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AT&T Project Number: CLL01599
Project Name: OC Mining

**County of Orange**
**Application for a Wireless Communication Facility**
*Project Information, Justification, Alternative Site Analysis*

AT&T Mobility (AT&T) is requesting approval for the construction and operation of an unmanned wireless telecommunications facility (cell site), and presents the following project information for your consideration:

**Project Location**
Address: 10000 S. Crawford Canyon Rd., Santa Ana, CA 92705
APN: 393-390-12
Zoning: Community Commercial

**Project Representative**
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**AT&T Contact**
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**Leasing**
Pending final updates and full execution of lease.

**Project Description**
AT&T proposes to build an unmanned wireless telecommunications facility consisting of a three (3) sector array with three (3) panel antennas per sector that is disguised within the branches of a 50' tall (Includes 5 Feet of Top Branches) faux Eucalyptus tree, designed to blend in with and compliment the surroundings vicinity. All associated equipment will be located within an equipment enclosure. AT&T will work with the City and the community to install a state-of-the-art stealth structure that will improve communications services for the residents and visitors in the city of Orange/Orange County community area and city as a whole.
AT&T proposal above the maximum height is required to meet the services required to fill the gap in coverage in this search ring. AT&T top of antenna is 45 feet. The additional 5 feet of branches is provided to improve the stealth

design of the tree. AT&T has provided propagation maps, attached, and included images below to show the significant difference in service provided with the antennas at lower levels.

**Project Objectives**
A wireless carrier requires the installation of a cell site within a specified area to close a "significant gap in coverage." Other criteria for selecting sites include the following:

- The radio signal must be of sufficient strength to achieve consistent, sustainable, and reliable service to customers at a *level sufficient for outdoor, in-vehicle, and in-building penetration with good voice quality* (Threshold, 15.85 db).
- When nearby other sites become overloaded and more enhanced voice and data services are used (4G and other high-speed data services), signal contracts and a gap is created. With heavy use it is intensified due to the unique properties of digital radio transmissions.

In this specific case, AT&T's radio-frequency engineers (RF) identified a significant gap in coverage in the vicinity of Chapman Ave, and Crawford Canyon Rd. See enclosed radio-signal propagation maps.

**Alternative Site Analysis**

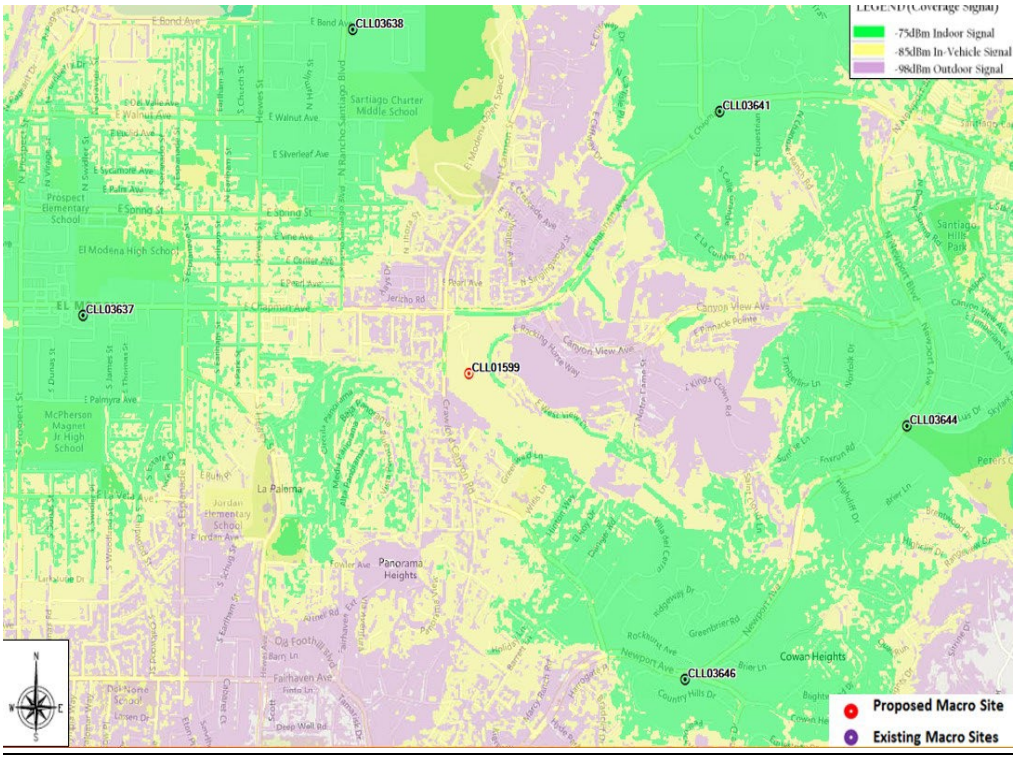
- AT&T's gap in coverage in this instance includes a search ring of predominantly residential homes, within the city of Orange. The original Search Ring for CLL01599 was determined to have no viable candidates for a macro site. A facility located within the search ring would not be possible due to the setbacks of the residential zone (25 ft. front and rear; 25 ft. from habitable dwelling). No space would be adequate to fit a structure. No structures/carriers exist within the SR for viable colocation. The existing JPA poles are will not support the demands needed for a Macro NSB site due to the design requirements that limited the potential equipment to 1 flush mounted antenna per sector.

