



SAN FRANCISCO PLANNING DEPARTMENT

Executive Summary Conditional Use Authorization to Allow a Wireless Telecommunications Services (WTS) Facility

HEARING DATE: JULY 8, 2010

Date: July 1, 2010
Case No.: **2010.0042CP**
Project Address: **100 Armory Drive**
Current Zoning: P (Public Use) District
OS (Open Space) Height and Bulk District
Block/Lot: 7281/004
Project Sponsor: Margie Detiege on the behalf of Verizon Wireless
2000 Crow Canyon Place, Suite 400
San Ramon, CA 94583
Staff Contact: Adrian C. Putra – (415) 575-9079
adrian.putra@sfgov.org
Recommendation: **Approve the Conditional Use Authorization with Conditions and Approve the Coastal Zone Permit.**

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PROJECT DESCRIPTION

The proposal is to modify the existing Verizon Wireless WTS facility by adding three panel antennas at the top of a 50' tall Verizon Wireless monopole that contains three panel mounted antennas. The proposed antennas would be powered by existing equipment cabinets that are enclosed in an approximately 11'-6" by 20' equipment shelter. Verizon Wireless' monopole and equipment shelter are located east of the main armory building situated at the center of the site. The purpose for the new antennas is to enhance the speed and data streaming capabilities of Verizon's existing WTS facility and will not impact the existing voice coverage. Each antenna measures approximately 4' long by 1' wide by 7" thick. The Project includes a local coastal zone permit.

SITE DESCRIPTION AND PRESENT USE

The project site is located at the end of Armory Drive which is a private street located west of Skyline Boulevard between Sloat Boulevard and Great Highway, and south of the San Francisco Zoo. The project site is occupied by the National Guard and contains three buildings, and three WTS facilities (Verizon Wireless, AT&T, and Sprint-Nextel) that each have their antennas mounted onto their own individual monopole. The site is located on a heavily wooded hill above Skyline Boulevard.

SURROUNDING PROPERTIES & NEIGHBORHOOD

There are no residential uses within a 500-foot radius of the site. Lake Merced and Harding Park Golf Course are located east of the site, the San Francisco Zoo is located north of the site, and City and State owned property is located west and south of the site. Heavily wooded open space and wide arterial streets characterize the area.

ENVIRONMENTAL REVIEW STATUS

The San Francisco Planning Department (hereinafter "Department") determined the application to be categorically exempt from the environmental review process (CEQA) pursuant to exemption Classes 1, 3 and 11 of Title 14 of the California Administrative Code.

HEARING NOTIFICATION REQUIREMENTS

TYPE	REQUIRED PERIOD	REQUIRED NOTICE DATE	ACTUAL NOTICE DATE	ACTUAL PERIOD
Classified News Ad	20 days	June 18, 2010	June 18, 2010	20 days
Posted Notice	20 days	June 18, 2010	June 18, 2010	20 days
Mailed Notice	20 days	June 18, 2010	June 18, 2010	20 days

PUBLIC COMMENT

To date the Department has not received any public comment regarding the project. Additionally, a Community Outreach Meeting was conducted for the proposed project. The meeting was held at 6:00 PM on Tuesday, June 1, 2010, at the Janet Pomeroy Center at 207 Skyline Boulevard, San Francisco, CA 94132. According to the Project Sponsor no neighbors attended the meeting.

ISSUES AND OTHER CONSIDERATIONS

- The proposal will have minimal visual impacts to the surrounding neighborhood since the project site has ample landscaping and open space, and is minimally visible from street view.
- The Department is not aware of opposition to the project.

REQUIRED COMMISSION ACTION

Pursuant to Planning Code Section 234.2(a) and 303, a Conditional Use authorization is required to modify an existing WTS facility by adding three panel antennas to an existing monopole with related equipment cabinets located at grade in the P District, and OS Height and Bulk District.

The Commission must approve the Coastal Zone Permit, pursuant to Planning Code Section 330.1, in order to modify an existing WTS facility by adding three panel antennas to an existing monopole with related equipment cabinets located at grade in the Coastal Zone Permit Area.

BASIS FOR RECOMMENDATION

The Department believes this project is necessary and/or desirable under Section 303 of the Planning Code for the following reasons:

- The Project complies with the applicable requirements of the Planning Code Code, General Plan Policies, and Western Shoreline Area Plan.
- The project meets the criteria established under the 1996 Wireless Telecommunications Services Facilities Siting Guidelines, and it is consistent with the objectives and policies of the Commerce and Industry Element, the Community Safety Element, the Residence Element, and the Urban Design Element of the General Plan.
- The Project Site is a Location Preference Number 1, as it is a preferred location as a publicly used structure (USA National Guard facility).
- The project is desirable as it will improve upon the existing Verizon Wireless communications network.

RECOMMENDATION:	Approval the Conditional Use Authorization with Conditions and Approve the Coastal Zone Permit
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Exhibit Checklist

- | | |
|---|--|
| <input checked="" type="checkbox"/> Executive Summary | <input checked="" type="checkbox"/> Project sponsor submittal |
| <input checked="" type="checkbox"/> Draft Motion | Drawings: <u>Existing Conditions</u> |
| <input type="checkbox"/> Environmental Determination | <input checked="" type="checkbox"/> Check for legibility |
| <input checked="" type="checkbox"/> Zoning District Map | Drawings: <u>Proposed Project</u> |
| <input type="checkbox"/> Height & Bulk Map | <input checked="" type="checkbox"/> Check for legibility |
| <input checked="" type="checkbox"/> Parcel Map | <input type="checkbox"/> Public Correspondence |
| <input type="checkbox"/> Sanborn Map | <input checked="" type="checkbox"/> Coverage Maps |
| <input checked="" type="checkbox"/> Aerial Photo | <input checked="" type="checkbox"/> RF Report and DPH Evaluation |
| <input checked="" type="checkbox"/> Context Photos | <input checked="" type="checkbox"/> Notice of Community Outreach Meeting |
| <input checked="" type="checkbox"/> Site Photos | |

Exhibits above marked with an "X" are included in this packet

Planner's Initials

ACP



SAN FRANCISCO PLANNING DEPARTMENT

Subject to: (Select only if applicable)

- Inclusionary Housing (Sec. 315)
- Jobs Housing Linkage Program (Sec. 313)
- Downtown Park Fee (Sec. 139)
- First Source Hiring (Admin. Code)
- Child Care Requirement (Sec. 314)
- Other

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Planning Commission Motion

HEARING DATE: JULY 8, 2010

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ADOPTING FINDINGS RELATING TO THE APPROVAL OF A CONDITIONAL USE AUTHORIZATION UNDER PLANNING CODE SECTIONS 234.2(a) AND 303 TO MODIFY AN EXISTING WIRELESS TELECOMMUNICATIONS SERVICES (WTS) FACILITY BY ADDING THREE PANEL ANTENNAS TO AN EXISTING 50-FEET TALL MONOPOLE WITH RELATED EQUIPMENT CABINETS LOCATED AT GRADE, AS PART OF THE VERIZON WIRELESS TELECOMMUNICATIONS NETWORK IN A P (PUBLIC USE) ZONING DISTRICT, COASTAL ZONE PERMIT AREA, AND A OS (OPEN SPACE) HEIGHT AND BULK DISTRICT.

PREAMBLE

On January 21, 2010, Margie Detiege on the behalf of Verizon (hereinafter "project sponsor"), made an application (hereinafter "application"), for Conditional Use authorization on the property at **100 Armory Drive, Lot 004 in Assessor's Block 7281**, (hereinafter "project site") to modify an existing wireless telecommunications services (WTS) facility by adding three panel antennas to an existing 50-foot tall monopole with related equipment cabinets located at grade, as part of the Verizon wireless telecommunications network in a P (Public Use) Zoning District, Local Coastal Zone Permit Area, and a OS (Open Space) Height and Bulk District, in general conformity with plans filed with the Application and labeled "EXHIBIT B" (hereinafter "Project").

The San Francisco Planning Department (hereinafter "Department") determined the application to be categorically exempt from the environmental review process (CEQA) pursuant to exemption Classes 1, 3 and 11 of Title 14 of the California Administrative Code.

On July 8, 2010, the Commission conducted a duly noticed public hearing at a regularly scheduled meeting on Conditional Use Application No. 2009.1002CP.

The Commission has heard and considered the testimony presented to it at the public hearing and has further considered written materials and oral testimony presented on behalf of the applicant, Department staff, and other interested parties.

MOVED, that the Commission hereby authorizes the Conditional Use requested in Application No. 2010.0042CP, subject to the conditions contained in "EXHIBIT A" of this motion, based on the following findings:

FINDINGS

Having reviewed the materials identified in the preamble above, and having heard all testimony and arguments, this Commission finds, concludes, and determines as follows:

1. The above recitals are accurate and constitute findings of this Commission.
2. **Site Description and Present Use.** The project site is located at the end of Armory Drive which is a private street located west of Skyline Boulevard between Sloat Boulevard and Great Highway, and south of the San Francisco Zoo. The project site is occupied by the National Guard and contains three buildings, and three WTS facilities (Verizon Wireless, AT&T, and Sprint-Nextel) that each have their antennas mounted onto their own individual monopole. The site is located on a heavily wooded hill above Skyline Boulevard.
3. **Surrounding Properties and Neighborhood.** There are no residential uses within a 500-foot radius of the site. Lake Merced and Harding Park Golf Course are located east of the site, the San Francisco Zoo is located north of the site, and City and State owned property is located west and south of the site. Heavily wooded open space and wide arterial streets characterize the area.
4. **Proposal.** The proposal is to modify the existing Verizon Wireless WTS facility by adding three panel antennas at the top of a 50' tall Verizon Wireless monopole that contains three panel mounted antennas. The proposed antennas would be powered by existing equipment cabinets that are enclosed in an approximately 11'-6" by 20' equipment shelter. Verizon Wireless' monopole and equipment shelter are located east of the main armory building situated at the center of the site. The purpose for the new antennas is to enhance the speed and data streaming capabilities of Verizon's existing WTS facility and will not impact the existing voice coverage. Each antenna measures approximately 4' long by 1' wide by 7" thick.

5. **Public Comment.** The Department has not received public comment since the filing of the application as of the date of this motion.
6. **Past History and Actions.** The Planning Commission held a duly advertised public hearing on August 15, 1996 to consider adoption of guidelines for the siting of WTS facilities in the City which would include standard conditions of approval for wireless communications facilities which are regulated by the FCC and required to meet the health and safety standards.

The Planning Commission, by Resolution No. 14182, adopted the proposed WTS Facilities Siting Guidelines on August 15, 1996. The sample conditions of approval presented in the Guidelines form the basis for the development of conditions of approval for this Application and Motion.

On June 13, 1996, the Commission conducted a duly noticed public hearing at a regularly scheduled meeting on the application for a Conditional Use pursuant to Planning Code Sections 234.2(a) to install a wireless transmission facility consisting of 12 antennas attached to a 40 foot tall monopole and a base transceiver station on the grounds of the California National Guard Armory at 100 Armory Drive, as part of the Cellular One (now "AT&T") telecommunications network.

On March 20, 1997, the Commission conducted a duly noticed public hearing at a regularly scheduled meeting on the application for a Conditional Use pursuant to Planning Code Sections 234.2(a) to install a wireless transmission facility consisting of three (3) antennas attached on the top of a proposed 50 foot tall monopole and a base transceiver station in a fenced area at the base of the monopole on the grounds of the California National Guard Armory at 100 Armory Drive, as part of the Sprint-Nextel telecommunications network.

On September 15, 2005, the Commission conducted a duly noticed public hearing at a regularly scheduled meeting on the application for a Conditional Use pursuant to Planning Code Sections 234.2(a) and 303 to install a wireless telecommunications facility consisting of three (3) panel antennas on a monopole and related equipment cabinets within a shelter at grade level, as part of Verizon Wireless' telecommunications network on the property at 100 Armory Drive within a P (Public Use) District and an OS (Open Space) Height and Bulk District.

On July 1, 2010, the Commission conducted a duly noticed public hearing at a regularly scheduled meeting on the application for a Conditional Use pursuant to Planning Code Section 234.2(a) to establish a new wireless telecommunications services (WTS) facility consisting of six panel antennas mounted on a 53-foot tall monopole and related equipment cabinets located at grade, as part of the T-Mobile wireless telecommunications network.

7. **P (Public Use) Districts – Conditional Use Required.** In addition to the use districts otherwise established by this Code, there shall also be in the City a Public Use District herein referred to as a "P District," to apply to land that is owned by a governmental agency and in some form of public use, including open space. The purpose of designating such land as a P District on the Zoning Map is to relate the Zoning Map to actual land use and to the Master Plan with respect to such land. Any lot in a P District may be occupied by a principal use listed in Section 234.1, or by

a conditional use listed in Section 234.2, subject to applicable regulations of this Code including the limitations of Section 290 for OS (Open Space) Districts; provided, however, that on any lot in a P District, which lot is within ¼ mile of the nearest NC-1 or Individual Area Neighborhood Commercial District as described in Article 7 of this Code, no accessory nonpublic use shall be permitted, unless such use or feature complies with the controls which are applicable in any NC-1 or Individual Area Neighborhood Commercial District or Restricted Use Subdistrict located within ¼ mile of the lot, excluding the provisions of zoning category .83, as defined in Section 790.80 of Article 7. Per section 234.2(a) of the Planning Code, a wireless telecommunications facility is permitted as a conditional use.

8. **Coastal Zone Permit.** The project requires a Coastal Zone Permit pursuant to Planning Code Section 330 because the site is within San Francisco's Coastal Zone. Therefore, findings of consistency with the Western Shoreline Element of the General Plan are required.
9. **Location Preference.** The WTS Facilities Siting Guidelines identify different types of buildings for the siting of wireless telecommunications facilities, with Location Preference 1 being the most desirable location and Location Preference 7 being the least desirable location. Under the Guidelines, the Project is a Location Preference Number 1, as it is a preferred location for a publicly used structure (USA National Guard facility).
10. **Radio Waves Range.** According to the Project Sponsor, the proposed wireless network will transmit and receive calls by radio waves operating in the 806 – 896 and 1850 – 1990 Megahertz (MHz) bands. These bands are regulated by the Federal Communications Commission (FCC) and which must comply with the FCC adopted health and safety standards for electromagnetic radiation and radio frequency radiation.
11. **Radiofrequency (RF) Emissions:** The Project Sponsor retained Hammett & Edison, Inc., a radio engineering consulting firm, to prepare a report describing the expected RF emissions from the proposed facility. The Department of Public Health reviewed the report and determined that the proposed facility complies with the standards set forth in the Guidelines. Once the installation is constructed and operational, a second report documenting the actual RF emissions will be prepared and evaluated for compliance.
12. **Department of Public Health Review and Approval.** The existing RF levels at the ground level of the site were less than 1% of the FCC public exposure limit. Also located at this site are antennas operated by AT&T and Sprint Nextel. There were observed no other antennas within 100 feet of this site. Verizon proposes to add three Andrew Model BXA70063/4CF antennas. The estimated ambient RF field from the proposed Verizon transmitters at ground level is calculated to be 0.0031 mW/square centimeter, which is 0.56% of the FCC public exposure limit. The three dimensional perimeter of RF levels equal to the public exposure limit is calculated to extend 39 feet and does not reach any publicly accessible areas. Warning signs must be posted at the roof access door, barricades and antennas in English, Spanish and Chinese. Workers should not have access to directly in front of the antennas while they are in operation.

13. **Maintenance Schedule.** According to the Project Sponsor maintenance visits will be required by cell technician only once a month.
14. **Community Outreach.** A Community Outreach Meeting was conducted for the proposed project. The meeting was held at 6:00 PM on Tuesday, June 1, 2010, at the Janet Pomeroy Center at 207 Skyline Boulevard, San Francisco, CA 94132. According to the Project Sponsor no neighbors attended the meeting.
15. **Five-year plan:** Verizon submitted its latest five-year plan, as required, on April, 2010.
16. **Planning Code Compliance.** The Commission finds that the Project is consistent with the relevant provisions of the amendments to Planning Code in the following manner:
 - A. **Use.** A WTS facility is considered a public utility under Planning Code Section 209.6(b), which requires Conditional Use authorization in the P District under Planning Code Section 234.2(a).
 - B. **Height.** Per Planning Code Section 260(b)2(I), radio antennae for transmission, reception, or relay of radio, television or other electronic signals, where permitted as principal or conditional uses are exempt from height limits.
17. **Planning Code Section 303** establishes criteria for the Planning Commission to consider when reviewing applications for Conditional Use approval. On balance, the project does comply with said criteria in that:
 - A. The proposed new uses and building, at the size and intensity contemplated and at the proposed location, will provide a development that is necessary or desirable, and compatible with, the neighborhood or the community.

The proposed project will be generally desirable and compatible with the surrounding neighborhood because the project will not conflict with the existing uses of the property and will be of such size and nature to be compatible with the public use nature the vicinity and immediate area. The approval of this authorization has been found, first and foremost, to insure public safety, and insure that the placement of antennas and related support and protection features are so located, designed, and treated architecturally to minimize their visibility from public places, to avoid intrusion into public vistas, avoid disruption of the architectural design integrity of building and insure harmony with neighborhood character. The proposed project will also improve upon necessary facilities for emergency transmission and improved communication for the neighborhood, community and the region.

- B. The proposed project will not be detrimental to the health, safety, convenience or general welfare of persons residing or working in the vicinity. There are no features of the project that could be detrimental to the health, safety or convenience of those residing or working the area, in that:

- i Nature of proposed site, including its size and shape, and the proposed size, shape and arrangement of structures;

The proposed project must comply with all applicable Federal and State regulations to safeguard the health, safety and to ensure that persons residing or working in the vicinity will not be affected, and prevent harm to other personal property.

An evaluation of potential health effects from RF radiation, conducted by the Department of Public Health, has concluded that the proposed wireless transmission facilities will have no adverse health effects if operated in compliance with the FCC-adopted health and safety standards. The Department has received information that the proposed wireless system must be operated so as not to interfere with radio or television reception in order to comply with the provisions of its license under the FCC.

The Department is developing a database of all such wireless communications facilities operating or proposed for operation in the City and County of San Francisco. All applicants are now required to submit information on the location and nature of all existing and approved wireless transmission facilities operated by the Project Sponsor. The goal of this effort is to foster public information as to the location of these facilities.

- ii The accessibility and traffic patterns for persons and vehicles, the type and volume of such traffic, and the adequacy of proposed off-street parking and loading;

No increase in traffic volume is anticipated with the proposal to add three additional antennas to an existing WTS facility. According to the Project Sponsor the WTS facility would operate 24 hours per day, seven days per week as an unmanned facility, which will only require access by company representatives once a month for maintenance.

- iii The safeguards afforded to prevent noxious or offensive emissions such as noise, glare, dust and odor;

While some noise and dust may result from the erection of the antennas and transceiver equipment, once the facility is built, impacts with regards to the above will likely be insignificant.

- iv Treatment given, as appropriate, to such aspects as landscaping, screening, open spaces, parking and loading areas, service areas, lighting and signs;

The subject site has ample landscaping and open space. The installation of antennas onto a monopole will not affect the existing landscaping.

- C. That the use as proposed will comply with the applicable provisions of the Planning Code and will not adversely affect the General Plan.

The Project complies with all relevant requirements and standards of the Planning Code and is consistent with objectives and policies of the General Plan as detailed below.

18. **General Plan Compliance.** The Project is, on balance, consistent with the following Objectives and Policies of the General Plan

COMMERCE AND INDUSTRY ELEMENT

Objectives and Policies

OBJECTIVE 1:

MANAGE ECONOMIC GROWTH AND CHANGE TO ENSURE ENHANCEMENT OF THE TOTAL CITY LIVING AND WORKING ENVIRONMENT.

Policy 1:

Encourage development, which provides substantial net benefits and minimizes undesirable consequences. Discourage development, which has substantial undesirable consequences that cannot be mitigated.

Policy 2:

Assure that all commercial and industrial uses meet minimum, reasonable performance standards.

The project would enhance the total city living and working environment by providing communication services for residents and workers within the City. Additionally, the project would comply with Federal, State and Local performance standards.

OBJECTIVE 2:

MAINTAIN AND ENHANCE A SOUND AND DIVERSE ECONOMIC BASE AND FISCAL STRUCTURE FOR THE CITY.

Policy 1:

Seek to retain existing commercial and industrial activity and to attract new such activity to the city.

Policy 3:

Maintain a favorable social and cultural climate in the city in order to enhance its attractiveness as a firm location.

The site is an integral part of a new wireless communications network that will enhance the City's diverse economic base.

OBJECTIVE 4:

IMPROVE THE VIABILITY OF EXISTING INDUSTRY IN THE CITY AND THE ATTRACTIVENESS OF THE CITY AS A LOCATION FOR NEW INDUSTRY.

Policy 1:

Maintain and enhance a favorable business climate in the City.

Policy 2:

Promote and attract those economic activities with potential benefit to the City.

The project would benefit the City by enhancing the business climate through improved communication services for residents and workers.

COMMUNITY SAFETY ELEMENT

Objectives and Policies

OBJECTIVE 3:

ENSURE THE PROTECTION OF LIFE AND PROPERTY FROM THE EFFECTS OF FIRE OR NATURAL DISASTER THROUGH ADEQUATE EMERGENCY OPERATIONS PREPARATION.

Policy 1:

Maintain a local agency for the provision of emergency services to meet the needs of San Francisco.

Policy 2:

Develop and maintain viable, up-to-date in-house emergency operations plans, with necessary equipment, for operational capability of all emergency service agencies and departments.

Policy 3:

Maintain and expand agreements for emergency assistance from other jurisdictions to ensure adequate aid in time of need.

Policy 4:

Establish and maintain an adequate Emergency Operations Center.

Policy 5:

Maintain and expand the city's fire prevention and fire-fighting capability.

Policy 6:

Establish a system of emergency access routes for both emergency operations and evacuation.

In the event that traditional land line telephones are rendered inoperable during a natural disaster the project would enhance the ability of the City to protect both life and property from the effects of a fire or natural disaster by improving wireless communication services.

19. **Planning Code Section 101.1(b)** establishes eight priority-planning policies and requires review of permits for consistency with said policies. On balance, the project does comply with said policies in that:

- A. That existing neighborhood-serving retail uses be preserved and enhanced and future opportunities for resident employment in and ownership of such businesses be enhanced.

No neighborhood-serving retail use would be displaced and the wireless communications network will enhance personal communication services.

- B. That existing housing and neighborhood character be conserved and protected in order to preserve the cultural and economic diversity of our neighborhoods.

No residential uses would be displaced or altered in any way by the granting of this authorization.

- C. That the City's supply of affordable housing be preserved and enhanced,

The project would have no adverse impact on housing in the vicinity.

- D. That commuter traffic not impede MUNI transit service or overburden our streets or neighborhood parking.

The Project will not adversely impact public transit or place a burden on the existing supply of parking in the neighborhood. According to the Project Sponsor, the proposal to add three antenna to an existing WTS facility will only require access by company representatives once a month.

