**COUNTY OF SAN MATEO**
**PLANNING AND BUILDING DEPARTMENT**

**DATE:** March 5, 2026

**TO:** Zoning Hearing Officer

**FROM:** Planning Staff

**SUBJECT:** Consideration of a Use Permit Renewal, pursuant to Sections 8.280 and 8.376.030.VI of the San Mateo County Zoning Regulations, to allow the continued operation of an existing telecommunications facility operated by Verizon Wireless. The project is located at 25 Loma Vista Lane in the unincorporated Burlingame Hills area of San Mateo County.

County File Number: PLN2007-00123 (Verizon Wireless)

## PROPOSAL

The project applicant, John Merritt, ATC Sequoia LLC, on behalf of Verizon Wireless, is proposing to renew an existing Use Permit (PLN2007-00123) to allow the continued operation of a wireless communications facility located at 25 Loma Vista Lane in the unincorporated Burlingame Hills area in San Mateo County. The existing facility consists of four panel antennas mounted on a 25-foot pole, a 300-square-foot, 8-foot-high masonry block wall equipment storage structure, which includes a 7-foot-high lattice fence along the south side, a wood deck with railing above the equipment storage structure, and two GPS antennae mounted on the south side. No changes are proposed to the existing approved facility.

## RECOMMENDATION

That the Zoning Hearing Officer approve the Use Permit Renewal, County File No. PLN2007-00123, by making the required findings and adopting the conditions of approval listed in Attachment A.

## BACKGROUND

Report Prepared By: Tiffany Gee, Project Planner; TGee@smcgov.org

Applicant: John Merritt, ATC Sequoia LLC, on behalf of Verizon Wireless

Owner: Maria Gavallos Flocas and Alex Flocas

Public Notification: Ten-day advanced notification for the hearing was mailed to property owners within 300 feet of the project parcel and a notice for the hearing posted in the San Mateo County Times on February 7, 2026.

Location: 25 Loma Vista Lane, Burlingame Hills

APN(s): 027-011-200

Size: 28,800 square feet

Existing Zoning: R-1/S-9 (One-Family Residential District/S-9 Combining District)

General Plan Designation: Medium-Low Density Residential

Sphere-of-Influence: City of Burlingame

Existing Land Use: Residential, Telecommunications Facilities

Water Supply/Sewage Disposal: The project does not necessitate the need for water or sewage service. However, the site is served by the Burlingame Municipal Water Department for water supply and the City of Burlingame for sewage disposal.

Flood Zone: FEMA Flood Zone X (Area of Minimal Flood Hazard), Community Panel No. 06081C0134E, dated October 16, 2012.

Environmental Evaluation: The project is categorically exempt pursuant to Section 15301, Class 1, of the California Environmental Quality Act (CEQA) Guidelines for the continued operation of existing public or private facilities involving little or no physical changes or expansion of use.

Setting: To the north and south of the property are single-family residences. To the east are single-family residences and the City of Burlingame. West of the property is Interstate 280. The site contains a single-family residence with a detached garage and two existing wireless telecommunications facilities (the subject Verizon Wireless facility and an AT&T facility that is not part of this application). The parcel is located approximately 55 feet uphill of Interstate 280 in the northbound direction and approximately 70 feet uphill in the southbound direction.

Chronology:

| Date | | Action |
|---|---|---|
| June 19, 2008 | - | Use Permit and Lot Line Adjustment approved by the Zoning Hearing Officer for the new Verizon Wireless telecommunications facility (PLN2007-00123). |
| December 21, 2022 | - | Subject application for a Use Permit Renewal initiated. |
| August 5, 2025 | - | Minor modification to remove and replace four existing antennae with six new antennae along with related radios and cables on existing tower applied for under BLD2025-02116, currently under review. |
| November 30, 2025 | - | Minor modification to extend an existing 25-foot monopole by 11 feet to 36 feet applied for under BLD2025-03364, currently under review. |
| December 17, 2025 | - | Use Permit Renewal application deemed complete. |
| March 5, 2026 | - | Zoning Hearing Officer public hearing. |

## DISCUSSION

A. KEY ISSUES

1. Public Comment

Comments were received from Maria Flocas, the owner of the subject property, regarding the project:

*Due to the close proximity of the Verizon cell tower to our home, we have major RF emission safety concerns with the upgrades Verizon has planned. We have reached out to Verizon many times. We are hoping to make lease changes and have our safety concerns resolved. Until then we do not approve any upgrades.*

After review of the lease between the owners and Verizon Wireless, staff, with the consultation of the County Attorney's Office, determined that the applicant has sufficient evidence demonstrating that they have the owner authorization required to allow for the renewal application for this facility. The owners' concerns regarding RF emissions and Verizon's rights under the lease to modify the facility are not in the purview of the County's Planning and Building Department.

2. Conformance with the San Mateo County General Plan

Staff has determined that the project complies with all applicable General Plan policies, with specific discussion of the following:

Chapter 4 – Visual Quality

The project is consistent with Policy 4.21 (*Utility Structures*) and Policy 4.22 (*Scenic Corridors*) which seek to minimize the adverse visual quality of utility structures and protect and enhance the visual quality of scenic corridors by managing the location and appearance of structural development. While the project site is not located within the I-280/Junipero Serra State Scenic Corridor, the existing monopole and antennae will be visible for a portion of the I-280/Junipero Serra State Scenic Corridor; therefore, discussion of the impact on the scenic corridor applies to the project.

The existing facility is located uphill of the I-280/Junipero Serra State Scenic Corridor, with its upper portion of the monopole visible briefly to motorists. To the passerby, the visual impact is only moderate when heading in either direction of I-280. The monopole assembly does not appear as a solid structure because there are visible voids between the antennas and the bars of the frame. Mature trees are located immediately behind the monopole's location. These trees help break up the profile of the monopole and make it harder to recognize when traveling at speed. The lower portion of the monopole is not visible from the Interstate due to the vegetative screening and topography. Previous Conditions of Approval No.5 and No.6 requiring the monopole, antennas, and related equipment be painted and maintained a dark green color to help blend with the surrounding vegetation in order to minimize visual impact are being maintained as conditions of approval under this renewal. Therefore, the existing facility has not resulted in significant visual impacts, and no changes are proposed under the subject renewal.

As of the writing of this staff report, two modifications that are currently under building permit review, BLD2025-02116 and BLD2025-03364, will result in a replacement of the four existing antennae with six new antennae and their related radios and cables, and an 11-foot extension to the existing monopole, extending to 36 feet, the maximum height allowed by the underlying zoning. These modifications qualify for streamlined permitting as eligible facilities requests pursuant to Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012. These modifications will not result in significant visual impacts as the upgrade will not substantially alter the physical size of the facility. There are no proposed changes to the equipment storage structure.

3. Conformance with the Zoning Regulations

The project site is located within the Single-Family Residential (R-1/S-9) Zoning District. Wireless telecommunications facilities are allowed in any zoning district pursuant to a Use Permit per Section 8.280.010(b) of the San Mateo County Zoning Regulations, when found to be necessary for the public health, safety, convenience, or welfare. The Federal Communications Commission (FCC) has established that cellular transmitting facilities serve national interests and directly and indirectly benefit the public. No changes are proposed for this facility. Therefore, this facility's continued use qualifies as a public service and the proposed renewal to continue operating may be granted for this location in the R-1/S-9 Zoning District.

Section 8.336.040 (*Exception for Mechanical Appurtenances*)

This project includes an existing 20-foot-tall monopole, which exceeds the maximum height allowable for accessory structures. However, Section 8.336.040 (*Exception for Mechanical Appurtenances*) of the Zoning Regulations states that, upon securing of a Use Permit, communications towers, including cellular towers, may be built to a height greater than the maximum height up to a maximum of 150 feet. This section further stipulates that the facility shall not cover more than 15% of the lot or have an area at the base greater than 1,600 square feet. The existing cellular facility does not exceed 150 feet in height, does not cover more than 50% of the lot, nor is the base area of the proposed facility greater than 1,600 square feet. Therefore, the project conforms with these provisions.

4. Conformance with Wireless Telecommunications Facilities Regulations

Staff has determined that the project complies with the applicable standards of the Wireless Telecommunication Facilities (WTF) Ordinance, as discussed below:

a. Development and Design Standards

**Section 8.376.030.II.A** generally prohibits new facilities in areas with sensitive habitats. The project site does not contain any rare, threatened, or endangered animal or plant species identified on the California Natural Diversity Database (CNDDB). Additionally, the project does not include a new facility. The project is for the renewal of an existing facility.

**Section 8.376.030.II.B** discourages locating telecommunications facilities in residential zones unless no other locations provide feasible service or adequate capacity or coverage. The site is located in an area zoned R-1/S-9 (Single-Family Residential), a residential

designation, however, the property already has this existing monopole and relocating it could potentially be more impactful to residences, resources, or the intended coverage areas of this facility. Although it is in a residential area, there is some distance from the monopole to the residences to the north (approximately 260 feet), northwest (approximately 200 feet), east (approximately 290 feet), and southeast (approximately 170 feet). There are no residences to the south and southwest as the I-280/Junipero Serra freeway lies there.

**Section 8.376.030.II.C** requires that co-locations be investigated as an alternative to a new facility if it can provide equivalent coverage with less environmental impact. **Section 8.376.030.II.D** states that, except in cases where aesthetically inappropriate, new facilities should be constructed to support co-location. The project conforms to these standards because it does not involve any new construction and is not considered a new facility. Removing this facility and locating the antennas onto another facility would be an inferior option because this facility is partially screened from public view and the visible portions from the freeway would be brief and painted to blend with the surroundings. Any alternative facility would likely be less screened, and the antennas would increase the visual impact of those facilities.

**Section 8.376.030.II.E – G** seek to minimize and mitigate visual impacts from public views by designing facilities to blend in with the surrounding environment, maintaining exterior equipment to blend with the surrounding environment and/or buildings, and requiring facilities to be constructed of non-reflective materials.

The existing facility blends in with the surrounding environment by being painted dark green. Although the existing facility is visible from the I-280/Junipero Serra State Scenic Corridor, the bottom portion of the monopole is screened by vegetation and topography, while the upper portion that is visible will be only briefly visible to Interstate passersby and is painted to blend with the character of the site and the vegetation in the vicinity. The minor modifications currently under review for replacing antennas and increasing the height of the monopole does change the visual impacts slightly. However, the minor modifications are not under this renewal review, and the changes have not been permitted or implemented as of the writing of this staff report. The 11-foot expansion would be required to adhere to the Conditions of Approval from the original decision letter, and the equipment would be required to be painted a dark green color to blend in. Additionally, no physical changes to the facility are proposed with this renewal.

