

Memorandum

To: Anne Hersch, City of Albany
From: Christy O'Berry
Reviewed by: Jonathan L. Kramer
Date: January 4, 2012
RE: PA08-038 (AT&T Mobility)
1035 San Pablo Ave

At the direction of the City, I have reviewed the AT&T Mobility ("AT&T") application to install a new wireless telecommunications facility on the roof of the commercial building located at 1035 San Pablo Ave. Sprint is also located at this site, and on the same roof.

Project Description

AT&T proposes to install 9 new panel antennas, each approximately 4' in height, on the roof of the building. The antennas will be capable of supporting AT&T service in the Cellular (850 MHz), LTE (700 MHz), AWS (1,700 MHz), and PCS (1,900 MHz) bands of service. The proposed antennas are shown in 3 sectors of antennas with 3 antennas per sector oriented towards 70° TN, 165° TN, and 345° TN.

AT&T proposes to center mount the antennas at 43'-3" above ground level inside a new RF transparent fiberglass-reinforced plastic ("FRP") pop-up enclosure and a new FRP screen attached to the north face of the existing penthouse.

The proposed FRP pop-up enclosure will camouflage the antennas in Sectors A (70° TN) and C (165° TN) from public view. The proposed pop-up will be 10' by 5'-6" and will extend approximately 10' above the roof line on the south side of the building.

The proposed FRP enclosure at the north face of the existing penthouse will be approximately 2' by 10' and will camouflage Sector B (345° TN) from view. The new pop-up and new screen walls are proposed to be architecturally integrated into the building by texturing and painting to match the existing building.

AT&T proposes to paint new RF safe zone 6" striping in front of Sectors A and B that will extend 2' in front of the panel antennas in those sectors.

AT&T also proposes to install new base telecommunications station ("BTS") equipment on a new raised steel platform located behind the proposed Sector A & C antenna pop-up on the center of the roof. AT&T proposes to install 5 new outdoor equipment cabinets with some of the cabinets indicated as future cabinets, a new electrical panel, a new telephone interface ("Telco") cabinet, and a new GPS antenna on the BTS platform. AT&T proposes to mount the



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new GPS antenna to a new equipment cabinet. Depending on its location, the GPS antenna may be visible to the public from the ground level.

The GPS antenna facilitates communication between AT&T wireless facilities through synchronization and timing of wireless signals in order to seamlessly pass the telecommunications between wireless facilities.

The BTS equipment will be partially screened by an existing 3'-6" parapet wall that surrounds the building roof. It is unclear from the site plans if AT&T proposes to install any mechanical or other screening around the BTS equipment.

The new and existing panel antennas are to be connected to the BTS equipment through new cable trays and conduit placed on the roof.

AT&T does not indicate that it will install any tower mounted amplifiers, remote radio units, DC surge suppressors or other panel antenna equipment.

Alternative Site Analysis

AT&T has submitted an alternative site analysis that asserts that they explored 9 alternative sites, not including the referenced site. I have *not* independently verified the data provided in AT&T's alternative site analysis. Therefore, the analysis provided below is based solely on information provided by AT&T.

Of the 9 sites selected by AT&T as alternatives:

1. AT&T was not able to negotiate a lease with the building owner for 3 of the sites;
2. Three sites had inadequate elevation to meet AT&T's coverage objective;
3. One site was disfavored based on Albany's wireless code;
4. One site was too close to a future search ring; and
5. One site did not meet AT&T's unidentified coverage objective.

Based on AT&T's analysis of the alternative sites, AT&T determined that 1035 San Pablo was the least intrusive means to fill AT&T's coverage objectives for the City of Albany.

The alternative site analysis prepared by AT&T leaves open the opportunity for AT&T to review some of the sites it rejected, however the proposed site (as an existing Sprint wireless facility being expanded to permit collocation with AT&T rather than newly developed) is a logical site.

Project Purpose

AT&T discloses that the dominant purpose of this project is to close a significant gap in AT&T's 3G (Cellular 850 MHz) service in southeast Albany. Its computerized coverage maps, below, show existing coverage of what they call "Outdoors Coverage" (its lowest level of asserted coverage).

