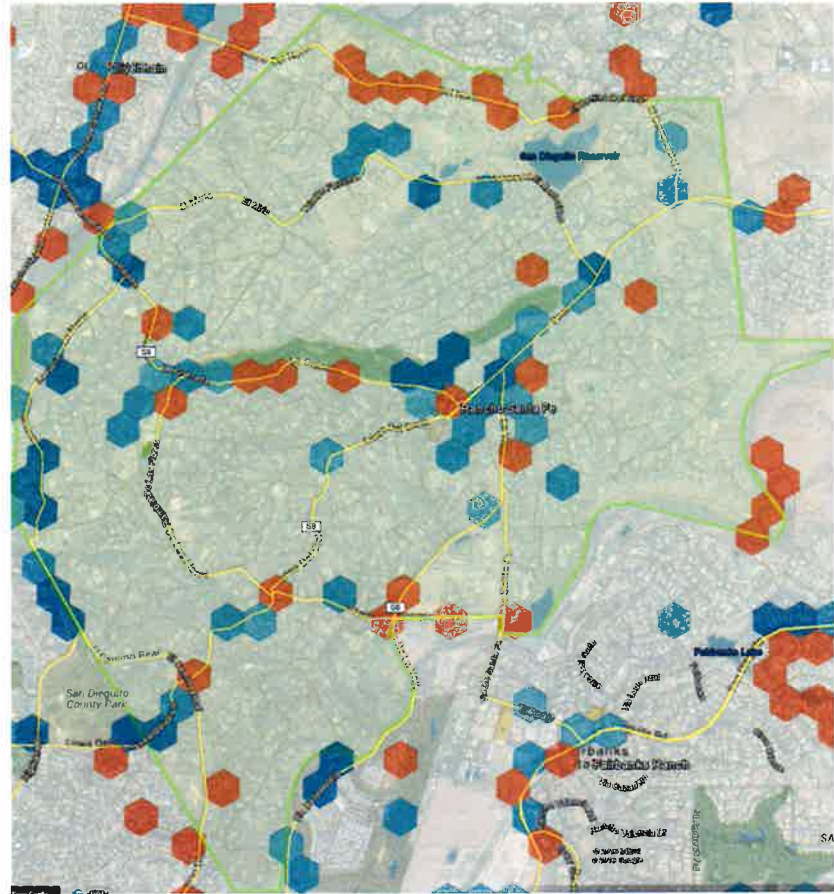
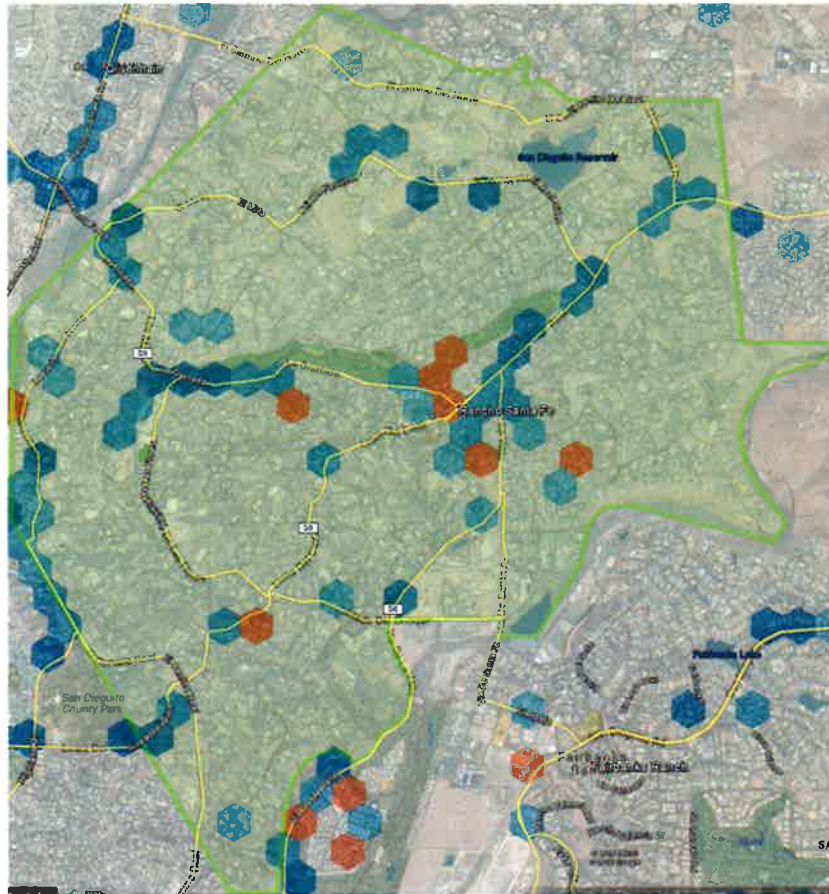
Rancho Santa Fe Current DAS RF Coverage