**Section 8.376.030.II.H – K** discusses wireless telecommunication facilities complying with the zoning, allowed height, and accessory buildings related to the facility. The project complies with the zoning district standards for setbacks, lot coverage, and no physical changes are proposed with this renewal. The project does not comply with the accessory structures height limits; however, it complies with Section 8.336.040 (*Exception for Mechanical Appurtenances*) regarding additional height allowed to utility structures and was previously approved under the establishing use permit for the facility.

b. Performance Standards

The project meets the required performance standards of Section 8.376.030.III for lighting, licensing, provision of a permanent power source, timely removal of the facilities, and visual resource protection. No physical changes to the facility are proposed, the facility operates under licenses issued from both the Federal Communications Commission (FCC) and the California Public Utilities Commission (CPUC), power for the facilities will continue to be provided by PG&E, visual impacts will continue to be minimal, and conditions of approval will require maintenance and/or removal of the facility when no longer in operation.

The facility is required to obtain and maintain all necessary licenses and registrations from the Federal Communications Commission (FCC), California Public Utilities Commission (CPUC), and any other applicable regulatory bodies. Verizon Wireless is also required to supply the Planning and Building Department with evidence of these licenses and registrations. If any license is ever revoked, Verizon Wireless is obligated to inform the Planning and Building Department of the revocation within 10 days of receiving such notice.

5. Conformance with Use Permit Findings

In order to approve this Use Permit renewal to allow the continued operation of this facility, the Zoning Hearing Officer must make the following findings:

a. **That the establishment, maintenance and/or conducting of the proposed use will not, under the circumstances of this particular case, result in a significant adverse impact to coastal resources, or be detrimental to the public welfare or injurious to property or improvements in said neighborhood.**

The project site is not located in the coastal zone, and no physical changes are proposed to the existing facility. Staff has reviewed the project file, reviewed previous conditions of approval, and found no

letters in the project file concerning non-compliance with Planning Division requirements or issues from neighboring parcels in the vicinity. The cell facility has been in place for a significant period of time and, therefore, there will be no increase in visual impact or other impacts caused by the continuance of this facility. The radio frequency analysis from November 6, 2025, indicates that the facility will be compliant with the Federal Communications Commission (FCC)'s current prevailing standards for limiting human exposure to RF energy provided that a Site ID Sign (with tower owner defined), RF Information Sign (Green), and RF Notice Sign (Blue) are posted at the site entrance, and an RF Exposure Sign (red) at the tower access point. No changes are proposed with this renewal.

b. **That the approval of this Use Permit renewal for this cellular telecommunication facility is necessary for the public health, safety, convenience, or welfare of the community.**

This project will continue to provide the clarity, range, and capacity for the existing cellular network in the area and will continue to provide service for the public in general. A cellular facility in this location is necessary for the convenience of cellular users and will not be detrimental to the public welfare.

6. Conformance with Conditions of Last Use Permit Approvals

Staff has reviewed the previous Use Permit conditions of approval for Verizon (PLN2007-00123), last approved June 19, 2008, and has determined that the commercial carrier is in compliance with all previous conditions (see Attachment E). No physical changes are proposed as part of the renewal. Previous conditions that remain relevant, along with new conditions, are included in Attachment A of this staff report.

B. ENVIRONMENTAL REVIEW

The proposed telecommunications facility is categorically exempt from the California Environmental Quality Act (CEQA) under the provision of Section 15301, Class 1, for the continued operation of existing public or private facilities involving no physical changes or expansion in use.

C. REVIEWING AGENCIES

San Mateo County Fire Department

## ATTACHMENTS

A. Recommended Findings and Conditions of Approval
B. Location Map
C. Site Plan
D. RF Report (11-06-2025)
E. PLN2007-00123 Letter of Decision with Conditions of Approval from 2008

Attachment A

County of San Mateo
Planning and Building Department

## RECOMMENDED FINDINGS AND CONDITIONS OF APPROVAL

Permit or Project File Number: PLN2007-00123 Hearing Date: March 5, 2026

Prepared By: Tiffany Gee, Project Planner For Adoption By: Zoning Hearing Officer

## RECOMMENDED FINDINGS

For the Environmental Review, Find:

1. That the project is categorically exempt from the California Environmental Quality Act (CEQA) under the provisions of Section 15301, Class 1, for the continued operation of existing public or private facilities involving no additional physical changes and no expansion of use.

For the Use Permit Renewal, Find:

2. That the establishment, maintenance and/or conducting of the proposed use will not, under the circumstances of this particular case, result in a significant adverse impact to coastal resources, or be detrimental to the public welfare or injurious to property or improvements in said neighborhood as a search of County records has shown that the site has operated in full compliance with the previous conditions of approval, is in compliance with the Federal Communications Commission (FCC)'s current prevailing standards for limiting human exposure to RF energy, and is compliant with the County's Wireless Telecommunication Facilities Ordinance due to the design, location, and available opportunities for future co-locations.

3. That the approval of this use permit renewal for an existing cellular telecommunication facility is necessary for the public health, safety, convenience, or welfare of the community as the site provides telecommunications coverage to the surrounding community, which serves as a benefit to both private and public users.

## RECOMMENDED CONDITIONS OF APPROVAL

Current Planning Section

1. This approval applies only to the proposal, documents, and plans described in this report, and submitted to and approved by the Zoning Hearing Officer on March 5, 2026. Modifications beyond those approved by the Zoning Hearing Officer will be subject to review and approval by the Director of Planning and Building and may require review at a public hearing. Minor modifications that are largely consistent with this approval may be approved at the discretion of the Director of Planning and Building.

2. This permit shall be valid for ten years from the date of this approval and shall expire on March 5, 2036. If continuation of this use is desired, the applicant shall file a use permit renewal application six months prior to its expiration with the Planning and Building Department, by submitting the applicable application forms and paying the application fees.

3. Any modification to this facility or changes in use or intensity will require a Use Permit amendment. If an amendment is requested, the applicant shall submit necessary documents and fees for consideration at a public hearing.

4. The monopole, antennae, and equipment storage shed shall be painted and maintained a non-reflective dark green color to blend in with the surrounding vegetation. The facility's non-reflective dark green color shall be maintained to the satisfaction of the Director of Planning and Building.

5. At the time of Use Permit renewal, if staff has determined based on a field inspection that the color of the monopole, antennae, equipment storage, or fence slats are no longer in compliance with the approved colors, the applicant shall repaint the structures prior to the use permit renewal.

6. The applicant shall not enter into a contract with the landowner or lessee that reserves for one company exclusive use of structures on this site for telecommunication facilities.

7. This installation shall be removed in its entirety at that time when this technology becomes obsolete, when the facility is no longer needed to achieve coverage objectives, or if the facility remains inactive for six consecutive months. If any of these circumstances occur, the entire facility, including all antennas and associated equipment, etc., shall be removed and the site shall be returned to its pre-construction state to the extent practicable.

8. The applicant shall maintain all necessary licenses and registrations from the Federal Communications Commission (FCC) and any other applicable regulatory bodies for the operation of the subject facility at this site. The applicant shall

supply the Planning Division with evidence of such licenses and registrations. If any required license is ever revoked, the applicant shall inform the Planning Division of the revocation within ten (10) days of receiving notice of such revocation.

9. The existing 7-foot-high fence enclosure shall be maintained in good condition, and any damage to the fence shall be promptly repaired. Any repaired sections of the fence shall match the appearance of the existing fence.

10. The facility shall maintain compliance with the performance standards contained in the County's Wireless Telecommunication Facilities Ordinance.

San Mateo County Fire Department

11. CFC 2022 Section 503.2.3: Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide all-weather driving capabilities.

12. SMCFD CFS-004: Emergency access roads shall be designed and maintained to support the imposed load of a fire apparatus weighing at least 75,000 lbs. and shall have a surface providing all-weather driving capabilities. Certification by a civil engineer may be required. Grades of less than 15% shall be surfaced with a minimum Class 2 aggregate base or equivalent with 95% compaction.

13. CFC 2022 Section 505.1: New and existing buildings shall be provided with approved address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than 4 inches (102 mm) high with a minimum stroke width of ½-inch (12.7 mm). Where required by the fire code official, address identification shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road and the building cannot be viewed from the public way, a monument, pole, or other sign or means shall be used to identify the structure. Address identification shall be maintained.

14. CFC 2022 Section 506.1.3: When required by the San Mateo County Fire Department, a Knox Box of the size and type designated shall be mounted on the building near the main entrance and shall be located a minimum of 60 inches and not higher than 72 inches above the finished floor, in a location approved by the fire code official. Additional Knox Boxes may be required at rear entrances to buildings. Knox padlocks or Knox Gate Switches may be required at any access as specified by the fire code official.

15. SMCFD Standard CFS-004: Gates shall be a minimum of 2 feet wider than the roadway they serve. Overhead gate structures shall have a minimum of 15½ feet of vertical clearance.

16. SMCFD Standard CFS-004: Locked gates shall be provided with a Knox Box or Knox Padlock for fire department access. Electric gates shall be provided with a Knox Gate Switch and automatically open during power failures, unless equipped with manual override capability that is approved by San Mateo County Fire Department. Gates providing Fire access to a driveway or other roadway shall be located at least 35 feet from the primary road or street and shall open to allow a vehicle to stop without obstructing traffic on the adjoining roadway.

17. CFC 2022 Section 304.1.2: Weeds, grass, vines or other growth that are capable of being ignited and endangering property shall be cut down and removed by the owner or occupant of the premises. Vegetation clearance requirements in wildland-urban interface areas shall be in accordance with Chapter 49.

18. CFC 2022 Section 4907.1: Hazardous vegetation and fuels shall be managed to reduce the severity of potential exterior wildfire exposure to buildings and to reduce the risk of fire spreading to buildings as required by applicable laws and regulations. Defensible space will be managed around all buildings and structures in State Responsibility Areas (SRA) as required in Public Resources Code 4291.

19. All fire conditions and requirements must be incorporated into the building plans, prior to building permit issuance. It is the applicant's responsibility to notify their contractor, architect and engineer of these requirements.

