COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: February 28, 2018

TO: Planning Commission

FROM: Planning Staff

SUBJECT: EXECUTIVE SUMMARY: Consideration of an appeal of the Zoning Hearing Officer's approval of a Use Permit to allow the relocation of an existing ground mounted wireless telecommunications facility from a parking lot light fixture to the rooftop of an existing grocery store building. The project is located at 46 5th Avenue, in the unincorporated North Fair Oaks area of San Mateo County.

County File Number: PLN 2002-00413 (AT&T/Beltran)

PROPOSAL

The appellant has appealed the Zoning Hearing Officer's decision to approve the relocation of an existing ground mounted wireless telecommunications facility from a parking lot light fixture to the rooftop of an existing grocery store building on the basis that the relocation will have negative health impacts.

The initial use permit approval (approved in 1997) included the location of panel antennas on a parking lot light fixture and the location of the cellular equipment (210 sq. ft.) in the parking lot approximately 50 feet from the antennas. The renewal and amendment includes locating eight antennas within one new rooftop enclosure (306 sq. ft.) and four antennas in a separate enclosure (324 sq. ft.) on the supermarket rooftop. The four antennas will be placed on the face of the existing enclosure and a 6-foot tall wall extension will be proposed to conceal these antennas. Minor cabinet modifications are proposed within the existing ground level equipment lease area. Trenching for installation of the underground cabling is also proposed to connect the equipment area to the relocated equipment on the building rooftop. The height of the proposed enclosure places the building at 32 feet in height where 60 feet is the maximum allowed in the CMU-1 Zoning District.

RECOMMENDATION

That the Planning Commission deny the appeal and uphold the decision of the Zoning Hearing Officer's decision to approve the Use Permit, County File Number PLN 2002-00413, by making the required findings and adopting the conditions of approval listed in Attachment A.

SUMMARY

The appellant's appeal is based on the concern that the relocation of AT&T's panel antennas will have a negative health impact resulting from multiple cellular facilities concentrated in one area, including affecting his place of employment, which is a commercial building located at 82 5th Avenue.

The applicant has responded to the appellant's concerns by providing an updated RF (radio frequency) Report indicating compliance with the Federal Communications Commission (FCC) Maximum Public Exposure Limit at the surrounding residential properties outlined by the appellant.

Staff has noted the FCC's regulation that states n*o State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the* [Federal Communications] *Commission's regulations concerning such emissions*. Given this language, the applicant's basis for appeal, the project's compliance with the County's Wireless Telecommunications Ordinance and Zoning Regulations as discussed in the staff report, and compliance with FCC exposure limits, staff recommends denial of the appeal.

Approval of this project by the Zoning Hearing Officer occurred on June 15, 2017.

The proposed project is located on a 1.3-acre parcel on the east side of El Camino Real and south of 5th Avenue. The property is flat and improved with a shopping center (Chavez Supermarket) and parking lot. A Shell gas station is located next to the property at the corner of El Camino Real and 5th Avenue. The city of Atherton borders the site on the west side of El Camino Real.

The Use Permit renewal and amendment to relocate the panel antennas is compliant with the Wireless Telecommunications Ordinance and recently adopted CMU-1 Zoning District (adopted by the Board of Supervisors on November 21, 2017) and is consistent with the Visual Quality and General Land Use policies of the General Plan. Locating the antennas on the rooftop of Chavez Supermarket will have less visual impact compared to the existing antennas attached to the light pole located in the parking lot. Conditions of approval include paint colors to match the existing building and restriping of parking spaces in areas affected by underground trenching associated with the relocation of the antennas. Staff has also recommended additional conditions of approval typical of wireless facility use permits (e.g., maintenance hours, no external lighting, and valid FCC license/registration).

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COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: February 28, 2018

TO: Planning Commission

FROM: Planning Staff

SUBJECT: Consideration of an appeal of the Zoning Hearing Officer's approval of a Use Permit renewal and amendment, pursuant to Section 6500 of the San Mateo County Zoning Regulations, for the relocation of an existing ground mounted wireless telecommunications facility from a parking lot light fixture to the rooftop of an existing grocery store building. The project is located at 46 5th Avenue, in the unincorporated North Fair Oaks area of San Mateo County.

County File Number: PLN 2002-00413 (AT&T/Beltran)

PROPOSAL

The appellant has appealed the Zoning Hearing Officer's decision to approve the relocation of an existing ground mounted wireless telecommunications facility from a parking lot light fixture to the rooftop of an existing grocery store building on the basis that the relocation will have negative health impacts.

The initial use permit approval (approved in 1997) included the location of panel antennas on a parking lot light fixture and the location of the cellular equipment (210 sq. ft.) in the parking lot approximately 50 feet from the antennas. The renewal and amendment includes locating eight antennas within one new rooftop enclosure (306 sq. ft.) and four antennas in a separate enclosure (324 sq. ft.) on the supermarket rooftop. The four antennas will be placed on the face of the existing enclosure and a 6-foot tall wall extension will be proposed to conceal these antennas. Minor cabinet modifications are proposed within the existing ground level equipment lease area. Trenching for installation of the underground cabling is also proposed to connect the equipment area to the relocated equipment on the building rooftop. The height of the proposed enclosure places the building at 32 feet in height where 60 feet is the maximum allowed in the CMU-1 Zoning District.

RECOMMENDATION

That the Planning Commission deny the appeal and uphold the Zoning Hearing Officer's decision to approve the Use Permit renewal and amendment, County File Number PLN 2002-00413, by making the required findings and adopting the conditions of approval listed in Attachment A.

BACKGROUND

Report Prepared By: Olivia Boo, Project Planner, 650/363-1818

Appellant: Gerald David W. Ehrhardt

Applicant: Christy Beltran (AT&T Mobility)

Landowner: Jack and Nancy Dehoff

Location: 46 5th Avenue, Menlo Park (North Fair Oaks)

APN: 060-281-610

Sphere-of-Influence: Redwood City

Existing Land Use: Supermarket and AT&T Wireless Facility

General Plan Designation: Commercial Mixed-Use

Zoning: CMU-1 (Commercial Mixed Use-1 District)

Flood Zone: Zone X (area of minimal flooding); FEMA FIRM Panel 06081C0304E; effective October 16, 2012.

Environmental Evaluation: Categorically exempt pursuant to Section 15301, Class 1: Continued Operation of an Existing Facility, and Section 15302, Class 2: Replacement or Reconstruction of an Existing Structure.

Setting: The proposed project is located on a 1.3-acre parcel on the east side of El Camino Real and south of 5th Avenue. The property is flat and improved with a shopping center (Chavez Supermarket) and parking lot. A Shell gas station is located next to the property at the corner of El Camino Real and 5th Avenue. The city of Atherton borders the site on the west side of El Camino Real.

Chronology:

Date		Action
October 16, 1997	-	Original Use Permit approved.
December 16, 2004	-	Use Permit Renewal approved.
June 2, 2016	-	Use Permit Amendment and Renewal submitted.
August 2, 2016	-	Application deemed complete.

January 26, 2017	-	North Fair Oaks Council Meeting. (The Council recommended approval of the project, see Section B of this report for further discussion).
June 15, 2017	-	Zoning Hearing Officer Hearing.
June 21, 2017	-	Project Appealed.
August 29, 2017	-	Received Updated Radio Frequency report.
October 11, 2017	-	Applicant submitted response to appeal.
February 28, 2018	-	Planning Commission Hearing.

DISCUSSION

A. KEY ISSUES

1. Appellant's Basis of Appeal

The appellant is concerned that the relocation of AT&T's panel antennas will have a negative health impact resulting from multiple cellular facilities concentrated in one area, including affecting his place of employment, which is a commercial building located at 82 5th Avenue. The concerns of the appellant are outlined below followed by staff's response.

a. "According to FCC rules in the Radio Frequency Report must have the RF readings that will be exposing to the nearest two story buildings of the purposed tower. What is the RF exposures for these building and their habitants."

25 Amherst Avenue	47 Amherst Avenue	61 Amherst Avenue
63 Amherst Avenue	25 Fifth Avenue	

Staff's Response:

The applicant has submitted a letter from the RF engineer (Attachments J and K) stating that the study area (1,000-foot radius) included the above properties in the RF Report. Staff requested that the engineer provide details on the Federal Communications Commission (FCC) Maximum Calculated Exposure Limit for the above listed addresses. The results, outlined in the table below, identify compliance with FCC limits at each location individually and cumulatively.

Maximum Calculated Exposure Level		
Residential Address	Approximate Distance from Proposed Relocation	Maximum Calculated Public Exposure Limit measured at each Location (including the proposed project)
47 Amherst Avenue	30 feet	1.7%
61 Amherst Avenue	35 feet	3.5%
63 Amherst Avenue	60 feet	18%
25 Amherst Avenue	100 feet	20%
25 Fifth Avenue	200 feet	4.7 %
Cumulative Public Exposure Limit anywhere at ground level including the proposed		
Cumulative Public Exposure Limit at any nearby building including the proposed project is 60%.		

b. "Another item that needs to be considered is the negative over lapping effect of multiple cell towers. Currently the cell tower at 197 5th Avenue is radiating at very high levels of RF over our property (82 5th Avenue). Once the new updated and relocated new tower (45 5th Avenue) is up and running our property will be sandwiched between the two towers (less than 2 miles apart). Thus causing even higher level of RF radiation. Most of our employees work outside and are exposed to these very high levels of RF on a daily basis."