RF propagation of the DAS sites throughout Rancho Santa Fe is primarily on the roads and homes near each node. The lower gain directional panel antennas provide coverage in two directions, but don't cover the broad area with strong RF signal.



Rootmetrics AT&T and VZW Data Performance

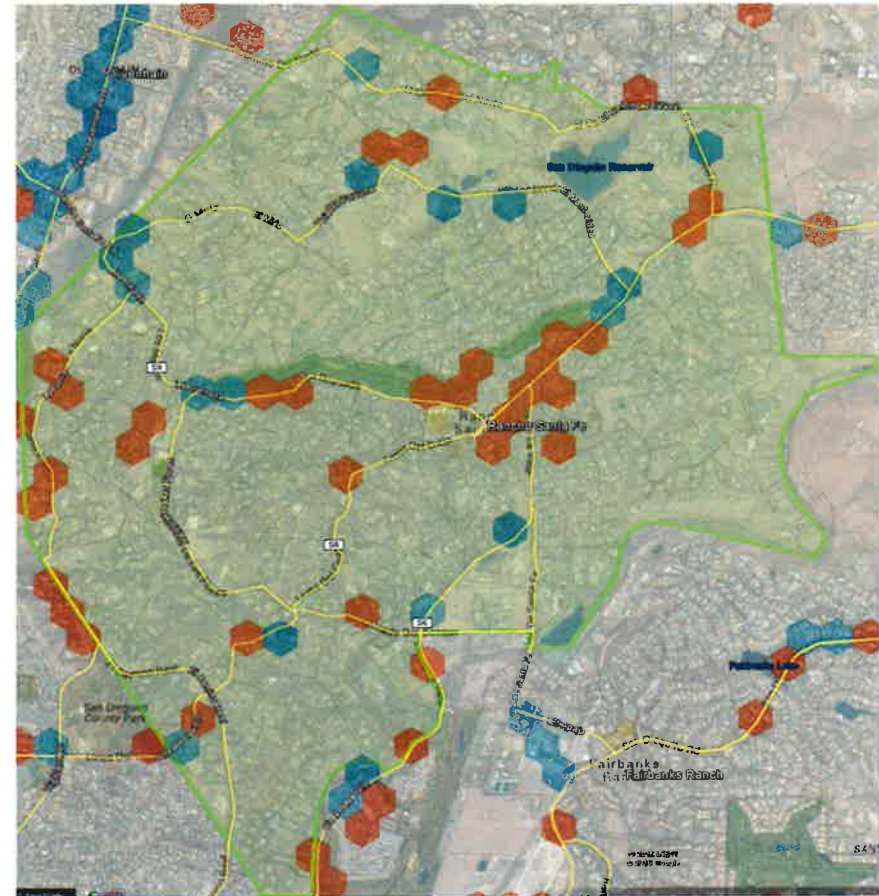
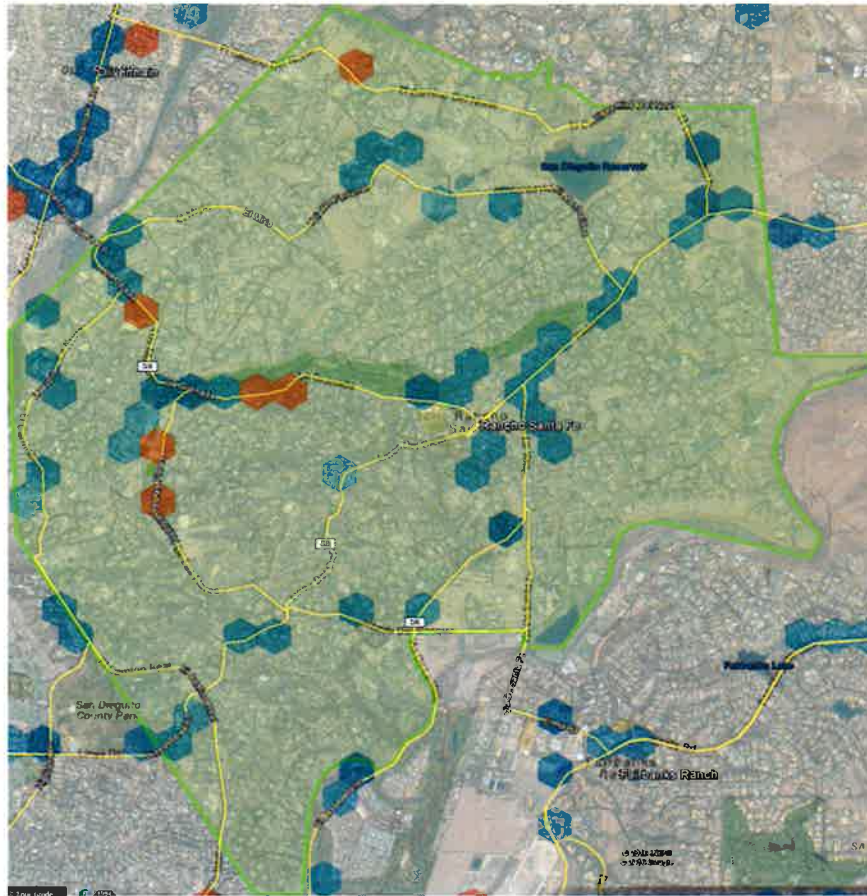