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

# ATTACHMENT B

# San Mateo County

PLN2007-00123 Vicinity Map


0.07 0 0.04 0.07 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere



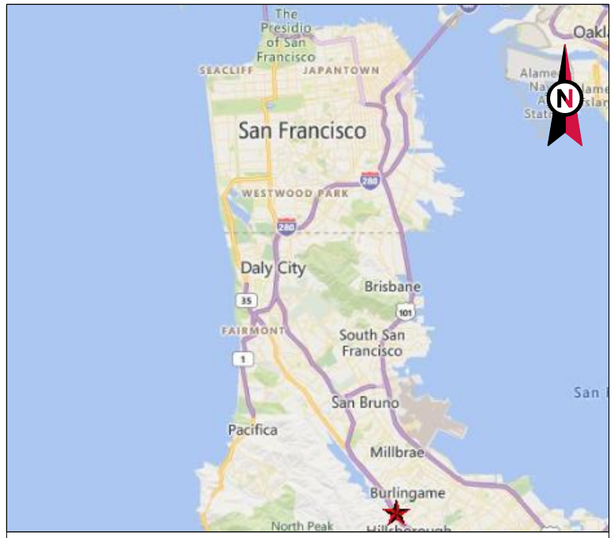
1: 2,257

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

# ATTACHMENT C




VICINITY MAP

AMERICAN TOWER®

SITE NAME: HWY 280-HILLSIDE CA
SITE NUMBER: 411588
SITE ADDRESS: 25 LOMA VISTA LN
BURLINGAME, CA 94010


LOCATION MAP

# CONDITIONAL USE PERMIT RENEWAL

## COMPLIANCE CODE

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

1. 2019 CALIFORNIA ADMINISTRATIVE CODE
2. 2019 CALIFORNIA BUILDING CODE
3. 2019 CALIFORNIA RESIDENTAL CODE
4. 2019 CALIFORNIA ELECTRICAL CODE
5. 2019 CALIFORNIA PLUMBING CODE
6. 2019 CALIFORNIA ENERGY CODE
7. 2019 CALIFORNIA FIRE CODE
8. 2019 CALIFORNIA EXISTING BUILDING CODE
9. 2018 INTERNATIONAL BUILDING CODE (IBC)
10. NATIONAL ELECTRIC CODE (NEC)
11. LOCAL BUILDING CODE
12. CITY/COUNTY ORDINANCES

## UTILITY COMPANIES

POWER COMPANY: PACIFIC GAS AND ELECTRIC
PHONE: (800) 743-5000

TELEPHONE COMPANY: AT&T
PHONE: (559) 439-3378

811 Know what's below. Call before you dig.

## PROJECT SUMMARY

SITE ADDRESS:

25 LOMA VISTA LN
BURLINGAME, CA 94010
COUNTY: SAN MATEO

GEOGRAPHIC COORDINATES:

LATITUDE: 37.573789

LONGITUDE: -122.398522

GROUND ELEVATION: 605' AMSL

ZONING INFORMATION:

JURISDICTION: SAN MATEO COUNTY

PARCEL NUMBER: 027-011-200

ZONING: R-1/S-9

## PROJECT TEAM

TOWER OWNER:

ATC SEQUOIA LLC
116 HUNTINGTON AVE
BOSTON, MA 02116

PROPERTY OWNER:

ALEX FLOCAS
25 LOMA VISTA LN
BURLINGAME, CA 94010

ENGINEER:

ATC TOWER SERVICES
3500 REGENCY PARKWAY SUITE 100
CARY, NC 27518

AGENT:

BONNIE BELAIR
ATTORNEY, AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

## PROJECT DESCRIPTION

THIS SUBMITTAL IS FOR RE-PERMITTING WITH SAN MATEO COUNTY. THIS SET OF DRAWINGS IS INTENDED TO DEPICT EXISTING SITE CONDITIONS. NO CHANGES TO EXISTING ARE PROPOSED.

## PROJECT NOTES

1. THE FACILITY IS UNMANNED.
2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE.
3. EXISTING FACILITY MEETS OR EXCEEDS ALL FAA AND FCC REGULATORY REQUIREMENTS.
4. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE.
5. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED.
6. HANDICAP ACCESS IS NOT REQUIRED.
7. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION, REMOVAL, AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).

## PROJECT LOCATION DIRECTIONS

TAKE HWY 280N TO SKYLINE BLVD EXIT IN BURLINGAME. HEAD SOUTH ON SKYLINE BLVD FOR 1/2 MILE. MAKE RIGHT ON HILLSIDE DR. MAKE ANOTHER RIGHT ON LOMA VISTA DRIVE TO END OF COURT. DRIVE UP PRIVATE ROAD. SITE IS ON LEFT DRIVEWAY.

## SHEET INDEX

| SHEET NO: | DESCRIPTION: | REV: | DATE: | BY: |
|---|---|---|---|---|
| G-001 | TITLE SHEET | A | 04/27/22 | JD |
| C-101 | OVERALL SITE PLAN | A | 04/27/22 | JD |
| C-102 | DETAILED SITE PLAN & TOWER ELEVATION | A | 04/27/22 | JD |
| C-501 | SIGNAGE | A | 04/27/22 | JD |

AMERICAN TOWER®
ATC TOWER SERVICES, LLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112



| REV. | DESCRIPTION | BY | DATE |
|---|---|---|---|
| A | PRELIM | JD | 04/27/22 |
| | | | |
| | | | |
| | | | |
| | | | |

ATC SITE NUMBER:
411588

ATC SITE NAME:
HWY 280-HILLSIDE CA

SITE ADDRESS:
25 LOMA VISTA LN
BURLINGAME, CA 94010

SEAL:

**PRELIMINARY: NOT FOR CONSTRUCTION**

| | |
|---|---|
| DATE DRAWN: | 04/27/22 |
| ATC JOB NO: | 14101547_E1 |

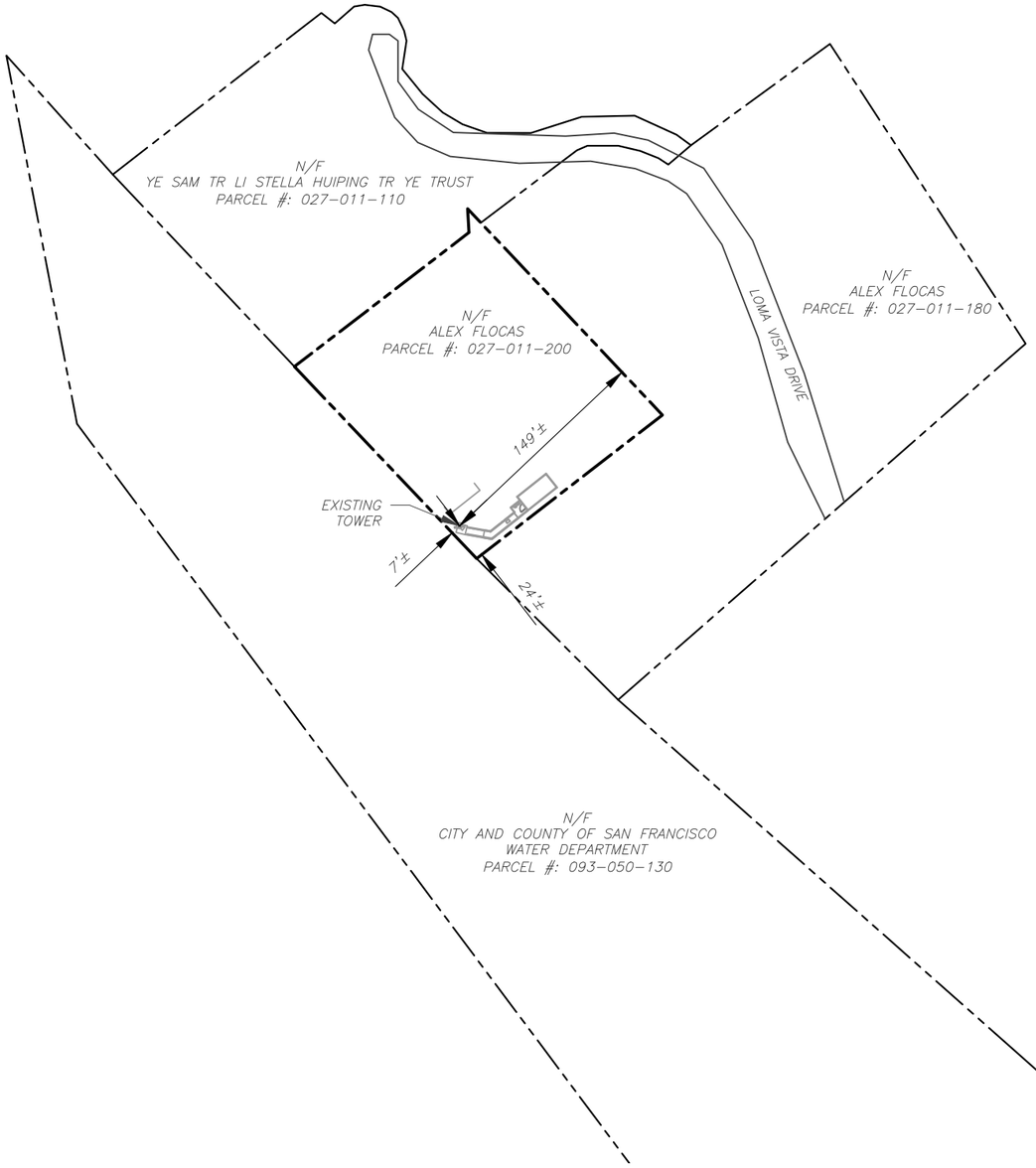
TITLE SHEET

| SHEET NUMBER: | REVISION: |
|---|---|
| G-001 | A |

NOTES:

1. THIS SET OF DRAWINGS IS INTENDED TO DEPICT EXISTING SITE CONDITIONS ONLY. THE PROJECT WILL NOT RESULT IN ANY PROPOSED WORK.

2. BOUNDARY INFORMATION OBTAINED FROM: DATA TREE ONLINE GIS




SURVEY LEGEND

- EXISTING PROPERTY
- EXISTING ADJ. PROPERTY
- EXISTING ROAD (PAVED)
- EXISTING BUILDING

1 OVERALL SITE PLAN

0 100' 200'

SCALE: 1"=100' (11X17)
1"=50' (22X34)

N


AMERICAN TOWER®
ATC TOWER SERVICES, LLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112




| REV. | DESCRIPTION | BY | DATE |
|---|---|---|---|
| A | PRELIM | JD | 04/27/22 |
| | | | |
| | | | |
| | | | |
| | | | |

ATC SITE NUMBER:
411588

ATC SITE NAME:
HWY 280-HILLSIDE CA

SITE ADDRESS:
25 LOMA VISTA LN
BURLINGAME, CA 94010

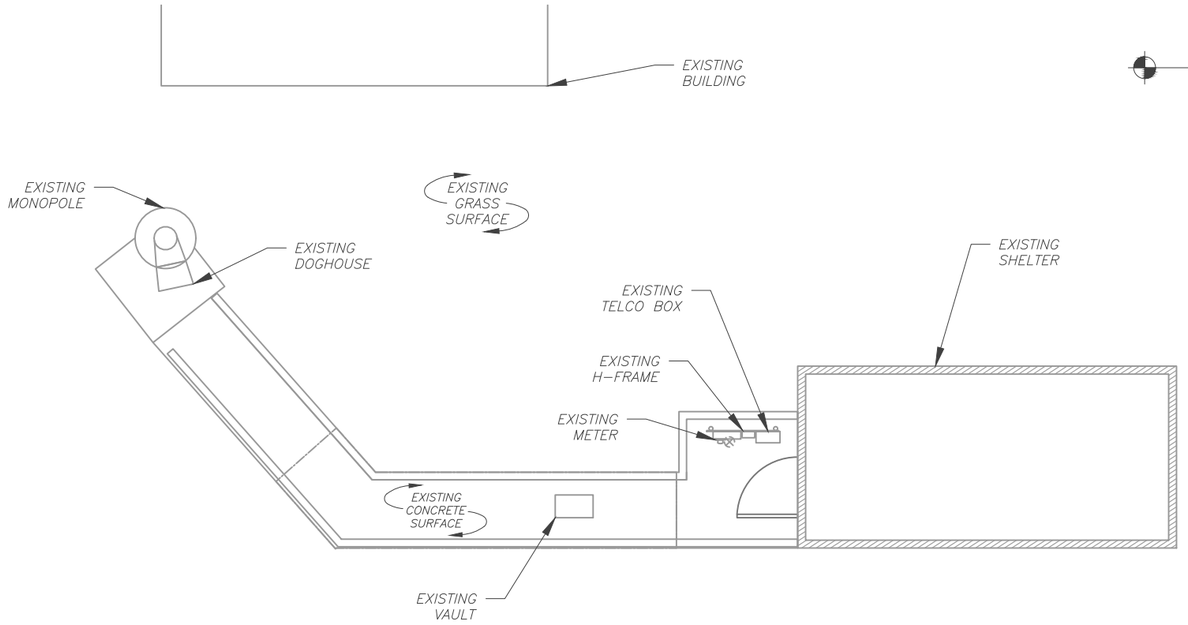
SEAL:

**PRELIMINARY: NOT FOR CONSTRUCTION**

| | |
|---|---|
| DATE DRAWN: | 04/27/22 |
| ATC JOB NO: | 14101547_E1 |

OVERALL SITE PLAN

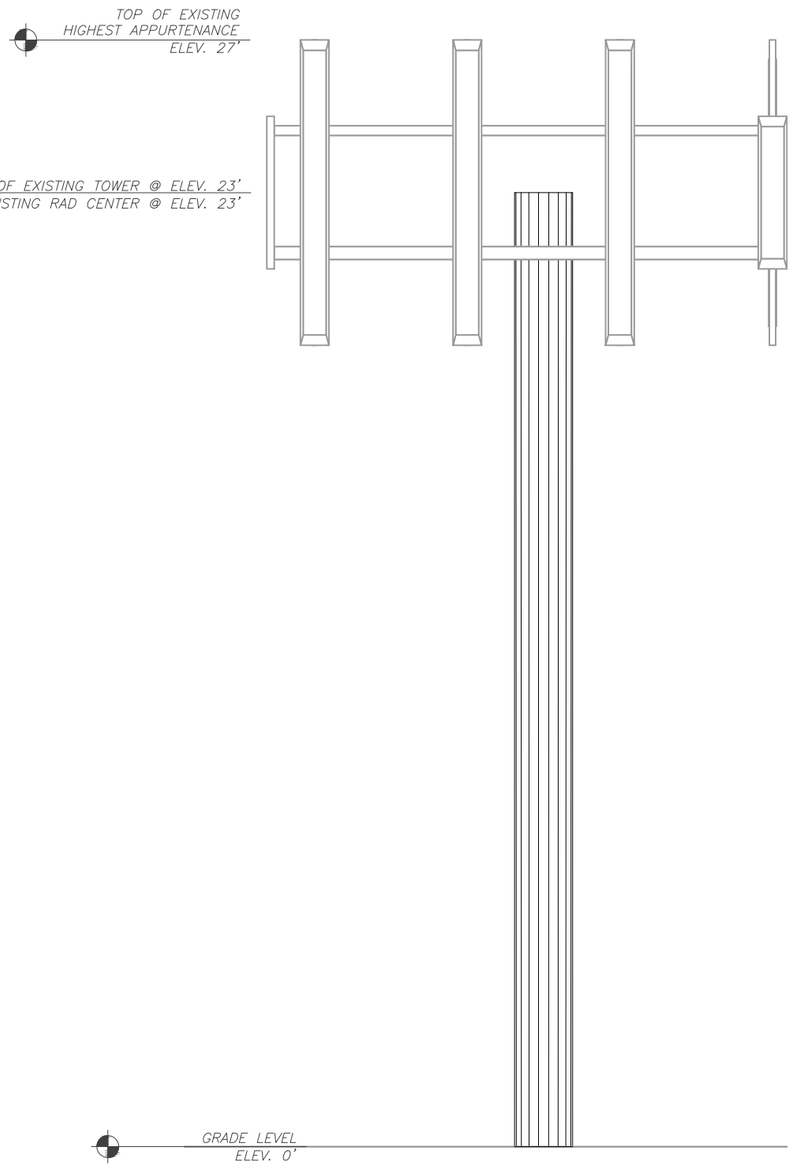
| SHEET NUMBER: | REVISION: |
|---|---|
| C-101 | A |




1 DETAILED SITE PLAN

0 10' 20'

SCALE: 1"=10' (11X17)
1"=5' (22X34)




2 TOWER ELEVATION

SCALE: NOT TO SCALE

AMERICAN TOWER®
ATC TOWER SERVICES, LLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112



| REV. | DESCRIPTION | BY | DATE |
|---|---|---|---|
| A | PRELIM | JD | 04/27/22 |
| | | | |
| | | | |
| | | | |
| | | | |

ATC SITE NUMBER:
411588

ATC SITE NAME:
HWY 280-HILLSIDE CA

SITE ADDRESS:
25 LOMA VISTA LN
BURLINGAME, CA 94010

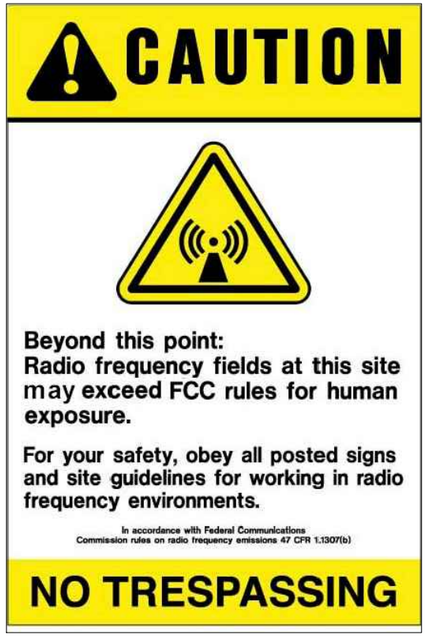
SEAL:

**PRELIMINARY: NOT FOR CONSTRUCTION**

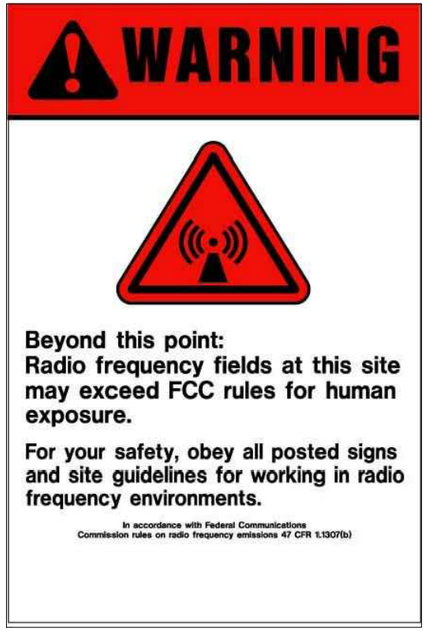
| | |
|---|---|
| DATE DRAWN: | 04/27/22 |
| ATC JOB NO: | 14101547_E1 |

DETAILED SITE PLAN & TOWER ELEVATION

| SHEET NUMBER: | REVISION: |
|---|---|
| C-102 | A |

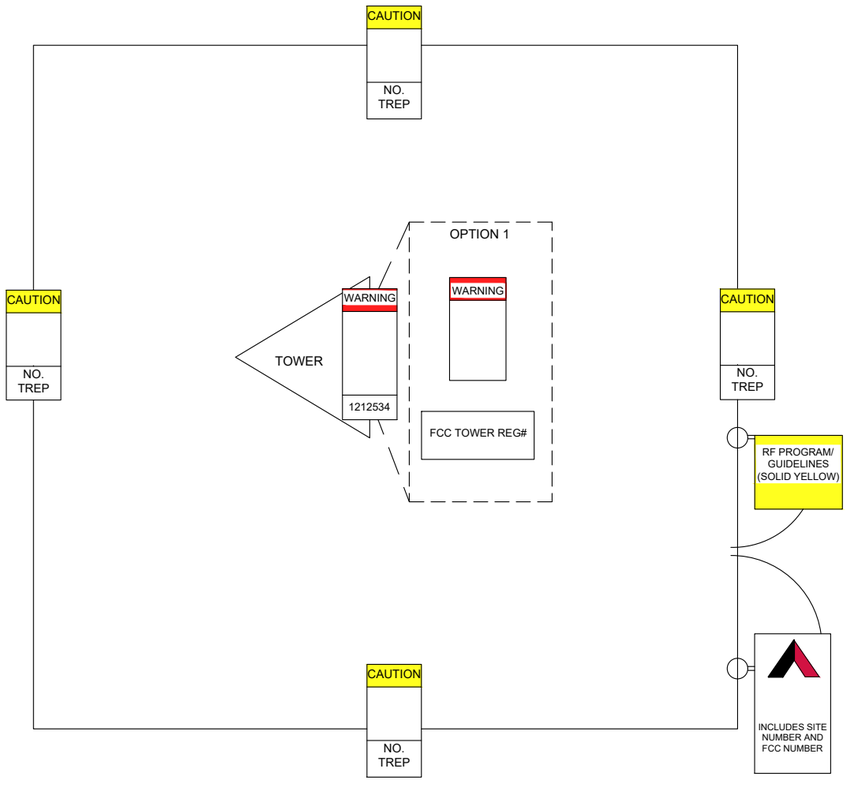



ATC CAUTION AND NO TRESPASSING SIGN




ATC RF WARNING AND FCC NUMBER SIGN

A "NO TRESPASSING" SIGN MUST BE POSTED A MINIMUM OF EVERY 50'.





ATC STAND-ALONE FCC TOWER REGISTRATION SIGN




EXISTING SIGNAGE PHOTO

THERE MUST BE AN ATC SIGN WITH SITE INFORMATION AND FCC REGISTRATION NUMBER AT BOTH THE ACCESS ROAD GATE (GATE OFF OF MAIN ROAD, IF APPLICABLE) AND COMPOUND FENCE (IF NO COMPOUND FENCE, THEN IN A CONSPICUOUS PLACE UPON DRIVE UP). IN ADDITION, PLEASE LOOK AT DIAGRAM FOR ALL ADDITIONAL SIGNS REQUIRED.

OPTION 1 MAY BE USED TO POST TOWER REGISTRATION NUMBERS AT THE BASE OF THE TOWER IF A WARNING SIGN DOES NOT HAVE SPACE FOR THE TOWER REGISTRATION NUMBER.

IMPORTANT: FOR ANY ATC SIGN THAT DOES NOT MEET THE ATC SPECIFICATION FOR SIGNAGE (I.E., SHARPIE/PAINT PEN, WORN LABELS, ETC.), BRING IT INTO COMPLIANCE (RE-WRITE IF WORN) AND FLAG FOR REPLACEMENT ASAP WITH THE APPROPRIATE PERMANENT SIGN (YOU CAN ORDER THESE THROUGH THE WAREHOUSE).

ONLY LABELS PRINTED BY A ZEBRA LABEL PRINTER WILL BE ACCEPTED.