Staff's Response:

Staff requested clarification from the engineer on the Sprint facility located at 197 5th Avenue as to what constitutes a "nearby" cellular facility. The engineer stated that a facility is considered "nearby" *if it is close enough to substantially impact RF exposure levels from the proposed facility in terms of its compliance with the prevailing standard*. The Sprint facility is approximately 880 feet from the proposed AT&T facility which is too far away to have such an impact, according to the Sprint engineer.

The County's Wireless Telecommunication Ordinance does not identify an RF emissions limit but does require wireless facilities to maintain compliance with FCC regulations and licensing/registration. The Federal Telecommunications Act of 1996 contains provisions for the restriction of such emission limits in Section 704 which states n*o State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the* [Federal

Communications] *Commission's regulations concerning such emissions*. This limitation includes individual as well as cumulative emissions levels. Given this language, the applicant's basis for appeal, the project's compliance with the County's Wireless Telecommunications Ordinance and Zoning Regulations (discussed below), and compliance with FCC exposure limits, staff recommends denial of the appeal.

B. ANALYSIS OF PROJECT COMPLIANCE WITH ALL APPLICABLE POLICIES AND REGULATIONS

1. Compliance with the General Plan

Visual Quality Policies

Policy 4.36 (*Urban Area Design Concept*) seeks to promote and enhance good design, site relationships, and other aesthetic considerations, maintain and improve upon the appearance and visual character of development in urban areas, and ensure that new development is designed and constructed to contribute to the orderly and harmonious development of the locality.

The proposed antenna modifications involve relocating the antenna equipment to the rooftop of the supermarket, placement of additional antennas, and concealing the antennas behind two 6-foot tall screening enclosures painted to match the existing building. The addition of one rooftop enclosure to screen the antennas is not expected to create a significant visual impact to the area, because the enclosure will have the appearance similar to typical mechanical equipment often located on a roof and will be partially screened by the existing horizontal fence style parapet as seen from 5th Avenue. The enclosures are conditioned to match the existing building colors and materials. No changes to the ground level lease area with exception to minor cabinet changes are proposed; no reduction in parking spaces will result from the project.

General Land Use

Policy 8.36 (*Uses*) allows uses in zoning districts that are consistent with the overall land use designation. The General Plan land use designation of the parcel is Commercial Mixed-Use (CMU) and the proposed use, subject to use permit approval, is consistent with the Commercial Mixed Use-1 Zoning District.

Policy 8.39 (*Height, Bulk, and Setbacks*) regulates height, bulk, and setback requirements in zoning districts in order to: (1) ensure that the size and scale of development is compatible with the parcel size, (2) provide sufficient light and air in and around the structure, and (3) ensure public health and safety. The overall antenna equipment is considered a small

addition, will meet minimum setback requirements, and continue to allow light and air around the building. The overall building height of 32-feet is compliant with the maximum height requirements allowed under the Zoning Regulations, as discussed further in Section 2. The bulk of the screening enclosure is similar to that of typical rooftop mechanical equipment and is considered minor in nature. A building permit is required for the proposed project to ensure public health and safety.

2. Conformance with the Zoning Regulations

The wireless facility is located within the CMU-1 (Commercial Mixed Use District). The proposed project complies with the development criteria set forth by the County Zoning Regulations for these districts as noted in the following table:

Development Standards	CMU-1[1]	Proposed Antennas Relocation	Existing Equipment Lease Area (no changes)
Front Yard Setback	0 ft. up to a maximum of 10 feet	62 ft. (new) 76 ft. (existing)	45 ft.
Side Yard Setback	0 ft.	34 ft. (new) 11 ft. (existing)	0 ft.
Rear Yard Setback	15 feet up to 40 feet of building height	45 ft. (new) 21 ft. (existing)	53 ft.
Height Maximum	60 ft.	32 ft.	6 ft.
[1] CMU-1 District adopted by the Board of Supervisors on November 21, 2017.			

Parking Compliance

The existing lease area is located within a retaining wall enclosure that separates Chavez Supermarket parking area from the adjacent Shell gas station. The existing lease area footprint remains unchanged thus the project will not reduce parking spaces or affect minimum drive aisle widths.

Relocating the antennas to the Chavez Supermarket rooftop will require trenching from the lease area to the rooftop. During construction, there will be minor temporary disturbance to the parking lot area to dig a trench for the cables. Parking spaces may be temporarily impacted during a 2 week construction period. No existing parking spaces will be permanently impacted for this AT&T redesign. A condition of approval is included requiring the restriping of affected parking spaces.

3. Conformance with the Wireless Telecommunication Facility Ordinance

According to Section 6512.6 of the Wireless Telecommunication Facilities Ordinance, existing facilities built prior to January 9, 2009 are subject to the provisions of the Ordinance related to new facilities. Staff has reviewed the project against the provisions of the Wireless Telecommunication Facilities Ordinance and determined that the project complies with the applicable standards discussed below:

a. Development and Design Standards

1. Section 6512.2 A prohibits location in a Sensitive Habitat as defined by Policy 1.8 of the General Plan for facilities proposed outside the Coastal Zone.

The site of the existing and proposed AT&T facility is not near mapped sensitive habitats.

2. Section 6512.2.B prohibits wireless facilities to be located in residential-zoned areas, unless the applicant demonstrates that no other site allows feasible or adequate capacity and coverage. Evidence shall include an alternative site analysis within 2.5 miles of the proposed facility.

The proposed relocation of the AT&T site will be located in the CMU-1 Zoning District and not in a residentially zoned district.

3. Section 6512.2.C prohibits wireless telecommunication facilities to be located in areas where co-location on existing facilities would provide equivalent coverage with less environmental impact.

The facility was established under a use permit approval in 1997 and has been in operation since that time. AT&T is proposing to upgrade an existing facility without proposing a new parcel location. If a different location were proposed, there would be the potential for new environmental impacts depending on the location of a new site and construction of a new facility elsewhere. Maintaining and upgrading the current location minimizes potential environmental impacts while continuing to provide consistent coverage.

4. **Section 6512.2.D requires wireless telecommunication facilities to be constructed so as to accommodate and be made available for co-location unless technologically infeasible.**

   AT&T's facility is the only cellular carrier located at the subject property. Co-location is not proposed at this time but the site is capable of accommodating additional carriers.

5. **Sections 6512.2.E-G seek to minimize and mitigate visual impacts from public views by ensuring that appropriate vegetative screening, painting of equipment, or other methods of blending equipment in with the surrounding environment are implemented and requiring facilities to be constructed of non-reflective materials.**

   The AT&T lease area is screened by a retaining wall enclosure and the proposed roof-top antennas will be screened by enclosures painted to match the grocery store. The existing fence style parapet will partially screen the new rooftop enclosure as seen from 5th Avenue and painting of the vertical cable tray will further minimize potential visual impacts. Locating the antennas on the rooftop of Chavez Supermarket will have less visual impact compared to the existing antennas attached to the light pole located in the parking lot. The antennas in the parking lot have no screening. Proposed paint colors shall be reviewed and approved by the Planning Department prior to implementation.

6. **Section 6512.2.H requires compliance with the underlying zoning district.**

   Refer to Section A.2 above (Zoning Regulations) for discussion.

7. **Section 6512.2.I(3) requires building mounted telecommunication facilities to comply with the maximum height allowed for structures allowed in the zoning district or 16 feet above the building roofline, whichever is higher.**

   The maximum allowed height limit in the CMU-1 District is 60 feet for commercial buildings. Both the new antennas (31 feet) and the enclosure (32 feet) comply with the maximum allowed height limit. The project also complies with the maximum footprint allowed of the Wireless Ordinance (lot coverage no more than 15% or 1,600 sq. ft. base area). The overall footprint of the antenna enclosures and lease area is approximately 840 sq. ft. and covers 1% of the 56,628 sq. ft. lot.

8. Section 6512.2.L prohibits diesel generators as emergency power sources unless electricity, natural gas, solar, wind or other renewable energy sources are not feasible.

No diesel generator is proposed.

4. Compliance with Conditions of Last Approval

a. This Use Permit Renewal and Amendment shall be for the project described in this report and approved December 16, 2004. Minor revisions shall be subject to the review and approval of the Community Development Director. Any modifications or expansions to the existing use will require an application and issuance of a use permit amendment.

Compliance with Condition? Yes

Recommend to Retain Condition? Yes, but modified to reflect current date and language.

b. This Use Permit shall be valid for a ten (10) year period. The applicant shall file for a renewal of this permit with applicable fees six (6) months prior to the expiration with the County Planning and Building Department, if continuation of this use is desired.

Compliance with Condition? No. The applicant was undecided on a redesign of the facility which delayed the renewal.

Recommend to Retain Condition? Yes, but modified to: This Use Permit shall be valid for ten (10) years until February 28, 2028. The applicant shall file for a renewal of this permit six months prior to expiration with the County Planning Department by submitting the applicable application forms and paying the applicable fees six (6) months prior to expiration, if continuation of this use is desired.

c. The applicant shall apply for a Use Permit Amendment and building permit prior to any changes to the existing facility. Amendment to this Use Permit requires an application for amendment, payment of applicable fees, and consideration at a public hearing.