The project documentation submitted indicates that AT&T is also adding service in the PCS, AWS and LTE bands to the site, but AT&T has not submitted coverage maps for those bands so I have no basis to opine regarding its existing coverage on those bands, if any.

Figure I below, depicts AT&T's computer projection assertions of the existing coverage levels in only the Cellular band for the area surrounding the proposed site. The coverage map indicates that AT&T currently has "outdoor" signal level coverage, as AT&T defines that term, to the areas surrounding the proposed site.

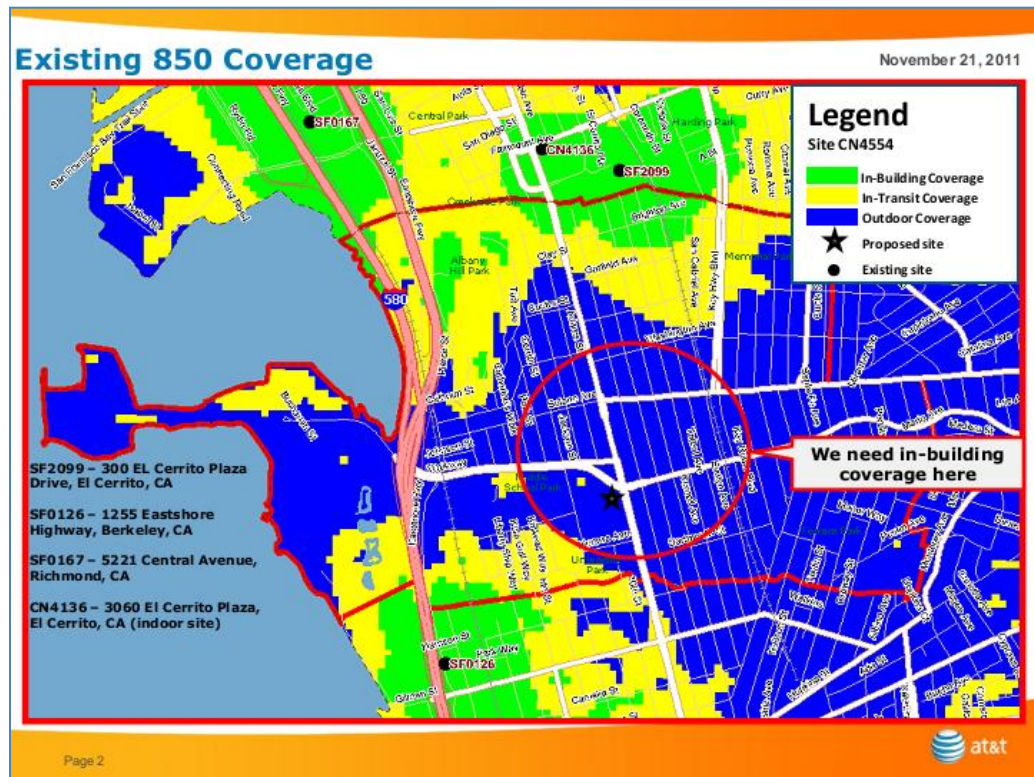


Figure I: Existing AT&T signal coverage in the Cellular band without the proposed site, all as asserted by AT&T. (Source: AT&T Mobility).