ATC RF PROGRAM NOTICE SIGN


ATC SITE SIGN

REPLACEMENT OF SIGNAGE:

AS SIGNAGE BECOMES STOLEN, DAMAGED, BRITTLE OR FADED, IT SHOULD BE REPLACED WITH SIGNAGE PER THIS SPECIFICATION. ANY ACQUIRED SITE SHOULD HAVE NEW SIGNS POSTED WITHIN 60 DAYS UNLESS OTHERWISE SPECIFIED. ANY SITE SOLD SHOULD HAVE THE ATC SIGNS REMOVED WITHIN 30 DAYS UNLESS OTHERWISE SPECIFIED. ALL FCC OR REGULATORY SIGNAGE MUST BE INSTALLED OR REPLACED AS REQUIRED TO MEET OUR STANDARD. SIGNS SHOULD BE REPLACED ON NORMAL, QUARTERLY MAINTENANCE VISITS BY CONTRACTORS OR SITE MANAGERS, UNLESS OTHERWISE REQUIRED ON A CASE-BY-CASE BASIS.

NOTE:

EXTERIOR SIGNS ARE NOT PROPOSED EXCEPT AS REQUIRED BY THE FCC. ALL EXISTING SIGNAGE AND ANY FUTURE SIGNAGE WILL BE COMPLIANT WITH STATUTE 164-43.4 NO HIGH-VOLTAGE SIGNAGE IS NECESSARY. NO HIGH-VOLTAGE EQUIPMENT PRESENT.

AMERICAN TOWER®
ATC TOWER SERVICES, LLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112



| REV. | DESCRIPTION | BY | DATE |
|---|---|---|---|
| A | PRELIM | JD | 04/27/22 |
| | | | |
| | | | |
| | | | |
| | | | |

ATC SITE NUMBER:
411588

ATC SITE NAME:
HWY 280-HILLSIDE CA

SITE ADDRESS:
25 LOMA VISTA LN
BURLINGAME, CA 94010

SEAL:

PRELIMINARY:
NOT FOR CONSTRUCTION

| | |
|---|---|
| DATE DRAWN: | 04/27/22 |
| ATC JOB NO: | 14101547_E1 |

SIGNAGE

| SHEET NUMBER: | REVISION: |
|---|---|
| C-501 | A |

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

# ATTACHMENT D

RF DESIGN & SERVICES

326 Tryon Road
Raleigh, North Carolina 27603
(815) 721-6954
WWW.TEPGROUP.NET

# Non-Ionizing Radiation (NIER) Study

| Site Number: **411588** | Site Name: **Hwy 280-Hillside CA** | Location: **Burlingame, California** |
|---|---|---|
| Tenant: **Verizon Wireless** | | |


Prepared For: **American Tower, Inc. Woburn, Massachusetts**

November 06, 2025

236275 P-499300

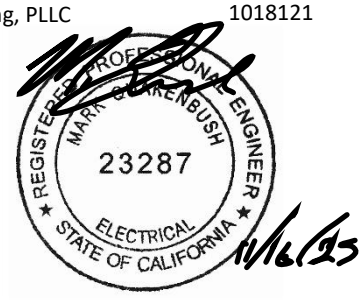
Prepared By

Gautam J. Sopal

Tower Engineering Professionals

Approved By

TEP Engineering, PLLC 1018121



# Contents

# Disclaimer Notice

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# Non-Ionizing Electromagnetic Radiation (NIER) Study

411588 Hwy 280-Hillside CA
Burlingame, California

## INTRODUCTION

Tower Engineering Professionals RF Design & Services Division (TEP-RF) of Raleigh, North Carolina, has been retained by American Tower, Inc. (ATC), of Woburn, Massachusetts to evaluate the RF emissions compared to the Maximum Permissible Exposure (MPE) limit for facilities at this location. This evaluation uses compliance standards as outlined in Federal Communications Commission (FCC) document OET-65.

## SITE AND FACILITY CONSIDERATIONS

| | |
|---|---|
| *Site Number* | 411588 |
| *Site Name* | Hwy 280-Hillside CA |
| *Address* | 25 Loma Vista Ln., Burlingame, California |
| *Co-ordinates* | 37.573789, -122.398522 |
| *Structure Type* | Monopole |
| *Structure Height* | 25 ft |
| *Tenants* | Verizon Wireless (VZW) |

## POWER DENSITY CALCULATIONS

Power densities were calculated based on FCC MPE limits for both General Population/Uncontrolled and Occupational/Controlled environments.

For the purpose of this study, a radius of 100’ from the base of the monopole with heights of 6’ above ground level and the antenna centers of radiation were used. Beyond 100’ the MPE levels become di minimus. This study utilized FCC recognized and accepted software programs using the maximum ERP levels for the antenna models provided by ATC. Diagrams depicting the predicted spatial average power density level at any specific location may be found in Appendix 3, MPE Limit Study. Descriptions of RF signage can be found in Appendix 4, Barrier & Sign Types. A discussion regarding the FCC limits may be found in Appendix 5, Information Pertaining to MPE Studies. Prediction Models used in this study may be found in Appendix 6, MPE Standards Methodology.

All data used in this study was collected from one or more of the following sources:

- ATC furnished data and does not include other unidentified communication facilities.
- Load List at 411588 Hwy 280-Hillside CA RF NIER Study 11/04/2025.
- FCC databases.
- Carrier standard configurations.
- Empirical data collected by TEP.

## SITE MITIGATION & CONTROL

In order to comply with FCC, tenant, & ATC requirements, TEP recommends the placement of signage at the following points:

Site Entrance

1. Site ID Sign (tower owner defined)
2. RF Information Sign (Green)
3. RF Notice Sign (Blue)

Tower Access Point

1. RF Exposure Sign (Red)

*Alpha Sector*

No additional mitigation is required.

*Beta Sector*

No additional mitigation is required.

*Gamma Sector*

No additional mitigation is required

## COMPLIANCE DETERMINATION

With the above mitigation implemented, this installation ***WILL BE*** in compliance with current FCC MPE limits as described in FCC OET-65.

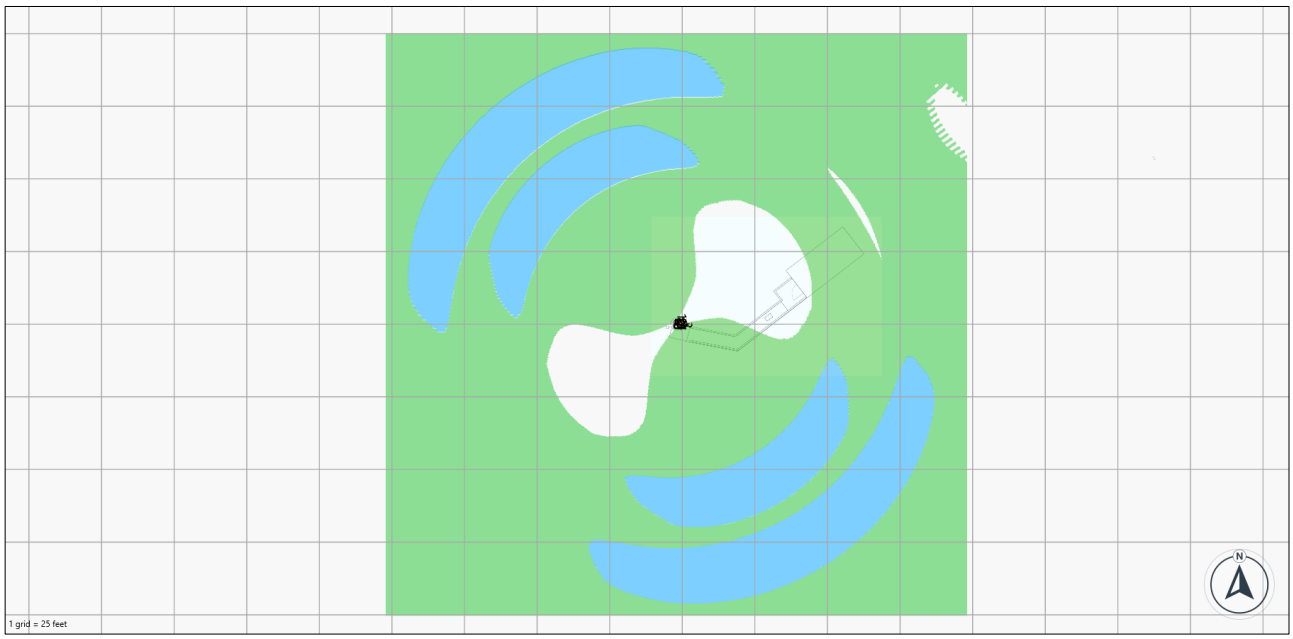
# Appendix 1 Site Photos


Aerial View of the Site

# Appendix 2.1 Antenna Inventory

| Ant # | Carrier | Manufacturer | Antenna Model | Az (deg) | TX (MHz) | RX (MHz) | EDT (deg) | MDT (deg) | Gain (dBd) | ERP (W) | Rad Ctr (ft) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | VZW | Ericsson | AIR 6419 B77D | 150 | 3700-3980 | 3700-3980 | 6 | 0 | 25.3 | 71639 | 33.0 |
| 2 | VZW | Ericsson | AIR 6419 B77D | 320 | 3700-3980 | 3700-3980 | 6 | 0 | 25.3 | 71639 | 33.0 |
| 3 | VZW | JMA Wireless | MX12FRO645-01 | 150 | 746-757 | 776-787 | 0 | 0 | 17.7 | 5522 | 33.0 |
| | | | | | 880-894 | 835-849 | | | | 6639 | |
| | | | | | 1965-1990 | 1710-1730 | | | | 8569 | |
| | | | | | 2110-2130 | 1885-1910 | | | | 10068 | |
| 4 | VZW | JMA Wireless | MX12FRO645-01 | 320 | 746-757 | 776-787 | 0 | 0 | 17.7 | 5522 | 33.0 |
| | | | | | 880-894 | 835-849 | | | | 6639 | |
| | | | | | 1965-1990 | 1710-1730 | | | | 8569 | |
| | | | | | 2110-2130 | 1885-1910 | | | | 10068 | |
| 5 | VZW | Ericsson | AIR6449 | 150 | 2496-2690 | 2496-2690 | 6 | 0 | 25.7 | 46790 | 23.0 |
| 6 | VZW | Ericsson | AIR6449 | 320 | 2496-2690 | 2496-2690 | 6 | 0 | 25.7 | 46790 | 23.0 |
| 7 | VZW | Commscope | NHH-65C-R2B | 150 | 746-757 | 776-787 | 0 | 0 | 15.4 | 9706 | 23.0 |
| | | | | | 880-894 | 835-849 | | | | 9933 | |
| | | | | | 1965-1990 | 1710-1730 | | | | 12562 | |
| | | | | | 2110-2130 | 1885-1910 | | | | 14423 | |
| 8 | VZW | Commscope | NHH-65C-R2B | 320 | 746-757 | 776-787 | 0 | 0 | 15.4 | 9706 | 23.0 |
| | | | | | 880-894 | 835-849 | | | | 9933 | |
| | | | | | 1965-1990 | 1710-1730 | | | | 12562 | |
| | | | | | 2110-2130 | 1885-1910 | | | | 14423 | |
| 9 | VZW | Commscope | NHH-65C-R2B | 150 | 746-757 | 776-787 | 0 | 0 | 15.4 | 9706 | 23.0 |
| | | | | | 880-894 | 835-849 | | | | 9933 | |
| | | | | | 1965-1990 | 1710-1730 | | | | 12562 | |
| | | | | | 2110-2130 | 1885-1910 | | | | 14423 | |
| 10 | VZW | Commscope | NHH-65C-R2B | 320 | 746-757 | 776-787 | 0 | 0 | 15.4 | 9706 | 23.0 |
| | | | | | 880-894 | 835-849 | | | | 9933 | |
| | | | | | 1965-1990 | 1710-1730 | | | | 12562 | |
| | | | | | 2110-2130 | 1885-1910 | | | | 14423 | |
| 11 | VZW | Commscope | NHH-65C-R2B | 150 | 746-757 | 776-787 | 0 | 0 | 15.4 | 9706 | 23.0 |
| | | | | | 880-894 | 835-849 | | | | 9933 | |
| | | | | | 1965-1990 | 1710-1730 | | | | 12562 | |
| | | | | | 2110-2130 | 1885-1910 | | | | 14423 | |
| 12 | VZW | Commscope | NHH-65C-R2B | 320 | 746-757 | 776-787 | 0 | 0 | 15.4 | 9706 | 23.0 |
| | | | | | 880-894 | 835-849 | | | | 9933 | |
| | | | | | 1965-1990 | 1710-1730 | | | | 12562 | |
| | | | | | 2110-2130 | 1885-1910 | | | | 14423 | |