Compliance with Condition? Yes.

Recommend to Retain Condition? Yes.

d. The antennas shall be painted and shall remain the same color as the existing light standards located in the shopping center.

Compliance with Condition? Yes.

Recommend to Retain Condition? Yes, but modified to: The rooftop enclosures and vertical cable tray shall be painted and maintain a color that matches the grocery store building. Colors and materials shall be submitted to the Planning Department for review and approval.

e. The new equipment cabinet installation shall be surrounded by a block wall of the same texture and color as the existing equipment enclosure and wall surrounding the service station. The height of the wall shall be sufficient to block the view of the equipment cabinets from 5th Avenue. A building permit is required prior to construction of the block wall.

Compliance with Condition? Yes.

Recommend to Retain Condition? Yes, but modified. The equipment cabinet shall remain enclosed by a block wall of the same texture and color as the existing equipment enclosure and wall surrounding the service station. The height of the wall shall continue to block the view of the equipment cabinets from 5th Avenue and El Camino Real.

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

Compliance with Condition? Yes.

Recommend to Retain Condition? Yes.

g. 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.

Compliance with Condition? Yes.

Recommend to Retain Condition? Yes.

h. Any necessary utilities leading to the facility shall be placed underground.

Compliance with Condition? Yes.

Recommend to Retain Condition? Yes.

i. The applicant shall install the landscape plan approved by the North Fair Oaks Council. The applicant shall submit photos of the installed landscaping to be approved by the Planning Department prior to requesting a final inspection for the building permit. The applicant shall maintain the approved landscaping. The applicant shall replace all dead plant material immediately.

Compliance with Condition? No.

Recommend to Retain Condition? No. Since the antennas are proposed to be relocated to the Chavez Supermarket rooftop, installing new vegetation at street level is not considered applicable, as minimal changes are expected to the parking lot.

j. The applicant shall erect a sign clearly posted and readable on the light pole, that workers performing maintenance on the light pole or fixture shall not do such work within 3 feet of the cellular antennas while the cellular facility is in operation. Any work performed contrary to this shall occur only with the permission and under the direction of the cellular facility operator. The sign shall be placed and confirmed prior to the final inspection approval of the building permit for the new antennas.

Compliance with Condition? Yes.

Recommend to Retain Condition? Yes, but modified. The applicant shall remove signs associated with the wireless facility from the light pole. Required signs shall be placed in accordance with FCC regulations and at the recommendation of the RF engineer.

Additional Recommended Planning Conditions of Approval

Staff recommends the following conditions of approval.

k. The applicant shall restripe any parking spaces affected by this project prior to the Building Department final inspection. The applicant shall submit “before and after” photo verification of any restriped parking spaces.

l. A building permit shall be issued prior to the start of any construction work associated with this approval.

m. If a less visually obtrusive/reduced antenna technology becomes available for use during the life of this project, the applicant shall present a redesign incorporating this technology into the project for review by the Community Development Director and any parties that have expressed an interest.

n. Maintenance for the roof antennas shall only be performed between 9:00 a.m. and 5:00 p.m.

o. There shall be no external lighting associated with this use. Wireless telecommunication facilities shall not be lighted or marked unless required by the Federal Communications Commission (FCC) or Federal Aviation Administration (FAA).

p. The applicant shall maintain all necessary licenses and registrations from the FCC and any other applicable regulatory bodies for the operation of the subject facility at this site. The applicant shall supply the Planning Department with evidence of such licenses and registrations. If any required license is ever revoked, the applicant shall inform the Planning Department of the revocation within ten (10) days of receiving notice of such revocation.

q. This facility and all equipment associated with it shall be removed in its entirety by the applicant within ninety (90) days if the FCC license and registration are revoked or if the facility is abandoned or no longer needed. The owner and/or operator of the facility shall notify the Planning Department upon abandonment of the facility.

r. Noise sources associated with demolition, construction, repair, remodeling, or grading of any real property shall be limited to the hours from 7:00 a.m. to 6:00 p.m., weekdays and 9:00 a.m. to 5:00 p.m., Saturdays. Said activities are prohibited on Sundays, Thanksgiving, and Christmas (San Mateo Ordinance Code Section 4.88.360).

s. This permit does not allow for the removal of any trees. Removal of any tree with a diameter equal to or greater than 12 inches as measured 4.5 feet above the ground shall require a separate tree removal permit.

t. The applicant shall coordinate and notify the commercial tenants on the adjacent parcels for potential construction impacts and the anticipated construction schedule.

5. Conformance with Use Permit Findings

Under the provisions of Section 6500 (Use Permits) wireless telecommunications facilities are permitted in the CMU-1 District after issuance of a use permit. In order to allow the operation of this facility, the following use permit findings are necessary:

a. That the establishment, maintenance and/or conducting of the use will not, under the circumstances of the particular case,

result in a significant adverse impact, or be detrimental to the public welfare or injurious to property or improvements in said neighborhood.

There is no building expansion proposed to the Chavez Supermarket to accommodate the antennas on the roof. No additional footprint is proposed to the existing equipment cabinet lease area. The equipment cabinet changes will not reduce the existing available parking or affect minimum drive aisle widths. The project has been reviewed by Menlo Park Fire Protection District and the County's Building Inspection Section and was granted conditional approval.

The impacts from this project are considered minimal. The radio frequency report prepared by OSC Engineering accounts for AT&T's proposed antennas, and concluded that the total cumulative emission limit at ground level is calculated to be no greater than 27% at ground level, which is below the Maximum Permissible Exposure. Any exposure resulting in a level higher than 100% exceeds the Limits and requires further action, such as barriers. AT&T's existing and proposed telecommunication facilities will meet emission criteria as required by the California Public Utilities Commission and the Federal Communications Commission.

The installation will not interfere with household appliances or disturb existing telecommunications equipment. Because the system will be unmanned and require only occasional service visits, it will not generate significant additional traffic, noise, or intensity of use of the property. The proposed antennas will be enclosed by a screen wall to minimize visual impacts and conditioned to be painted a non-reflective color to match the building. The equipment is a small addition to the supermarket building rooftop and is not expected to cause significant change to the property. The screen walls will have the appearance of mechanical equipment often installed on building rooftops.

b. That the use is necessary for the public health, safety, convenience or welfare.

The continued use is to enhance coverage for AT&T cellular carriers. The Federal Communications Commission has established the desirability and need for wireless telecommunications facilities to enable communication between mobile units and the existing wire-dependent telephone system. This facility will contribute to enhance the existing wireless network for increased clarity, range, and system capacity, and therefore is a benefit to both public and private users. The wireless network is considered necessary for public health, safety, convenience, and welfare. Staff has determined that no adverse

effects to public health and safety would result from the proposed operation of this facility.

C. NORTH FAIR OAKS COMMUNITY COUNCIL

On January 26, 2017, the North Fair Oaks Community Council held a public hearing to consider the project and recommended approval with the condition for staff to notify the tenants of the shopping center with regards to a construction schedule so that the tenants may prepare for construction noise and impacts, and requested additional trees in the parking lot. Staff has added a condition for the applicant to coordinate with the tenants on the adjacent parcels for potential construction impacts.

Regarding the request for additional trees, staff has determined that because the antennas are proposed to be relocated to the supermarket rooftop and only minor ground trenching is expected, planting additional trees in the parking lot is not required. The visual impact of the proposed antennas to the public, at ground level, will be minimal, given the propose screening walls

D. ENVIRONMENTAL REVIEW

Categorically exempt pursuant to Section 15301, Class 1: continued operation of an existing facility, and Section 15302, Class 2: replacement or reconstruction of an existing structure.

E. REVIEWING AGENCIES

Building Inspection Section
Menlo Park Fire Protection District
Department of Public Works
Environmental Health Section

ATTACHMENTS

A. Recommended Findings and Conditions of Approval
B. Vicinity Map and Location Map
C. Site Plan
D. Proposed Antenna Plan
E. Existing and Proposed Equipment Area
F. Elevations
G. Photos
H. Appellant's Appeal
I. Map of 82-5th Avenue and Existing Telecommunication Facilities.
J. Radio Frequency Report
K. Radio Frequency Report clarification letter (October 11, 2017)

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Attachment A

County of San Mateo
Planning and Building Department

RECOMMENDED FINDINGS AND CONDITIONS OF APPROVAL

Permit or Project File Number: PLN 2002-00413 Hearing Date: February 28, 2018

Prepared By: Olivia Boo
Project Planner

For Adoption By: Planning Commission

RECOMMENDED FINDINGS

Regarding the Environmental Review, Find:

1. That the project is categorically exempt from the California Environmental Quality Act (CEQA), pursuant to Section 15301, Class 1: continued operation of an existing facility, and Section 15302, Class 2: replacement or reconstruction of an existing structure.

Regarding the Use Permit, Find:

2. That the establishment, maintenance, and conducting of the proposed use will not, under the circumstances of the particular case, result in a significant adverse impact, or be detrimental to the public welfare or injurious to property or improvements in said neighborhood. The radio frequency (RF) report concludes, that the cumulative operation of the existing and proposed wireless facilities will meet emission criteria as required by the California Public Utilities Commission and the Federal Communications Commission. The project has been reviewed by Menlo Park Fire Protection District and the County's Building Inspection Section and granted conditional approval.