- E. That a diverse economic base be maintained by protecting our industrial and service sectors from displacement due to commercial office development, and that future opportunities for resident employment and ownership in these sectors be enhanced.

The Project would cause no displacement of industrial and service sector activity.

- F. That the City achieve the greatest possible preparedness to protect against injury and loss of life in an earthquake.

Compliance with applicable structural safety and seismic safety requirements would be considered during the building permit application review process.

- G. That landmarks and historic buildings be preserved.

No landmarks or historic buildings would be affected by the project.

- H. That our parks and open space and their access to sunlight and vistas be protected from development.

The Project will have no adverse impact on parks or open space, or their access to sunlight or vistas.

20. The Project is consistent with and would promote the general and specific purposes of the Code provided under Section 101.1(b) in that, as designed, the Project would contribute to the character and stability of the neighborhood and would constitute a beneficial development.
21. The Commission hereby finds that approval of the Determination of Compliance authorization would promote the health, safety and welfare of the City.

DECISION

That based upon the Record, the submissions by the Applicant, the staff of the Department and other interested parties, the oral testimony presented to this Commission at the public hearings, and all other written materials submitted by all parties, the Commission hereby **APPROVES Conditional Use Application No. 2010.1042CP** subject to the following conditions attached hereto as "EXHIBIT A" which is incorporated herein by reference as though fully set forth.

APPEAL AND EFFECTIVE DATE OF MOTION: Any aggrieved person may appeal this conditional use authorization to the Board of Supervisors within thirty (30) days after the date of this Motion No. XXXXX. The effective date of this Motion shall be the date of this Motion if not appealed (after the 30-day period has expired) OR the date of the decision of the Board of Supervisors if appealed to the Board of Supervisors. For further information, please contact the Board of Supervisors at (415) 554-5184, City Hall, Room 244, 1 Dr. Carlton B. Goodlett Place, San Francisco, CA 94102.

I hereby certify that the foregoing Motion was adopted by the Planning Commission on **July 8, 2010**.

Linda Avery
Commission Secretary

AYES:

NAYES:

ABSENT:

ADOPTED: July 8, 2010

Exhibit A

Conditions of Approval

Whenever "Project Sponsor" is used in the following conditions, the conditions shall also bind any successor to the Project or other persons having an interest in the Project or underlying property.

GENERAL CONDITIONS

1. This approval is for Conditional Use authorization under Planning Code Sections 234.2(a) and 303 to modify an existing wireless telecommunications services (WTS) facility by adding three panel antennas to an existing 50-foot tall monopole with related equipment cabinets located at grade, as part of the Verizon wireless telecommunications network in a P (Public Use) Zoning District and a OS (Open Space) Height and Bulk District, in general conformance with plans filed with the Application dated April 21, 2010, stamped "EXHIBIT B" and are subject to the following conditions, included in the docket for Case No. 2010.0042CP, reviewed and approved by the Commission on July 8, 2010.
2. **Plan Drawings.** Prior to the issuance of any building or electrical permits for the installation of the facilities, the Project Sponsor shall submit final scaled drawings for review and approval by the Planning Department ("Plan Drawings"). The Plan Drawings shall describe:
 - a. **Structure and Siting.** Identify all facility related support and protection measures to be installed. This includes, but is not limited to, the location(s) and method(s) of placement, support, protection, screening, paint and/or other treatments of the antennas and other appurtenances to insure public safety, insure compatibility with urban design, architectural and historic preservation principles, and harmony with neighborhood character.
 - b. **For the Project Site, regardless of the ownership of the existing facilities.** Identify the location of all existing antennas and facilities; and identify the location of all approved (but not installed) antennas and facilities.
 - c. **Emissions.** Provide a report, subject to approval of the Zoning Administrator, that operation of the facilities in addition to ambient RF emission levels will not exceed adopted FCC standards with regard to human exposure in uncontrolled areas.
3. **Project Implementation Report.** The Project Sponsor shall prepare and submit to the Zoning Administrator a Project Implementation Report. The Project Implementation Report shall:
 - a. Identify the three-dimensional perimeter closest to the facility at which adopted FCC standards for human exposure to RF emissions in uncontrolled areas are satisfied;
 - b. Document testing that demonstrates that the facility will not cause any potential exposure to RF emissions that exceed adopted FCC emission standards for human exposure in uncontrolled areas.

- c. The Project Implementation Report shall compare test results for each test point with applicable FCC standards. Testing shall be conducted in compliance with FCC regulations governing the measurement of RF emissions and shall be conducted during normal business hours on a non-holiday weekday with the subject equipment measured while operating at maximum power.
 - d. **Testing, Monitoring, and Preparation.** The Project Implementation Report shall be prepared by a certified professional engineer or other technical expert approved by the Department. At the sole option of the Department, the Department (or its agents) may monitor the performance of testing required for preparation of the Project Implementation Report. The cost of such monitoring shall be borne by the Project Sponsor pursuant to the condition related to the payment of the City's reasonable costs.
 - i. **Notification and Testing.** The Project Implementation Report shall set forth the testing and measurements undertaken pursuant to Conditions 2 and 4.
 - ii. **Approval.** The Zoning Administrator shall request that the Certification of Final Completion for operation of the facility not be issued by the Department of Building Inspection until such time that the Project Implementation Report is approved by the Department for compliance with these conditions.
4. **Notification prior to Project Implementation Report.** The Project Sponsor shall undertake to inform and perform appropriate tests for residents of any dwelling units located within 25 feet of the transmitting antenna at the time of testing for the Project Implementation Report.
- a. At least twenty calendar days prior to conducting the testing required for preparation of the Project Implementation Report, the Project Sponsor shall mail notice to the Department, as well as to the resident of any legal dwelling unit within 25 feet of a transmitting antenna of the date on which testing will be conducted. The Applicant will submit a written affidavit attesting to this mail notice along with the mailing list.
 - b. When requested in advance by a resident notified of testing pursuant to subsection (a), the Project Sponsor shall conduct testing of total power density of RF emissions within the residence of that resident on the date on which the testing is conducted for the Project Implementation Report.
5. **Community Liaison.** Within 10 days of the effective date of this authorization, the Project Sponsor shall appoint a community liaison officer to resolve issues of concern to neighbors and residents relating to the construction and operation of the facilities. Upon appointment, the Project Sponsor shall report in writing the name, address and telephone number of this officer to the Zoning Administrator. The Community Liaison Officer shall report to the Zoning Administrator what issues, if any, are of concern to the community and what issues have not been resolved by the Project Sponsor.
6. **Installation.** Within 10 days of the installation and operation of the facilities, the Project Sponsor shall confirm in writing to the Zoning Administrator that the facilities are being maintained and operated in compliance with applicable Building, Electrical and other Code requirements, as well as applicable FCC emissions standards.
7. **Screening.**

- a. To the extent necessary to ensure compliance with adopted FCC regulations regarding human exposure to RF emissions, and upon the recommendation of the Zoning Administrator, the Project Sponsor shall:
 - i. Modify the placement of the facilities;
 - ii. Install fencing, barriers or other appropriate structures or devices to restrict access to the facilities;
 - iii. Install multi-lingual signage, including the RF radiation hazard warning symbol identified in ANSI C95.2-1982, to notify persons that the facility could cause exposure to RF emissions; or
 - iv. Implement any other practice reasonably necessary to ensure that the facility is operated in compliance with adopted FCC RF emission standards.
 - b. To the extent necessary to minimize visual obtrusion and clutter, installations shall conform to the following standards:
 - c. Antennas and back-up equipment shall be painted, fenced, landscaped or otherwise treated architecturally so as to minimize visual impacts;
 - d. Rooftop installations shall be setback such that back-up facilities are not viewed from the street;
 - e. Antennae attached to building facades shall be so placed, screened or otherwise treated to minimize any negative visual impact; and
 - f. Although co-location of various companies' facilities may be desirable, a maximum number of antennas and back-up facilities on the Project Site shall be established, on a case-by-case basis, such that "antennae farms" or similar visual intrusions for the site and area is not created.
8. **Out of Service.** The Project Sponsor or Property Owner shall remove antennae and equipment that has been out of service for a continuous period of six months or otherwise abandoned.
9. **Periodic Safety Monitoring.** The Project Sponsor shall submit to the Zoning Administrator 10 days after installation of the facilities, and every two years thereafter, a certification attested to by a licensed engineer expert in the field of EMR/RF emissions, that the facilities are and have been operated within the then current applicable FCC standards for RF/EMF emissions.
10. **Emissions Conditions.** It is a continuing condition of this authorization that the facilities be operated in such a manner so as not to contribute to ambient RF/EMF emissions in excess of then current FCC adopted RF/EMF emission standards; violation of this condition shall be grounds for revocation.
11. **Noise and Heat.** The WTS facility, including power source and cooling facility, shall be operated at all times within the limits of the San Francisco Noise Ordinance. The WTS facility, including power source and any heating/cooling facility, shall not be operated so as to cause the generation of heat that adversely affects a building occupant.
12. **Implementation and Monitoring Costs.**
- a. The Project Sponsor, on an equitable basis with other WTS providers, shall pay the cost of preparing and adopting appropriate General Plan policies related to the placement of

- WTS facilities. Should future legislation be enacted to provide for cost recovery for planning, the Project Sponsor shall be bound by such legislation.
- b. The Project Sponsor or its successors shall be responsible for the payment of all reasonable costs associated with the monitoring of the conditions of approval contained in this authorization, including costs incurred by this Department, the Department of Public Health, the Department of Electricity and Telecommunications, Office of the City Attorney, or any other appropriate City Department or agency pursuant to Planning Code Section 351(f)(2). The Planning Department shall collect such costs on behalf of the City.
 - c. The Project Sponsor shall be responsible for the payment of all fees associated with the installation of the subject facility, which are assessed by the City pursuant to all applicable law.
13. **All Conditions Basis for Revocation.** The Project Sponsor or its successors shall comply fully with all conditions specified in this authorization. Failure to comply with any condition shall constitute grounds for revocation under the provisions of Planning Code sections 174, 176 and 803(d). The Zoning Administrator shall schedule a public hearing before the Planning Commission to receive testimony and other evidence to demonstrate a finding of a violation of a condition of the authorization of the use of the facility and, finding that violation, the Commission shall revoke the Conditional Use authorization. Such revocation by the Planning Commission is appealable to the Board of Supervisors.
14. In the event that the project implementation report includes a finding that RF emissions for the site exceed FCC Standards in any uncontrolled location, the Zoning Administrator may require the Applicant to immediately cease and desist operation of the facility until such time that the violation is corrected to the satisfaction of the Zoning Administrator.
15. **Complaints and Proceedings.** Should any party complain to the Project Sponsor about the installation or operation of the facilities, which complaints are not resolved by the Project Sponsor, the Project Sponsor (or its appointed agent) shall advise the Zoning Administrator of the complaint and the failure to satisfactorily resolve such complaint. If the Zoning Administrator thereafter finds a violation of any provision of the City Planning Code and/or any condition of approval herein, the Zoning Administrator shall attempt to resolve such violation on an expedited basis with the Project Sponsor. If such efforts fail, the Zoning Administrator shall refer such complains to the Commission for consideration at the next regularly scheduled public meeting.
16. **Severability.** If any clause, sentence, section or any part of these conditions of approval is for any reason held to be invalid, such invalidity shall not affect or impair other of the remaining provisions, clauses, sentences, or sections of these conditions. It is hereby declared to be the intent of the Commission that these conditions of approval would have been adopted had such invalid sentence, clause, or section or part thereof not been included herein.
17. **Transfer of Operation.** Any carrier/provider authorized by the Zoning Administrator or by the Planning Commission to operate a specific WTS installation may assign the operation of the

facility to another carrier licensed by the FCC for that radio frequency provided that such transfer is made known to the Zoning Administrator in advance of such operation, and all conditions of approval for the subject installation are carried out by the new carrier/provider.

18. **Compatibility with City Emergency Services.** The facility shall not be operated, nor caused to transmit on or adjacent to any radio frequencies licensed to the City for emergency telecommunication services such that the City's emergency telecommunications system experiences interference, unless prior approval for such has been granted in writing by the City.
19. **Notice of Recordation.** Prior to the issuance of any building permit for the construction of the Project, the Zoning Administrator shall approve and order the recordation of a notice in the Official Records of the Recorder of the City and County of San Francisco, which notice shall state that construction of the Project has been authorized by and is subject to the conditions of this Motion. From time to time after the recordation of such notice, at the request of the Project Sponsor, the Zoning Administrator shall affirm in writing the extent to which the conditions of this Motion have been satisfied, and record said writing if requested.
20. Violation of the conditions contained in this Motion or of any other provisions of the Planning Code may be subject to abatement procedures and fines up to \$500 a day in accordance with Planning Code Section 176.
21. Should monitoring of the Conditions of Approval contained in Exhibit A of this Motion be required, the Project Sponsor or successors shall pay fees as established in Planning Code Section 351(e)(1).
22. The authorization and right vested by virtue of this action shall be deemed void and canceled if, within 3 years of the date of this Motion, a site permit or building permit for the Project has not been secured by Project Sponsor. This authorization may be extended at the discretion of the Zoning Administrator only if the failure to issue a permit by the Department of Building Inspection is delayed by a city, state, or federal agency or by appeal of the issuance of such permit.



SAN FRANCISCO PLANNING DEPARTMENT

Subject to: (Select only if applicable)

- Inclusionary Housing (Sec. 315)
- Jobs Housing Linkage Program (Sec. 313)
- Downtown Park Fee (Sec. 139)
- First Source Hiring (Admin. Code)
- Child Care Requirement (Sec. 314)
- Other

1650 Mission St.
Suite 400
San Francisco,
CA 94103-2479

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

Planning Commission Motion

HEARING DATE: JULY 8, 2010

Date: July 1, 2010
Case No.: **2010.0042CP**
Project Address: **100 Armory Drive**
Current Zoning: P (Public Use) District
 OS (Open Space) Height and Bulk District
Block/Lot: 7281/004
Project Sponsor: Margie Detiege on the behalf of Verizon Wireless
 2000 Crow Canyon Place, Suite 400
 San Ramon, CA 94583
Staff Contact: Adrian C. Putra – (415) 575-9079
 adrian.putra@sfgov.org

ADOPTING FINDINGS RELATING TO THE APPROVAL OF A CONDITIONAL USE AUTHORIZATION UNDER PLANNING CODE SECTIONS 234.2(a) AND 303 TO MODIFY AN EXISTING WIRELESS TELECOMMUNICATIONS SERVICES (WTS) FACILITY BY ADDING THREE PANEL ANTENNAS TO AN EXISTING 50-FEET TALL MONOPOLE WITH RELATED EQUIPMENT CABINETS LOCATED AT GRADE, AS PART OF THE VERIZON WIRELESS TELECOMMUNICATIONS NETWORK IN A P (PUBLIC USE) ZONING DISTRICT, COASTAL ZONE PERMIT AREA, AND A OS (OPEN SPACE) HEIGHT AND BULK DISTRICT.

PREAMBLE

On January 21, 2010, Margie Detiege on the behalf of Verizon (hereinafter "project sponsor"), made an application (hereinafter "application"), for Conditional Use authorization on the property at **100 Armory Drive, Lot 004 in Assessor's Block 7281**, (hereinafter "project site") to modify an existing wireless telecommunications services (WTS) facility by adding three panel antennas to an existing 50-foot tall monopole with related equipment cabinets located at grade, as part of the Verizon wireless telecommunications network in a P (Public Use) Zoning District, Local Coastal Zone Permit Area, and a OS (Open Space) Height and Bulk District, in general conformity with plans filed with the Application and labeled "EXHIBIT B" (hereinafter "Project").

On April 30, 2010, Margie Detiege on the behalf of Verizon (hereinafter "project sponsor"), made an application (hereinafter "application"), for a Local Coastal Zone Permit on the property at **100 Armory Drive, Lot 004 in Assessor's Block 7281**, (hereinafter "project site") to modify an existing wireless

telecommunications services (WTS) facility by adding three panel antennas to an existing 50-foot tall monopole with related equipment cabinets located at grade, as part of the Verizon wireless telecommunications network in a P (Public Use) Zoning District, Local Coastal Zone Permit Area, and a OS (Open Space) Height and Bulk District, in general conformity with plans filed with the Application and labeled "EXHIBIT B" (hereinafter "Project").

The San Francisco Planning Department (hereinafter "Department") determined the application to be categorically exempt from the environmental review process (CEQA) pursuant to exemption Classes 1, 3 and 11 of Title 14 of the California Administrative Code.

On July 8, 2010, the Commission conducted a duly noticed public hearing at a regularly scheduled meeting on Conditional Use Application No. 2009.1002CP.

The Commission has heard and considered the testimony presented to it at the public hearing and has further considered written materials and oral testimony presented on behalf of the applicant, Department staff, and other interested parties.

MOVED, that the Commission hereby authorizes the Conditional Use requested in Application No. 2010.0042CP, subject to the conditions contained in "EXHIBIT A" of this motion, based on the following findings:

FINDINGS

Having reviewed the materials identified in the preamble above, and having heard all testimony and arguments, this Commission finds, concludes, and determines as follows:

1. The above recitals are accurate and constitute findings of this Commission.
2. **Site Description and Present Use.** The project site is located at the end of Armory Drive which is a private street located west of Skyline Boulevard between Sloat Boulevard and Great Highway, and south of the San Francisco Zoo. The project site is occupied by the National Guard and contains three buildings, and three WTS facilities (Verizon Wireless, AT&T, and Sprint-Nextel) that each have their antennas mounted onto their own individual monopole. The site is located on a heavily wooded hill above Skyline Boulevard.
3. **Surrounding Properties and Neighborhood.** There are no residential uses within a 500-foot radius of the site. Lake Merced and Harding Park Golf Course are located east of the site, the San Francisco Zoo is located north of the site, and City and State owned property is located west and south of the site. Heavily wooded open space and wide arterial streets characterize the area.
4. **Proposal.** The proposal is to modify the existing Verizon Wireless WTS facility by adding three panel antennas at the top of a 50' tall Verizon Wireless monopole that contains three panel mounted antennas. The proposed antennas would be powered by existing equipment cabinets that are enclosed in an approximately 11'-6" by 20' equipment shelter. Verizon Wireless' monopole and equipment shelter are located east of the main armory building situated at the

center of the site. The purpose for the new antennas is to enhance the speed and data streaming capabilities of Verizon's existing WTS facility and will not impact the existing voice coverage. Each antenna measures approximately 4' long by 1' wide by 7" thick.

5. **Public Comment.** The Department has not received public comment since the filing of the application as of the date of this motion.
6. **Past History and Actions.** The Planning Commission held a duly advertised public hearing on August 15, 1996 to consider adoption of guidelines for the siting of WTS facilities in the City which would include standard conditions of approval for wireless communications facilities which are regulated by the FCC and required to meet the health and safety standards.

The Planning Commission, by Resolution No. 14182, adopted the proposed WTS Facilities Siting Guidelines on August 15, 1996. The sample conditions of approval presented in the Guidelines form the basis for the development of conditions of approval for this Application and Motion.

On June 13, 1996, the Commission conducted a duly noticed public hearing at a regularly scheduled meeting on the application for a Conditional Use pursuant to Planning Code Sections 234.2(a) to install a wireless transmission facility consisting of 12 antennas attached to a 40 foot tall monopole and a base transceiver station on the grounds of the California National Guard Armory at 100 Armory Drive, as part of the Cellular One (now "AT&T") telecommunications network.

On March 20, 1997, the Commission conducted a duly noticed public hearing at a regularly scheduled meeting on the application for a Conditional Use pursuant to Planning Code Sections 234.2(a) to install a wireless transmission facility consisting of three (3) antennas attached on the top of a proposed 50 foot tall monopole and a base transceiver station in a fenced area at the base of the monopole on the grounds of the California National Guard Armory at 100 Armory Drive, as part of the Sprint-Nextel telecommunications network.

On September 15, 2005, the Commission conducted a duly noticed public hearing at a regularly scheduled meeting on the application for a Conditional Use pursuant to Planning Code Sections 234.2(a) and 303 to install a wireless telecommunications facility consisting of three (3) panel antennas on a monopole and related equipment cabinets within a shelter at grade level, as part of Verizon Wireless' telecommunications network on the property at 100 Armory Drive within a P (Public Use) District and an OS (Open Space) Height and Bulk District.

On July 1, 2010, the Commission conducted a duly noticed public hearing at a regularly scheduled meeting on the application for a Conditional Use pursuant to Planning Code Section 234.2(a) to install a new wireless telecommunications services (WTS) facility consisting of six panel antennas mounted on a 53-foot tall monopole and related equipment cabinets located at grade, as part of the T-Mobile wireless telecommunications network.

7. **P (Public Use) Districts – Conditional Use Required.** In addition to the use districts otherwise established by this Code, there shall also be in the City a Public Use District herein referred to as

a "P District," to apply to land that is owned by a governmental agency and in some form of public use, including open space. The purpose of designating such land as a P District on the Zoning Map is to relate the Zoning Map to actual land use and to the Master Plan with respect to such land. Any lot in a P District may be occupied by a principal use listed in Section 234.1, or by a conditional use listed in Section 234.2, subject to applicable regulations of this Code including the limitations of Section 290 for OS (Open Space) Districts; provided, however, that on any lot in a P District, which lot is within ¼ mile of the nearest NC-1 or Individual Area Neighborhood Commercial District as described in Article 7 of this Code, no accessory nonpublic use shall be permitted, unless such use or feature complies with the controls which are applicable in any NC-1 or Individual Area Neighborhood Commercial District or Restricted Use Subdistrict located within ¼ mile of the lot, excluding the provisions of zoning category .83, as defined in Section 790.80 of Article 7. Per section 234.2(a) of the Planning Code, a wireless telecommunications facility is permitted as a conditional use.

8. **Location Preference.** The WTS Facilities Siting Guidelines identify different types of buildings for the siting of wireless telecommunications facilities, with Location Preference 1 being the most desirable location and Location Preference 7 being the least desirable location. Under the Guidelines, the Project is a Location Preference Number 1, as it is a preferred location for a publicly used structure (USA National Guard facility).
9. **Radio Waves Range.** According to the Project Sponsor, the proposed wireless network will transmit and receive calls by radio waves operating in the 806 – 896 and 1850 – 1990 Megahertz (MHz) bands. These bands are regulated by the Federal Communications Commission (FCC) and which must comply with the FCC adopted health and safety standards for electromagnetic radiation and radio frequency radiation.
10. **Radiofrequency (RF) Emissions:** The Project Sponsor retained Hammett & Edison, Inc., a radio engineering consulting firm, to prepare a report describing the expected RF emissions from the proposed facility. The Department of Public Health reviewed the report and determined that the proposed facility complies with the standards set forth in the Guidelines. Once the installation is constructed and operational, a second report documenting the actual RF emissions will be prepared and evaluated for compliance.
11. **Department of Public Health Review and Approval.** The existing RF levels at the ground level of the site were less than 1% of the FCC public exposure limit. Also located at this site are antennas operated by AT&T and Sprint Nextel. There were observed no other antennas within 100 feet of this site. Verizon proposes to add three Andrew Model BXA70063/4CF antennas. The estimated ambient RF field from the proposed Verizon transmitters at ground level is calculated to be 0.0031 mW/square centimeter, which is 0.56% of the FCC public exposure limit. The three dimensional perimeter of RF levels equal to the public exposure limit is calculated to extend 39 feet and does not reach any publicly accessible areas. Warning signs must be posted at the roof access door, barricades and antennas in English, Spanish and Chinese. Workers should not have access to directly in front of the antennas while they are in operation.