# Appendix 3.1 MPE Limit Study General Population




**Legend**

| Study Zone | Elev. (ft) | Type | Exposure Profile | Max MPE | Att | Carriers |
|---|---|---|---|---|---|---|
| Floor Study Zone | 0.0 | Floor | 2D General Population... | 186.38% | 0.00 | VZW |

| 5%-100% | 100%-500% | 500%-5000% | 5000%+ |
|---|---|---|---|

| Exposure Profile Name | Model | Exposure Area | Standard | Resolution | RCF |
|---|---|---|---|---|---|
| 2D General Population 0.25 | Sula 9 | Spatial Avg. (6 ft) | FCC General Public | 0.25 | 1.0 |

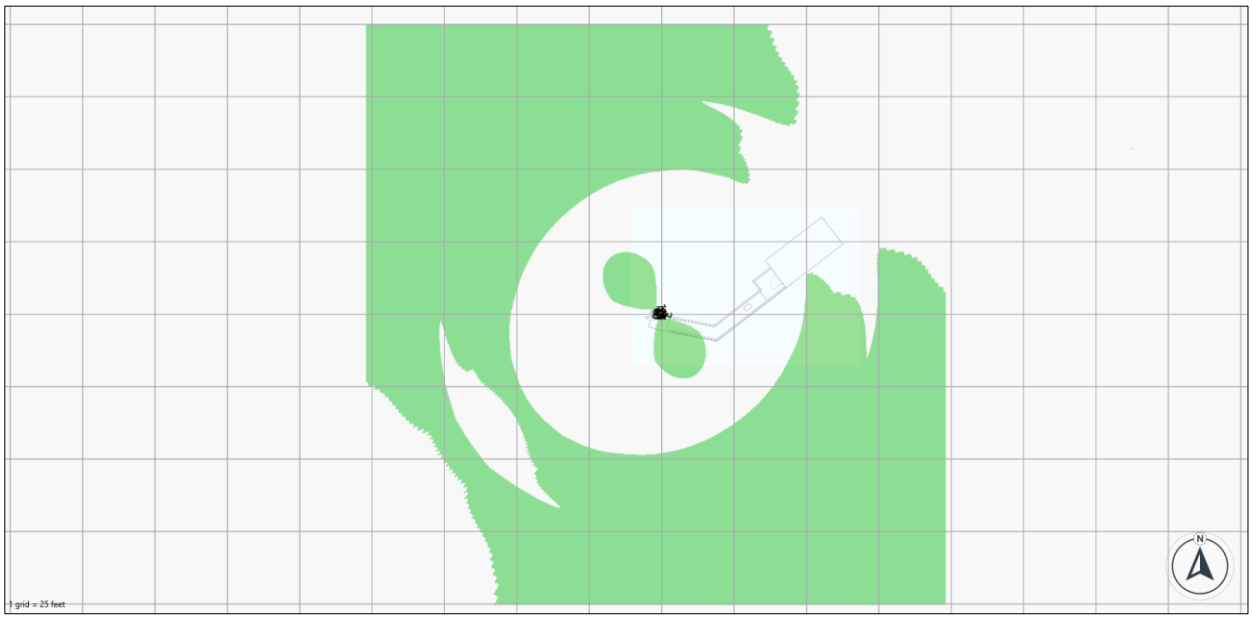
VZW

Max MPE

Grid Size: 25.00 feet

Floor = Elevation +6' | Mid-Level = Elevation +/- 3'

# Appendix 3.2 MPE Limit Study Occupational Limit



**Legend**

| Study Zone | Elev. (ft) | Type | Exposure Profile | Max MPE | Att | Carriers |
|---|---|---|---|---|---|---|
| Floor Study Zone | 0.0 | Floor | 2D Occupational 0.25 | 37.28% | 0.00 | VZW |

| 5%-100% | 100%-500% | 500%-5000% | 5000%+ |
|---|---|---|---|

| Exposure Profile Name | Model | Exposure Area | Standard | Resolution | RCF |
|---|---|---|---|---|---|
| 2D Occupational 0.25 | Sula 9 | Spatial Avg. (6 ft) | FCC Occupational | 0.25 | 1.0 |

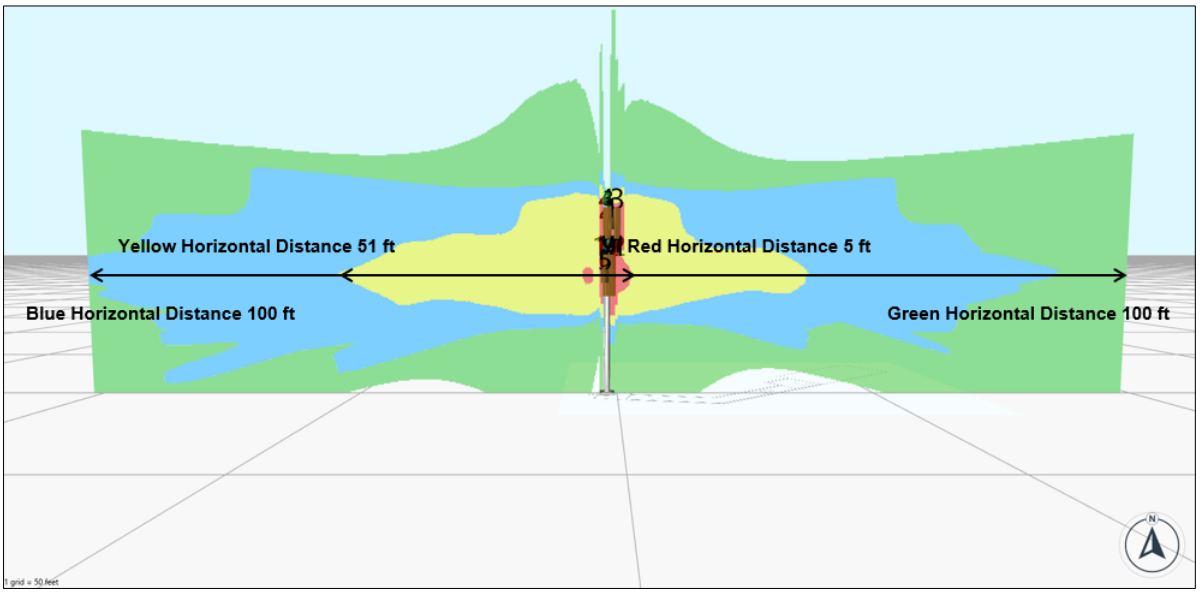
VZW

Max MPE

Grid Size: 25.00 feet

Floor = Elevation +6' | Mid-Level = Elevation +/- 3'

# Appendix 3.3 MPE Limit Study General Population – Horizontal View




**Legend**

| Study Zone | Elev. (ft) | Type | Exposure Profile | Max MPE | Att | Carriers |
|---|---|---|---|---|---|---|
| Vertical 2D Study Zone | 5.0 | Mid-Level | 2D General Population... | 59312.98% | 0.00 | VZW |

| 5%-100% | 100%-500% | 500%-5000% | 5000%+ |
|---|---|---|---|

| Exposure Profile Name | Model | Exposure Area | Standard | Resolution | RCF |
|---|---|---|---|---|---|
| 2D General Population 0.25 | Sula 9 | Spatial Avg. (6 ft) | FCC General Public | 0.25 | 1.0 |

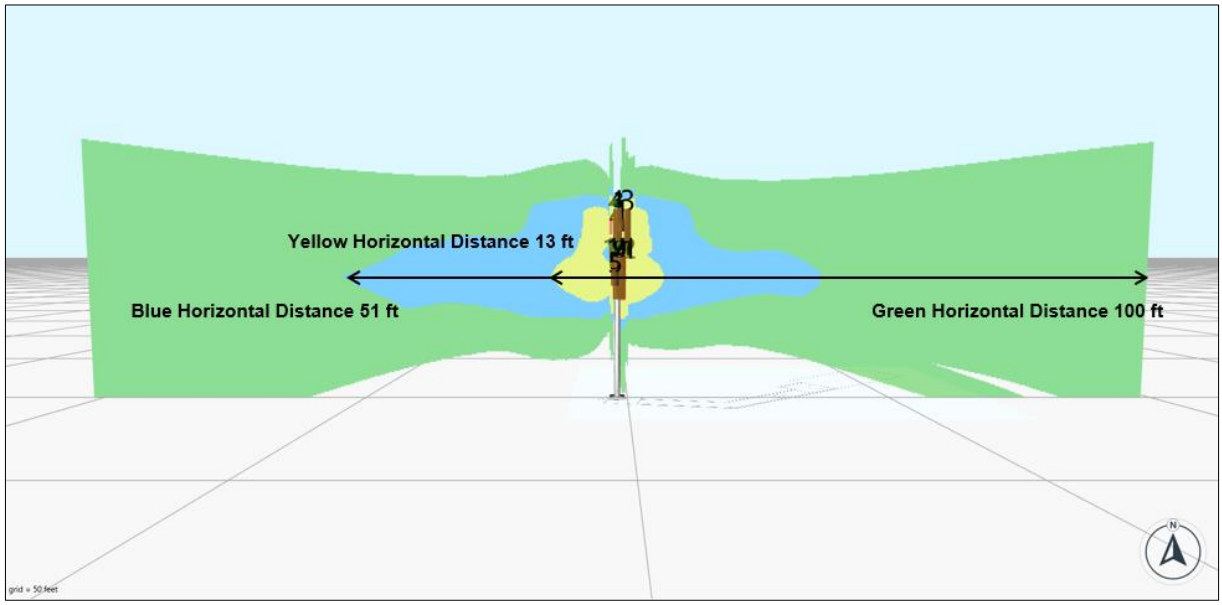
VZW

Max MPE

Grid Size: 50.00 feet

Floor = Elevation +6' | Mid-Level = Elevation +/- 3'