3. That the use is necessary for the public health, safety, convenience, or welfare. This facility contributes to an enhanced AT&T wireless network for increased clarity, range, and system capacity, and therefore, is a benefit to both public and private users. The wireless network is considered necessary for public health, safety, convenience, and welfare.in the area for residents, commuters, and emergency personnel.

RECOMMENDED CONDITIONS OF APPROVAL

Current Planning Section

1. This Use Permit Renewal and Amendment shall be for the project described in this report and approved February 28, 2018. The applicant shall file for a renewal of this permit six months prior to expiration with the county Planning Department by submitting the applicable application forms and paying the applicable fees six (6) months prior to expiration, if continuation of this use is desired. Minor modifications to the project may be approved by the Community Development Director if they are consistent with the intent of, and in substantial conformance with, this approval. Any significant modifications or expansions to the existing use will require an application and issuance of a use permit amendment.

2. This Use Permit shall be valid for ten (10) years until February 28, 2018. The applicant shall file for a renewal of this permit six months prior to expiration with the County Planning Department by submitting the applicable application forms and paying the applicable fees six (6) months prior to expiration, if continuation of this use is desired.

3. The applicant shall apply for a Use Permit Amendment and building permit prior to any changes to the existing facility. Amendment to this Use Permit requires an application for amendment, payment of applicable fees, and consideration at a public hearing.

4. The rooftop screen shall be painted and shall remain the same color as the building rooftop parapet.

5. The equipment cabinet shall remain enclosed by a block wall of the same texture and color as the existing equipment enclosure and wall surrounding the service station. The height of the wall shall continue to block the view of the equipment cabinets from 5th Avenue and El Camino Real.

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

7. 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.

8. Any necessary utilities leading to the facility shall be placed underground.

9. The applicant shall remove signs associated with the wireless facility from the light pole. Required signs shall be placed in accordance with FCC regulations and at the recommendation of the RF engineer.

Additional Planning Conditions of Approval

10. The applicant shall restripe any parking spaces affected by this project prior to the Building Department final inspection. The applicant shall submit “before and after” photo verification of any restriped parking spaces.

11. A building permit shall be issued prior to the start of any construction work associated with this approval.

12. If a less visually obtrusive/reduced antenna technology becomes available for use during the life of this project, the applicant shall present a redesign incorporating this technology into the project for review by the Community Development Director and any parties that have expressed an interest.

13. Maintenance for the roof antennas shall only be performed between 9:00 a.m. and 5:00 p.m.

14. There shall be no external lighting associated with this use. Wireless telecommunication facilities shall not be lighted or marked unless required by the Federal Communications Commission (FCC) or Federal Aviation Administration (FAA).

15. The applicant shall maintain all necessary licenses and registrations from the FCC and any other applicable regulatory bodies for the operation of the subject facility at this site. The applicant shall supply the Planning Department with evidence of such licenses and registrations. If any required license is ever revoked, the applicant shall inform the Planning Department of the revocation within ten (10) days of receiving notice of such revocation.

16. This facility and all equipment associated with it shall be removed in its entirety by the applicant within ninety (90) days if the FCC license and registration are revoked or if the facility is abandoned or no longer needed. The owner and/or operator of the facility shall notify the Planning Department upon abandonment of the facility.

17. Noise sources associated with demolition, construction, repair, remodeling, or grading of any real property shall be limited to the hours from 7:00 a.m. to 6:00 p.m., weekdays and 9:00 a.m. to 5:00 p.m., Saturdays. Said activities are prohibited on Sundays, Thanksgiving, and Christmas (San Mateo Ordinance Code Section 4.88.360).

18. This permit does not allow for the removal of any trees. Removal of any tree with a diameter equal to or greater than 12 inches as measured 4.5 feet above the ground shall require a separate tree removal permit.

19. The applicant shall coordinate and notify the commercial tenants on the adjacent parcels for potential construction impacts and the anticipated construction schedule.

Building Inspection Section

20. The applicant shall apply for and obtain a building permit prior to any construction activity related to this project approval.

Menlo Park Fire Protection District

21. The project is to comply with the 2013 CA Building / Fire Codes and local amendments. The following plan review comments are applicable to this submittal:

22. The applicant shall have a current Hazardous Material Inventory Sheet and all applicable HMBP and MSDS sheets on site and on file with the San Mateo County and Menlo Park Fire Department Hazardous Material Sections if applicable.

23. The applicant shall meet all applicable requirements of Section 608 of the 2013 CFC.

24. The applicant shows a data/matrix chart including the type and number of batteries, the amount of liquid, electrolyte in each battery and total volume of liquids. 2013 CFC 608.1.2013.

25. The applicant shall provide signage on the gates of the equipment areas and doors to equipment structures. The signs shall state the type of battery system, voltage of electrical circuits, and if batteries have electrolyte solution with corrosive liquids (NFPA 704 labeling). The signs shall also have the 24-hour a day emergency contact numbers and the name of the lessee company i.e., AT&T.

26. The applicant shall state if the building has more than or could have more than 1.0% of hydrogen concentration from charging system. If so, what kind of ventilation is being provided? 2013 CFC 608.6.1.

27. Fire Detection System (smoke detectors) is required for the telecommunication enclosed room located on top of the roof. Deferred submittal required for extension of the existing fire alarm system serving the building into the enclosed space, additional fees would be required. If the enclosure is without a roof and is open to the sky above, this condition will not apply. CFC, Section 903.3.1.1.1: item 5.

28. If the building or room is part of a structure, a smoke detector(s) shall be installed and supervised by a Central Station Monitoring Company. Local audible alarms are also required 2013 CFC, Section 608.9.

29. If non-recombinant (lead acid/free flowing liquid) batteries are used, the applicant shall provide spill control and neutralization spill kit. 2013 CF, Section 608.5.

30. Batteries shall be seismically braced in accordance with CBC.

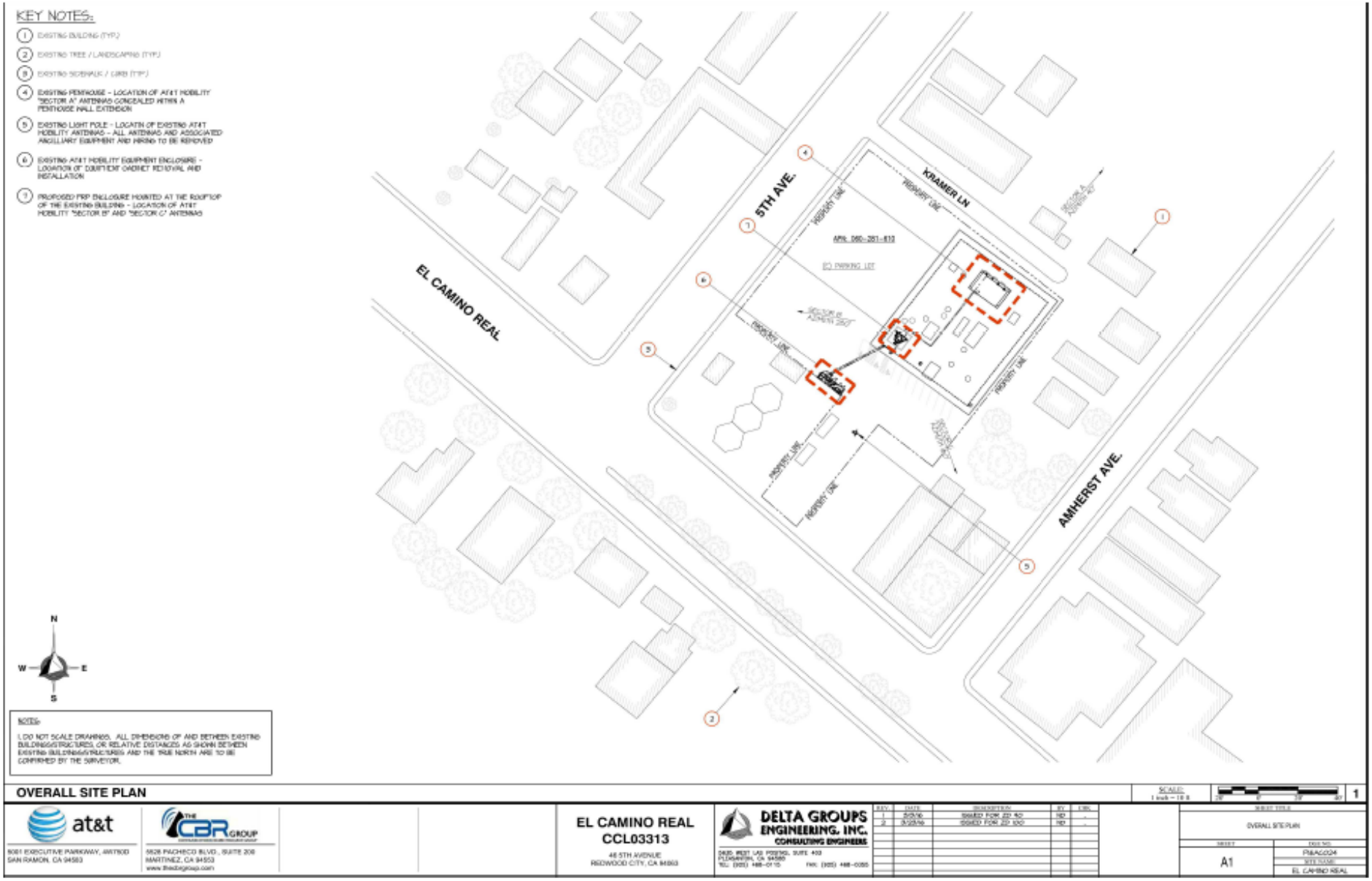
31. Upon completion of work and prior to occupancy, contact Inspector **Ron Keefer** of the Menlo Park Fire Protection District at 650/688-8428 to schedule a final inspection. A 48-HOUR NOTICE IS REQUIRED FOR ALL INSPECTIONS.