12. **Maintenance Schedule.** According to the Project Sponsor maintenance visits will be required by cell technician only once a month.
13. **Community Outreach.** A Community Outreach Meeting was conducted for the proposed project. The meeting was held at 6:00 PM on Tuesday, June 1, 2010, at the Janet Pomeroy Center at 207 Skyline Boulevard, San Francisco, CA 94132. According to the Project Sponsor no neighbors attended the meeting.
14. **Five-year plan:** Verizon submitted its latest five-year plan, as required, on April, 2010.
15. **Planning Code Compliance.** The Commission finds that the Project is consistent with the relevant provisions of the amendments to Planning Code in the following manner:
 - A. **Use.** A WTS facility is considered a public utility under Planning Code Section 209.6(b), which requires Conditional Use authorization in the P District under Planning Code Section 234.2(a).
 - B. **Height.** Per Planning Code Section 260(b)2(I), radio antennae for transmission, reception, or relay of radio, television or other electronic signals, where permitted as principal or conditional uses are exempt from height limits.
16. **Planning Code Section 303** establishes criteria for the Planning Commission to consider when reviewing applications for Conditional Use approval. On balance, the project does comply with said criteria in that:
 - A. The proposed new uses and building, at the size and intensity contemplated and at the proposed location, will provide a development that is necessary or desirable, and compatible with, the neighborhood or the community.

The proposed project will be generally desirable and compatible with the surrounding neighborhood because the project will not conflict with the existing uses of the property and will be of such size and nature to be compatible with the public use nature the vicinity and immediate area. The approval of this authorization has been found, first and foremost, to insure public safety, and insure that the placement of antennas and related support and protection features are so located, designed, and treated architecturally to minimize their visibility from public places, to avoid intrusion into public vistas, avoid disruption of the architectural design integrity of building and insure harmony with neighborhood character. The proposed project will also provide necessary facilities for emergency transmission and improved communication for the neighborhood, community and the region.

- B. The proposed project will not be detrimental to the health, safety, convenience or general welfare of persons residing or working in the vicinity. There are no features of the project that could be detrimental to the health, safety or convenience of those residing or working the area, in that:

- i Nature of proposed site, including its size and shape, and the proposed size, shape and arrangement of structures;

The proposed project must comply with all applicable Federal and State regulations to safeguard the health, safety and to ensure that persons residing or working in the vicinity will not be affected, and prevent harm to other personal property.

An evaluation of potential health effects from RF radiation, conducted by the Department of Public Health, has concluded that the proposed wireless transmission facilities will have no adverse health effects if operated in compliance with the FCC-adopted health and safety standards. The Department has received information that the proposed wireless system must be operated so as not to interfere with radio or television reception in order to comply with the provisions of its license under the FCC.

The Department is developing a database of all such wireless communications facilities operating or proposed for operation in the City and County of San Francisco. All applicants are now required to submit information on the location and nature of all existing and approved wireless transmission facilities operated by the Project Sponsor. The goal of this effort is to foster public information as to the location of these facilities.

- ii The accessibility and traffic patterns for persons and vehicles, the type and volume of such traffic, and the adequacy of proposed off-street parking and loading;

No increase in traffic volume is anticipated with the proposal to add three additional antennas to an existing WTS facility. According to the Project Sponsor the WTS facility would operate 24 hours per day, seven days per week as an unmanned facility, which will only require access by company representatives once a month for maintenance.

- iii The safeguards afforded to prevent noxious or offensive emissions such as noise, glare, dust and odor;

While some noise and dust may result from the erection of the antennas and transceiver equipment, once the facility is built, impacts with regards to the above will likely be insignificant.

- iv Treatment given, as appropriate, to such aspects as landscaping, screening, open spaces, parking and loading areas, service areas, lighting and signs;

The subject site has ample landscaping and open space. The installation of antennas on an existing monopole will not affect the existing landscaping.

- C. That the use as proposed will comply with the applicable provisions of the Planning Code and will not adversely affect the General Plan.

The Project complies with all relevant requirements and standards of the Planning Code and is consistent with objectives and policies of the General Plan as detailed below.

17. **General Plan Compliance.** The Project is, on balance, consistent with the following Objectives and Policies of the General Plan

WESTERN SHORELINE AREA PLAN

The Zoo

Objectives and Policies

OBJECTIVE 4:

IMPROVE THE QUALITY OF THE ZOO AND ITS RELATIONSHIP TO THE COASTAL ZONE RECREATIONAL SYSTEM.

Policy 1:

Maintain the landscaped park-like atmosphere of the Zoo.

The project site which is located south of the San Francisco Zoo does not involve any significant physical modifications that adversely impact the landscaped park-like atmosphere of the Zoo.

18. **Planning Code Section 101.1(b)** establishes eight priority-planning policies and requires review of permits for consistency with said policies. On balance, the project does comply with said policies in that:

- A. That existing neighborhood-serving retail uses be preserved and enhanced and future opportunities for resident employment in and ownership of such businesses be enhanced.

No neighborhood-serving retail use would be displaced and the wireless communications network will enhance personal communication services.

- B. That existing housing and neighborhood character be conserved and protected in order to preserve the cultural and economic diversity of our neighborhoods.

No residential uses would be displaced or altered in any way by the granting of this authorization.

- C. That the City's supply of affordable housing be preserved and enhanced,

The project would have no adverse impact on housing in the vicinity.

- D. That commuter traffic not impede MUNI transit service or overburden our streets or neighborhood parking.

The Project will not adversely impact public transit or place a burden on the existing supply of parking in the neighborhood. According to the Project Sponsor, the proposal to add three antenna to an existing WTS facility will only require access by company representatives once a month.

- E. That a diverse economic base be maintained by protecting our industrial and service sectors from displacement due to commercial office development, and that future opportunities for resident employment and ownership in these sectors be enhanced.

The Project would cause no displacement of industrial and service sector activity.

- F. That the City achieve the greatest possible preparedness to protect against injury and loss of life in an earthquake.

Compliance with applicable structural safety and seismic safety requirements would be considered during the building permit application review process.

- G. That landmarks and historic buildings be preserved.

No landmarks or historic buildings would be affected by the project.

- H. That our parks and open space and their access to sunlight and vistas be protected from development.

The Project will have no adverse impact on parks or open space, or their access to sunlight or vistas..

19. The Project is consistent with and would promote the general and specific purposes of the Code provided under Section 101.1(b) in that, as designed, the Project would contribute to the character and stability of the neighborhood and would constitute a beneficial development.
20. The Commission hereby finds that approval of the Determination of Compliance authorization would promote the health, safety and welfare of the City.

DECISION

That based upon the Record, the submissions by the Applicant, the staff of the Department and other interested parties, the oral testimony presented to this Commission at the public hearings, and all other written materials submitted by all parties, the Commission hereby **APPROVES Coastal Zone Permit No. 2010.0042CP**.

APPEAL AND EFFECTIVE DATE OF MOTION: Any aggrieved person may appeal this Coastal Zone Permit to the Board of Permit Appeals per Planning Code Section 330.9 within ten (10) days of the date of this Motion No. XXXXX. The effective date of this Motion shall be the date of this Motion if not appealed. For further information, please contact the Board of Permit Appeals in person at 1650 Mission Street, 3rd Floor (Room 304) or call (415) 575 – 6880.

I hereby certify that the foregoing Motion was adopted by the Planning Commission on **July 8, 2010**.

Linda Avery
Commission Secretary

AYES:

NAYES:

ABSENT:

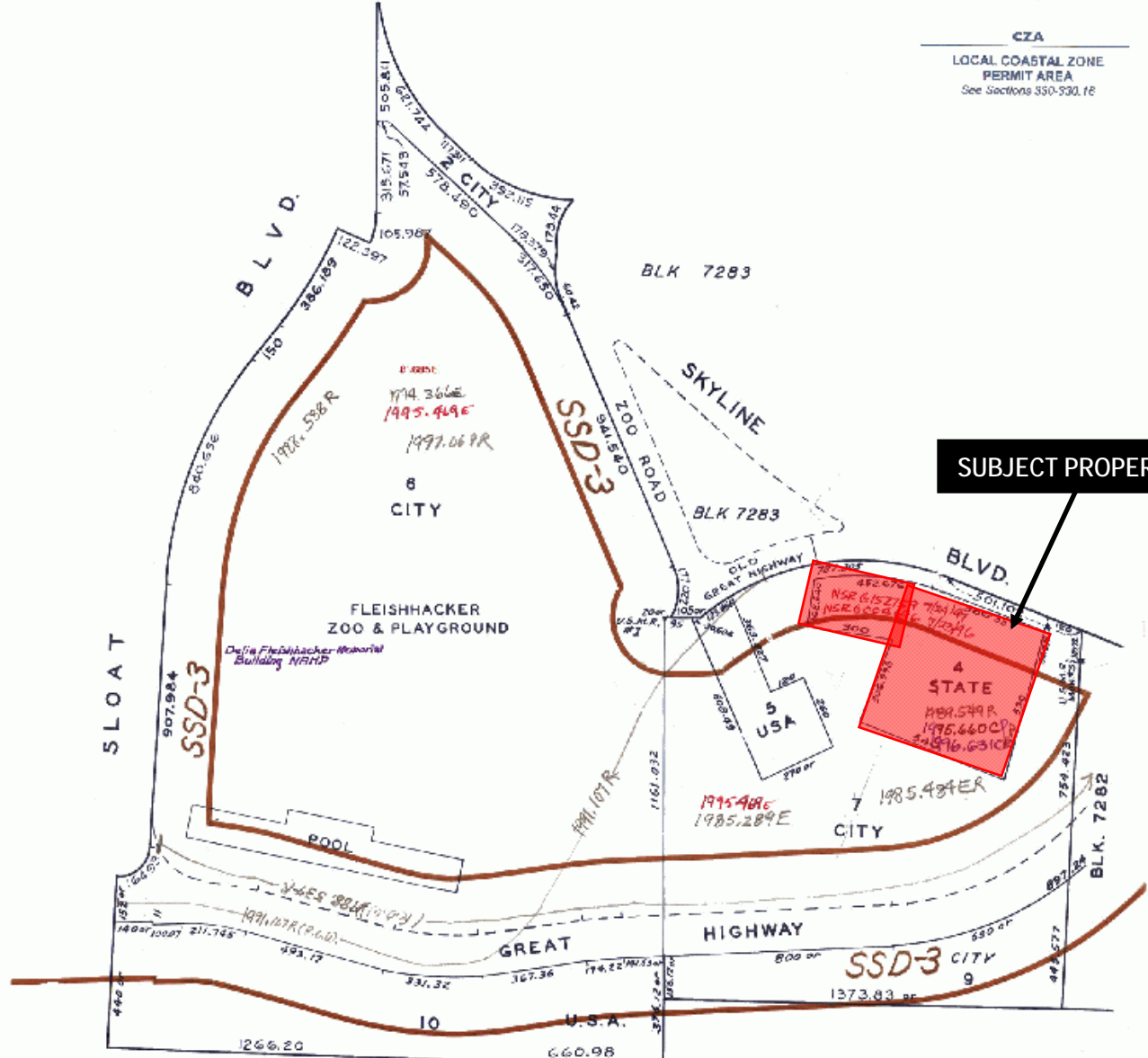
ADOPTED: July 8, 2010

Parcel Map

SPECIAL SIGN DISTRICT
See Section 662.15

CZA

**LOCAL COASTAL ZONE
PERMIT AREA**
See Sections 930-930.18



SUBJECT PROPERTY

PACIFIC OCEAN

Scale of Feet



Conditional Use Request Hearing
 Case Number **2010.0042CP**
 Wireless Telecommunications Facility
 100 Armory Drive

Aerial Photo view looking West



SUBJECT PROPERTY

Conditional Use Request Hearing
Case Number 2010.0042CP
Wireless Telecommunications Facility
100 Armory Drive

Aerial Photo view looking South



SUBJECT PROPERTY

Conditional Use Request Hearing
Case Number **2010.0042CP**
Wireless Telecommunications Facility
100 Armory Drive

Zoning Map






Conditional Use Request Hearing
Case Number 2010.0042CP

Wireless Telecommunications Facility
100 Armory Drive

Zoning Map



COASTAL ZONE AREA

-  Local Coastal Zone Permit Area
-  Area Appealable to the California Coastal Commission *
-  Jurisdiction Retained by the California Coastal Commission

* If a parcel is bisected by the appeal area boundary, only that portion within the appeal area is subject to the California Coastal Commission.



Conditional Use Request Hearing
Case Number 2010.042CP
 Wireless Telecommunications Facility
 100 Armory Drive

Site Photo



Conditional Use Request Hearing
Case Number **2010.0042CP**
Wireless Telecommunications Facility
100 Armory Drive



Review of Cellular Antenna Site Proposals

Project Sponsor: Verizon Wireless **Planner:** Jonas Ionin

RF Engineer Consultant: Bill Hammett, Hammett & Edison **Phone number** 707-996-5200

Project Address/Location: 100 Armory Dr. #123352

The following information is required to be provided before approval of this project can be made. These information requirements are established in the San Francisco Planning Department Wireless Telecommunications Services Facility Siting Guidelines dated August 1996.

In order to facilitate quicker approval of this project, it is recommended that the project sponsor review this document before submitting the proposal to ensure that all requirements are included.

X 1. The location of all existing antennas and facilities. Existing RF levels. (WTS-FSG, Section 11, 2b)

X 2. The location of all approved (but not installed) antennas and facilities. Expected RF levels from the approved antennas. (WTS-FSG Section 11, 2b)

X 3. The number and types of WTS within 100 feet of the proposed site and provide estimates of cumulative EMR emissions at the proposed site. (WTS-FSG, Section 10.5.2)

X 4. Location (and number) of the Applicant's antennas and back-up facilities per building and number and location of other telecommunication facilities on the property (WTS-FSG, Section 10.4.1a)

X 5. Power rating (maximum and expected operating power) for all existing and proposed backup equipment subject to the application (WTS-FSG, Section 10.4.1c)

X 6. The total number of watts per installation and the total number of watts for all installations on the building (roof or side) (WTS-FSG, Section 10.5.1).

X 7. Preferred method of attachment of proposed antenna (roof, wall mounted, monopole) with plot or roof plan. Show directionality of antennas. Indicate height above roof level. Discuss nearby inhabited buildings (particularly in direction of antennas) (WTS-FSG, Section 10.41d)

X 8. Report estimated ambient radio frequency fields for the proposed site (identify the three-dimensional perimeter where the FCC standards are exceeded.) (WTS-FSG, Section 10.5) State FCC standard utilized and power density exposure level (i.e. 1986 NCRP, 200 $\mu\text{w}/\text{cm}^2$)

X 9. Signage at the facility identifying all WTS equipment and safety precautions for people nearing the equipment as may be required by any applicable FCC-adopted standards. (WTS-FSG, Section 10.9.2). Discuss signage for those who speak languages other than English.

X 10. Statement on who produced this report and qualifications.

X **Approved.** Based on the information provided the following staff believes that the project proposal will comply with the current Federal Communication Commission safety standards for radiofrequency radiation exposure. FCC standard 1986 - NCRP **Approval of the subsequent Project Implementation Report is based on project sponsor completing recommendations by project consultant and DPH.**

Comments: There are existing three (3) antennas operated by Verizon installed on a pole located at 100 Armory Drive. Also located at this site are antennas operated by AT& and, Sprint Nextel. Existing RF levels at ground level were less than 1% of the FCC public exposure limit. There were observed no other antennas within 100 feet of this site. Verizon proposes to add three Andrew Model BXA70063/4CF antennas. The estimated ambient RF field from the proposed Verizon transmitters at ground level is calculated to be 0.0031 mW/sq. cm., which is .56% of the FCC public exposure limit. The three dimensional perimeter of RF levels equal to the public exposure limit is calculated to extend 39 feet and does not reach any publicly accessible areas. Warning signs must be posted at the base of the pole and at the antennas in English, Spanish and Chinese. Worker should not have access directly in front of the antennas while they are in operation.

 Not Approved, additional information required. _____

 Not Approved, does not comply with Federal Communication Commission safety standards for radiofrequency radiation exposure. FCC Standard

 1 Hours spent reviewing

 \$178.00 Charges to Project Sponsor (in addition to previous charges, to be received at time of receipt by Sponsor)

Signed _____ Date April 23, 2010

Patrick Fosdahl
Environmental Health Management Section
San Francisco Dept. of Public Health
1390 Market St., Suite 210,
San Francisco, CA. 94102
415-252-3904

**Verizon Wireless • Base Station No. 123352 “SF Zoo”
100 Armory Drive • San Francisco, California**

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of Verizon Wireless, a wireless telecommunications carrier, to evaluate proposed modifications to its existing base station (Site No. 123351 “SF Zoo”) located at 100 Armory Drive with respect to prevailing standards limiting human exposure to radio frequency energy.

Background

The San Francisco Department of Public Health has adopted a 10-point checklist for determining compliance of WTS facilities with prevailing safety standards. The acceptable limits for exposures of unlimited duration are those adopted by the FCC:

Personal Wireless Service	Approx. Frequency	Occupational Limit	Public Limit
Broadband Radio (“BRS”)	2,600 MHz	5.00 mW/cm ²	1.00 mW/cm ²
Advanced Wireless (“AWS”)	2,100	5.00	1.00
Personal Communication (“PCS”)	1,950	5.00	1.00
Cellular Telephone	870	2.90	0.58
Specialized Mobile Radio (“SMR”)	855	2.85	0.57
Long Term Evolution (“LTE”)	700	2.33	0.47
[most restrictive frequency range]	30–300	1.00	0.20

The site was visited by Mr. Kent Swisher, a qualified engineer employed by Hammett & Edison, Inc., during normal business hours on August 18, 2009, and reference has been made to additional information provided by Verizon regarding the addition of LTE service, including drawings by Connell Design Group, LLC, dated March 23, 2009.

Checklist

1. The location of all existing antennas and facilities at site. Existing RF levels.

Verizon had installed three directional antennas oriented in different directions at the top of a tall steel pole located adjacent to the National Guard building at 100 Armory Drive. Access to the antennas was restricted by their mounting location. There were observed similar antennas mounted on nearby poles for use by AT&T Mobility and Sprint Nextel, other wireless telecommunications carriers. Existing RF levels at ground near the site measured less than 2% of the most restrictive public exposure limit.

2. The location of all approved (but not installed) antennas and facilities. Expected RF levels from approved antennas.

No other WTS facilities are reported to be approved for this site, but not yet installed.

**Verizon Wireless • Base Station No. 123352 “SF Zoo”
100 Armory Drive • San Francisco, California**

3. The number and types of WTS within 100 feet of proposed site and estimates of additive EMR emissions at proposed site.

There were no other WTS facilities observed within 100 feet of the proposed site.

4. Location (and number) of Applicant’s antennas and back-up facilities per building and location (and number) of other WTS at site.

Verizon proposes to add LTE service by replacing the existing antennas with three Andrew Model DBXNH-6565A-VTM multi-band directional panel antennas at the same locations, mounted with no downtilt at an effective height of about 48 feet above ground and oriented toward 85°T, 175°T, and 355°T.

5. Power rating (maximum and expected operating power) for all existing and proposed backup equipment subject to application.

The maximum rating of the cellular and PCS transmitters is 20 watts, with the proposed LTE transmitters rated at 16 watts. The power ratings of the transmitters for the other carriers are not known. The actual operating power of the transmitters will depend upon the system losses encountered after the physical cabling runs have been installed; the transmitters may operate at a power less than their maximum rating, such that the total power radiated from the antennas does not exceed the level given in Item 6 below.

6. Total number of watts per installation and total number of watts for all installations at site.

The maximum effective radiated power in any direction for Verizon would be 2,560 watts, representing simultaneous operation at 960 watts for PCS, 1,200 watts for cellular, and 400 watts for LTE service. The maximum numbers of watts for the other carriers’ operations are not known.

7. Plot or roof plan showing method of attachment of antennas, directionality of antennas, and height above roof level. Discuss nearby inhabited buildings.

The antennas would be mounted as described in Item 4 above. There were noted no buildings of similar height nearby.

8. Estimated ambient RF levels for proposed site and identify three-dimensional perimeter where exposure standards are exceeded.

For a person anywhere at ground near the site, the maximum ambient RF level from the proposed Verizon operation is calculated to be 0.0028 mW/cm², which is 0.51% of the applicable public exposure limit. Therefore, ambient levels at ground are estimated to remain less than 2% of the public limit. The three-dimensional perimeter of RF levels equal to the public exposure limit is calculated to extend up to 34 feet in front of the Verizon antennas and to shorter distances below the antennas; this does not reach any publicly accessible areas.

**Verizon Wireless • Base Station No. 123352 "SF Zoo"
100 Armory Drive • San Francisco, California**

9. Describe proposed signage at site.

Due to their mounting location, the Verizon antennas would not be accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. It is presumed that Verizon will, as an FCC licensee, take adequate steps to ensure that its employees or contractors comply with FCC occupational exposure guidelines whenever work is required near the antennas themselves. An explanatory warning sign* had been posted at the base of the pole.

10. Statement of authorship.

The undersigned author of this statement is a qualified Professional Engineer, holding California Registrations Nos. E-13026 and M-20676, which expire on June 30, 2011. 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.

Conclusion

Based on the information and analysis above, it is my professional opinion that the Verizon Wireless base station operation located at 100 Armory Drive in San Francisco will continue to comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment.



William F. Hammett
William F. Hammett, P.E.