Untested Slow Moderate Fast Faster

- AT&T has relatively poor data performance in areas that are not close to DAS nodes and many areas have returned no data points.
- Verizon has very poor data performance in many areas because they are not on the DAS network



Rootmetrics T-Mobile and Sprint Data Performance



Untested Slow Moderate Fast Faster

- T-Mobile has relatively poor data performance in areas that are not close to DAS nodes and many areas have returned no data points.
- Sprint has very poor data performance in many areas because they are likely utilizing mostly higher frequencies DAS network

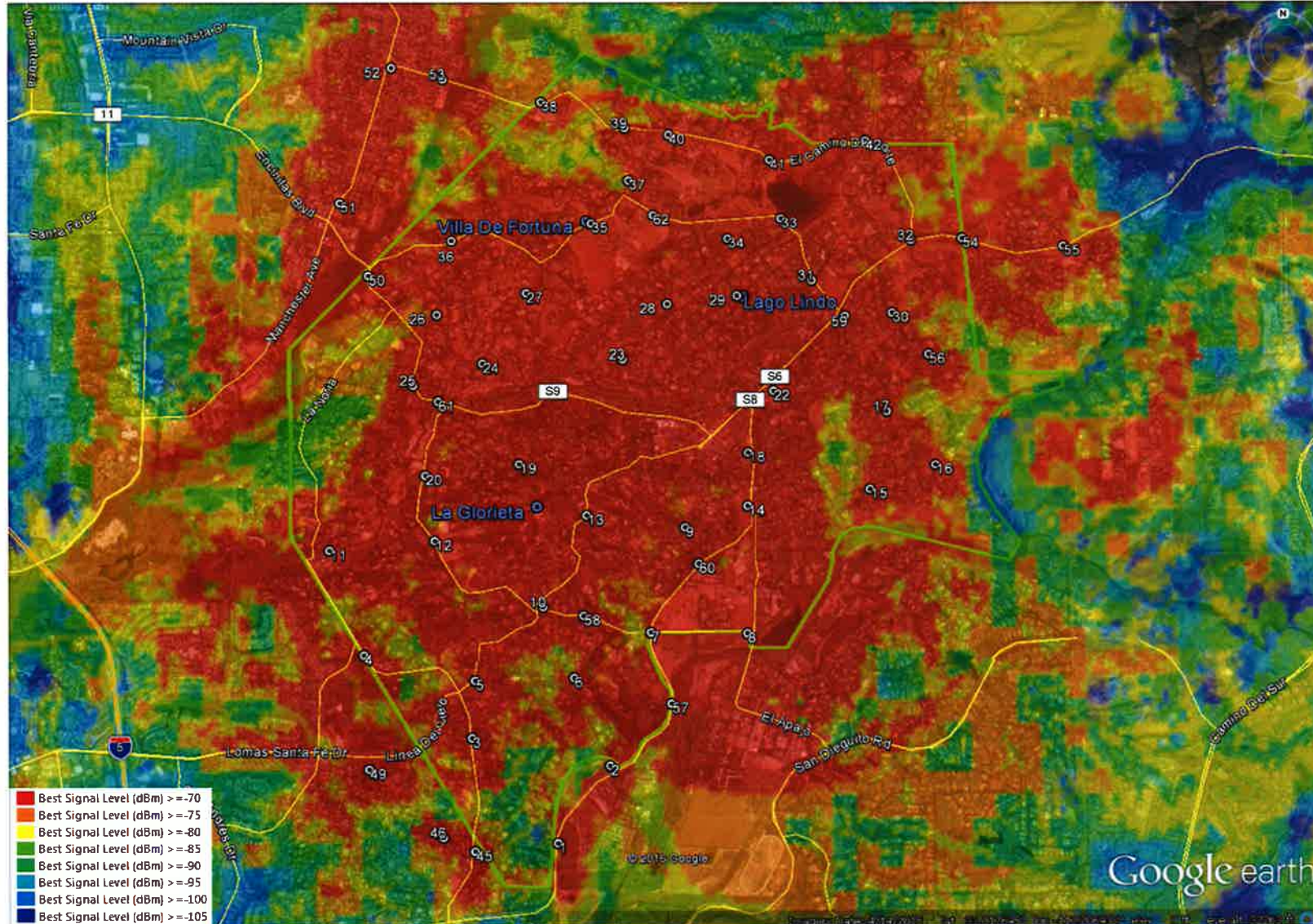


Design Overview and Evolution

- The current DAS can be enhanced significantly with the addition of 3 well positioned macrocells, utilizing stealth mono-eucalyptus poles.
- This is necessary to get the antennas above the trees and clutter to enable the cell site to “hear” the smartphones and other devices, especially when used indoors. This will create an umbrella over the DAS and fill in the gaps that currently exist.
- The macrocell will have higher-level technology capabilities designed for 4G to bring the entire network up to fast and usable performance standards.
- The existing DAS can still be used and even upgraded to small cells to handle non-mobile data capacity hot-spots.
- The overall EMF levels, especially from the smartphones and other devices will decrease as the system will maintain them at minimum levels to maintain voice and data connectivity.