Our subject property lot is in County of Orange jurisdiction and borders the city of Orange consisting of primarily residential communities.

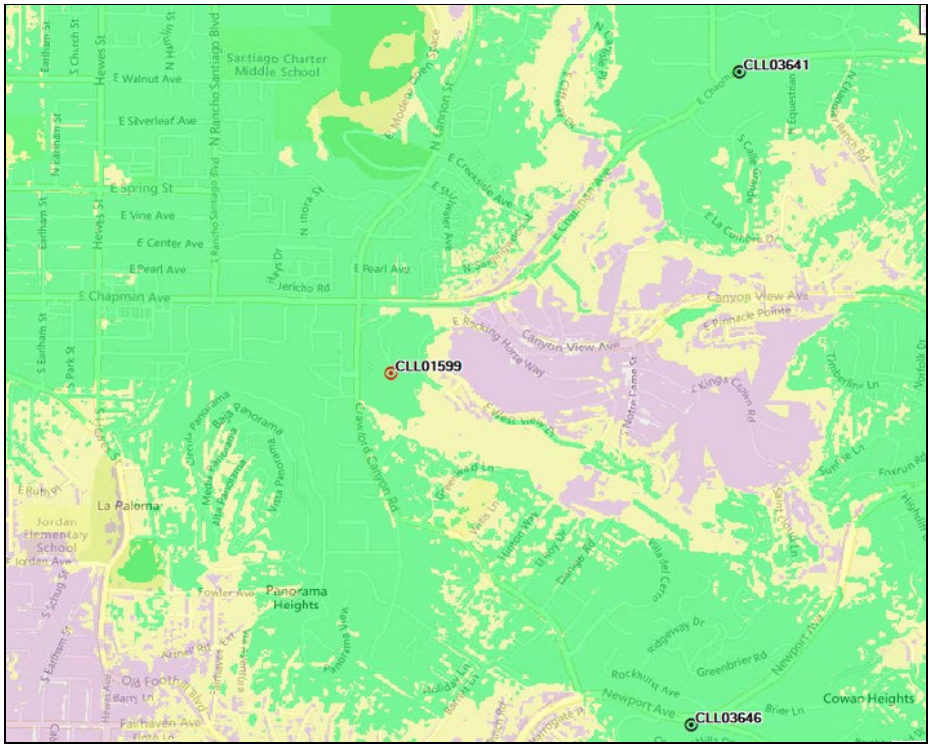
**<u>Figure 1</u>**
**Original and Expanded Search Ring View – Green-Primary Search Ring/Red-Expanded Search Ring**