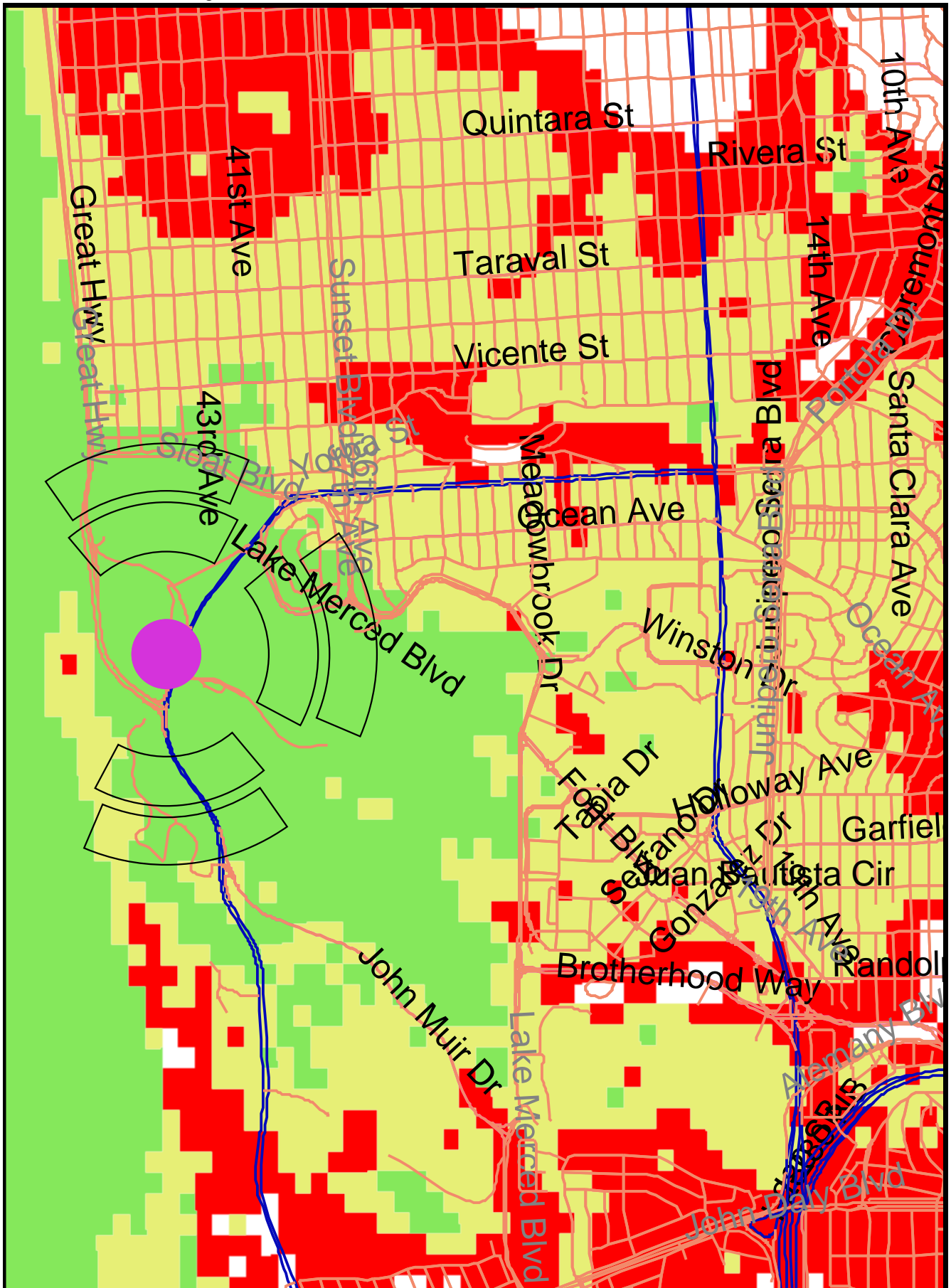
December 3, 2009

* Warning sign complied with OET-65 color and symbol recommendations. Contact information was provided in English to arrange for access to restricted areas, with Spanish and Chinese translations (not by this firm) included.

100 Armory Drive

Existing coverage - coverage will not be affected with the new antennas due to their purpose being for boosting data speed and increasing the number of calls that can be handled at a time.

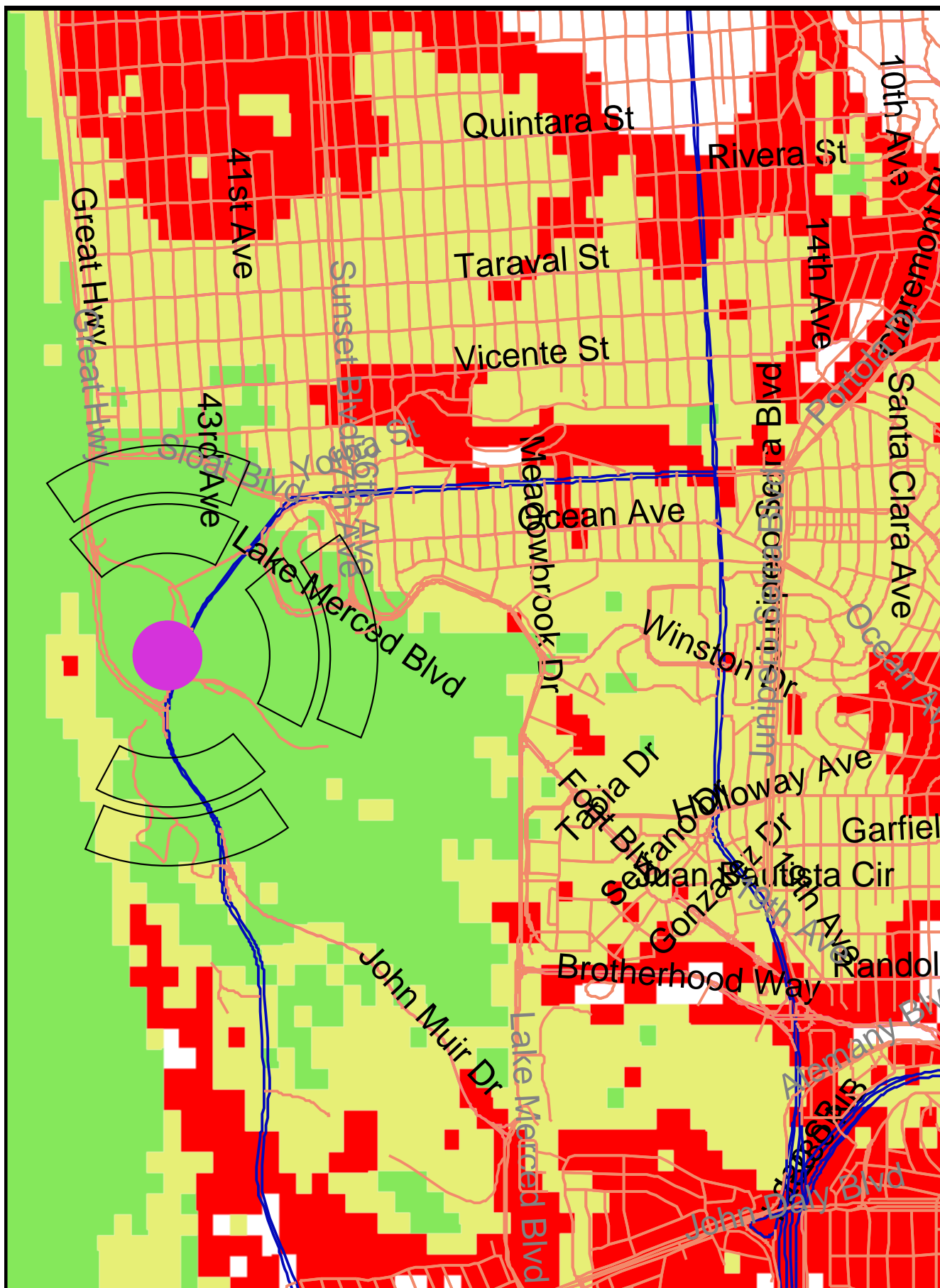
Coverage: Green = Good Yellow = Fair Red = Poor White = Bad or None



100 Armory Drive

Proposed coverage - coverage will not be affected with the new antennas due to their purpose being for boosting data speed and increasing the number of calls that can be handled at a time.

Coverage: Green = Good Yellow = Fair Red = Poor White = Bad or None









Existing



Proposed



Existing



Proposed

proposed antenna modifications

NOTICE OF NEIGHBORHOOD MEETING
TO: Neighbors/Owners within 500' radius of 100 Armory Road

Meeting Information: Verizon Wireless is proposing to add new antennas to their existing cell site at 100 Armory Road in San Francisco to boost the data speed on their wireless network. The proposed Verizon Wireless addition to the existing unmanned facility consists of adding three (3) 4' panel antennas on their existing pole.
Date: 6/1/2010
Time: 6:00 PM
Place: Janet Pomeroy Center

Site Information: Plans and photo simulations will be available for your review at the meeting. This project will be scheduled for Planning Commission review on a future date. You are invited to attend a community meeting held at the Janet Pomeroy Center for the Handicapped located at 207 Skyline Blvd, San Francisco, CA on June 1st, 2010 at 6:00 P.M to learn more about the project.
Address: 207 Skyline Blvd
Block/Lot: 7281-005
Zoning: P

Applicant: Verizon Wireless

Contact Information: If you have any questions regarding the proposal and are unable to attend the meeting, please contact James Singleton or Margie Detiege at 925-244-1890. Please call Adrian Putra at 415-575-9079 with the City of San Francisco Planning Department if you have any questions regarding the planning process.
NSA Wireless, Inc.
James Singleton
925-244-1890

NOTE: If you require an interpreter be present at the meeting, please contact us at 925-244-1890 and we will make every effort to provide one for you.

Información Acerca de la Reunión: Verizon Wireless propone a instale las nuevas antenas panel en su instalación existente en 207 Skyline Blvd a alce la velocidad de datos como parte de su red inalámbrica de San Francisco. Los adiciones al instalación existente sin personal porsupuesta por Verizon Wireless consiste en adición de tres (3) 4' antenas panel obscurado en la torre existencia.
Fecha: 6/1/2010
Hora: 6:00 de la noche
Lugar: Janet Pomeroy Center

Información Sobre el Sitio: En la reunión tendremos dibujos y simulaciones fotográficas para su consulta por parte de los asistentes. La revición de este proyecto por parte de la Comisión de Planeación estará programado para la fecha futura. Le invitamos a concurrir a la reunión informativa para la comunidad que se realizará en el Centro de Janet Pomeroy ubicada en 207 Skyline Blvd, el día 1 de Junio a las 6:00 de la noche, a fin de obtener más información sobre el proyecto.
Dirección: 207 Skyline Blvd
Bloque/Lote: 7281-005
Zona: P

Solicitante: Verizon Wireless

Información del Contacto: Si tiene alguna pregunta acerca de la propuesta y no puede asistir a la reunión, por favor llámese con James Singleton o Margie Detiege al 925-244-1890. Póngase en contacto con Adrian Putra del Departamento de Planeación de la Ciudad de San Francisco al teléfono 415-575-9079 si tiene alguna pregunta referente al proceso de planeación.
NSA Wireless, Inc.
James Singleton
925-244-1890

NOTA: Si requiere la presencia de un intérprete en la reunion, por favor comuníquese con nuestra oficina al 925-244-1890 en cuanto pueda y trataremos de proporcionarle un intérprete.

會議詳情

日期: 2010年6月1日
時間: 下午6:00 PM
地點: Janet Pomeroy Center
Verizon Wireless 公司建議加裝新的天線在100 Armory Road, San Francisco 現有的網路系統上以取代舊的網路系統, 建議將目前現有無人使用的設備移除裝上新的設施,建議將目前現有無人使用的設備移除裝上新的設施,也就是用3三吋的有顏色的天線板來增加原有的3三吋的天線板,如此一來,新的天在傳輸塔。

設施地點資料

地址: 207 Skyline Blvd
街段 / 地段: 7281-005
劃區: P
這整個計劃,結構圖與模擬圖像將會在公聽會中對大家展示,在将来另外,在6/1/2010下午6:00,我們將有一場說明會;地點在: Janet Pomeroy Center for the Handicapped, 207 Skyline Blvd.

申請公司: Verizon Wireless

我們誠摯的邀請您來參加,在會議上您將得到更清楚的資訊
如果您有任何問題或是建議但是不克參加會議,歡迎您致電: 925-2441890 找 James Singleton 或 Margie Detiege

聯絡人

NSA Wireless, Inc.
James Singleton
925-244-1890

如果您對整個計劃有問題,請致電三藩市都市計畫部門415-5759079 找 Adrian Putra

如果您需要翻譯人員在會議上協助您,請即致電
925-2441890,我們將盡力為您安排翻譯服務



AFFIDAVIT

Neighborhood Outreach Meeting regarding Verizon Antenna Add at 100 Armory Drive

Verizon held the Neighborhood Outreach meeting on June 1st at 6 pm in conference room of Janet Pomeroy Center for the Handicapped at 207 Skyline Blvd.

415-665-4100

1) JIM CREARY DIRECTOR OF SUPPORT SERVICES @ JPC

2) _____

3) _____

4) _____





Sign-In for neighborhood Outreach regarding 100 Armory Drive held at ²⁰⁷~~245~~ Skyline Blvd.

- 1)
- 2)
- 3)
- 4)
- 5)



SF ZOO

SITE NO. 123352
100 ARMORY DRIVE
SAN FRANCISCO, CA 94123



VERIZON WIRELESS
2785 MITCHELL DRIVE
WALNUT CREEK, CA 94598

PROJECT INFORMATION:

SF ZOO
SITE NO. 123352
100 ARMORY DRIVE
SAN FRANCISCO, CA 94132

NSA Wireless, Inc.

Site Acquisition · Planning · Construction Management · Site Modifications
Bishop Ranch 15 1st Floor
12647 Alcoa Blvd., Suite 110
San Ramon, CA 94583
(925) 244-1890 OFFICE

CURRENT ISSUE DATE:

04/21/10

ISSUED FOR:

100% CD

REV.: DATE: DESCRIPTION: BY:

REV.	DATE	DESCRIPTION	BY
7	04/21/10	100% CD	EN
6	04/14/10	100% CD	EN
5	03/29/10	100% CD	EN
4	12/03/09	100% CD	EN
3	11/12/09	100% CD	EN
2	05/19/09	100% CD	DC
1	05/01/09	100% CD	DC
0	03/23/09	90% CD	AN

CIVIL ENGINEER:



DRAWN BY: CHK.: APV.:

AN	DC
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LICENSER:



SHEET TITLE:

TITLE SHEET, SITE INFORMATION
AND VICINITY MAP

SHEET NUMBER:

T-1

CODE COMPLIANCE

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

- 2007 CALIFORNIA BUILDING CODE ('07 CBC)
- 2007 CALIFORNIA FIRE CODE ('07 CFC)
- 2007 CALIFORNIA ELECTRIC CODE ('07 CEC)
- 2007 CALIFORNIA MECHANICAL CODE ('07 CMC)
- 2007 SAN FRANCISCO FIRE CODE (2007 SFFC)
- 2002 NEPA 13 AUTOMATIC SPRINKLER SYSTEMS
- 2002 NFPA 72 NATIONAL FIRE ALARM CODE

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF A MODIFICATIONS TO AN EXISTING VERIZON WIRELESS WIRELESS ANTENNA FACILITY, MODIFICATIONS INCLUDE:

- THE ADDITION OF THREE (3) NEW 4' PANEL ANTENNAS TO BE MOUNTED NEXT TO THE THREE (3) (E) 4' PANEL ANTENNAS.
- THE ADDITION OF SIX (6) NEW RUNS OF COAX.

DRIVING DIRECTIONS

START: OUT GOING SOUTHWEST ON MITCHELL DR. TOWARD N WIGET LN. TURN LEFT ON N WIGET LN. MAKE A RT ON YGNACIO VALLEY RD. MERGE ONTO CA-24 WEST. TAKE THE 580 W EXIT TO SAN FRANCISCO. MERGE ONTO I-80 W. I-80 BECOMES HIGHWAY 101, TAKE SOUTH TO I-280 EXIT. MERGE ONTO MONTEREY BOULEVARD. STAY STRAIGHT TO SANTA CLARA AVENUE. TURN LEFT ONTO ST. FRANCIS BOULEVARD. PASS ROUND ABOUT, BECOMES SLOAT BOULEVARD. TURN SLIGHTLY LEFT ONTO HERBST ROAD WHICH BECOMES ARMORY DRIVE.

SHEET INDEX

SHEET	DESCRIPTION
T-1	TITLE SHEET, SITE INFORMATION AND VICINITY MAP
T-1.1	FIRE DEPARTMENT CHECKLIST
T-1.2	RF EXPOSURE LETTER / STRIPING DETAILS
T-1.3	RF EXPOSURE NOTES / SIGNAGE DETAILS
T-2	GENERAL CONSTRUCTION NOTES, GENERAL NOTES, ABBREVIATIONS & LEGEND
LS-1	TOPOGRAPHIC SURVEY
A-1	SITE PLAN / ANTENNA LAYOUT
A-2	ELEVATIONS
D-1	DETAILS

PROJECT TEAM

CIVIL ENGINEER:

CONNELL DESIGN GROUP, LLC
4685 MACARTHUR COURT, SUITE 480
NEWPORT BEACH, CA 92660
PHONE: (949) 753-8807
FAX: (949) 753-8833
E-MAIL: dconnell@connelldesigngroup.com
CONTACT: DAN CONNELL

SITE ACQUISITION:

NSA WIRELESS, INC.
4685 MACARTHUR COURT SUITE 480
NEWPORT BEACH, CA 92660
CONTACT: MARGIE DETIEGE
PHONE: 925-244-1890 ex 227
E-MAIL: margie.detiege@nsawireless.com

PROJECT INFORMATION

APPLICANT

VERIZON WIRELESS
2785 MITCHELL DRIVE
WALNUT CREEK, CA 94598
JAY INOUIE
925-519-9247

OWNER

CONTACT: SGT. TIM SCHLAFER
PHONE: (415) 469-6298

SITE ADDRESS: 100 ARMORY DRIVE
SAN FRANCISCO, CA 94123

LATITUDE: 37° 43' 38.31" N

LONGITUDE: 122° 30' 10.71"

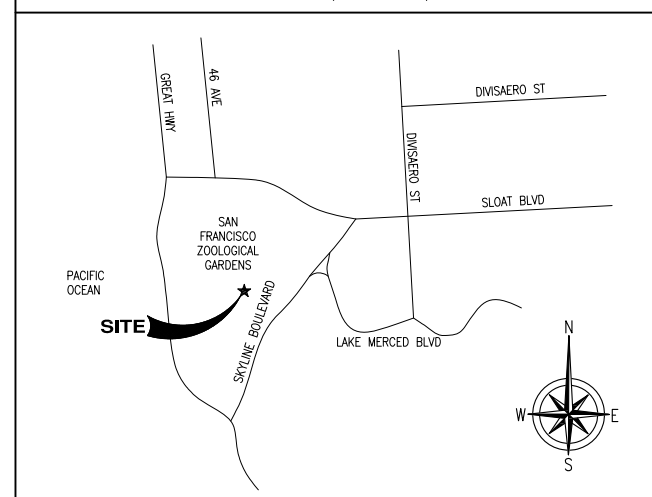
JURISDICTION: THE CITY OF SAN FRANCISCO

OCCUPANCY TYPE: GROUP U

CONST. TYPE: V-N.R.

BLOCK/LOT NUMBER: 7281-004

VICINITY MAP (NOT TO SCALE)



GENERAL CONTRACTOR NOTES

DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS WITH EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE. SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

2.06 PERMIT APPLICATION CHECKLIST FOR CELLULAR ANTENNA SITES AND ALL EQUIPMENT SERVING THE CELLULAR ANTENNA SITE

THIS CHECKLIST SHALL BE PRINTED ON A DRAWING SHEET AND SUBMITTED AS PART OF THE PLANS SUBMITTED WITH ANY BUILDING PERMIT APPLICATION CREATING OR MODIFYING CELLULAR ANTENNA SITES REGARDLESS OF RF EMISSION QUANTITIES. THIS CHECKLIST IS DESIGNED TO ASSIST DESIGNERS, INSTALLERS, PLAN REVIEWERS, AND FIELD INSPECTORS. THIS CHECKLIST SHALL BE PREPARED BY THE DESIGN PROFESSIONAL AND SHALL BE STAMPED AND WET-SIGNED.

THIS DOCUMENT IS NOT ALL-INCLUSIVE OF ALL REQUIREMENTS FOR CELLULAR ANTENNA SITES AND IT IS THE RESPONSIBILITY OF THE DESIGNER TO RESEARCH THE APPLICABLE CODES. DOCUMENTS REFERENCED FOR THIS BULLETIN ARE AS FOLLOWS:

- FCC OET BULLETIN 56 – QUESTIONS AND ANSWERS ABOUT BIOLOGICAL EFFECTS AND POTENTIAL HAZARDS OF RADIO FREQUENCY ELECTROMAGNETIC FIELDS (AUGUST 1999)
- FCC OET BULLETIN 65 – EVALUATING COMPLIANCE WITH FCC GUIDELINES FOR HUMAN EXPOSURE TO RADIO FREQUENCY ELECTROMAGNETIC FIELDS (ED. 97-01:AUGUST 1997)
- FCC – A LOCAL GOVERNMENT OFFICIAL'S GUIDE TO TRANSMITTING ANTENNA RF EMISSION SAFETY: RULES, PROCEDURES, AND PRACTICAL GUIDANCE (JUNE 2, 2000)
- 2007 CALIFORNIA BUILDING CODE (2001 CBC)
- 2007 CALIFORNIA FIRE CODE (2001 CFC)
- 2007 CALIFORNIA MECHANICAL CODE (2001 CMC)
- 2007 SAN FRANCISCO FIRE CODE (2001 SFFC)
- 2002 NFPA 13 AUTOMATIC SPRINKLER SYSTEMS
- 2002 NFPA 72 NATIONAL FIRE ALARM CODE

COMPLETE, EXISTING OR N/A	SHEET LOCATION
COMPLETE	T-1
EXISTING	A-1 A-2
COMPLETE	T-1.1
COMPLETE	A-1
EXISTING	T-1.3 A-1
EXISTING	N/A
EXISTING	A-1 A-2
EXISTING	N/A
EXISTING	A-1 A-2