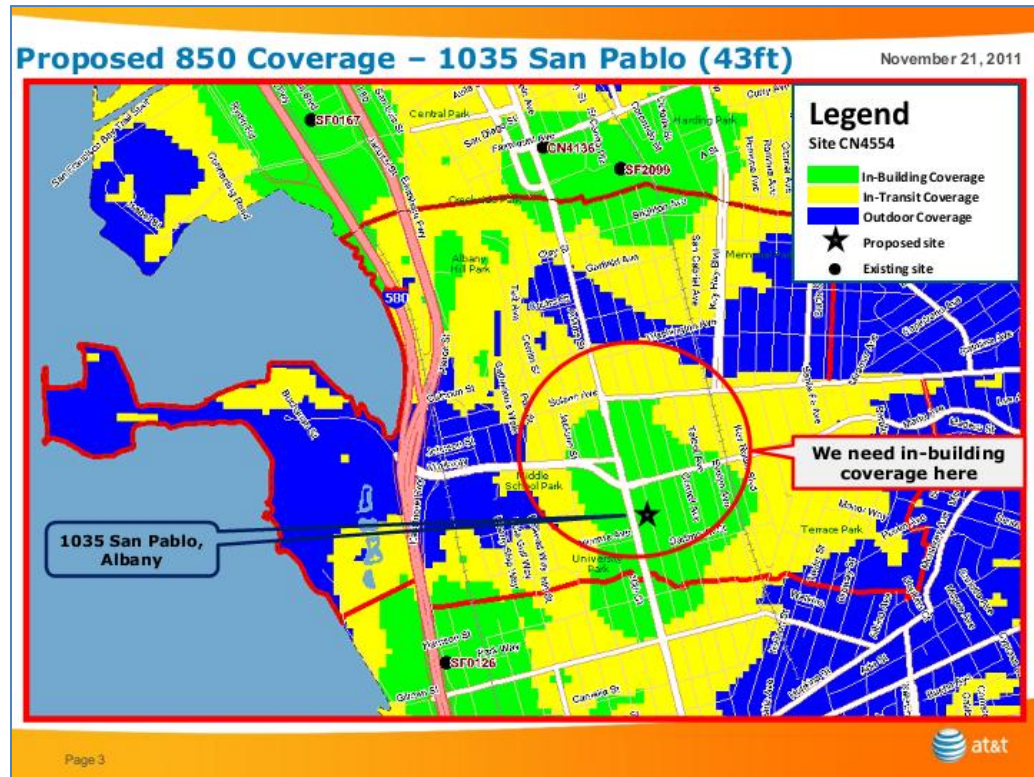


Figure 2: Proposed AT&T signal coverage in the Cellular band with the proposed site operational, all as asserted by AT&T. (Source: AT&T Mobility).

Figure 2 above, indicates that the proposed site will provide “in-building” signal coverage, as AT&T defines that term, to the area surrounding the site in the Cellular band of service, and “in-transit” (mobile) coverage beyond the “in-building” coverage area.

The coverage maps and project documentation support the proposition that AT&T is attempting to improve its service in the Cellular band to southeast Albany and indicates that AT&T has a lower grade of existing coverage in its Cellular band of service this area, whatever that grade may be.

Physical Design Considerations

Based on the future equipment proposed by AT&T in the design plans, AT&T is seeking permission to install more equipment than is necessary for the currently proposed facility. To ensure that all future elements are properly evaluated at the time they are actually necessary, I recommend that the City require AT&T to strike all future elements from the project application and the permit reflect this change as a condition of permit approval.

The GPS antenna as proposed in the project plans may be visible above the parapet wall and potentially visible from the ground level. Although a GPS antenna is not a requirement of FCC regulations, a GPS antenna is a necessary technical element for proper operation of the wireless telecommunications facility. However, a visible GPS antenna is both technically unnecessary and visually unappealing. The GPS antenna at this site can be mounted in such a manner that it is not visible above the roof level.

To ensure that no portion of the BTS or GPS is visible to the public, I recommend that the City add as a condition of approval the following:

- I. No portion of the project, including without limitation the equipment cabinets; the mounting platforms, rails and racks; the GPS antenna; cables; work lights; and all other elements of the project shall protrude above the height of the parapet wall.

RF Safety Considerations

The FCC completely occupies the field as to setting RF safety standards in the United States. The City is not permitted to set its own standards regardless of whether higher, lower, or even the same as the FCC's standards. The Commission does, however, permit the City to determine whether a proposed wireless project meets the required FCC 47 CFR § 1.1307 et seq. (the "FCC rules") and FCC Office of Engineering and Technology Bulletin 65 ("OET 65") RF safety directives.