**Figure 3**

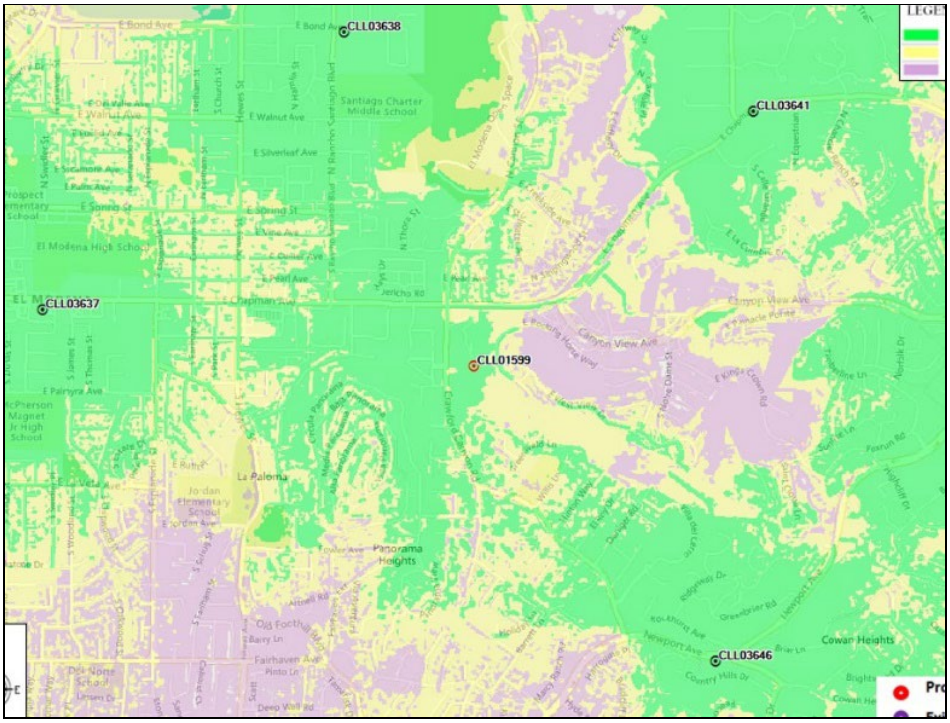
**Current Gap in Coverage**




**New Coverage at 41 Ft. Antenna RAD Center**




**New Coverage at 31 Ft. Antenna RAD Center**




**Findings/Burden of Proof**

*The site for the proposed use is adequate in size and shape.*

AT&T is proposing a stealth design for this project which is concealed within the branches of the mono-tree and in accordance with the County of Orange Wireless Code. All cellular equipment and antennas are disguised and screened from public view. The requested height of the faux mono-Euca tree is the minimum height needed in order to fill the significant gap in coverage for this project. AT&T uses the most advanced technology to design the equipment shelter so as to blend the architecture with the surrounding community and thereby minimizing the visual impact of the site.

*The proposed location has sufficient access to streets and highways that are adequate in width and pavement type to carry the quantity and quality of traffic generated by the proposed use.*

The proposed project is south of Chapman Ave and East of Crawford Canyon Rd., the primarily residential communities which is the perfect location as there is adequately line of sight to meet the gap in coverage of the surrounding communities requiring coverage. There are adequate access routes directly to the proposed facility. All the roadways and access ways within the facility are in compliance with local, state and federal regulations concerning width and grading.

*The proposed use will not have an adverse effect upon adjacent or abutting properties.*

The project is proposed within an PI-Public Institutional zone and will not have an adverse effect upon adjacent or abutting properties as it is a stealth design that will blend naturally with the subject property and the surrounding community. The project will provide a public benefit of better wireless telecommunications and data services to the surrounding neighborhoods and community.

*The proposed use is deemed essential and desirable to the public convenience or welfare.*

The new wireless telecommunications facility is in high demand to the residents and visitors of the community and County of Orange. Wireless communications are vastly used in this area and the need for this site was established entirely from increased usage of AT&T services in the vicinity of the requested project.

**GENERAL INFORMATION**

**Site Selection**

Customer demand drives the need for new cell sites. Data relating to incomplete and dropped calls is gathered, drive-tests are conducted, and scientific modeling using sophisticated software is evaluated. Once the area requiring a new site is identified, a target ring on a map is provided to a real estate professional to begin a search for a suitable location.