1. DESCRIPTION OF SCOPE OF WORK (BOTH ON THE APPLICATION AND PLANS) SHALL MATCH THE ACTUAL WORK BEING DONE.
2. PLANS SHALL INCLUDE PLAN VIEWS AND ELEVATIONS SHOWING ALL EQUIPMENT LOCATIONS AND CABLE RUNS.
3. SUBMIT ON A DRAWING SHEET THE SAN FRANCISCO HEALTH DEPARTMENT CELLULAR ANTENNA SITE (WTS) CHECKLIST/PROPOSAL/ENGINEER'S RF REPORT. THE FCC REQUIRES CARRIERS TO INFORM AND PREVENT OCCUPATIONAL EXPOSURE (I.E. BUILDING MAINTENANCE WORKERS, FIRE FIGHTERS, ETC.) THE RF REPORT SHALL NOT SPECIFY LOCKING THE ROOF ACCESS DOOR TO KEEP THE GENERAL PUBLIC OFF OF THE ROOF PER 2001 SFFC 1207.7.1. THE RF REPORT SHALL BE WET STAMPED AND SIGNED BY AN ENGINEER.
4. DRAWINGS SHALL REFLECT THE STRIPED/EXCLUSION AREAS PER THE ABOVE RF REPORT WITH A MINIMUM RADIUS BEING 1 FOOT.
5. NOTICE TO WORKERS WARNING SIGNAGE AS APPLICABLE PER THE ABOVE RF REPORT: SIGNAGE SHALL BE IN ENGLISH, CHINESE AND SPANISH; THE SIGNAGE SHALL BE PERMANENTLY MOUNTED AT THE STAIRWELL SIDE OF THE ROOF-ACCESS STAIRWELL, DOOR, IN THE FIRE CONTROL ROOM WITHIN PROXIMITY OF THE CELL-SITE SHUTDOWN SIGNAGE AND ANY OTHER SPACE NECESSARY TO WARN WORKERS (IE. PARAPETS, STREET SIDE OF FIRE ESCAPES); THE SIGNAGE SHALL BE CLEARLY LABELED AND VISIBLE FROM ANY DIRECTION OF APPROACH; THE SIGN SHALL BE WEATHERPROOF WITH CONTRASTING BACKGROUND AND LETTERING COLORS AND SHALL BE READABLE FROM AT LEAST FIFTEEN (15) FEET FROM THE SIGN; THERE IS A YELLOW TRIANGLE AROUND THE ANTENNA SYMBOL (SEE ANSI C95.2-1999); AND LOCATION AND SIGNAGE DETAIL WITH SITE SPECIFIC INFORMATION SHALL BE INCLUDED ON A DRAWING SHEET.
6. PROVIDE A QUANTITATIVE THREE-DIMENSIONAL PERIMETER OF THE RF LEVELS IF THE ANTENNAS APPEAR TO ENCR OACH ON ANY MEANS OF EXITING.
7. CAMOUFLAGED ANTENNAS SHALL HAVE 4INCH X 4INCH SIGNAGE PERMANENTLY MOUNTED TO THE EXTERIOR OF THE RF SCREEN AS PROVIDED BELOW. THESE ANTENNAS SHALL ALSO HAVE THE STRIPPED EXCLUSION AREA TO THE FULLEST EXTENT OF THE ANTENNA LOCATION WITH A MINIMUM RADIUS OF 1 FOOT: THE SIGNAGE SHALL BE CLEARLY LABELED AND VISIBLE FROM ANY DIRECTION OF APPROACH EVEN IF ACCESS IS ACHIEVED FROM THE BUILDING FACE (I.E. LADDERS, CHERRY PICKER, ETC.); THE SIGN SHALL BE WEATHERPROOF WITH CONTRASTING BACKGROUND COLOR AND SHALL BE RECOGNIZABLE FROM AT LEAST FIFTEEN (15) FEET FROM THE SIGN; THE SIGN SHALL CONTAIN THE YELLOW TRIANGLE AROUND THE ANTENNA SYMBOL (SEE ANSI C95.2-1999); AND LOCATION AND SIGNAGE DETAIL SHALL BE INCLUDED ON A DRAWING SHEET.
8. PLANS SHALL SHOW WHETHER A NEW ELECTRICAL SERVICE IS INSTALLED FOR THE CELL SITE. IN GENERAL, BUILDINGS SHOULD ONLY HAVE ONE ELECTRICAL SERVICE. HOWEVER, WITH THE PRIOR APPROVAL OF THE SAN FRANCISCO FIRE DEPARTMENT AND THE ELECTRICAL INSPECTION DIVISION, BUILDINGS MAY HAVE ONE ADDITIONAL SERVICE TO SERVE ROOFTOP ANTENNA EQUIPMENT, PROVIDED A PERMANENT PLACARD IS PROVIDED AT THE LOCATION OF EACH SERVICE DISCONNECT STATING THE LOCATION OF THE OTHER AND IDENTIFYING THE EQUIPMENT SERVED BY EACH SERVICE.
9. PROVIDE ROUTE OF ALL CABLES FROM THEIR ORIGIN TO THE EQUIPMENT (PLAN, ELEVATION AND SECTION VIEWS). CABLES/WIRING SHALL NOT BE ALLOWED IN EXIT ENCLOSURES OR IN FRONT OF DRY STANDPIPES (2007 CBC 1020.1.1).

COMPLETE, EXISTING OR N/A	SHEET LOCATION
EXISTING	N/A
N/A	N/A
N/A	N/A
(E)	N/A
(E)	N/A
(E)	N/A
(E)	N/A

10. EITHER:
 PROVIDE A MANUAL BATTERY DISCONNECT:
 * INSTRUCTIONAL SIGNAGE SHALL BE PROVIDED ON THE PROCEDURE TO DISCONNECT OR DE-ENERGIZE RADIO FREQUENCY (RF) SIGNAL FOR THE ABOVE MANUAL DISCONNECT FOR THE BATTERIES.
 * SIGNAGE SHALL BE PERMANENTLY MOUNTED NEXT TO THE BATTERY'S ELECTRICAL PANEL AND CLEARLY LABELED IN A PHENOLIC LABEL WITH A WHITE BACKGROUND AND BLACK LETTERING. THE TITLE BLOCK SHALL BE A RED BACKGROUND AND 1" HIGH WHITE LETTERING.
 * THE ACTUAL BREAKER(S) SHALL BE A PHENOLIC LABEL (RED BACKGROUND AND WHITE LETTERING) WITH LETTERING NOT LESS THAN 1/8" HIGH.
 * THE SIGNAGE SHALL ALSO BE LIKE POSTED IN THE FCC ROOM WITHIN PROXIMITY OF THE FIRE ALARM PANEL AND BUILDING'S MAIN ELECTRICAL ROOM WITHIN PROXIMITY OF THE MAIN SHUTOFF.
 * A COPY OF THE SIGNAGE SHALL BE INCLUDED ON A DRAWING SHEET.
 * PROVIDE SFFD APPROVED KEY LOCK BOX FOR EQUIPMENT/ELECTRICAL ROOM FOR BATTERY/EQUIPMENT SHUTDOWN.
 * THE PERMANENTLY MOUNTED LABEL ABOVE THE LOCK BOX SHALL READ "SFFD BATTERY DISCONNECT ACCESS KEY" AND SHALL BE A PHENOLIC LABEL WITH A RED BACKGROUND AND WHITE LETTERING.
 * LOCATION AND LABEL OF THE KEY LOCK BOX SHALL BE INCLUDED ON A DRAWING SHEET.
 OR:
 PROVIDE 24 HOUR/7 DAYS A WEEK TELEPHONE SERVICE CENTER SHUT-DOWN:
 * PROVIDE INSTRUCTIONAL SIGNAGE FOR EMERGENCY SHUTDOWN OF THE CELL SITE INCLUDING TELEPHONE NUMBER AND CELL SITE IDENTIFICATION NUMBER.
 * THE SIGN SHALL STATE THAT THERE IS NO MANUAL SHUT DOWN FOR THE CELL SITE AND TO CALL THE CONTACT NUMBER (THE NUMBER SHALL BE PRINTED ON THE SIGN) WITH THE SITE IDENTIFICATION NUMBER (THE NUMBER SHALL BE PRINTED ON THE SIGN) FOR IMMEDIATE SHUT-DOWN OF THE SITE 24HR/7DAYS A WEEK.
 * THE SIGN SHALL ALSO STATE WHETHER OR NOT THE BACK-UP BATTERY POWER TO THE ANTENNAS IS ALSO SHUT-DOWN.
 * THE SIGNAGE SHALL BE PERMANENTLY MOUNTED NEXT TO THE MAIN ELECTRICAL SHUT-OFF, IN THE FCC ROOM WITHIN CLOSE PROXIMITY TO THE FIRE ALARM PANEL, AT THE BATTERY CABINET AND AT THE EQUIPMENT ROOM.
 * THE SIGN SHALL BE CLEARLY LABELED IN A PHENOLIC LABEL WITH A WHITE BACKGROUND AND BLACK LETTERING. THE TITLE BLOCK SHALL BE A RED BACKGROUND AND 1" HIGH WHITE LETTERING.
 * A COPY OF THE SIGNAGE SHALL BE INCLUDED ON A DRAWING SHEET.
11. IS A NEW HVAC SYSTEM BEING INSTALLED?
 ___ YES
 * WHAT IS THE VOLUME OF REFRIGERANT USED BY THE COOLING UNIT(S)? _____
 ___ NO
 * WHAT IS THE TYPE OF REFRIGERANT PER 2007 CMC? _____
 * ASSURE COMPLIANCE WITH 2007 CFC SECTION 606.
12. PLANS STATE SEQUENCE OF OPERATIONS FOR ANY NEW DETECTION, DAMPERS, OR FANS.
13. PLANS SHALL CLEARLY SHOW LOCATIONS OF BATTERIES AND BATTERY CABINETS.
14. PLANS SHALL STATE WHETHER THE BUILDING IS FULLY SPRINKLERED OR NOT.
15. IN FULLY SPRINKLERED BUILDINGS, EQUIPMENT ROOMS SHALL BE PROVIDED WITH SPRINKLERS IN ACCORDANCE WITH NFPA 13.
16. PROVIDE A TABLE ON A DRAWING SHEET SHOWING THE MANUFACTURER, MODEL, TYPE, AMOUNT (GALLONS OR POUNDS) OF ELECTROLYTE, FLOODED LEAD ACID, NI-CD, VRLA OR LI-ION. PLEASE SHOW DETAILED COMPLIANCE WITH 2007 CFC SECTION 608 ON THE DRAWING SHEETS. WHEN COMPLIANCE WITH SECTION 608 OF THE 2007 CALIFORNIA FIRE CODE IS REQUIRED, THE FOLLOWING ADDITIONAL INFORMATION SHALL BE PROVIDED:
 * ROOFTOP BATTERY ROOMS EXCEEDING THE ABOVE REQUIREMENTS SHALL BE SEPARATED FROM THE BUILDING AND ANY OPENINGS AS SPECIFIED BY THE 2007 CBC AND CMC.
 * PLANS STATE THAT A SEPARATE FIRE DEPARTMENT PERMIT WILL BE OBTAINED FROM SFFD HEADQUARTERS AT 698 2ND ST.

PREPARED BY: DANIEL CONNELL, PE STAMP

FIRM NAME: CONNELL DESIGN GROUP, LLC
 ADDRESS: 4685 MACARTHUR COURT, SUITE 480, NEWPORT BEACH, CA 92660
 PHONE NUMBER: 949-753-8807
 FAX NUMBER: 949-753-8833



VERIZON WIRELESS
 2785 MITCHELL DRIVE
 WALNUT CREEK, CA 94598

PROJECT INFORMATION:

SF ZOO
 SITE NO. 123352
 100 ARMORY DRIVE
 SAN FRANCISCO, CA 94132

NSA Wireless, Inc.

Site Acquisition * Planning * Construction Management * Site Modifications
 Bishop Ranch 15 1st Floor
 12847 Alcosta Blvd., Suite 110
 San Ramon, CA 94583
 (925) 244-1880 OFFICE

CURRENT ISSUE DATE:

04/21/10

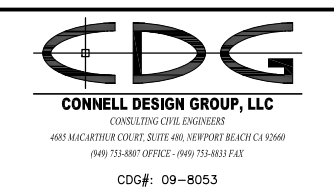
ISSUED FOR:

100% CD

REV.: DATE: DESCRIPTION: BY:

REV.	DATE	DESCRIPTION	BY
7	04/21/10	100% CD	EN
6	04/14/10	100% CD	EN
5	03/29/10	100% CD	EN
4	12/03/09	100% CD	EN
3	11/12/09	100% CD	EN
2	05/19/09	100% CD	DC
1	05/01/09	100% CD	DC
0	03/23/09	90% CD	AN

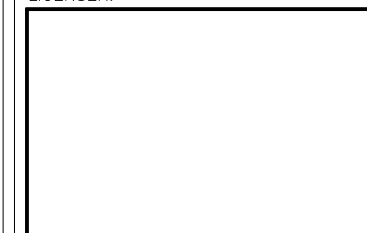
CIVIL ENGINEER:



DRAWN BY: AN CHK.: DC APV.:

AN	DC
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LICENSER:

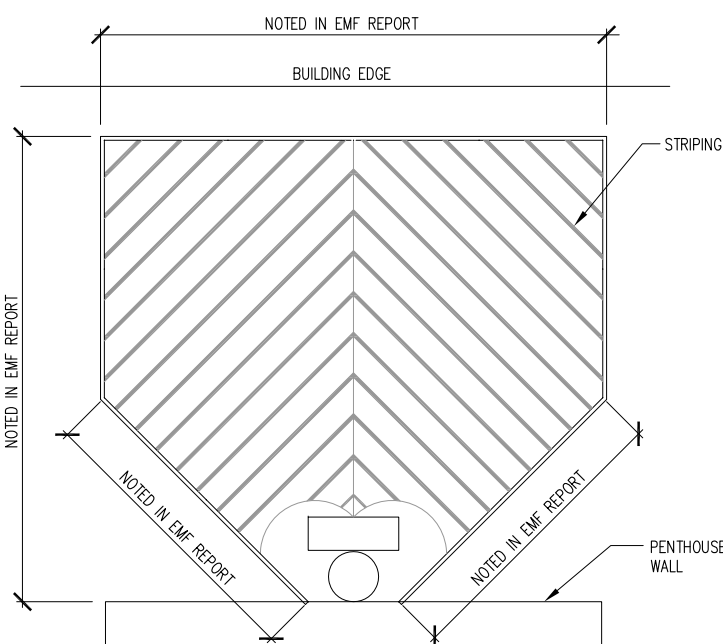


SHEET TITLE:

FIRE DEPARTMENT CHECKLIST

SHEET NUMBER:

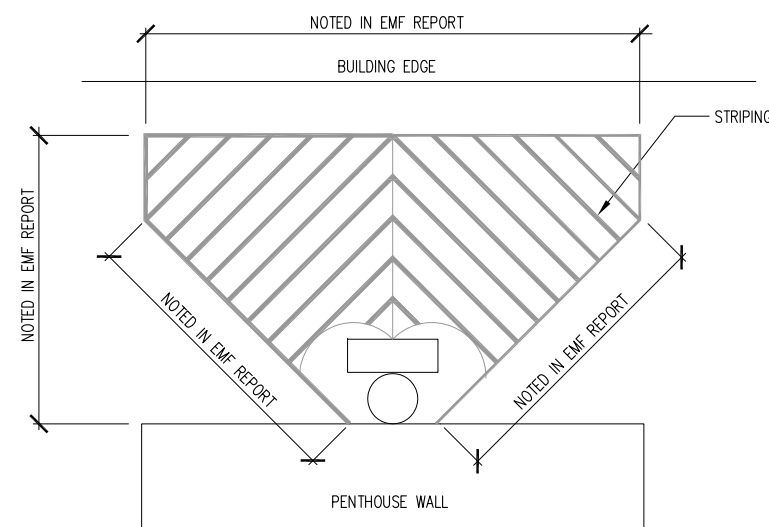
T-1.1



NOTE: TO BE USED ONLY WHEN INDICATED.

TYPICAL CAUTION STRIPAGE WITH PUBLIC ACCESS

SCALE: NONE 2



NOTE: TO BE USED ONLY WHEN INDICATED.

TYPICAL CAUTION STRIPAGE WITH NO PUBLIC ACCESS

SCALE: NONE 3

Verizon Wireless • Base Station No. 123352 "SF Zoo"
100 Armory Drive • San Francisco, California

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of Verizon Wireless, a wireless telecommunications carrier, to evaluate proposed modifications to its existing base station (Site No. 123351 "SF Zoo") located at 100 Armory Drive with respect to prevailing standards limiting human exposure to radio frequency energy.

Background

The San Francisco Department of Public Health has adopted a 10-point checklist for determining compliance of WTS facilities with prevailing safety standards. The acceptable limits for exposures of unlimited duration are those adopted by the FCC:

Personal Wireless Service	Approx. Frequency	Occupational Limit	Public Limit
Broadband Radio ("BRS")	2,600 MHz	5.00 mW/cm ²	1.00 mW/cm ²
Advanced Wireless ("AWS")	2,100	5.00	1.00
Personal Communication ("PCS")	1,950	5.00	1.00
Cellular Telephone	870	2.90	0.58
Specialized Mobile Radio ("SMR")	855	2.85	0.57
Long Term Evolution ("LTE")	700	2.33	0.47
[most restrictive frequency range]	30-300	1.00	0.20

The site was visited by Mr. Kent Swisher, a qualified engineer employed by Hammett & Edison, Inc., during normal business hours on August 18, 2009, and reference has been made to additional information provided by Verizon, including construction drawings by Connell Design Group, LLC, dated March 23, 2009.

Checklist

- The location of all existing antennas and facilities at site. Existing RF levels.
Verizon had installed three directional antennas oriented in different directions at the top of a tall steel pole located adjacent to the National Guard building at 100 Armory Drive. Existing RF levels at ground near the site measured less than 1% of the most restrictive public exposure limit.
- The location of all approved (but not installed) antennas and facilities. Expected RF levels from approved antennas.
No other WTS facilities are reported to be approved for this site, but not yet installed.
- The number and types of WTS within 100 feet of proposed site and estimates of additive EMR emissions at proposed site.
There were no other WTS facilities observed within 100 feet of the proposed site. There were observed similar antennas mounted on nearby poles for use by AT&T Mobility and Sprint Nextel, at 215 and 190 feet away, respectively.

HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
SAN FRANCISCO

VW123351599.2
Page 1 of 3

Verizon Wireless • Base Station No. 123352 "SF Zoo"
100 Armory Drive • San Francisco, California

4. Location (and number) of Applicant's antennas and back-up facilities per building and location (and number) of other WTS at site.

Verizon proposes to add LTE service by adding three Andrew Model BXA70063/4CF directional panel antennas next to the existing antennas, reported to be Andrew Model DBXNH-6565A-VTM directional broadband antennas for PCS and cellular service, mounted with no down tilt at an effective height of about 48 feet above ground and oriented toward 85°T, 175°T, and 355°T.

5. Power rating (maximum and expected operating power) for all existing and proposed backup equipment subject to application.

The maximum rating of the cellular and PCS transmitters is 20 watts, with the proposed LTE transmitters rated at 16 watts. The power ratings of the transmitters for the other carriers are not known. The actual operating power of the transmitters will depend upon the system losses encountered after the physical cabling runs have been installed; the transmitters may operate at a power less than their maximum rating, such that the total power radiated from the antennas does not exceed the level given in Item 6 below.

6. Total number of watts per installation and total number of watts for all installations at site.

The maximum effective radiated power in any direction for Verizon would be 2,560 watts, representing simultaneous operation at 960 watts for PCS, 1,200 watts for cellular, and 400 watts for LTE service. The maximum numbers of watts for the other carriers' operations are not known.

7. Plot or roof plan showing method of attachment of antennas, directionality of antennas, and height above roof level. Discuss nearby inhabited buildings.

The antennas would be mounted as described in Item 4 above. There were noted no buildings of similar height nearby.

8. Estimated ambient RF levels for proposed site and identify three-dimensional perimeter where exposure standards are exceeded.

For a person anywhere at ground near the site, the maximum ambient RF level from the proposed Verizon operation is calculated to be 0.0031 mW/cm², which is 0.56% of the applicable public exposure limit. Therefore, ambient levels at ground are estimated to remain less than 1% of the public limit. The three-dimensional perimeter of RF levels equal to the public exposure limit is calculated to extend up to 39 feet in front of the Verizon antennas and to shorter distances below the antennas; this does not reach any publicly accessible areas.

9. Describe proposed signage at site.

Due to their mounting location, the Verizon antennas would not be accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. It is presumed that Verizon will, as an FCC licensee, take adequate steps to ensure that its employees or

HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
SAN FRANCISCO

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Page 2 of 3

Verizon Wireless • Base Station No. 123352 "SF Zoo"
100 Armory Drive • San Francisco, California

contractors comply with FCC occupational exposure guidelines whenever work is required near the antennas themselves. An explanatory warning sign* had been posted at the base of the pole.

10. Statement of authorship.

The undersigned author of this statement is a qualified Professional Engineer, holding California Registrations Nos. E-13026 and M-20676, which expire on June 30, 2011. 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.

Conclusion

Based on the information and analysis above, it is my professional opinion that the Verizon Wireless base station operation located at 100 Armory Drive in San Francisco will continue to comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment.

April 21, 2010

 William F. Hammett, P.E.

HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
SAN FRANCISCO

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Page 3 of 3

RF EXPOSURE LETTER

SCALE: NONE 1



VERIZON WIRELESS
2785 MITCHELL DRIVE
WALNUT CREEK, CA 94598

PROJECT INFORMATION:

SF ZOO
SITE NO. 123352
100 ARMORY DRIVE
SAN FRANCISCO, CA 94132

NSA Wireless, Inc.

Site Acquisition • Planning • Construction Management • Site Modifications
 Bishop Ranch 15 1st Floor
12647 Alcosta Blvd., Suite 110
San Ramon, CA 94583
(925) 244-1890 OFFICE

CURRENT ISSUE DATE:

04/21/10

ISSUED FOR:

100% CD

REV.: DATE: DESCRIPTION: BY:

REV.	DATE	DESCRIPTION	BY
7	04/21/10	100% CD	EN
6	04/14/10	100% CD	EN
5	03/29/10	100% CD	EN
4	12/03/09	100% CD	EN
3	11/12/09	100% CD	EN
2	05/19/09	100% CD	DC
1	05/01/09	100% CD	DC
0	03/23/09	90% CD	AN

CIVIL ENGINEER:



DRAWN BY: CHK.: APV.:

AN DC

LICENSER:

SHEET TITLE:

RF EXPOSURE LETTER / STRIPING
DETAILS

SHEET NUMBER:

T-1.2

SIGNAGE AND STRIPING INFORMATION

THE FOLLOWING INFORMATION IS A GUIDE LINE WITH RESPECT TO PREVAILING STANDARDS LIMITING HUMAN EXPOSURE TO RADIO FREQUENCY ENERGY AND SHOULD BE USED AS SUCH. IF THE SITE'S EMF REPORT OR ANY LOCAL, STATE OR FEDERAL GUIDELINES OR REGULATION SHOULD BE IN CONFLICT WITH ANY PART OF THESE NOTES OR PLANS THE MORE RESTRICTIVE GUIDE LINE OR REGULATION SHALL BE FOLLOWED AND OVER RIDE THE LESSER.

THE PUBLIC LIMIT OF RF EXPOSURE ALLOWED BY VERIZON WIRELESS IS 1mWcm^2 AND THE OCCUPATIONAL LIMIT OF RF EXPOSURE ALLOWED BY VERIZON WIRELESS IS 5mWcm^2

IF THE BOTTOM OF THE ANTENNA IS MOUNTED (8) EIGHT FEET ABOVE THE GROUND OR ROOF LINE OF THE PERSONAL COMMUNICATION SYSTEM (PCS) AND DOSE NOT EXCEED THE PUBLIC LIMIT OF RF EXPOSURE LIMIT THEN NO STRIPING OR BARRICADES SHOULD BE NEEDED.


IF THE PUBLIC LIMIT OF RF EXPOSURE ON THE SITE IS EXCEEDED AND THE AREA IS PUBLICLY ACCESSIBLE (e.g. ROOF ACCESS DOOR THAT CANNOT BE LOCKED OR HAVING A FIRE EGRESS) THEN BOTH BARRICADES AND STRIPING WILL BE NEEDED AROUND THE ANTENNAS. THE EXACT EXTENT OF THE BARRICADES AND STRIPING WILL BE DETERMINED BY THE EMF REPORT FOR THE SITE DONE BEFORE OR SHORTLY AFTER THE CONSTRUCTION OF THE SITE. USE THE PLANS AS A GUIDE LINE FOR PLACEMENT OF SUCH BARRICADES AND STRIPING.