Rancho Santa Fe with three 95ft Mono-Eucalyptus

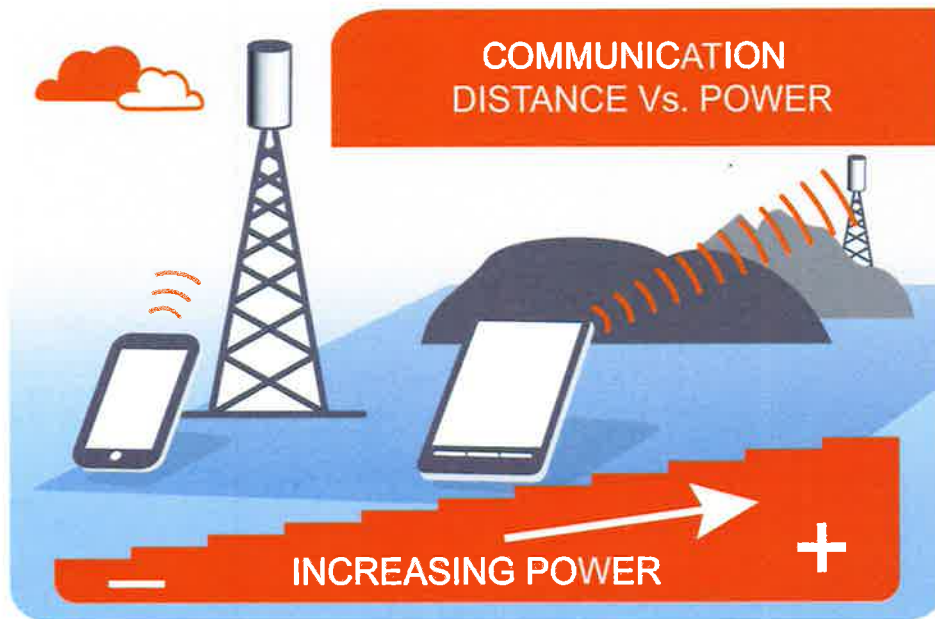


RF propagation of the ATC sites surrounding Rancho Santa Fe. This 3 site plan uses three core sites at La Glorieta and Lago Lindo, and Villa Fortuna.

The RF signal at 95' completely provides umbrella wireless