Under the FCC rules, certain types of wireless projects are deemed to be "categorically excluded," thus not subject to further RF evaluation under the rules due to identified factors including: whether the antenna supporting structure is not a building or shared to perform some other function, and the lowest portion of the transmitting antenna is at least 10 meters above ground.

The proposed project does **not** qualify for categorical exclusion under the FCC rules because it is to be mounted on an occupied building. An analysis of the RF emissions is necessary to determine whether a project design will comply with the FCC rules.

AT&T has submitted a third party RF emission report from Hammett & Edison, Inc. dated June 27, 2011 (the "Hammett & Edison Report"). The Hammett & Edison Report has sufficient emissions data to perform an independent analysis of the proposed emissions. Based on the frequency and power to be emitted from AT&T' antennas, a controlled access zone of 42 feet will extend outward from each transmitting antenna at the same level as the antennas.

The existence of a controlled zone does not mean that the project violates the FCC rules; rather, it merely requires that the wireless carrier take affirmative steps to restrict access to the controlled zones. In this case, the controlled zone for Sector C will be in inaccessible airspace at the same level as the antennas. However, the controlled zones in front of Sectors A and B will be accessible by the General Population (i.e. roofers, HVAC operators, building maintenance staff, etc.).

To comply with the existing FCC rules and FCC OET Bulletin 65 directives regarding RF safety, I recommend the City condition the project as follows:

1. All roof access doors shall remain locked at all times except during active maintenance by AT&T or authorized building personnel; and
2. AT&T shall place and maintain permanent RF Notice signs in English and Spanish on the roof access doors. The signage must be a minimum of 8" wide by 12" high, compliant with FCC OET Bulletin 65 or ANSI C95.2 for color, symbol, and content conventions. All such signage shall at all times provide a working local or toll-free telephone number to its network operations center, and such telephone number shall be able to reach a live person who can exert transmitter power-down control over this site as required by the FCC. The location of the sign must be visible to persons immediately prior to entering the roof area; and
3. AT&T shall place and maintain a permanent RF Notice sign in English and Spanish on the BTS platform. The signage must be a minimum of 8" wide by 12" high, compliant with FCC OET Bulletin 65 or ANSI C95.2 for color, symbol, and content conventions. All such signage shall at all times provide a working local or toll-free telephone number to its network operations center, and such telephone number shall be able to reach a live person who can exert transmitter power-down control over this site as required by the FCC. The location of the sign must be visible to persons no less than 3 feet from the BTS platform; and
4. All access to the proposed pop-up and FRP screen walls shall be secured by AT&T at all times, except during active maintenance by AT&T; and

5. AT&T shall place and maintain a permanent RF Caution sign in English and Spanish at the access point to the interior of each pop-up enclosure. The signage must be a minimum of 8" wide by 12" high, compliant with FCC OET Bulletin 65 or ANSI C95.2 for color, symbol, and content conventions. All such signage shall at all times provide a working local or toll-free telephone number to its network operations center, and such telephone number shall be able to reach a live person who can exert transmitter power-down control over this site as required by the FCC. The location of the sign must be visible immediately prior to entering the pop-up; and
6. AT&T shall install and at all times maintain in good condition alternating bright color UV stabilized floor stripes in front of Sector A extending from the pop-up in front of Sector A to the end of the controlled zone, at least 42' towards the eastern wall of the building; and
7. Consistent with AT&T's proposed RF safety zone for Sector B, AT&T shall install and at all times maintain in good condition alternating bright color UV stabilized floor stripes in front of Sector B extending from the FRP screen walls to the parapet wall; and
8. If members of the General Population are required to be in the controlled zone in front of Sectors A or B, denoted by the roof stripping other than to transit the controlled zone area (i.e., to perform maintenance or repairs on the air conditioning units or roof area, etc. within the controlled zone), AT&T shall coordinate signal transmissions from the that Sector during the entire work period to ensure compliance with the FCC rules.

If AT&T agrees to the conditions just stated, there will be no RF emissions basis to deny or further condition the project.

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