IF THE PUBLIC LIMIT OF RF EXPOSURE ON THE SITE IS NOT EXCEEDED AND THE AREA IS NOT PUBLICLY ACCESSIBLE (e.g. ROOF ACCESS DOOR IS LOCKED), THEN JUST STRIPING OUT TO THE PUBLIC LIMIT WILL BE NEEDED AROUND THE ANTENNAS. THE EXACT EXTENT OF THE STRIPING WILL BE DETERMINED BY THE EMF REPORT FOR THE SITE DONE BEFORE OR SHORTLY AFTER THE CONSTRUCTION OF THE SITE. USE THE PLANS AS A GUIDE LINE FOR PLACEMENT OF SUCH STRIPING.

ALL TRANSMIT ANTENNAS REQUIRE A THREE LANGUAGE WARNING SIGN WRITTEN IN ENGLISH, SPANISH AND CHINESE. THIS SIGN WILL BE PROVIDED TO THE CONTRACTOR BY THE VERIZON WIRELESS CONSTRUCTION MANAGER AT THE TIME OF CONSTRUCTION. THE LARGER SIGN SHALL BE PLACED AT ALL ROOF ACCESS LOCATIONS AND ON ALL BARRICADES IN PLANE SITE AND THE SMALLER SIGN SHALL BE PLACED ON THE ANTENNAS THEMSELVES OR ON THE OUT SIDE OF THE ANTENNA ENCLOSURES IN A MANNER THAT IS EASILY SEEN BY ANY PERSON ON THE ROOF. WARNING SIGNS SHALL COMPLY WITH ANSI C95.2 COLOR, SYMBOL, AND CONTENT CONVENTIONS. ALL SIGN WILL HAVE VERIZON WIRELESS'S NAME AND THE COMPANY CONTACT INFORMATION (e.g., TELEPHONE NUMBER) TO ARRANGE FOR ACCESS TO THE RESTRICTED AREAS. THIS TELEPHONE NUMBER WILL BE PROVIDED TO THE CONTRACTOR BY THE VERIZON WIRELESS CONSTRUCTION PROJECT MANAGER AT THE TIME OF CONSTRUCTION.

PHOTOS OF ALL STRIPING, BARRICADES AND SIGNAGE WILL BE PART OF THE CONTRACTORS CLOSE OUT PACKAGE AND WILL BE TURNED INTO THE VERIZON WIRELESS CONSTRUCTION PROJECT MANAGER AT THE END OF CONSTRUCTION. STRIPING SHALL BE DONE WITH FADE RESTRAINT YELLOW SAFETY PAINT IN A CROSS HATCH PATTERN AS SHOW BY THE DETAIL. ALL BARRICADES SHELL BE MADE OF AN RF FRIENDLY MATERIAL SO THAT NOT TO BLOCK OR INTERFERE WITH THE OPERATION OF THE SITE SHALL BE PAINTED WITH FADE RESTRAINT YELLOW SAFETY PAINT. THE CONTRACTOR SHALL PROVIDE ALL RF FRIENDLY BARRICADES NEED AND SHALL PROVIDE THE VERIZON WIRELESS CONSTRUCTION PROJECT MANAGER WITH A THE DETAILED SHOP DRAWING OF EACH BARRICADE.

NOTE:
1. ALL REQUIRED SIGNAGE WILL BE INSTALLED AND FIELD VERIFIED. SEE SHEET A-1 FOR SIGN LOCATIONS



WARNING
HIGH RADIO FREQUENCY EXPOSURE AREA

KEEP BACK 8 FEET FROM THIS ANTENNA. IF ACCESS IS REQUIRED WITHIN THIS DISTANCE, PLEASE CONTACT ANTENNA OWNER BEFORE APPROACHING.

ADVERTENCIA
AREA DE EXPOSICIÓN DE ALTAS FRECUENCIAS DE RADIO

MANTENERSE A 8 PIES DE DISTANCIA DE ESTA ANTENA. SI ES NECESARIO ACERCARSE MAS, COMUNIQUESE CON EL PROPIETARIO DE LA ANTENA ANTES DE HACERLO.

警告
高廣無線電能量地區

請保持在此天線 8 呎以外，如需要進入此範圍內，請在進入之前先聯絡天線的持有人


PHONE NUMBER/ NÚMERO DE TELÉFONO/ 電話號碼
TIM SCHLAFER (415) 469-6298

OWNER/ PROPIETARIO/ 持有人
123352

SITE NUMBER/ NÚMERO DEL SITIO/ 此站號碼
Hammett & Edison, Inc.

(N) INSTALL LARGE STICKER AT BASE OF MONOPOLE

NOTICE



Radio frequency fields beyond this point may exceed the FCC general public exposure limit.

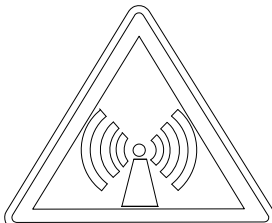
Obey all posted signs and site guidelines for working in radio frequency environments.

In accordance with Federal Communications Commission rules on frequency emissions 47 CFR 1.1307(b)

(TYP.) WARNING SIGNAGE NOT NEEDED DUE TO HEIGHT OF ANTENNAS ON POLE

TYPICAL NOTICE SIGN

SCALE: N.T.S. 4



CAUTION

Beyond this point: Radio frequency fields at this site may exceed FCC rules for human exposure.

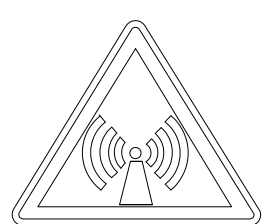
For your safety obey all posted signs and site guidelines for working in radio frequency environments.

In accordance with Federal Communications Commission rules on radio frequency emissions 47 CFR 1.1307(b)

(TYP.) WARNING SIGNAGE NOT NEEDED DUE TO HEIGHT OF ANTENNAS ON POLE

TYPICAL CAUTION SIGN

SCALE: N.T.S. 5



WARNING

Beyond this point: Radio frequency fields at this site exceed the FCC rules for human exposure.

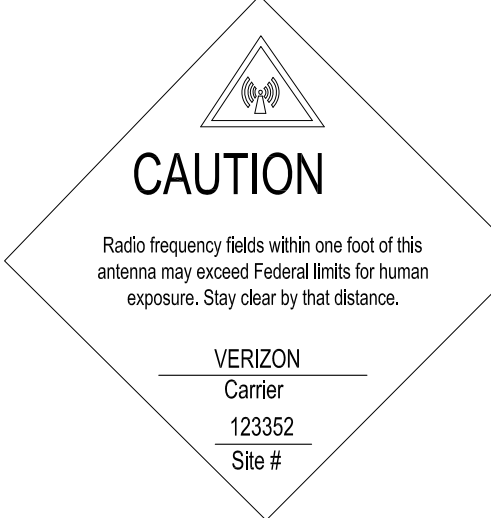
Failure to obey all posted signs and site guidelines for working in radio frequency environments could result in serious injury

In accordance with Federal Communications Commission rules on radio frequency emissions 47 CFR 1.1307(b)

(TYP.) WARNING SIGNAGE NOT NEEDED DUE TO HEIGHT OF ANTENNAS ON POLE

TYPICAL WARNING SIGN

SCALE: N.T.S. 6



CAUTION

Radio frequency fields within one foot of this antenna may exceed Federal limits for human exposure. Stay clear by that distance.

VERIZON
Carrier
123352
Site #

(TYP.) WARNING SIGNAGE NOT NEEDED DUE TO HEIGHT OF ANTENNAS ON POLE

TYPICAL CAUTION SIGN

SCALE: N.T.S. 1

IN CASE OF EMERGENCY
CALL


1-800-408-7900

Site No: 123352

(E) WARNING SIGNAGE ON INSIDE OF SHELTER DOOR

EMERGENCY CONTACT SIGN

SCALE: N.T.S. 2



NOTICE

GUIDELINES FOR WORKING IN RADIO FREQUENCY ENVIRONMENTS

- All personnel should have electromagnetic energy (EME) awareness training.
- All personnel entering this site must be authorized. obey all posted signs.
- Assume all antennas are active. Before working on antennas, notify owners and disable appropriate transmitters.
- Maintain minimum 8 feet clearance from all antennas. Do not stop in front of antennas.
- Use personal RF monitors while working near antennas.
- Never operate transmitters without shields during normal operation.
- Do not operate base station antennas in equipment rooms.

(TYP.) WARNING SIGNAGE NOT NEEDED DUE TO HEIGHT OF ANTENNAS ON POLE

RF GUIDELINES SIGN

SCALE: N.T.S. 3

GENERAL NOTES

SCALE: N.T.S. 8

MULTI-LANGUAGE SIGN

SCALE: N.T.S. 7

TYPICAL WARNING SIGN

SCALE: N.T.S. 6

RF GUIDELINES SIGN

SCALE: N.T.S. 3

verizonwireless
VERIZON WIRELESS
2785 MITCHELL DRIVE
WALNUT CREEK, CA 94598

PROJECT INFORMATION:

SF ZOO
SITE NO. 123352
100 ARMORY DRIVE
SAN FRANCISCO, CA 94132

NSA Wireless, Inc.
Site Acquisition · Planning · Construction Management · Site Modifications
Bishop Ranch 15 1st Floor
12647 Alcosta Blvd., Suite 110
San Ramon, CA 94583
(925) 244-1880 OFFICE

CURRENT ISSUE DATE:

04/21/10


ISSUED FOR:

100% CD

REV.: DATE: DESCRIPTION: BY:

REV.	DATE	DESCRIPTION	BY
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2	05/19/09	100% CD	DC
1	05/01/09	100% CD	DC
0	03/23/09	90% CD	AN

CIVIL ENGINEER:



CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
4885 MACARTHUR COURT, SUITE 480, NEWPORT BEACH CA 92660
(949) 733-8807 OFFICE - (949) 733-8833 FAX
CDG#: 09-8053

DRAWN BY: CHK.: APV.:

AN	DC
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LICENSER:

SHEET TITLE:

RF EXPOSURE NOTES / SIGNAGE DETAILS

SHEET NUMBER:

T-1.3

A.B.	ANCHOR BOLT	GRND.	GROUND
ABV.	ABOVE	HDR.	HEADER
ACCA	ANTENNA CABLE COVER ASSEMBLY	HGR.	HANGER
ADD'L	ADDITIONAL	HT.	HEIGHT
A.F.F.	ABOVE FINISHED FLOOR	ICGB.	ISOLATED COPPER GROUND BUS
A.F.G.	ABOVE FINISHED GRADE	IN.(")	INCH(ES)
ALUM.	ALUMINUM	INT.	INTERIOR
ALT.	ALTERNATE	LB.(#)	POUND(S)
ANT.	ANTENNA	L.B.	LAC BOLTS
APPRX.	APPROXIMATE(LY)	L.F.	LINEAR FEET (FOOT)
ARCH.	ARCHITECT(URAL)	L.	LONG(TUDINAL)
AWG.	AMERICAN WIRE GAUGE	MAS.	MASONRY
BLDG.	BUILDING	MAX.	MAXIMUM
BLK.	BLOCK	M.B.	MACHINE BOLT
BLKG.	BLOCKING	MECH.	MECHANICAL
BM.	BEAM	MFR.	MANUFACTURER
B.N.	BOUNDARY NAILING	MIN.	MINIMUM
BTC.W.	BARE TINNED COPPER WIRE	MISC.	MISCELLANEOUS
B.O.F.	BOTTOM OF FOOTING	MTL.	METAL
B/U	BACK-UP CABINET	(N)	NEW
CAB.	CABINET	NO.(#)	NUMBER
CANT.	CANTILEVER(ED)	N.T.S.	NOT TO SCALE
C.I.P.	CAST IN PLACE	O.C.	ON CENTER
CLG.	CEILING	OPNG.	OPENING
CLR.	CLEAR	P/C	PRECAST CONCRETE
COL.	COLUMN	PCS	PERSONAL COMMUNICATION SERVICES
CONC.	CONCRETE	PLY.	PLYWOOD
CONN.	CONNECTION(OR)	PPC	POWER PROTECTION CABINET
CONSTR.	CONSTRUCTION	PRC	PRIMARY RADIO CABINET
CONT.	CONTINUOUS	P.S.F.	POUNDS PER SQUARE FOOT
d	PENNY (NAILS)	P.S.I.	POUNDS PER SQUARE INCH
DBL.	DOUBLE	P.T.	PRESSURE TREATED
DEPT.	DEPARTMENT	PHR.	POWER (CABINET)
D.F.	DOUGLAS FIR	QTY.	QUANTITY
DIA.	DIAMETER	RAD.(R)	RADIUS
DIAG.	DIAGONAL	REF.	REFERENCE
DIM.	DIMENSION	REIN.F.	REINFORCEMENT(ING)
DWG.	DRAWING(S)	REQ'D.	REQUIRED
DWL.	DOWEL(S)	RGS.	RIGID GALVANIZED STEEL
EA.	EACH	SCH.	SCHEDULE
ELEV.	ELEVATION	SHT.	SHEET
ELC.	ELECTRICAL	SIM.	SIMILAR
ELEV.	ELEVATOR	SPEC.	SPECIFICATION(S)
EMT.	ELECTRICAL METALLIC TUBING	SQ.	SQUARE
E.N.	EDGE NAIL	S.S.	STAINLESS STEEL
ENG.	ENGINEER	STD.	STANDARD
EQ.	EQUAL	STL.	STEEL
EXP.	EXPANSION	STRUC.	STRUCTURAL
EXST.(E)	(E)	TEMP.	TEMPORARY
EXT.	EXTERIOR	THK.	THICK(NESS)
FAB.	FABRICATION(OR)	T.N.	TOE NAIL
F.F.	FINISH FLOOR	T.O.A.	TOP OF ANTENNA
F.G.	FINISH GRADE	T.O.C.	TOP OF CURB
FIN.	FINISH(ED)	T.O.F.	TOP OF FOUNDATION
FLR.	FLOOR	T.O.P.	TOP OF PLATE (PARAPET)
FDN.	FOUNDATION	T.O.S.	TOP OF STEEL
F.O.C.	FACE OF CONCRETE	T.O.W.	TOP OF WALL
F.O.M.	FACE OF MASONRY	TYP.	TYPICAL
F.O.S.	FACE OF STUD	U.G.	UNDER GROUND
F.O.W.	FACE OF WALL	U.L.	UNDERWRITERS LABORATORY
F.S.	FINISH SURFACE	U.N.O.	UNLESS NOTED OTHERWISE
FT.(')	FOOT(FEET)	V.I.F.	VERIFY IN FIELD
FTG.	FOOTING	W	WIDE(WIDTH)
G.	GROWTH (CABINET)	W/	WITH
GA.	GAUGE	WD.	WOOD
GL.	GALVANIZE(D)	W.P.	WEATHERPROOF
G.F.I.	GROUND FAULT CIRCUIT INTERRUPTER	WT.	WEIGHT
GLB.(GLU-LAM)	GLUE LAMINATED BEAM	☉	CENTERLINE
GPS	GLOBAL POSITIONING SYSTEM	☒	PLATE

ABBREVIATIONS **3**

	NEW ANTENNA		GROUT OR PLASTER
	EXISTING ANTENNA		EXISTING BRICK
	GROUND ROD		EXISTING MASONRY
	GROUND BUS BAR		CONCRETE
	MECHANICAL GRND. CONN.		EARTH
	CADWELD		GRAVEL
	GROUND ACCESS WELL		PLYWOOD
	ELECTRIC BOX		SAND
	TELEPHONE BOX		WOOD CONT.
	LIGHT POLE		WOOD BLOCKING
	FND. MONUMENT		STEEL
	SPOT ELEVATION		CENTERLINE
	SET POINT		PROPERTY/LEASE LINE
	REVISION		MATCH LINE
	GRID REFERENCE		WORK POINT
	DETAIL REFERENCE		GROUND CONDUCTOR
	ELEVATION REFERENCE		TELEPHONE CONDUIT
	SECTION REFERENCE		ELECTRICAL CONDUIT
			COAXIAL CABLE
			OVERHEAD SERVICE CONDUCTORS
			CHAIN LINK FENCING

LEGEND **4**

1. THE LATEST EDITION OF THE AMERICAN INSTITUTE OF ARCHITECTS DOCUMENT A201 "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION" ARE INCLUDED IN THESE SPECIFICATIONS AS IF COMPLETELY REPRODUCED HEREIN.
2. THIS FACILITY IS AN UNOCCUPIED PCS TELECOMMUNICATIONS SITE AND IS EXEMPT FROM DISABLED ACCESS REQUIREMENTS.

3. PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTORS PARTICIPATING SHALL VISIT THE JOB SITE AND FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THE NEW PROJECT, WITH THE CONSTRUCTION AND CONTRACT DOCUMENTS, FIELD CONDITIONS, AND CONFIRM THAT THE PROJECT CAN BE ACCOMPLISHED AS SHOWN, PRIOR TO PROCEEDING WITH SUBMISSION OF BIDS & CONSTRUCTION. SHOULD ANY ERRORS, OMISSION, OR DISCREPANCIES BE FOUND, THE CONTRACTORS SHALL IMMEDIATELY NOTIFY PROJECT MANAGER, AND THE ARCHITECT IN WRITING. IN THE EVENT OF DISCREPANCIES, THE CONTRACTOR SHALL INCLUDE THE MORE COSTLY OR EXTENSIVE WORK IN THE BID, UNLESS SPECIFICALLY DIRECTED OTHERWISE. IF A DISCREPANCY EXISTS AND THE PROJECT MANAGER AND ARCHITECT ARE NOT NOTIFIED, THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL COSTS INCURRED TO REPAIR OR CORRECT ALL PROBLEMS THAT RESULT.

4. DRAWINGS SHALL NOT BE SCALED. FIGURED DIMENSIONS HAVE PRECEDENCE OVER DRAWING SCALE AND DETAIL DRAWINGS HAVE PRECEDENCE OVER SMALL SCALE DRAWINGS. CONTRACTOR SHALL CHECK ACCURACY OF ALL DIMENSIONS IN THE FIELD. UNLESS SPECIFICALLY NOTED, DO NOT FABRICATE ANY MATERIALS, OR BEGIN ANY CONSTRUCTION UNTIL THE ACCURACY OF DRAWING DIMENSIONS HAS BEEN VERIFIED AGAINST ACTUAL FIELD DIMENSIONS.

5. CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER AND THE ARCHITECT IF ANY DETAILS ARE CONSIDERED IMPRACTICAL, UNSUITABLE, UNSAFE, NOT WATERPROOF, OR NOT WITHIN CUSTOMARY TRADE PRACTICE. IF WORK IS PERFORMED, IT WILL BE ASSUMED THAT THERE IS NO OBJECTION TO ANY DETAIL. DETAILS ARE INTENDED TO SHOW THE END RESULT OF THE DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB CONDITIONS, AND SHALL BE INCLUDED AS PART OF THE WORK.

6. (E) ELEVATIONS AND LOCATIONS TO BE JOINED SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION. IF THEY DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER, AND THE ARCHITECT SO THAT MODIFICATIONS CAN BE MADE BEFORE PROCEEDING WITH THE WORK.

7. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED CONSTRUCTION STANDARDS. IF THE CONTRACTOR HAS QUESTIONS REGARDING THEIR EXACT MEANING, THE PROJECT MANAGER, AND THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION BEFORE THE CONTRACTOR PROCEEDS WITH THE WORK.

8. THE CONTRACTOR SHALL OBTAIN AND PAY FOR PERMITS, LICENSES AND INSPECTIONS NECESSARY FOR PERFORMANCE OF THE WORK AND INCLUDE THOSE IN THE COST OF THE WORK TO VERIZON WIRELESS.

9. THE CONTRACTOR SHALL SUPERVISE AND DIRECT ALL WORK, USING THE BEST SKILL AND ATTENTION. HE SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES AND SEQUENCES, AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT, INCLUDING CONTACT AND COORDINATION WITH THE IMPLEMENTATION ENGINEER AND WITH THE LANDLORD'S AUTHORIZED REPRESENTATIVE'S

10. WORKMANSHIP THROUGHOUT SHALL BE OF THE BEST QUALITY OF THE TRADE INVOLVED, AND SHALL MEET OR EXCEED THE FOLLOWING MINIMUM REFERENCE STANDARDS FOR QUALITY AND PROFESSIONAL CONSTRUCTION PRACTICE:

NRCA - NATIONAL ROOFING CONTRACTORS ASSOCIATION
O'HARE INTERNATIONAL CENTER
10255 W. HIGGINS ROAD, SUITE 600 ROSEMONT, IL 60018
SMACNA - SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
4201 LAFAYETTE CENTER DRIVE CHATTILY, VA 22021-1209
ITLP - INTERNATIONAL INSTITUTE FOR LATH AND PLASTER
820 TRANSFER ROAD
ST. PAUL, MN 55114-1406
AMA - ADHESIVE MANUFACTURERS ASSOCIATION
401 NORTH MICHIGAN AVENUE, SUITE 2400
CHICAGO, IL 60611

11. THE CONTRACTOR SHALL VERIFY, COORDINATE, AND PROVIDE ALL NECESSARY BLOCKING, BACKING, FRAMING, HANGERS OR OTHER SUPPORTS FOR ALL ITEMS REQUIRING THE SAME.

12. ALL WORK PERFORMED AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTORS SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. MECHANICAL AND ELECTRICAL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS. CONTRACTORS SHALL COMPLY WITH STATE DEPARTMENT OF INDUSTRIAL REGULATIONS AND DIVISION OF INDUSTRIAL SAFETY (OSHA) REQUIREMENTS.

13. CONTRACTORS SHALL PROTECT THE OWNERS' PROPERTY FROM DAMAGE WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGE TO NEW AND (E) CONSTRUCTION, STRUCTURE, LANDSCAPING, CURBS, STAIRS, OR EQUIPMENT, ETC., SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO THE SATISFACTION OF THE PROPERTY OWNER, OR HIS REPRESENTATIVE, AND VERIZON WIRELESS' REPRESENTATIVE, AT THE EXPENSE OF THE CONTRACTOR.

14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR, AND SHALL REPLACE OR REMEDY, ANY FAULTY, IMPROPER, OR INFERIOR MATERIALS OR WORKMANSHIP, OR ANY DAMAGE WHICH SHALL APPEAR WITHIN ONE YEAR AFTER THE COMPLETION AND ACCEPTANCE OF THE WORK UNDER THIS CONTRACT BY VERIZON WIRELESS.