coverage to the entire community, filling in all the areas with stronger RF coverage. The higher gain advanced antennas will also strengthen the signal from smart phones being used indoors.



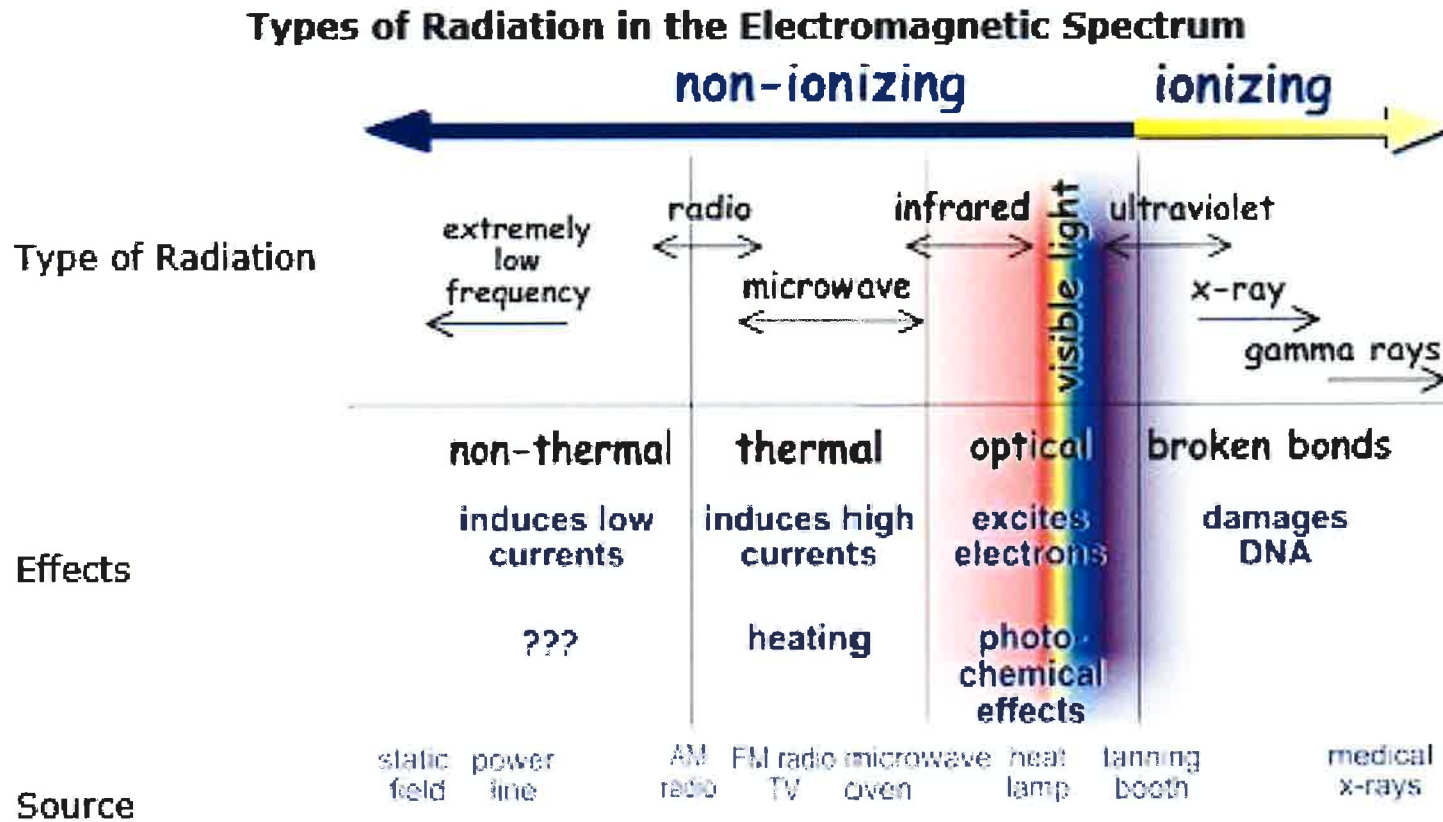
EMF, Dynamic Power Control (DTx/DRx), and Discontinuous Transmission