MAR:OSB:aow- OSBCC0035_WAU.DOCX

San Mateo County Planning Commission Meeting

Owner/Applicant: **DeHoff/AT&T** Attachment: **B**

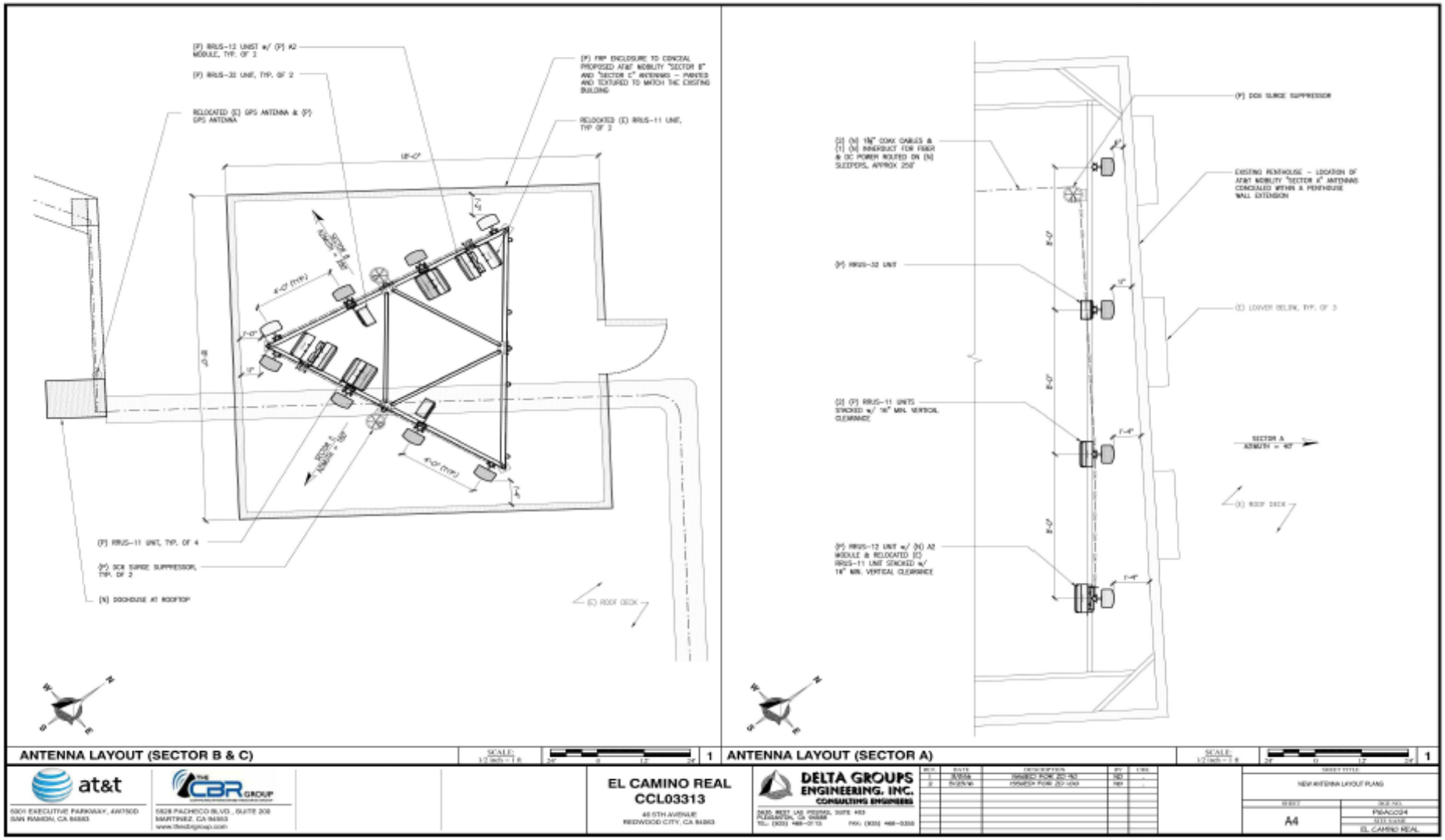
File Numbers: **PLN2012-00413**



San Mateo County Planning Commission Meeting

Owner/Applicant: **DeHoff/AT&T** Attachment: **C**

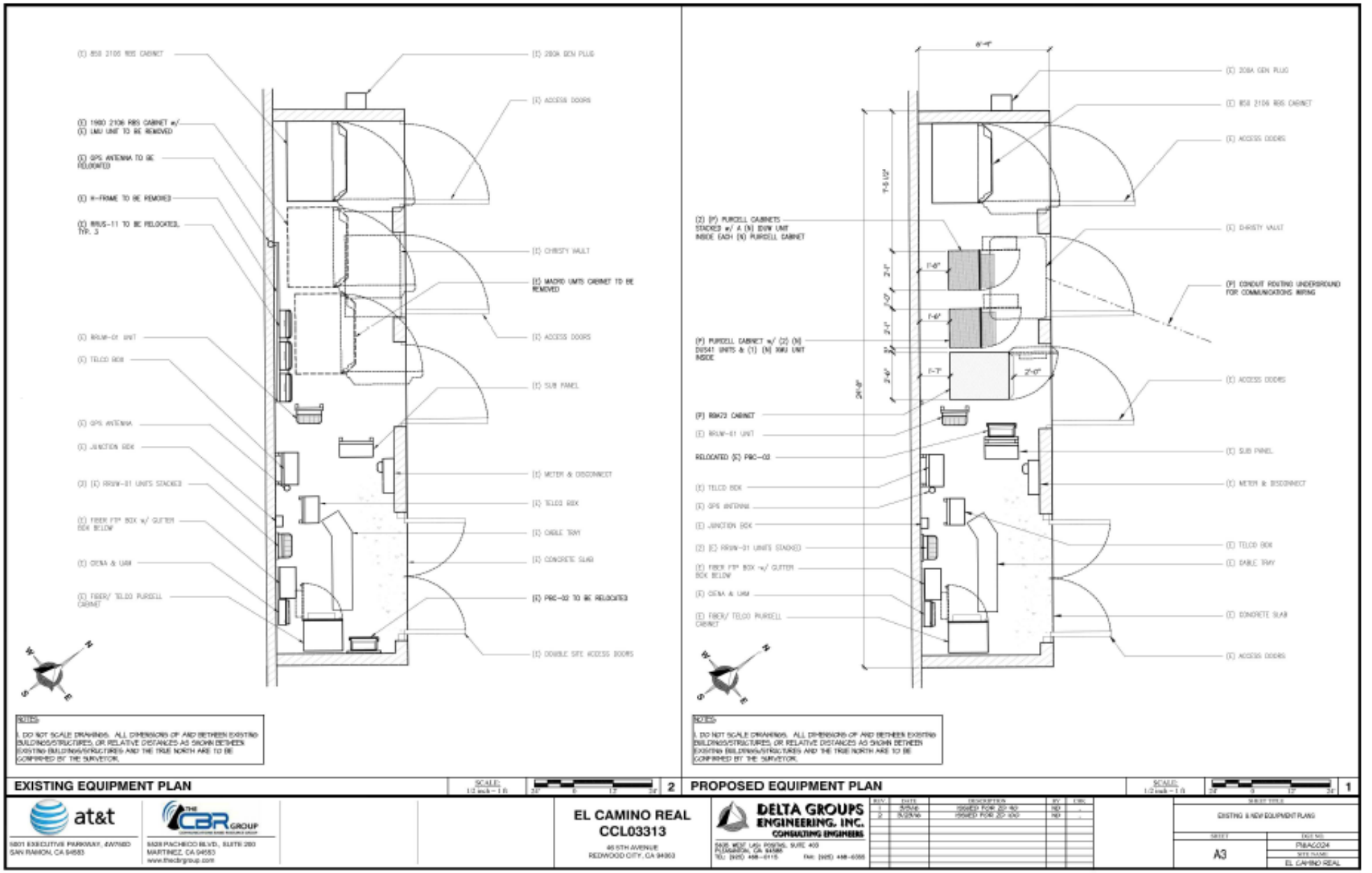
File Numbers: **PLN2012-00413**



San Mateo County Planning Commission Meeting

Owner/Applicant: **DeHoff/AT&T** Attachment: **D**

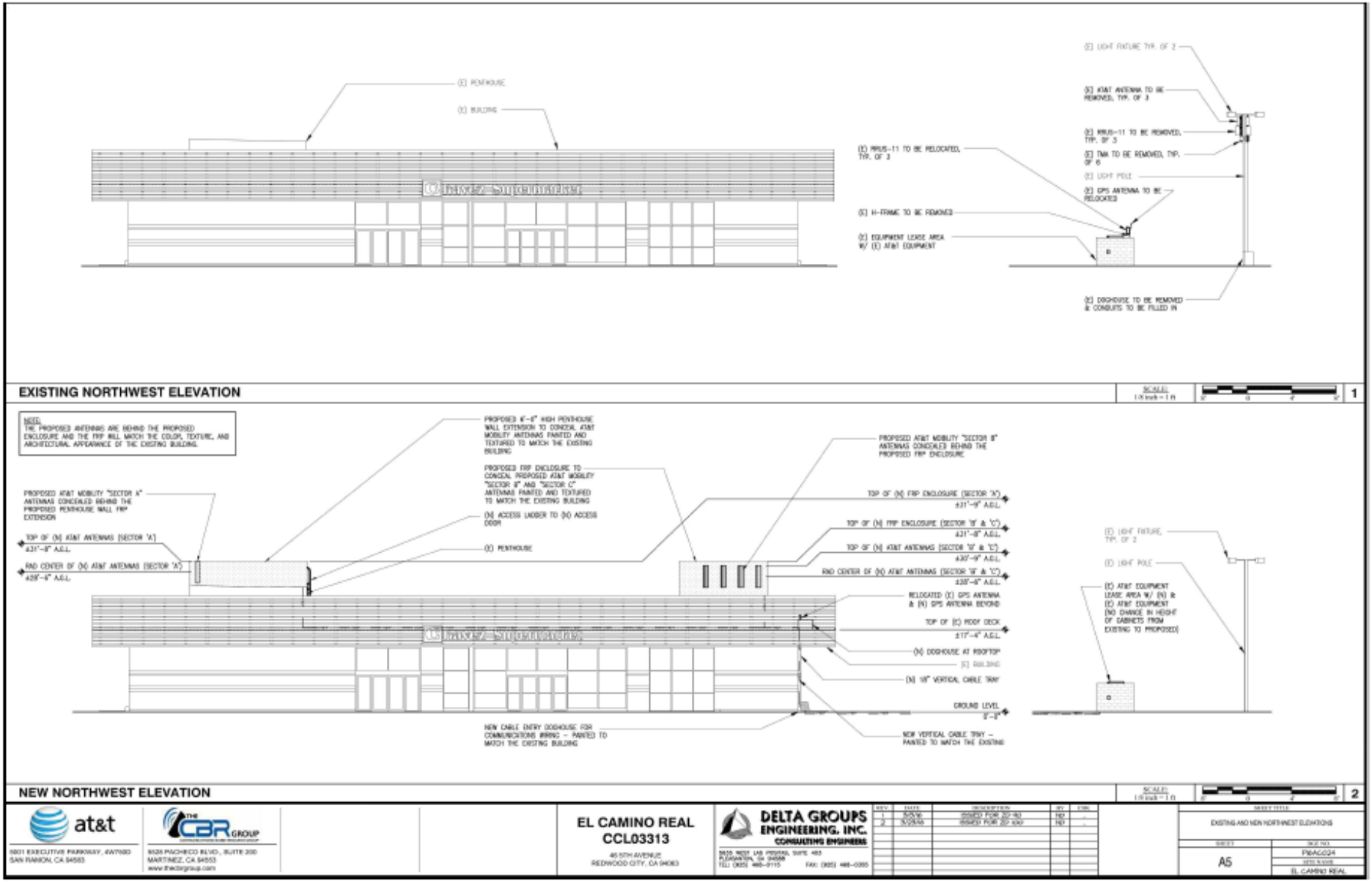
File Numbers: **PLN2012-00413**



San Mateo County Planning Commission Meeting

Owner/Applicant: **DeHoff/AT&T** Attachment: **E**

File Numbers: **PLN2012-00413**



San Mateo County Planning Commission Meeting

Owner/Applicant: **DeHoff/AT&T** Attachment: **F**

File Numbers: **PLN2012-00413**

San Mateo County Planning Commission Meeting

Owner/Applicant: **DeHoff/AT&T** Attachment: **G**

File Numbers: **PLN2012-00413**

San Mateo County Planning Commission Meeting

Owner/Applicant: **DeHoff/AT&T** Attachment: **G**

File Numbers: **PLN2012-00413**

San Mateo County

Application for Appeal

Planning and Building Department

☒ To the Planning Commission

☐ To the Board of Supervisors

County Government Center • 455 County Center, 2nd Floor
Redwood City • CA • 94063 • Mail Drop PLN 122
Phone: 650 • 363 • 4161 Fax: 650 • 363 • 4849

Name: Gerald M. Dobbs

Address: 82 5th Avenue
Redwood City, CA

Phone, W: (650)365-6743 H:

Zip: 94063

Permit Numbers involved:

PLN2002-00413

I hereby appeal the decision of the:

- ☐ Staff or Planning Director
- ☒ Zoning Hearing Officer
- ☐ Design Review Committee
- ☐ Planning Commission

made on June 15 20 17, to approve/deny the above-listed permit applications.

I have read and understood the attached information regarding appeal process and alternatives.

☒ yes ☐ no

Appellant's Signature:

Date:

Planning staff will prepare a report based on your appeal. In order to facilitate this, your precise objections are needed. For example: Do you wish the decision reversed? If so, why? Do you object to certain conditions of approval? If so, then which conditions and why?

Please see attached sheet.

Attachment H

According to FCC rules in the Radio Frequency Report must have the RF readings that will be exposing to the nearest two story buildings of the purposed tower.

Here is a list of the closest two story buildings with people living in them.
25 5th Avenue
47 Amherst
61 Amherst
63 Amherst
25 Amherst Court

What is the RF exposures for these building and their habitants.

Another item that needs to be considered is the negative over lapping effect of multiple cell towers. Currently the cell tower at 197 5th Avenue is radiating at very high levels of RF over our property (82 5th Avenue). Once the new updated and relocated new tower (45 5th Avenue) is up and running our property will be sandwiched between the two towers (less than .2 miles apart). Thus causing and even higher level of RF radiation. Most of our employees work outside and are exposed to these very high levels of RF on a daily basis.

As of this morning the current reading in uW/m (microwatts/sq.meter)coming from the 197 5th avenue tower was ranging from 2000-5100. (using an acoustimeter Model AM-10 and no cell phone on myself). Levels are even higher if you have a cell phone on you.