15. ALL SITE WORK SHALL BE CAREFULLY COORDINATED BY GENERAL CONTRACTOR WITH LOCAL UTILITY COMPANY, TELEPHONE COMPANY, AND ANY OTHER UTILITY COMPANIES HAVING JURISDICTION OVER THIS LOCATION. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO LOCATE ALL (E) UTILITIES, WHETHER SHOWN HEREIN OR NOT, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTORS SHALL BEAR ALL EXPENSES FOR REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED IN CONJUNCTION WITH THE EXECUTION OF WORK.

16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE PROJECT SITE WHILE THE JOB IS IN PROGRESS AND UNTIL THE JOB IS COMPLETED AND ACCEPTED BY VERIZON WIRELESS.

17. THE CONTRACTOR SHALL PROVIDE TEMPORARY WATER, POWER AND TOILET FACILITIES AS REQUIRED BY THE PROPERTY OWNER AND THE CITY OR GOVERNING AGENCY.

18. THE LATEST EDITION OF ALL PERMITTED AND APPROVED PLANS PERTAINING TO THIS PROJECT SHALL BE KEPT IN A PLAN BOX AND SHALL NOT BE USED BY WORKERS. ALL CONSTRUCTION SETS SHALL REFLECT THE SAME INFORMATION. THE CONTRACTOR SHALL ALSO MAINTAIN IN GOOD CONDITION, ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA AND CHANGE ORDERS, ON THE PREMISES AT ALL TIMES. THESE ARE TO BE UNDER THE CARE OF THE JOB SUPERINTENDENT.

19. THE CONTRACTOR SHALL REMOVE ALL RUBBISH AND WASTE MATERIALS ON A DAILY BASIS, AND SHALL EXERCISE STRICT CONTROL OVER JOB CLEANING THROUGHOUT CONSTRUCTION, INCLUDING FINAL CLEANUP UPON COMPLETION OF WORK. ALL AREAS ARE TO BE LEFT IN A BROOM CLEAN CONDITION AT THE END OF EACH DAY. ALL MATERIALS COLLECTED DURING CLEANING OPERATIONS SHALL BE DISPOSED OF OFF-SITE BY THE GENERAL CONTRACTOR.

20. THE GENERAL CONTRACTOR MUST PERFORM WORK DURING PROPERTY OWNER'S PREFERRED HOURS TO AVOID DISRUPTION OF NORMAL ACTIVITY.

21. ALL EXPOSED METAL SHALL BE HOT-DIPPED GALVANIZED.

22. SEAL ALL PENETRATIONS THROUGH FIRE-RATED AREAS WITH U.L. LISTED OR FIRE MARSHALL APPROVED MATERIALS IF AND WHERE APPLICABLE TO THIS FACILITY AND PROJECT SITE.

23. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-A, 10-BC WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF THE PROJECT CONSTRUCTION AREA.

24. ELECTRICAL POWER SYSTEM SHALL BE GROUNDED PER NEC ARTICLES 250 AND 810.

25. ALL NEW OPENINGS IN THE EXTERIOR ENVELOPE OF CONDITIONED SPACES SUCH AS AT WALL AND ROOF PENETRATIONS SHALL BE CAULKED OR SEALED TO LIMIT INFILTRATION OF AIR AND MOISTURES.

26. U.N.O., CONTRACTOR SHALL PROVIDE CLOSE-OUT PACKAGE TO VERIZON WIRELESS WHICH WILL INCLUDE:
(CONTRACTOR SHALL REFER TO THEIR CURRENT CONTRACT FOR A COMPLETE LIST OF DELIVERABLES.)

- A. BUILDING PERMITS/ELECTRICAL PERMITS
 - B. FINAL INSPECTION CARD
 - C. STAMPED BUILDING PERMIT PLANS
 - D. GROUNDING TEST
 - E. SWEEP TEST
 - F. CONCRETE TEST
 - G. SPECIAL INSPECTION REPORTS
 - H. WARRANTIES, MANUAL, EQUIPMENT SPECIFICATIONS
 - I. SUBCONTRACTOR CONTACT LIST
 - J. RED LINED ASBUILTS
 - K. CONSTRUCTION PROCESS PHOTOS
 - L. SITE COMPLETION PHOTOS
 - M. A WRITTEN REPORT ON ANTENNA SERIAL NUMBER FOR EACH SECTOR
 - N. MANUFACTURER'S PERFORMANCE REPORT FOR EACH ANTENNA
- CONTRACTOR SHALL REFER TO THEIR CURRENT CONTRACT FOR A COMPLETE LIST OF DELIVERABLES.

1. PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY, UNLESS NOTED OTHERWISE. THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

2. THE CONTRACTOR SHALL OBTAIN, IN WRITING, AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.

3. CONTRACTOR SHALL CONTACT USA (UNDERGROUND SERVICE ALERT,) AT (800) 227-2600, FOR UTILITY LOCATIONS, 48 HRS BEFORE PROCEEDING WITH ANY EXCAVATION, SITE WORK OR CONSTRUCTION.

4. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE, OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.

5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CBC'S REQUIREMENTS REGARDING EARTHQUAKE RESISTANCE, FOR, BUT NOT LIMITED TO, PIPING, LIGHT FIXTURES, CEILING GRID, INTERIOR PARTITIONS, AND MECHANICAL EQUIPMENT. ALL WORK MUST COMPLY WITH LOCAL EARTHQUAKE CODES AND REGULATIONS.

6. REPRESENTATIONS OF TRUE NORTH, OTHER THAN THOSE FOUND ON THE PLOT OF SURVEY DRAWING, SHALL NOT BE USED TO IDENTIFY OR ESTABLISH THE BEARING OF TRUE NORTH AT THE SITE. THE CONTRACTOR SHALL RELY SOLELY ON THE PLOT OF SURVEY DRAWING AND ANY SURVEYOR'S MARKINGS AT THE SITE FOR THE ESTABLISHMENT OF TRUE NORTH, AND SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH THE WORK IF ANY DISCREPANCY IS FOUND BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND THE TRUE NORTH ORIENTATION AS DEPICTED ON THE CIVIL SURVEY. THE CONTRACTOR SHALL ASSUME SOLE LIABILITY FOR ANY FAILURE TO NOTIFY THE ARCHITECT/ENGINEER.

7. THE BUILDING DEPARTMENT ISSUING THE PERMITS SHALL BE NOTIFIED AT LEAST TWO WORKING DAYS PRIOR TO THE COMMENCEMENT OF WORK, OR AS OTHERWISE STIPULATED BY THE CODE ENFORCEMENT OFFICIAL HAVING JURISDICTION.

8. THE ARCHITECT/ENGINEER, CONNELL DESIGN GROUP LLC, AND REPRESENTATIVES OF THE OWNER, MUST BE NOTIFIED AT LEAST TWO FULL DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

9. DO NOT EXCAVATE OR DISTURB BEYOND THE PROPERTY LINES OR LEASE LINES, UNLESS OTHERWISE NOTED.

10. ALL EXISTING UTILITIES, FACILITIES, CONDITIONS, AND THEIR DIMENSIONS SHOWN ON PLANS HAVE BEEN PLOTTED FROM AVAILABLE RECORDS. THE ARCHITECT/ENGINEER AND THE OWNER ASSUME NO RESPONSIBILITY WHATSOEVER AS TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS, OR THE MANNER OF THEIR REMOVAL OR ADJUSTMENT. CONTRACTORS SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL EXISTING UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTORS SHALL ALSO OBTAIN FROM EACH UTILITY COMPANY DETAILED INFORMATION RELATIVE TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTING EXISTING UTILITIES.

11. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES, BOTH HORIZONTALLY AND VERTICALLY, PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES OR DOUBTS AS TO THE INTERPRETATION OF PLANS SHOULD BE IMMEDIATELY REPORTED TO THE ARCHITECT/ENGINEER FOR RESOLUTION AND INSTRUCTION, AND NO FURTHER WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS CHECKED AND CORRECTED BY THE ARCHITECT/ENGINEER. FAILURE TO SECURE SUCH INSTRUCTION MEANS CONTRACTOR WILL HAVE WORKED AT HIS/HER OWN RISK AND EXPENSE.

12. ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS TO BE DISTURBED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISH ELEVATIONS PRIOR TO FINAL INSPECTION OF WORK.

13. ANY DRAIN AND/OR FIELD TILE ENCOUNTERED DURING CONSTRUCTION SHALL BE RETURNED TO ITS ORIGINAL CONDITION PRIOR TO COMPLETION OF WORK. SIZE, LOCATION AND TYPE OF ANY UNDERGROUND UTILITIES OR IMPROVEMENTS SHALL BE ACCURATELY NOTED AND PLACED ON "AS-BUILT" DRAWINGS BY GENERAL CONTRACTOR, AND ISSUED TO ARCHITECT/ENGINEER AT COMPLETION OF PROJECT.

14. ALL TEMPORARY EXCAVATIONS FOR THE INSTALLATION OF FOUNDATIONS, UTILITIES, ETC., SHALL BE PROPERLY LAID BACK OR BRACED IN ACCORDANCE WITH CORRECT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.

15. INCLUDE MISC. ITEMS PER VERIZON WIRELESS SPECIFICATIONS.



VERIZON WIRELESS
2785 MITCHELL DRIVE
WALNUT CREEK, CA 94598

PROJECT INFORMATION:

SF ZOO
SITE NO. 123352
100 ARMORY DRIVE
SAN FRANCISCO, CA 94132

NSA Wireless, Inc.

Site Acquisition • Planning • Construction Management • Site Modifications
Bishop Ranch 15 1st Floor
12847 Alcosta Blvd., Suite 110
San Ramon, CA 94583
(925) 244-1880 OFFICE

CURRENT ISSUE DATE:

04/21/10

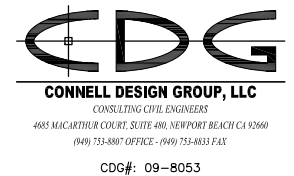
ISSUED FOR:

100% CD

REV.:--DATE:--DESCRIPTION:--BY:

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5	03/29/10	100% CD	EN
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3	11/12/09	100% CD	EN
2	05/19/09	100% CD	DC
1	05/01/09	100% CD	DC
0	03/23/09	90% CD	AN

CIVIL ENGINEER:



DRAWN BY: AN CHK.: DC APV.:

LICENSER:

SHEET TITLE:

GENERAL CONSTRUCTION NOTES,
GENERAL NOTES, ABBREVIATIONS &
LEGEND

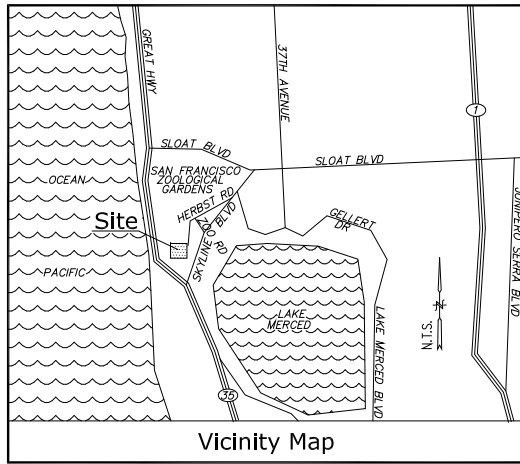
SHEET NUMBER:

T-2

GENERAL NOTES **4**

GENERAL CONSTRUCTION NOTES **2**

1



Title Report

THE SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT
 PREPARED BY:
 ORDER NO.:
 DATED:

Legal Description

NOT AVAILABLE

Assessor's Parcel No.

BLOCK 7281 - LOT 007

Easements

NOT AVAILABLE

Access Easement

TO BE DETERMINED

Lease Area

TO BE DETERMINED

Geographic Coordinates at Existing Monopole

1983 DATUM: LATITUDE 37° 43' 38.78" N LONGITUDE 122° 30' 10.60" W
 ELEVATION = 88.9 FEET ABOVE MEAN SEA LEVEL (A.M.S.L.)

CERTIFICATION:
 THE LATITUDE AND LONGITUDE SHOWN ABOVE ARE ACCURATE TO WITHIN +/- 15 FEET HORIZONTALLY AND THAT THE ELEVATIONS SHOWN ABOVE ARE ACCURATE TO WITHIN +/- 3 FEET VERTICALLY. THE HORIZONTAL DATUM (GEOGRAPHIC COORDINATES) IS IN TERMS OF THE NORTH AMERICAN DATUM OF 1983 (NAD 83) AND IS EXPRESSED IN DEGREES (°), MINUTES (') AND SECONDS ("). TO THE NEAREST HUNDRETH OF A SECOND. THE VERTICAL DATUM (ELEVATIONS) IS IN TERMS OF THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND IS DETERMINED TO THE NEAREST TENTH OF A FOOT.

Basis of Bearings

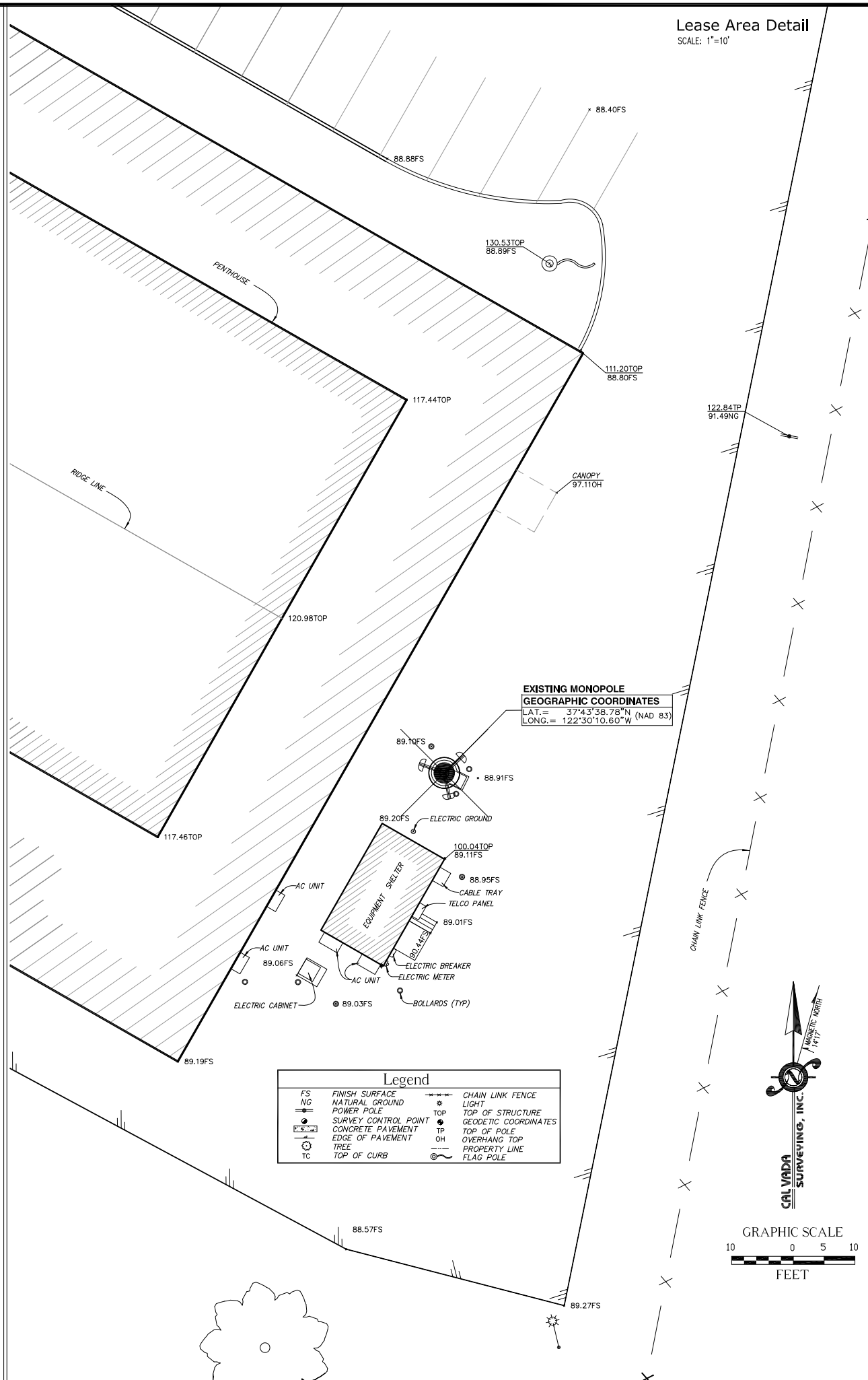
THE BEARINGS SHOWN HEREON ARE BASED UPON THE STATE PLANE COORDINATE SYSTEM OF NAD 1983, CALIFORNIA ZONE 3.

Bench Mark

THE ELEVATIONS SHOWN HEREON ARE BASED UPON THE CSRC CORS STATION "SBRN" ELEVATION=101.43 FEET (NAVD88)

Date of Survey

APRIL 6, 2010



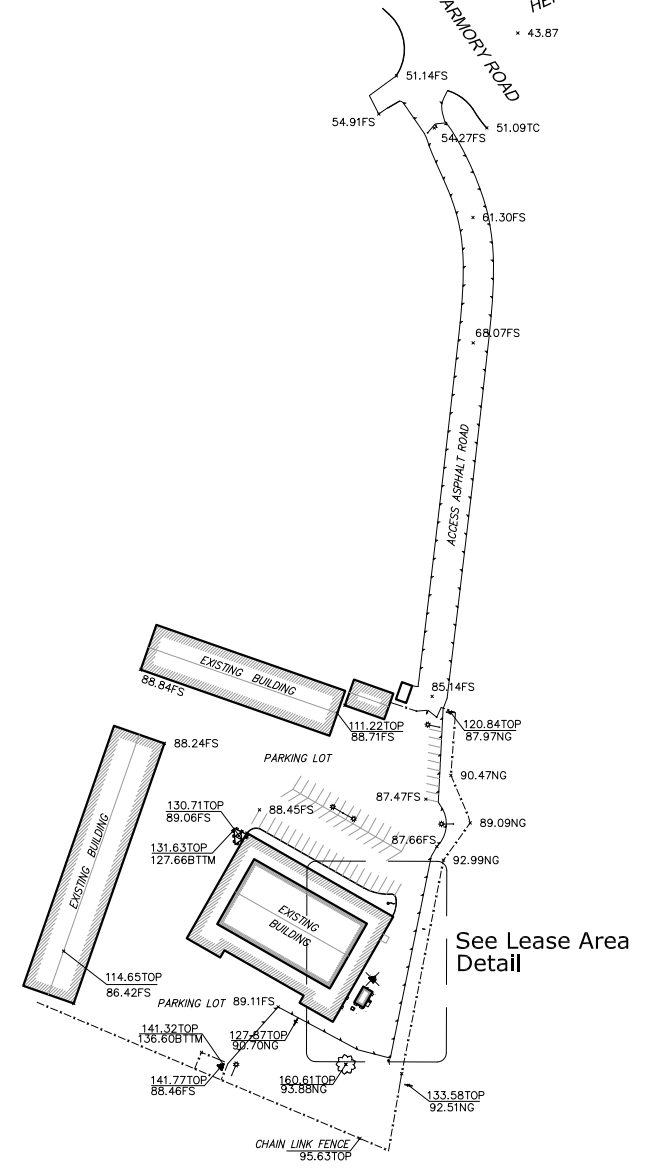
**EXISTING MONOPOLE
 GEOGRAPHIC COORDINATES**
 LAT. = 37°43'38.78"N (NAD 83)
 LONG. = 122°30'10.60"W

Legend			
FS	FINISH SURFACE	CL	CHAIN LINK FENCE
NG	NATURAL GROUND	LT	LIGHT
PP	POWER POLE	TS	TOP OF STRUCTURE
SCP	SURVEY CONTROL POINT	GC	GEODETIC COORDINATES
CP	CONCRETE PAVEMENT	TP	TOP OF POLE
EP	EDGE OF PAVEMENT	OT	OVERHANG TOP
T	TREE	PL	PROPERTY LINE
TC	TOP OF CURB	FP	FLAG POLE



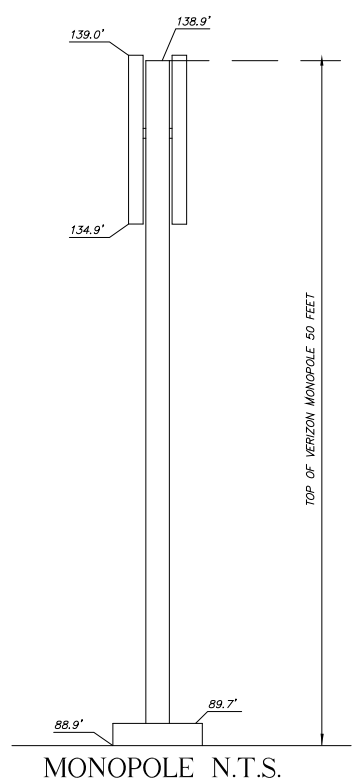
Overall Site Detail

SCALE: 1"=100'



Monopole Profile

NORTHERLY ELEVATION



MONOPOLE N.T.S.