# Appendix 3.4 MPE Limit Study Occupational Limit – Horizontal View




**Legend**

| Study Zone | Elev. (ft) | Type | Exposure Profile | Max MPE | Att | Carriers |
|---|---|---|---|---|---|---|
| Vertical 2D Study Zone | 5.0 | Mid-Level | 2D Occupational 0.25 | 11862.60% | 0.00 | VZW |

| 5%-100% | 100%-500% | 500%-5000% | 5000%+ |
|---|---|---|---|

| Exposure Profile Name | Model | Exposure Area | Standard | Resolution | RCF |
|---|---|---|---|---|---|
| 2D Occupational 0.25 | Sula 9 | Spatial Avg. (6 ft) | FCC Occupational | 0.25 | 1.0 |

VZW

Max MPE

**Grid Size: 50.00 feet**

**Floor = Elevation +6' | Mid-Level = Elevation +/- 3'**

# Appendix 4.1 Barrier & Sign Types


Stanchion Type

Cone Type

A-Frame Type

# Appendix 4.2 Barrier & Sign Types

<table>
<tr><th colspan="3">RF Safety Exposure Categorization</th></tr>
<tr><th>Exposure Conditions</th><th>Control Measures</th><th>Signage</th></tr>
<tr>
<td>
• Operational of the source(s) or locations where RF fields are too weak to cause exposures greater than General Public limit.
<table>
<tr><th>Cat.</th><th>Occupational Worker</th><th>General Public</th></tr>
<tr><td>1</td><td><20%</td><td><100%</td></tr>
</table>
• Green zone is where the time and spatial-average is below 20% of Occupational Worker limit or <100% of General Public limit.
</td>
<td>
• RF Safety Guideline/NIER report must be submitted to RFSO for approval.<br>
• No special EME safety practices required in these areas.<br>
• No signage required except Information sign.
</td>
<td>


*the antenna owner information and Antenna Structure Registration Number and must be displayed on the sign.<br>
INFORMATION sign for access to rooftop/access door.
</td>
</tr>
<tr>
<td>
• Operational of the source(s) or locations where RF exposure could cause exposure greater than General Public limit but not the Occupational Worker limit to be exceeded in accessible areas.
<table>
<tr><th>Cat.</th><th>Occupational Worker</th><th>General</th></tr>
<tr><td>2</td><td>≥20% but <100%</td><td>>100%</td></tr>
</table>
• Blue zone is where the spatial average is between 20%-100% of Occupational Worker limit. This limit MUST be less than the Occupational limit.
</td>
<td>
• RF Safety Guideline/NIER report must be submitted to RFSO for approval.<br>
• Recommended RF safety awareness training for all workers in this area.<br>
• Controlled areas with barriers and/or signage required in these area.<br>
• Do not walk in front of the antenna face or no loitering in this controlled area.<br>
• Individual MUST have full control over any area where the exposure levels exceed the limit.
</td>
<td>


NOTICE signage shall be posted on the barriers/stanchion to prevent anyone from entering into the area (must be cordon off around the antennas - 4 posts /3 signs).<br>
Or must be posted in location that can be easily viewed by individuals that enter the areas of concerns.
</td>
</tr>
<tr>
<td>
• Operational of the source(s) or locations where RF exposure exceeded the Occupational Worker limit in accessible areas.
<table>
<tr><th>Cat.</th><th>Occupational Worker</th><th>General Public</th></tr>
<tr><td>3</td><td>≥100%</td><td>≥500%</td></tr>
</table>
• Yellow zone is where the spatial average is above 100% of Occupational Worker limit.
</td>
<td>
• RF Safety Guideline/NIER report must be submitted to RFSO for approval.<br>
• Individual <u>shall not</u> enter and work in these areas without RS approval<br>
• Required RF safety training and access area is restricted only for authorized worker.<br>
• Controlled areas with barriers and signage required in these area.<br>
• Do not walk in front of the antenna face.<br>
• Require reduction of RF power and approval from Radiation Safety prior any work on the antennas.
</td>
<td>


CAUTION signage shall be posted on the barriers/stanchion to prevent anyone from entering into the area (must be cordon off around the antennas - 4 posts /3 signs).
</td>
</tr>
<tr>
<td>
• Exposure will exceed exposure limit in accessible areas.
<table>
<tr><th>Cat.</th><th>Occupational Worker</th><th>General Public</th></tr>
<tr><td>4</td><td>>500%</td><td>>1000%</td></tr>
</table>
• Red zone is where the time and spatial-averaged levels fall above 500% of Occupational Worker limit or is not feasible to prevent exposures.
</td>
<td>
• RF Safety Guideline/NIER report must be submitted to RFSO for approval.<br>
• MUST re-engineer site to reduce the EME fields.<br>
• <u>No access allowed-Prohibited access!</u> There must be controls to detect any unauthorized enter and terminate the RF energy in the area.<br>
• Lock out tag out of transmitters during the maintenance of the antenna system.<br>
• PPE is not sufficient.<br>
• Special RF training and PPE are required. (Applies only to individuals trained by RS).
</td>
<td>


RF WARNING & Pacemaker DANGER signage or appropriate DANGER sign shall be posted very near radiation RF sources or if appropriate DANGER sign.
</td>
</tr>
</table>

# Appendix 5 Information Pertaining to MPE Studies

In 1985, the FCC first adopted guidelines to be used for evaluating human exposure to RF emissions. The FCC revised and updated these guidelines on August 1, 1996, as a result of a rule-making proceeding initiated in 1993. The new guidelines incorporate limits for Maximum Permissible Exposure (MPE) in terms of electric and magnetic field strength and power density for transmitters operating at frequencies between 300 kHz and 100 GHz.

The FCC's MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP), and, over a wide range of frequencies, the exposure limits were developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines. Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

The FCC's limits, and the NCRP and ANSI/IEEE limits on which they are based, are derived from exposure criteria quantified in terms of specific absorption rate (SAR). The basis for these limits is a whole-body averaged SAR threshold level of 4 watts per kilogram (4 W/kg), as averaged over the entire mass of the body, above which expert organizations have determined that potentially hazardous exposures may occur. The MPE limits are derived by incorporating safety factors that lead, in some cases, to limits that are more conservative than the limits originally adopted by the FCC in 1985. Where more conservative limits exist, they do not arise from a fundamental change in the RF safety criteria for whole-body averaged SAR, but from a precautionary desire to protect subgroups of the general population who, potentially, may be more at risk.

The FCC exposure limits are also based on data showing that the human body absorbs RF energy at some frequencies more efficiently than at others. The most restrictive limits occur in the frequency range of 30-300 MHz where whole-body absorption of RF energy by human beings is most efficient. At other frequencies, whole-body absorption is less efficient, and consequently, the MPE limits are less restrictive.

MPE limits are defined in terms of power density (units of milliwatts per centimeter squared: $mW/cm^2$), electric field strength (units of volts per meter: V/m) and magnetic field strength (units of amperes per meter: A/m). The far-field of a transmitting antenna is where the electric field vector (E), the magnetic field vector (H), and the direction of propagation can be considered to be all mutually orthogonal ("plane-wave" conditions).

**Occupational/controlled exposure** limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

**General population/uncontrolled exposure** limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment-related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area. Additional details can be found in FCC OET 65.

# Appendix 6 MPE Standards Methodology

This study predicts RF field strength and power density levels that emanate from communications system antennae. It considers all transmitter power levels (less filter and line losses) delivered to each active transmitting antenna at the communications site. Calculations are performed to determine power density and MPE levels for each antenna as well as composite levels from all antennas. The calculated levels are based on where a human (Observer) would be standing at various locations at the site. The point of interest where the MPE level is predicted is based on the height of the Observer.

Compliance with the FCC limits on RF emissions are determined by spatially averaging a person's exposure over the projected area of an adult human body, that is approximately six-feet or two-meters, as defined in the ANSI/IEEE C95.1 standard. The MPE limits are specified as time-averaged exposure limits. This means that exposure is averaged over an identifiable time interval. It is 30 minutes for the general population/uncontrolled RF environment and 6 minutes for the occupational/controlled RF environment. However, in the case of the general public, time averaging should not be applied because the general public is typically not aware of RF exposure, and they do not have control of their exposure time. Therefore, it should be assumed that any RF exposure to the general public will be continuous.

The FCC's limits for exposure at different frequencies are shown in the following Tables.

| Limits for Occupational/Controlled Exposure | | | | |
|---|---|---|---|---|
| **Frequency Range (MHz)** | **Electric Field Strength (E) (V/m)** | **Magnetic Field Strength (H) (A/m)** | **Power Density (S) ($mW/cm^2$)** | **Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)** |
| 0.3 - 3.0 | 614 | 1.63 | 100* | 6 |
| 3.0 - 30 | 1842/f | 4.89/f | $900/F^2$ | 6 |
| 30 - 300 | 61.4 | 0.163 | 1.0 | 6 |
| 300 - 1500 | -- | -- | f/300 | 6 |
| 1500 - 100,000 | -- | -- | 5 | 6 |

f = frequency

* = Plane-wave equivalent power density

Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

| Limits for General Population/Uncontrolled Exposure | | | | |
|---|---|---|---|---|
| **Frequency Range (MHz)** | **Electric Field Strength (E) (V/m)** | **Magnetic Field Strength (H) (A/m)** | **Power Density (S) ($mW/cm^2$)** | **Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)** |
| 0.3 - 1.34 | 614 | 1.63 | 100* | 30 |
| 1.34 - 30 | 824/f | 2.19/f | $180/F^2$ | 30 |
| 30 -300 | 27.5 | 0.073 | 0.2 | 30 |
| 300 -1500 | -- | -- | f/1500 | 30 |
| 1500 -100,000 | -- | -- | 1.0 | 30 |

f = frequency

* = Plane-wave equivalent power density

General population/uncontrolled exposures apply in situations in which the general public may be exposed or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

It is important to understand that these limits apply cumulatively to all sources of RF emissions affecting a given area. For example, if several different communications

system antennas occupy a shared facility such as a tower or rooftop, then the total exposure from all systems at the facility must be within compliance of the FCC guidelines.

The field strength emanating from an antenna can be estimated based on the characteristics of an antenna radiating in free space. There are basically two field areas associated with a radiating antenna. When close to the antenna, the region is known as the Near Field. Within this region, the characteristics of the RF fields are very complex, and the wave front is extremely curved. As you move further from the antenna, the wave front has less curvature and becomes planar. The wave front still has a curvature, but it appears to occupy a flat plane in space (plane-wave radiation). This region is known as the Far Field.

Two models are utilized to predict Near and Far field power densities. They are based on the formulae in FCC OET 65.