Please kindly take these factors into consideration while accepting my appeal.

Thank You,

Gerald M. Dobbs
82 5th Avenue


197 5th Avenue
Exiting Sprint PCS
facility
600 ft.
82 5th Avenue
Appellant's place
of employment
196 ft.
46 5th Avenue
Chavez Market
Proposed
AT&T facility
Fifth Ave
Glendale Ave
Semicircular Rd
Williams Ave
Waverly Ave
Dexter Ave
Columbia Ave
Markham Ave
Arrowhead Ln
Loyola Ave
Amherst Ave
Frank's Hauling
Chavez Supermarket
Fifth Avenue Salon
& Color Group
Domino's Pizza
K&L Wine Merchants
Mimi's Pet Grooming
Best Western Plus
Executive Suites
La Petite Baleen
Swim School
Poly Clean Center
Google

Attachmen I

AT&T Mobility • Proposed Base Station (Site No. CCL03313)
46 Fifth Avenue • Redwood City, California

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of AT&T Mobility, a personal wireless telecommunications carrier, to evaluate the base station (Site No. CCL03313) proposed to be located at 46 Fifth Avenue in Redwood City, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

Executive Summary

AT&T proposes to install directional panel antennas above the single-story supermarket located at 46 Fifth Avenue in Redwood City. The proposed operation will comply with the FCC guidelines limiting public exposure to RF energy.

Prevailing Exposure Standards

The U.S. Congress requires that the Federal Communications Commission ("FCC") evaluate its actions for possible significant impact on the environment. A summary of the FCC's exposure limits is shown in Figure 1. These limits apply for continuous exposures and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health. The most restrictive FCC limit for exposures of unlimited duration to radio frequency energy for several personal wireless services are as follows:

Wireless Service	Frequency Band	Occupational Limit	Public Limit
Microwave (Point-to-Point)	5–80 GHz	5.00 mW/cm^2	1.00 mW/cm^2
WiFi (and unlicensed uses)	2–6	5.00	1.00
BRS (Broadband Radio)	2,600 MHz	5.00	1.00
WCS (Wireless Communication)	2,300	5.00	1.00
AWS (Advanced Wireless)	2,100	5.00	1.00
PCS (Personal Communication)	1,950	5.00	1.00
Cellular	870	2.90	0.58
SMR (Specialized Mobile Radio)	855	2.85	0.57
700 MHz	700	2.40	0.48
[most restrictive frequency range]	30–300	1.00	0.20

General Facility Requirements

Base stations typically consist of two distinct parts: the electronic transceivers (also called "radios" or "channels") that are connected to the traditional wired telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units. The transceivers are often located at ground level and are connected to the antennas by coaxial cables. A small antenna for reception of GPS signals is also required, mounted with a clear view of the sky. Because of the short wavelength of the frequencies assigned by the FCC for wireless services, the

antennas require line-of-sight paths for their signals to propagate well and so are installed at some height above ground. The antennas are designed to concentrate their energy toward the horizon, with very little energy wasted toward the sky or the ground. This means that it is generally not possible for exposure conditions to approach the maximum permissible exposure limits without being physically very near the antennas.