During an initial reconnaissance, properties selected for evaluation for installation of a cell site must be located in the general vicinity of the ring, possess an appropriate zoning designation, and appear to have enough space to accommodate an antenna structure and supporting radio equipment. The size of this space will vary depending on the objective of the site. The owners of each prospective location are notified to assess their interest in partnering with AT&T.

Four key elements are considered in the selection process:

- Leasing: The property must have an owner who is willing to enter into a long-term lease agreement under very specific terms and conditions.
- Zoning: It must be suitably zoned in accordance with local land-use codes to allow for a successful permitting process.
- Construction: Construction constraints and costs must be reasonable from a business perspective, and the proposed project must be capable of being constructed in accordance with local building codes and safety standards.

- RF: It must be strategically located to be able to achieve the RF engineer's objective to close the significant gap with antennas at a height to clear nearby obstructions.

**The Benefits to the Community**

Approximately 90-percent of American adults subscribe to cell phone service. People of all ages rely increasingly on their cell phones to talk, text, send media, and search the Internet for both personal and business reasons. More and more, they conduct these activities in their homes, therefore, becoming reliant on adequate service within residential neighborhoods. In fact, 50-percent of people who relocate are not signing up for landline service at their new location and are using their cell phone as their primary communication method.

The installation and operation of the proposed facility will offer improved:

- Communications for local, state, and federal emergency services providers (i.e., police, fire, paramedics, and other first-responders).
- Personal safety and security for community members in an emergency, or when there is an urgent need to reach family members or friends. Safety is the primary reason parents provide cell phones to their children. Currently 25 percent of all preteens, ages 9 to 12, and 75 percent of all teens, aged 13 to 19, have cell phones.
- Capability of local businesses to better serve their customers.
- Opportunity for a city or county to attract businesses to their community for greater economic development.
- Enhanced 911 Services (E911) – The FCC mandates that all cell sites have location capability. Effective site geometry within the overall network is needed to achieve accurate location information for mobile users through triangulation with active cell sites. (Over half of all 911 calls are made using mobile phones.)

**Safety – RF is Radio**

The FCC regulates RF emissions to ensure public safety. Standards have been set based on peer-reviewed scientific studies and recommendations from a variety of oversight organizations, including the National Council on Radiation Protection and Measurements (NCRP), American National Standards Institute (ANSI), Institute of Electrical and Electronics Engineers (IEEE), Environmental Protection Agency (EPA), Federal Drug Administration (FDA), Occupational Safety and Health Administration (OSHA), and National Institute for Occupational Safety and Health (NIOSH).

Although the purview of the public safety of RF emissions by the FCC was established by the Telecommunications Act of 1996, these standards remain under constant scrutiny. All AT&T cell sites operate well below these standards, and the typical urban cell site operates hundreds or even thousands of times below the FCC's limits for safe exposure.

**AT&T Company Information**

AT&T is one of the fastest growing nationwide service providers offering all digital voice, messaging, and high-speed data services to nearly 30 million customers in the United States.

AT&T is a "telephone corporation", licensed by the Federal Communications Commission (FCC) to operate in the 872-1962 MHz and 827-1877 MHz frequencies, and a state-regulated Public Utility subject to the California Public Utilities Commission (CPUC). The CPUC has established that the term "telephone corporation" can be extended to wireless carriers, even though they transmit signals without the use of telephone lines.

AT&T will operate this facility in full compliance with the regulations and licensing requirements of the FCC, Federal Aviation Administration (FAA) and the CPUC, as governed by the Telecommunications Act of 1996, and other applicable laws.

The enclosed application is presented for your consideration. AT&T requests a favorable determination and approval of this Conditional Use Permit application to build the proposed facility. Please contact me at 619-994-8528 or chris.doheny@smartlinkgroup.com for any questions or requests for additional information.

Respectfully submitted,

Chris Doheny, Smartlink Group
Authorized Agent for AT&T