- › Dynamic Power Control (DTx/DRx) is a technology that is part of the 4G standard to reduce the transmit power of the smartphone/device and the cell site radio equipment so that it is at the lowest possible level to communicate.
- › This was designed to increase battery life in user devices and reduce power consumption at the cell site.
- › With a well-designed network, this serves also to reduce EMF significantly near the user and around the cell site.
- › Discontinuous Transmission is the ability of the transmitter in the phone and the cell site radio to dynamically shut down to a standby state, “listening” when needed, but putting out little to no RF energy.



EMF and resource links



- http://www.pcia.com/images/Advocacy_Docs/pcia_rf_fact_sheet.pdf
- <http://www.who.int/mediacentre/factsheets/fs193/en/>



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Rancho Santé Fe (RSF) – Blending into the Community



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Three Proposed Tower Locations

- › **Lago Lindo** – OS (Open Space) district, parcel #265-201-04, 5.29 acres
- › **Via de Fortuna** – RR (Rural Residential) district, parcel #265-06-062, 0.64 acres
- › **La Glorieta Cul-de-sac** – RR (Rural Residential) district, parcel #268-11-005

Discussion of aerial sketches illustrating distances to residences and photo sims.

If necessary, we will investigate other locations to best meet the needs of the community and deliver optimal performance for the benefit of all residents.



Lago Lindo



Lago Lindo

Existing



Proposed



Photosimulation of the view looking southwest from across Lago Lindo.

6201 Lago Lindo

Rancho Santa Fe, CA 92067



Lago Lindo

Existing



Proposed



Photosimulation of the view looking east along Lago Lindo.

6201 Lago Lindo

Rancho Santa Fe, CA 92067



Via de Fortuna

NOTES:
1. PARCEL DATA OBTAINED FROM SANGIS.ORG
2. ALL DIMENSIONS ARE APPROXIMATE



Via de Fortuna

Existing



Proposed



Photosimulation of the view looking west along Via de Fortuna.

17960 Via de Fortuna
Rancho Santa Fe, CA 92067



Via de Fortuna

Existing



Proposed



Photosimulation of the view looking northeast along Via de Fortuna.

17960 Via de Fortuna
Rancho Santa Fe, CA 92067



La Glorieta Cul-de-sac



La Glorieta Cul-de-sac

Existing



Proposed



Photosimulation of the view looking west along La Glorieta.