Computer Modeling Method

The FCC provides direction for determining compliance in its Office of Engineering and Technology Bulletin No. 65, "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radio Frequency Radiation," dated August 1997. Figure 2 describes the calculation methodologies, reflecting the facts that a directional antenna's radiation pattern is not fully formed at locations very close by (the "near-field" effect) and that at greater distances the power level from an energy source decreases with the square of the distance from it (the "inverse square law"). The conservative nature of this method for evaluating exposure conditions has been verified by numerous field tests.

Site and Facility Description

Based upon information provided by AT&T, including zoning drawings by Delta Groups Engineering, Inc., dated January 17, 2017, that carrier has directional panel antennas installed on a light pole sited about 20 feet to the southeast of the Shell gas station located at the east corner of the intersection between Fifth Avenue and El Camino Real in Redwood City. AT&T proposes to remove that facility and to install nine CommScope Model SBNHH-1D65A directional panel antennas, above the roof of the single-story supermarket located at 46 Fifth Avenue, about 70 feet away. The antennas would employ up to 18° downtilt, would be mounted at an effective height of about 28½ feet above ground, 11 feet above the roof, and would be oriented in groups of three toward 40°T, mounted on the northeast face of the roof equipment penthouse, and toward 160°T and 280°T, within a view screen enclosure near the west corner of the roof. The maximum effective radiated power in any direction would be 8,450 watts, representing simultaneous operation at 2,740 watts for WCS, 4,020 watts for PCS,
800 watts for cellular, and 890 watts for 700 MHz service. There are reported no other wireless telecommunications base stations at the site or nearby.

Study Results

For a person anywhere at ground, the maximum RF exposure level due to the proposed AT&T operation is calculated to be 0.15 mW/cm^2, which is 27% of the applicable public exposure limit. The

maximum calculated level at any nearby building* is 60% of the public exposure limit. It should be noted that these results include several "worst-case" assumptions and therefore are expected to overstate actual power density levels from the proposed operation.

Recommended Mitigation Measures

It is recommended that the roof access ladder be kept locked, so that the AT&T antennas are not accessible to unauthorized persons. To prevent occupational exposures in excess of the FCC guidelines, it is recommended that appropriate RF safety training, to include review of personal monitor use and lockout/tagout procedures, be provided to all authorized personnel who have access to the structure, including employees and contractors of AT&T and of the property owner. No access within 20 feet directly in front of the AT&T antennas themselves, such as might occur during certain maintenance activities, should be allowed while the base station is in operation, unless other measures can be demonstrated to ensure that occupational protection requirements are met. It is recommended that boundary lines be marked on the roof with blue paint to identify areas within which exposure levels are calculated to exceed the public FCC limit, as shown in Figure 3. It is recommended that explanatory signs† be posted at the roof access ladder, on the antenna enclosure and at the antennas, readily visible from any angle of approach to persons who might need to work within that distance.

Conclusion

Based on the information and analysis above, it is the undersigned's professional opinion that operation of the base station proposed by AT&T Mobility at 46 Fifth Avenue in Redwood City, California, can comply with the prevailing standards for limiting human exposure to radio frequency energy and, therefore, need not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations. Locking the roof access ladder is recommended to establish compliance with public exposure limits; training authorized personnel, marking roof areas, and posting explanatory signs are recommended to establish compliance with occupational exposure limits.

---

* Located at least 50 feet away, based on photographs from Google Maps.

† Signs should comply with OET-65 color, symbol, and content recommendations. Contact information should be provided (*e.g.*, a telephone number) to arrange for access to restricted areas. The selection of language(s) is not an engineering matter, and guidance from the landlord, local zoning or health authority, or appropriate professionals may be required.

Authorship

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration Nos. E-13026 and M-20676, which expire on June 30, 2019. This work has been carried out under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.

William F. Hammett, P.E.
707/996-5200

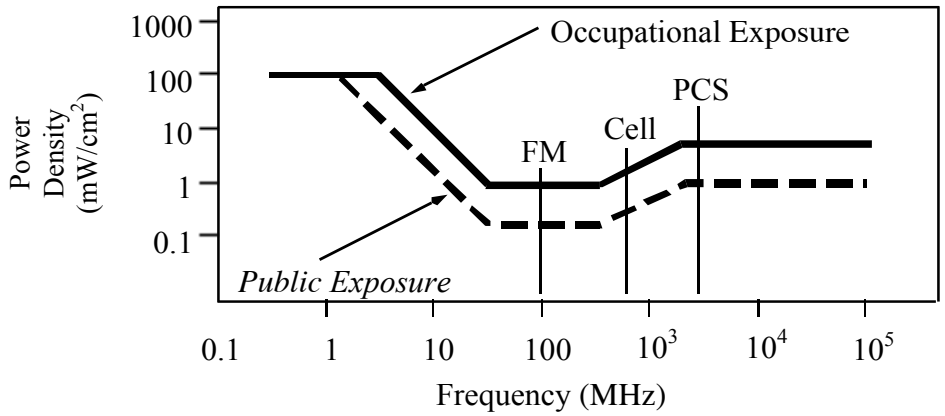
August 29, 2017

FCC Radio Frequency Protection Guide

The U.S. Congress required (1996 Telecom Act) the Federal Communications Commission ("FCC") to adopt a nationwide human exposure standard to ensure that its licensees do not, cumulatively, have a significant impact on the environment. The FCC adopted the limits from Report No. 86, "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," published in 1986 by the Congressionally chartered National Council on Radiation Protection and Measurements ("NCRP"). Separate limits apply for occupational and public exposure conditions, with the latter limits generally five times more restrictive. The more recent standard, developed by the Institute of Electrical and Electronics Engineers and approved as American National Standard ANSI/IEEE C95.1-2006, "Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," includes similar limits. These limits apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health.

As shown in the table and chart below, separate limits apply for occupational and public exposure conditions, with the latter limits (in *italics* and/or dashed) up to five times more restrictive:

Frequency	Electromagnetic Fields (f is frequency of emission in MHz)					
Applicable Range (MHz)	Electric Field Strength (V/m)		Magnetic Field Strength (A/m)		Equivalent Far-Field Power Density (mW/cm^2)	
0.3 – 1.34	614	*614*	1.63	*1.63*	100	*100*
1.34 – 3.0	614	*823.8/ f*	1.63	*2.19/ f*	100	*180/ f^2*
3.0 – 30	1842/ f	*823.8/ f*	4.89/ f	*2.19/ f*	900/ f^2	*180/ f^2*
30 – 300	61.4	*27.5*	0.163	*0.0729*	1.0	*0.2*
300 – 1,500	$3.54\sqrt{f}$	*$1.59\sqrt{f}$*	$\sqrt{f}/106$	*$\sqrt{f}/238$*	f/300	*f/1500*
1,500 – 100,000	137	*61.4*	0.364	*0.163*	5.0	*1.0*



Higher levels are allowed for short periods of time, such that total exposure levels averaged over six or thirty minutes, for occupational or public settings, respectively, do not exceed the limits, and higher levels also are allowed for exposures to small areas, such that the spatially averaged levels do not exceed the limits. However, neither of these allowances is incorporated in the conservative calculation formulas in the FCC Office of Engineering and Technology Bulletin No. 65 (August 1997) for projecting field levels. Hammett & Edison has built those formulas into a proprietary program that calculates, at each location on an arbitrary rectangular grid, the total expected power density from any number of individual radio sources. The program allows for the description of buildings and uneven terrain, if required to obtain more accurate projections.

RFR.CALC™ Calculation Methodology

Assessment by Calculation of Compliance with FCC Exposure Guidelines

The U.S. Congress required (1996 Telecom Act) the Federal Communications Commission ("FCC") to adopt a nationwide human exposure standard to ensure that its licensees do not, cumulatively, have a significant impact on the environment. The maximum permissible exposure limits adopted by the FCC (see Figure 1) apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health. Higher levels are allowed for short periods of time, such that total exposure levels averaged over six or thirty minutes, for occupational or public settings, respectively, do not exceed the limits.

Near Field.

Prediction methods have been developed for the near field zone of panel (directional) and whip (omnidirectional) antennas, typical at wireless telecommunications base stations, as well as dish (aperture) antennas, typically used for microwave links. The antenna patterns are not fully formed in the near field at these antennas, and the FCC Office of Engineering and Technology Bulletin No. 65 (August 1997) gives suitable formulas for calculating power density within such zones.

For a panel or whip antenna, power density $S = \frac{180}{\theta_{BW}} \times \frac{0.1 \times P_{net}}{\pi \times D \times h}$, in mW/cm^2,

and for an aperture antenna, maximum power density $S_{max} = \frac{0.1 \times 16 \times \eta \times P_{net}}{\pi \times h^2}$, in mW/cm^2,

where θ_{BW} = half-power beamwidth of the antenna, in degrees, and
P_{net} = net power input to the antenna, in watts,
D = distance from antenna, in meters,
h = aperture height of the antenna, in meters, and
η = aperture efficiency (unitless, typically 0.5-0.8).