**Cylindrical Model (Near Field Predictions)**

Spatially averaged plane-wave equivalent power densities parallel to the antenna may be estimated by dividing the antenna input power by the surface area of an imaginary cylinder surrounding the length of the radiating antenna. While the actual power density will vary along the height of the antenna, the average value along its length will closely follow the relation given by the following equation:

$$S = P \div 2\pi RL$$

Where:

S = Power Density

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

For directional-type antennas, power densities can be estimated by dividing the input power by that portion of a cylindrical surface area corresponding to the angular beam width of the antenna. For example, for the case of a 120-degree azimuthal beam width, the surface area should correspond to 1/3 that of a full cylinder. This would increase the power density near the antenna by a factor of three over that for a purely omni-directional antenna. Mathematically, this can be represented by the following formula:

$$S = (180 / \theta_{BW}) P \div \pi RL$$

Where:

S = Power Density

$\theta_{BW}$ = Beam width of antenna in degrees (3 dB half-power point)

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

If the antenna is a 360-degree omni-directional antenna, this formula would be equivalent to the previous formula.

**Spherical Model (Far Field Predictions)**

Spatially averaged plane-wave power densities in the Far Field of an antenna may be estimated by considering the additional factors of antenna gain and reflective waves that would contribute to exposure.

The radiation pattern of an antenna has developed in the Far Field region and the power gain needs to be considered in exposure predictions. Also, if the vertical radiation pattern of the antenna is considered, the exposure predictions would most likely be reduced significantly at ground level, resulting in a more realistic estimate of the actual exposure levels.

Additionally, to model a truly "worst case" prediction of exposure levels at or near a surface, such as at ground-level or on a rooftop, reflection off the surface of antenna radiation power can be assumed, resulting in a potential four-fold increase in power density.

These additional factors are considered, and the Far Field prediction model is determined by the following equation:

$$S = EIRP \times Rc \div 4\pi R^2$$

Where:

S = Power Density

EIRP = Effective Radiated Power from antenna

Rc = Reflection Coefficient (2.56)

R = Distance from the antenna

The EIRP includes the antenna gain. If the antenna pattern is considered, the antenna gain is relative based on the horizontal and vertical pattern gain values at that particular location in space, on a rooftop or on the ground. However, it is recommended that the antenna radiation pattern characteristics not be considered to provide a conservative "worst case" prediction. This is the equation is utilized for the Far Field exposure predictions herein.

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

# ATTACHMENT E

**Planning & Building Department**
455 County Center, 2nd Floor
Redwood City, California 94063
650/363-4161 Fax: 650/363-4849

Mail Drop PLN122
plngbldg@co.sanmateo.ca.us
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**Please reply to: Melissa Ross**
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June 19, 2008

Verizon Wireless
C/O Clarence Chavis
Ridge Communications
12667 Alcosta Blvd, Suite 175
San Ramon, CA 94583

PROJECT FILE

**Subject:** **PLN 2007-00123**
**Location:** **25 Loma Vista Lane, Burlingame**
**APN:** **027-011-120, 130**

On June 19, 2008 the Zoning Hearing Officer considered your request for a Use Permit and Lot Line Adjustment, pursuant to Section 6500 of the San Mateo County Zoning Regulations and Section 7124 of the Subdivision Regulations and certification of a mitigated Negative Declaration, pursuant to the California Environmental Quality Act to allow the construction of a cellular communications facility, consisting of a 25-foot tall monopole, as well as an equipment shelter, on a parcel located at 25 Loma Vista Lane, in the unincorporated Burlingame Hills area of San Mateo County. .

The Zoning Hearing Officer made the findings and approved this project subject to the conditions of approval as attached.

Any interested party aggrieved by the determination of the Zoning Hearing Officer may appeal this decision to the Planning Commission within ten (10) working days from such date of determination. The appeal period for this project will end on **July 3, 2008 at 5:00 p.m.**

If you have any questions concerning this item, please contact the Project Planner above.

Very truly yours,

George Bergman
Zoning Hearing Officer

cc: Public Works Department
Building Inspection Section
Assessor's Office
Cal-Fire
Burlingame Hills Improvement Association
Burlingame Community Development Department

Attachment A

County of San Mateo
Planning and Building Department

## FINDINGS AND CONDITIONS OF APPROVAL

Permit or Project File Number: PLN 2007-00123 Hearing Date: June 19, 2008

Prepared By: Melissa Ross, Project Planner For Adoption By: Zoning Hearing Officer

## FINDINGS

Regarding the Mitigated Negative Declaration, Found:

1. That the Negative Declaration is complete, correct and adequate, and prepared in accordance with the California Environmental Quality Act and applicable State and County Guidelines.

2. That, on the basis of the Initial Study and comments hereto, there is no evidence that the project, subject to the mitigation measures contained in the Negative Declaration, will have a significant effect on the environment.

3. That the Negative Declaration reflects the independent judgment of San Mateo County.

4. That the mitigation measures identified in the Negative Declaration, agreed to by the applicant, placed as conditions on the project, and identified as part of this public hearing, have been incorporated into the Mitigation and Reporting Plan in conformance with California Public Resources Code Section 21081.6.

Regarding the Lot Line Adjustment, Found:

5. That the processing of the lot line adjustment is in full conformance with the Subdivision Map Act Section 66412(d) and Section 7124 of the San Mateo County Subdivision Regulations.

   Section 7124 states that all lot line adjustments are subject to approval by the County and are to be consistent with Section 66412(d) of the Map Act. This lot line adjustment is consistent with and is in conformance with Section 66412(d) as the lot line adjustment is between four or fewer existing adjoining parcels; the land taken from one parcel is added to an adjoining parcel; and a greater number of parcels than originally existed has not been created.

Regarding the Use Permit, Found:

6. That the establishment, maintenance and/or conducting of the use will not, under the circumstances of this particular case, be detrimental to the public welfare or injurious to the property or improvements in said neighborhood because the project will meet the current FCC standards and has been conditioned to maintain a valid FCC and CPUC license.

7. That this personal telecommunications facility is necessary for the public health, safety, convenience or welfare of the community because the addition of this facility will provide increased and improved cellular service in this area to the public and provide assistance in emergency situations.

## CONDITIONS OF APPROVAL

Current Planning Section

1. This approval applies only to the proposal, documents and plans described in this report and submitted to and approved by the Zoning Hearing Officer on June 19, 2008. Minor revisions or modifications may be approved by the Community Development Director if they are consistent with the intent of and in substantial conformance with this approval.

2. This use permit shall be valid for a period of ten years from the date of approval, until June 19, 2018, with an option for renewal at the discretion of the applicant. Renewal of this permit shall be applied for six months prior to expiration with the Current Planning Section and shall be accompanied by the renewal application and fee applicable at that time.

3. The use permit shall be for the proposed project only. Any modifications to this facility will require a use permit amendment. Amendment to this use permit requires an application for amendment, payment of applicable fees, and possible consideration at a public hearing.

4. This use permit shall also be subject to an administrative review which shall occur no later than one year from date of this use permit approval. The purpose of the administrative review is to assure continued compliance with the conditions of approval. The administrative review shall be conducted at staff level, i.e., without a public hearing. However, should staff determine that the conditions of approval are not being met, that review shall be conducted at a public hearing by the Zoning Hearing Officer.

5. The monopoles, antennas and equipment shed shall be painted and maintained a dark green color to blend in with the surrounding vegetation. The chain link fence partially surrounding the equipment storage area shall be black vinyl chain link with dark green plastic slats installed. Any proposed change to the color shall be reviewed and approved by

the Planning Department prior to painting. Any new color proposed shall blend with the character of the site and the vegetation in the vicinity.

6. At the time of use permit renewal, if staff has determined based on a field inspection that the color of the monopole, GPS antennas, equipment storage, or fence slats are no longer in compliance with the approved colors, the applicant shall repaint the structures prior to use permit renewal.

7. This approval does not authorize the removal of any trees. Any tree removal or tree trimming will require a separate tree removal permit. The applicant shall protect trees adjacent to construction activities.

8. The applicant shall underground all utilities associated with the project.

9. The applicant shall implement the erosion and sediment control measures as noted in the erosion control plan.

10. This installation shall be removed in its entirety at that time when this technology becomes obsolete or this facility is no longer needed.

11. The applicant shall file a copy of the current FCC and CPUC license with the Current Planning Section. The applicant shall be required to keep a current copy of these forms on file with the Planning Department throughout the life of this use. The applicant shall notify the Current Planning Section if, at any time, the FCC or CPUC license is revoked or suspended.

12. The applicant shall not enter into a contract with the landowner or lessee which reserves for one company exclusive use of the tower structure for telecommunications facilities.

13. During project construction, the applicant shall, pursuant to Section 5022 of the San Mateo County Ordinance Code, minimize the transport and discharge of stormwater runoff from the construction site into storm drain systems by:

    a. Stabilizing all denuded areas and maintaining erosion control measures continuously between October 15 and April 15. Stabilizing shall include both proactive measures, such as the placement of hay bales or coir netting, and passive measures, such as revegetating disturbed areas with plants propagated from seed collected in the immediate area.

    b. Storing, handling, and disposing of construction materials and wastes properly, so as to prevent their contact with stormwater.

c. Controlling and preventing the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.

d. Using sediment controls or filtration to remove sediment when dewatering site and obtaining all necessary permits.

e. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.

f. Delineating with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses.

g. Protecting adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.

h. Performing clearing and earth-moving activities only during dry weather.

i. Limiting and timing applications of pesticides and fertilizers to prevent polluted runoff.

j. Limiting construction access routes and stabilizing designated access points.

k. Avoiding tracking dirt or other materials off-site; cleaning off-site paved areas and sidewalks using dry sweeping methods.

l. The contractor shall train and provide instruction to all employees and subcontractors regarding the construction best management practices.

14. The applicant is responsible for ensuring that all contractors are aware of all stormwater quality measures and implement such measures. Failure to comply with the construction BMPs will result in the issuance of correction notices, citations or a project stop order.

15. The applicant shall coordinate with the project planner to record the legal description of the reconfigured parcels with the County Recorder. The lot line adjustment shall be recorded prior to the issuance of the building permit.

Building Inspection Section

16. The applicant shall apply for a building permit prior to any construction.

Department of Public Works

17. Legal Descriptions: The applicant shall submit to the project planner (for recordation) legal descriptions of the reconfigured parcels. The project planner will review these descriptions and forward them to Public Works for review and approval.

18. Deeds: The applicant shall submit to the project planner a copy of the unrecorded Grant Deed (of only the parcel area to be exchanged) for review and approval prior to transfer of ownership.

19. The applicant shall submit a permanent stormwater management plan in compliance with the County's Drainage Policy and NPDES requirements for review and approval by the Department of Public Works.

20. The lot line adjustment shall be recorded prior to the issuance of the building permit.

Geotechnical Engineer

21. The applicant shall submit a soils report at the building permit stage.

Department of Fish and Game

22. The Department of Fish and Game has determined that this project is not exempt from Department of Fish and Game California Environmental Quality Act filing fees per Fish and Game Section 711.4. The applicant shall pay to the San Mateo County Recorder's Office an amount of $1,926.75 for these fees.