REV.	DATE/BY:	REVISION DESCRIPTION:
	04/12/10 FFS	PRELIMINARY

A&E DEVELOPMENT

CONNELL DESIGN GROUP
 CONSULTING CIVIL ENGINEERS
 4685 MACARTHUR COURT, SUITE 480, NEWPORT BEACH, CA 92660
 (949) 753-8807 OFFICE - (949) 753-8833 FAX

SITE BUILDER:

VERIZON WIRELESS
 2785 MITCHEL DRIVE
 WALNUT CREEK, CA. 94598

ENGINEER/CONSULTANT:

CAL VADA SURVEYING, INC.
 411 Jenks Cir., Suite 205, Corona, CA 92880
 Phone: 951-280-9960 Fax: 951-280-9746
 Toll Free: 800-CALVADA www.calvada.com
 JOB NO. 10228

APPROVALS:

APPROVED BY:	INITIALS:	DATE:
LANDLORD:		
LEASING:		
ZONING:		
R.F.:		
E/P:		
C.P.M.:		

SITE INFO:

SITE NAME:
SF ZOO
 SITE No. 12352

SITE ADDRESS:
 100 ARMORY DRIVE
 SAN FRANCISCO, CA 94132
 SAN FRANCISCO COUNTY

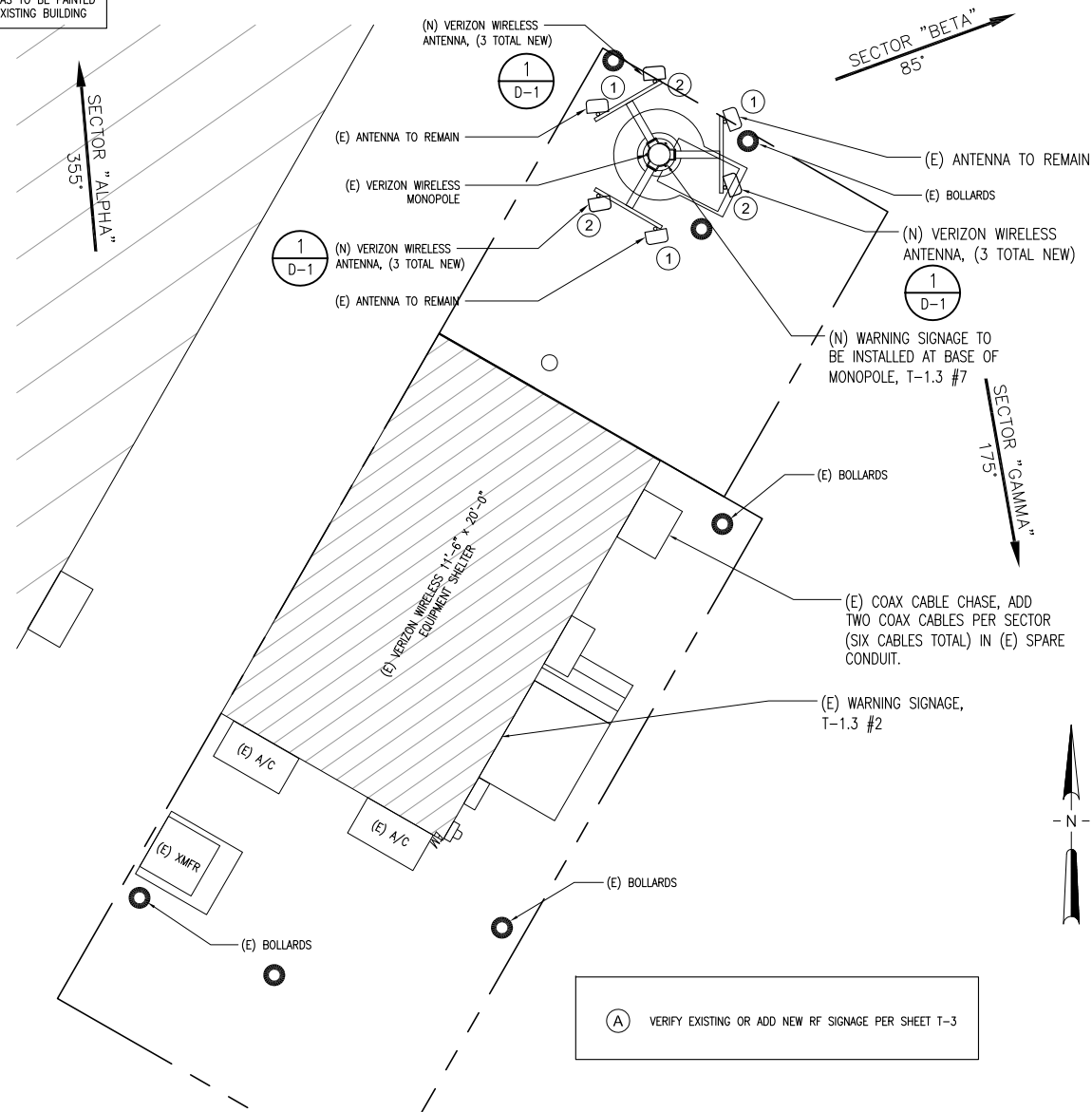
SHEET TITLE:
TOPOGRAPHIC SURVEY

DRAWING INFO:

DWG. NAME:	DRAWN BY:	DATE:
	FFS	04/12/10

SHEET NUMBER:
LS1 SHEET 1 OF 1

NOTE:
ALL NEW ANTENNAS TO BE PAINTED
TO MATCH THE EXISTING BUILDING



(A) VERIFY EXISTING OR ADD NEW RF SIGNAGE PER SHEET T-3

SECTOR 'ALPHA'

ANTENNA POSITION	EXISTING			PROPOSED		
	FREQUENCY	ANT. MODEL	ANTENNA SIZE (L x W x D) IN.	FREQUENCY	ANT. MODEL	ANTENNA SIZE (L x W x D) IN.
1	850/1900	BXD-63406380CF	48"x12.5"x6"	NO CHANGE	NO CHANGE	NO CHANGE
2	-	-	-	695/2100	DBXNH-6565A-VTM	48" x 11.9" x 7.1"

SECTOR 'BETA'

ANTENNA POSITION	EXISTING			PROPOSED		
	FREQUENCY	ANT. MODEL	ANTENNA SIZE (L x W x D) IN.	FREQUENCY	ANT. MODEL	ANTENNA SIZE (L x W x D) IN.
1	850/1900	BXD-63406380CF	48"x12.5"x6"	NO CHANGE	NO CHANGE	NO CHANGE
2	-	-	-	695/2100	DBXNH-6565A-VTM	48" x 11.9" x 7.1"

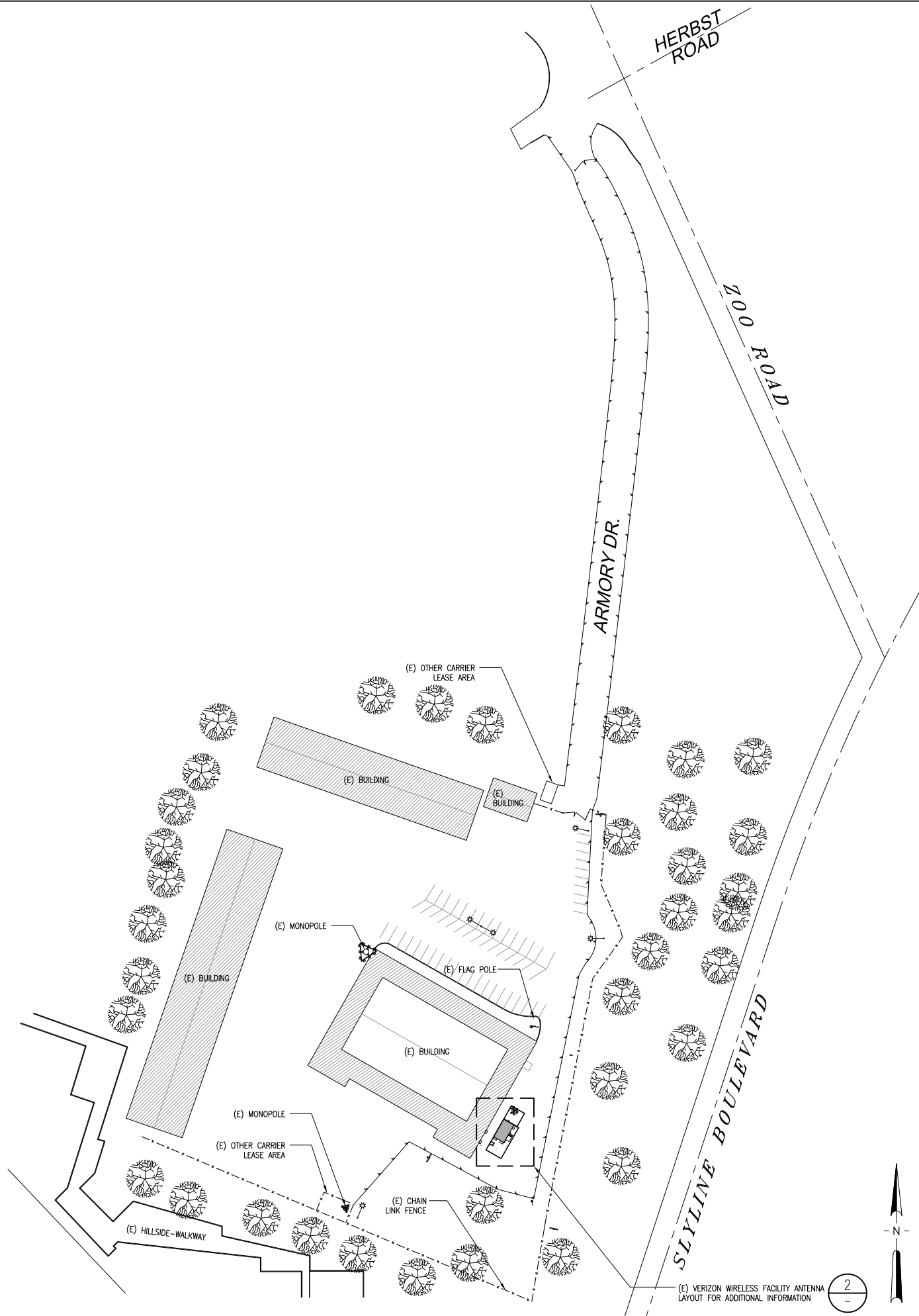
SECTOR 'GAMMA'

ANTENNA POSITION	EXISTING			PROPOSED		
	FREQUENCY	ANT. MODEL	ANTENNA SIZE (L x W x D) IN.	FREQUENCY	ANT. MODEL	ANTENNA SIZE (L x W x D) IN.
1	850/1900	BXD-63406380CF	48"x12.5"x6"	NO CHANGE	NO CHANGE	NO CHANGE
2	-	-	-	695/2100	DBXNH-6565A-VTM	48" x 11.9" x 7.1"

ANTENNA LAYOUT

SCALE: 1/4"=1'-0"

2 SITE PLAN



(E) VERIZON WIRELESS FACILITY ANTENNA LAYOUT FOR ADDITIONAL INFORMATION

SCALE: 1"=60'

1

verizonwireless
VERIZON WIRELESS
2785 MITCHELL DRIVE
WALNUT CREEK, CA 94598

PROJECT INFORMATION:
SF ZOO
SITE NO. 123352
100 ARMORY DRIVE
SAN FRANCISCO, CA 94132

NSA Wireless, Inc.
Site Acquisition · Planning · Construction Management · Site Modifications
Bishop Ranch 15 1st Floor
12847 Alcosta Blvd., Suite 110
San Ramon, CA 94583
(925) 244-1890 OFFICE

CURRENT ISSUE DATE:
04/21/10

ISSUED FOR:
100% CD

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7 04/21/10	100% CD	EN
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4 12/03/09	100% CD	EN
3 11/12/09	100% CD	EN
2 05/19/09	100% CD	DC
1 05/01/09	100% CD	DC
0 03/23/09	90% CD	AN

CIVIL ENGINEER:
CDG
CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
4885 MACARTHUR COURT, SUITE 480, NEWPORT BEACH CA 92660
(949) 753-8807 OFFICE - (949) 753-8833 FAX
CDG#: 09-8053

DRAWN BY: AN CHK.: DC APV.: DC

LICENSER:

SHEET TITLE:

SITE PLAN / ANTENNA LAYOUT

SHEET NUMBER:
A-1



VERIZON WIRELESS
2785 MITCHELL DRIVE
WALNUT CREEK, CA 94598

PROJECT INFORMATION:

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0	03/23/09	90% CD	AN

CIVIL ENGINEER:



DRAWN BY: CHK.: APV.:

AN DC

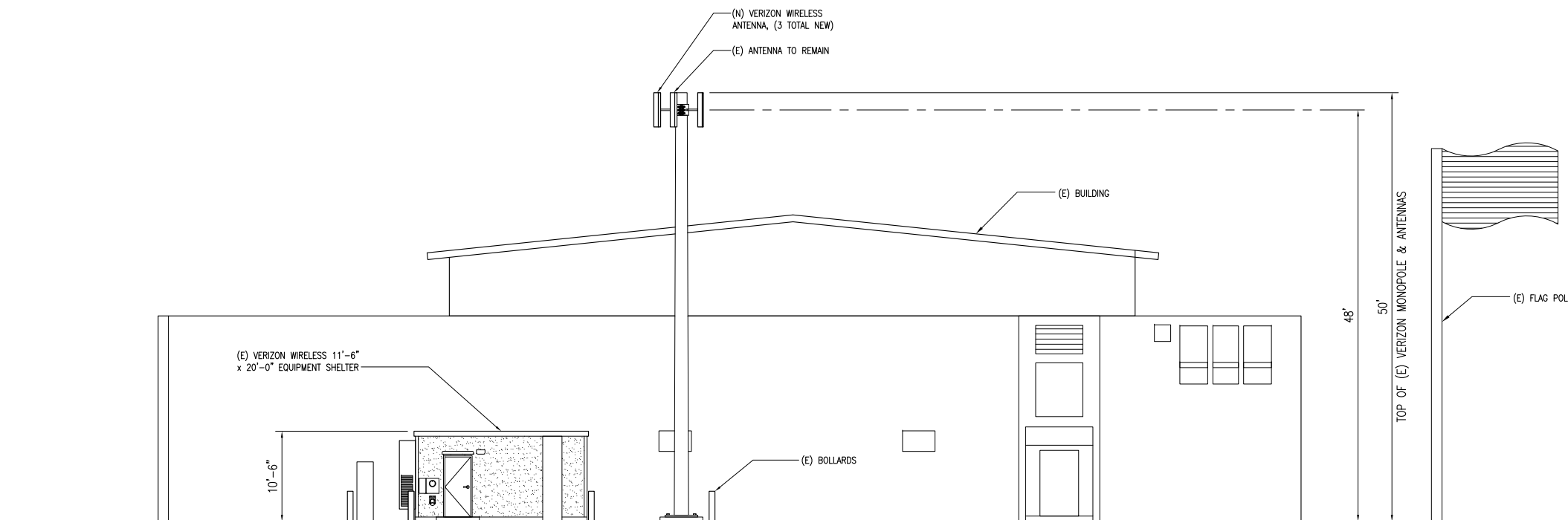
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SHEET TITLE:

ELEVATIONS

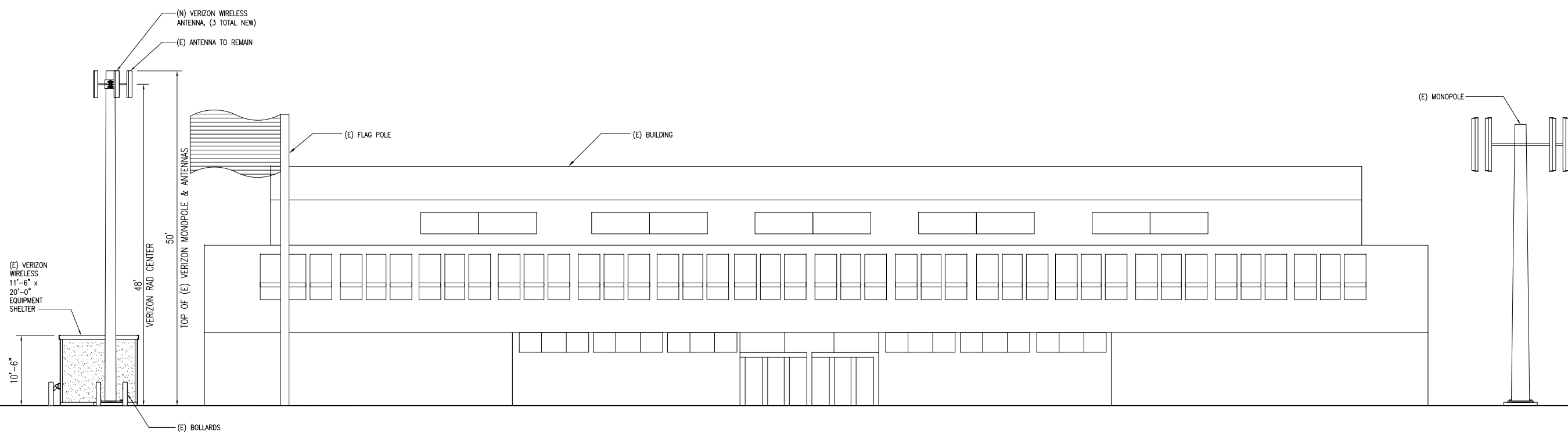
SHEET NUMBER:

A-2



WEST ELEVATION

SCALE: 1/8"=1'-0" 0 4' 8' 1



SOUTH ELEVATION

SCALE: 1/8"=1'-0" 0 4' 8' 2

PROJECT INFORMATION:

SF ZOO
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0	03/23/09	90% CD	AN

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4885 MACARTHUR COURT, SUITE 480, NEWPORT BEACH CA 92660
(949) 753-8807 OFFICE - (949) 753-8833 FAX
CDG#: 09-8053

DRAWN BY: CHK.: APV.:

AN	DC	
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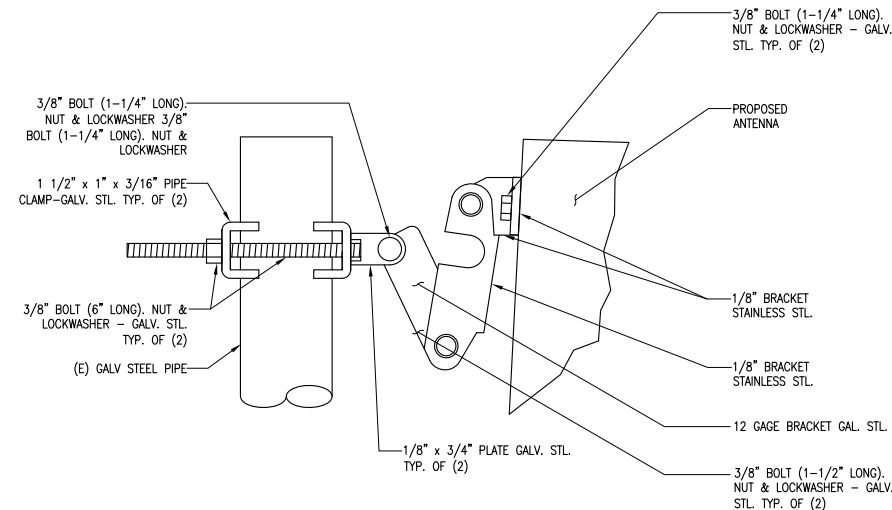
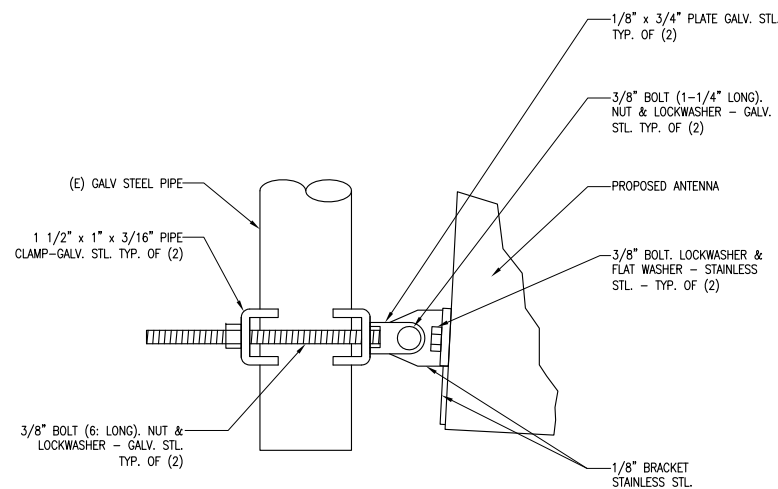
LICENSER:

SHEET TITLE:

DETAILS

SHEET NUMBER:

D-1



NOT USED

SCALE: N.T.S.

10

LOWER ANTENNA MOUNTING BRACKET

SCALE: N.T.S.

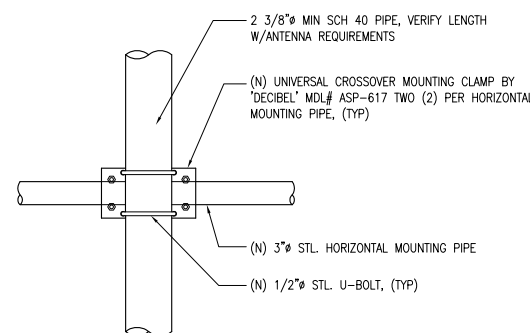
4

UPPER ANTENNA

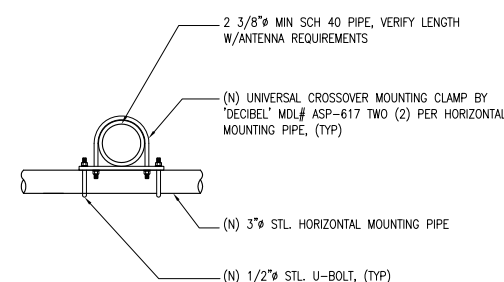
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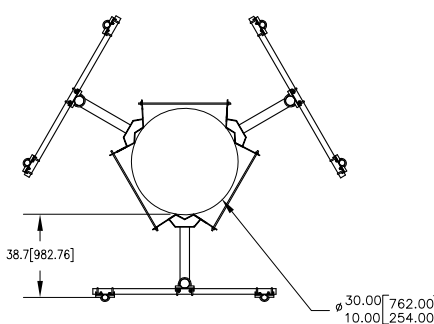
ITEM	PART NO.	DESCRIPTION	QTY.	WEIGHT
1	MC-RM1030-3	ø 10"-30" RINGMOUNT	1	189.67 LBS
2	MTC8278	2' SINGLE SUPPORT ARM KIT	3	55.52 LBS
3	MT-216-6NS	CELLULAR PIPE FRAME 6'-6" WIDE	3	75.96 LBS
4	MT-219-72	2.375" ODx72" SCH 40 PIPE	6	32.92 LBS



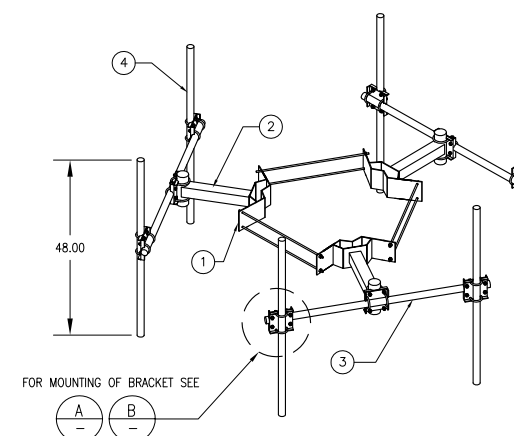
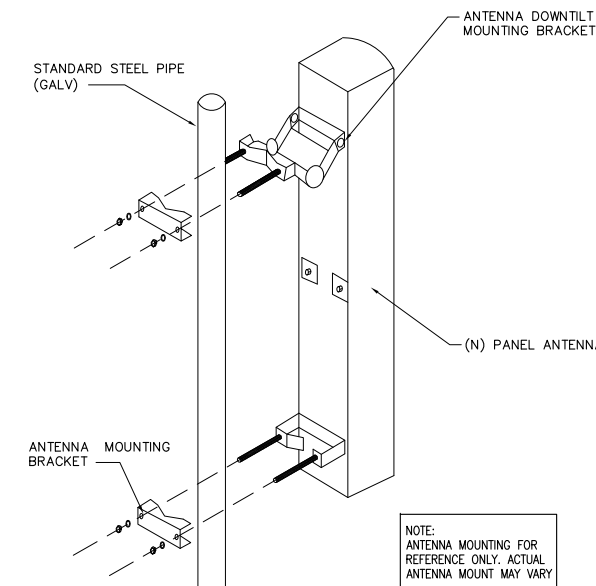
(A) PIPE MOUNTING DETAIL



(B) PIPE MOUNTING DETAIL



NOTES:
1. ALL METRIC DIMENSIONS ARE IN BRACKETS



NOT USED

SCALE: N.T.S.

12

NOT USED

SCALE: N.T.S.

9

ANTENNA MOUNTING DETAIL

SCALE: N.T.S.

2