The factor of 0.1 in the numerators converts to the desired units of power density.

Far Field.

OET-65 gives this formula for calculating power density in the far field of an individual RF source:

power density $S = \frac{2.56 \times 1.64 \times 100 \times RFF^2 \times ERP}{4 \times \pi \times D^2}$, in mW/cm^2,

where ERP = total ERP (all polarizations), in kilowatts,
RFF = relative field factor at the direction to the actual point of calculation, and
D = distance from the center of radiation to the point of calculation, in meters.

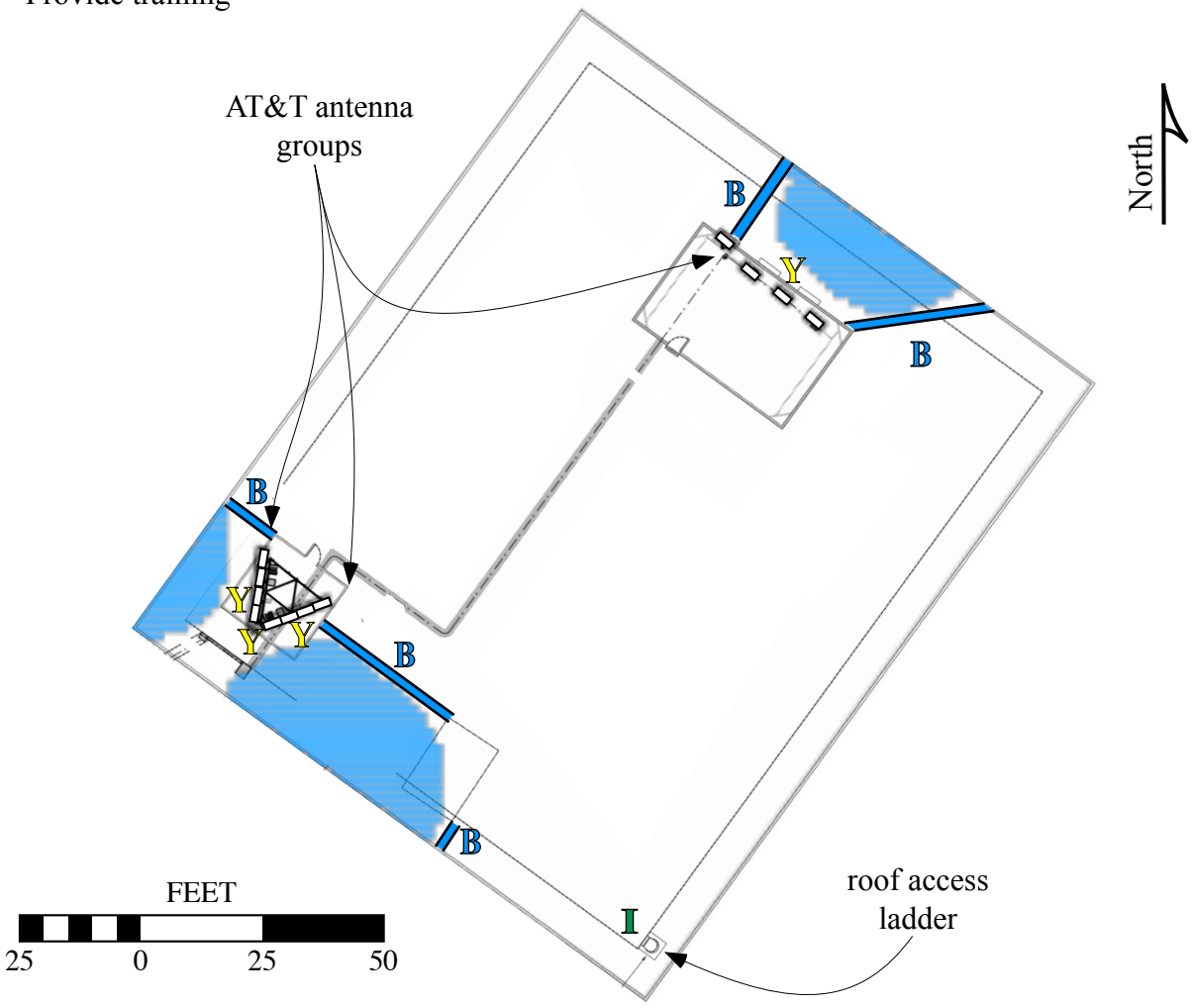
The factor of 2.56 accounts for the increase in power density due to ground reflection, assuming a reflection coefficient of 1.6 (1.6 x 1.6 = 2.56). The factor of 1.64 is the gain of a half-wave dipole relative to an isotropic radiator. The factor of 100 in the numerator converts to the desired units of power density. This formula has been built into a proprietary program that calculates, at each location on an arbitrary rectangular grid, the total expected power density from any number of individual radiation sources. The program also allows for the description of uneven terrain in the vicinity, to obtain more accurate projections.

AT&T Mobility • Base Station No. CCL03313
46 Fifth Avenue • Redwood City, California

Calculated RF Exposure Levels on Roof

Recommended Mitigation Measures

- Lock roof access ladder
- Mark boundaries as shown
- Post explanatory signs
- Provide training



Notes: See text.
Base drawing from Delta Groups Engineering, Inc., dated January 17, 2017.
Calculations performed according to OET Bulletin 65, August 1997.

Legend:	Less Than Public	Exceeds Public	Exceeds Occupational	Exceeds 10x Occupational
Shaded color	blank			
Boundary marking	N/A			
Sign type	I - Green INFORMATION	B - Blue NOTICE	Y - Yellow CAUTION	O - Orange WARNING

HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
BROADCAST & WIRELESS

WILLIAM F. HAMMETT, P.E.
RAJAT MATHUR, P.E.
ROBERT P. SMITH, JR.
NEIL J. OLIJ, P.E.
AMELIA NGAI
MANAS REDDY

ROBERT L. HAMMETT, P.E.
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DANE E. ERICKSEN, P.E.
ANDREA L. BRIGHT, P.E.
CONSULTANTS

BY EMAIL HTRIAS@DELTAGROUPS.COM

October 11, 2017

Mr. Harold Trias
Delta Groups Engineering, Inc.
5635 W. Las Positas Blvd, Suite 403
Pleasanton, California 94588

Dear Harold:

Thanks for passing along the several questions from Planner Olivia Boo with the County of San Mateo regarding our RF exposure study, dated August 29, 2017, evaluating the AT&T Mobility base station (Site No. CCL03313) proposed to be located at 46 Fifth Avenue in Redwood City. We endeavor here to address each question in turn:

1. Is there a minimum or maximum distance studied from a proposed cellular facility location? The County does not require an RF report beyond the subject site of a proposed new or amended facility, however, in effort for County staff to respond to the appellant inquiry, can you address whether AT&T engineers aware of any such FCC regulations that require RF reports to search surrounding areas within a specific distance?

No, there is no specification in the FCC Rules for a minimum or maximum distance that should be considered for an RF compliance study. The basic requirement is that wireless carriers must, as FCC licensees, comply at all times and in all locations with the FCC's exposure guidelines limiting human exposure. Presumably, calculations and/or measurements would be performed as needed to determine that the FCC's maximum permissible exposure limits are met at every accessible location.

2. If there is a distance limit, I would need a report from the RF engineer that states how it complies.

There is no specific distance limit (see above). Nevertheless, our practice at Hammett & Edison is to perform calculations of exposure levels out to 1,000 feet from the site being studied. For this AT&T proposal, we had found that calculated exposure levels anywhere at ground within that area from the proposed operation would be well below the FCC limits.

e-mail: **bhammett@h-e.com**
Delivery: **470 Third Street West • Sonoma, California 95476**
Telephone: **707/996-5200 San Francisco • 707/996-5280 Fax • 202/396-5200 D.C.**

3. If you can ask your RF to expand the study, stretch the study area, and provide a report that shows the cumulative study still complies (or if it doesn't). Include a study at each of the 5 residential properties.

There is no need to expand the study, since it already covers a 1,000-foot radius. The five residential properties were already evaluated. Here are the specific exposure levels at each, calculated at a second-floor elevation:

Residential Address	Approximate Distance	Maximum Calculated Exposure Level Power Density	vs. FCC Limit
47 Amherst Avenue	30 ft	0.012 mW/cm^2	1.7%
61 Amherst Avenue	35	0.026	3.5
63 Amherst Avenue	60	0.14	18
25 Amherst Avenue	100	0.16	20
25 Fifth Avenue	200	0.039	4.7

It is noted that these results are, as they should be, all less than the 60% maximum level stated in the report.

I read the Hammett & Edison report and I would like to ask for clarification on page 2, Site and Facility Description (section). The last sentence states "There are reported no other wireless telecommunication base stations at the site or nearby". Can Hammett & Edison clarify what constitutes "nearby". There is an existing Sprint facility 0.2 miles, located at 195 5th Avenue.

We would consider another wireless facility to be "nearby" if it is close enough to substantially impact RF exposure levels from the proposed facility in terms of its compliance with the prevailing standard. The Sprint tower located on 5th Avenue is, at a distance of about 880 feet, too far away to have such an impact.

I hope that this discussion is sufficient to address the planner's concerns. Please let us know if any further information is needed at this time.

Sincerely yours,

William F. Hammett, P.E.

ms