5260 La Glorieta

Rancho Santa Fe, CA 92067



Example of Existing Mono-Eucalyptus



Oceanside, CA

Example of Existing Mono-Pine



Fairbanks Ranch, CA



Zoning and Permitting Process

Rancho Santa Fe Association Approvals

1.

Board of Directors, upon advice of Art Jury, is required to provide approval for the proposal to construct the facilities
(Rancho Santa Fe Regulatory Code s.31.03 Major Construction)

- › Special Height Provisions Covenant (Paragraph 122, Section 16- with approval by Board and Art Jury)

2.

Building Permit required



3.

Certificate of Completion and Compliance required



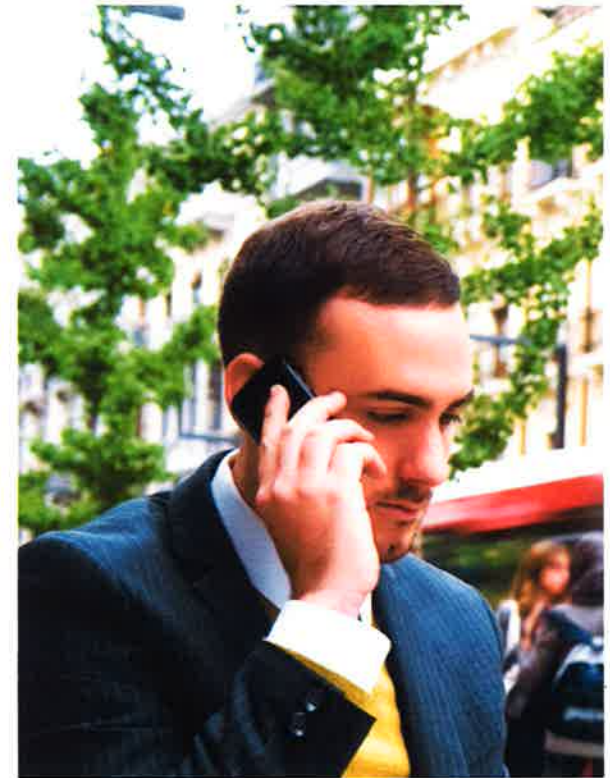
San Diego County Permitting Process

- › Requires Major Use Permit (MUP)
- › Any structure over 60 feet requires MUP
- › Application process requires:
 - › Plans – Including setbacks, elevation, construction with design elements and restrictions on height of ground equipment.
 - › Noise Study – Has to meet noise standards and cannot be located in setback.
 - › Visual Impact Analysis – Requires maximum silhouette, view shed analysis, color and screening elements.
 - › Environmental – Information and review for CEQA compliance
 - › Setbacks – San Diego County Wireless ordinance establishes required setbacks (6985(c)4).
- › County estimates 9–12 months for approval process.
- › Approval granting authority: San Diego County Planning Board Public Hearing
- › Building Permits: Required from County



Do Cell Towers Lower Property Values?

- › No definitive studies have been completed—there are outdated location-specific studies online.
- › Rancho Santa Fe is a beautiful, unique area that cannot be compared to any other area. American Tower works closely with communities to ensure that our solutions minimize the impact on scenic landscapes and historical properties. (e.g., Jackson Hole, WY; Vail, CO; Martha's Vineyard, MA; Medina, WA)
- › There will be people who believe that their property value will be reduced with a cell tower; however, there will be an equal, if not larger, group of people who will not purchase property without having wireless infrastructure available for their personal and professional lives.
- › Residents, visitors and emergency responders depend upon wireless services and devices in their everyday lives and wireless infrastructure is required to support this system. Unfortunately, we are reminded all too often of the compelling public safety need to quickly deploy emergency communications in order to respond to medical emergencies, fires, weather events, school hostage situations, terrorist attacks and all other emergency situations.



More than 70% of all emergency calls are placed from a wireless device - FCC



Questions and Answers

