SAN FRANCISCO
PLANNING DEPARTMENT

Executive Summary
Conditional Use Authorization
HEARING DATE: JANUARY 7, 2016
(CONTINUED FROM DECEMBER 17, 2015)

1650 Mission St.
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San Francisco,
CA 94103-2479

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Date:	December 31, 2015
Case No.:	**2015-006755CUA**
Project Address:	**3120 Mission Street**
Current Zoning:	NC-3 (Neighborhood Commercial, Moderate-Scale) Mission Street Formula Retail Restaurant Subdistrict Mission Street Alcohol Restricted Use District Fringe Financial Services Restricted Use District 50-X Height and Bulk District
Block/Lot:	6574/001A
Project Sponsor:	Verizon Wireless, represented by Peter Hilliard, OnAir LLC 14960 Karl Avenue Monte Sereno, CA 95030
Staff Contact:	Omar Masry – (415) 575-9116 Omar.Masry@sfgov.org

PROJECT DESCRIPTION

The proposal is to allow the development of a Verizon Wireless macro Wireless Telecommunications Services ("WTS") facility. The macro WTS facility would feature twelve (12) screened panel antennas within three (3) individual faux rooftop-mounted mechanical penthouses at the southern half of the rooftop. An equipment area, featuring equipment cabinets used to operate the WTS facility, is also proposed on the southern half of the roof of the Subject building.

The screen walls would be composed of fibre-reinforced plastic ("FRP") which allows radio signals to pass through, but can be textured and painted to mimic elements such as walls of mechanical penthouses. The screen walls would rise approximately 13 feet above the approximately 41-foot tall roof. The Sector A penthouse walls, near the Mission Street façade, would be setback approximately 10 feet from the edge of the roof, and the two (2) remaining penthouse structures would be setback 15 feet from the southern (Sector B) and western (Gamma Sector) roof edges. The proposed 250 square-foot rooftop-mounted equipment area would be setback 25 feet from the nearest roof edges, with equipment rising approximately seven (7) feet above the roof.

A generator receptacle would be mounted along the south facing building wall near ground level, at a location near the existing exterior stairs. Conduit running from the generator plug to the roof would be designed to mimic steel water pipes (instead of a wide cable tray that is typically utilized). In addition, any existing abandoned antennas, satellite or microwave dishes at the Subject building will also be removed.

Based on the zoning and land use, the existing WTS facility is at a Location Preference 5 Site (Preferred Location, Mixed-Use Buildings in High-Density Districts) according to the WTS Facilities Siting Guidelines. The Project Sponsor has indicated the proposed WTS Facility is intended to replace an existing Verizon Wireless Macro WTS facility at the adjacent St. Luke's hospital campus (1580 Valencia Street), one block to the west, across Valencia Street. The hospital has requested that the existing WTS facility be removed

SITE DESCRIPTION AND PRESENT USE

The Project Site is located on Assessor's Block 6574, Lot 001A. The subject lot fronts along Valencia, Cesar Chavez and Mission Streets, with the exception of three separate four-story residential and mixed-use (three stories of residences above retail uses) buildings at the northeast corner of the building near the intersection of Mission and Cesar Chavez Streets.

The Project Site features a surface parking lot along the western side of the lot, and a three-story 117,920 square-foot building on the eastern edge of the Project site. The Subject building was developed in 1956 and at one time served as a Sears's department store. It features an iconic 95-foot tall tower element rising above the eastern edge of the building along Mission Street.

In the late 1970's the building was converted, subject to building permits, to offices on the ground floor (City-affiliated workforce development center), and a mix of offices and residences on the upper floors. The Project site was rezoned from C-2 to NC-3 in the 1980s.

SURROUNDING PROPERTIES AND NEIGHBORHOOD

The Project Site is situated within the Bernal Heights neighborhood, near the southern edge of the Mission District. The Subject building is surrounded by the California Pacific Medical Campus (St. Lukes Hospital) to the west across Valencia Street, four-story mixed-use (residences above ground floor commercial space) to the north and east across Cesar Chavez and Mission Streets, and low rise (one or two stories) commercial uses (auto repair and nightclub) to the south.

ENVIRONMENTAL REVIEW

The Project is exempt from the California Environmental Quality Act ("CEQA") as a Class 3(d) categorical exemption (Construction of New Communications Facilities). The categorical exemption and all pertinent documents may be found in the files of the Planning Department, as the custodian of records, at 1650 Mission Street, San Francisco.

HEARING NOTIFICATION*

TYPE	REQUIRED PERIOD	REQUIRED NOTICE DATE	ACTUAL NOTICE DATE	ACTUAL PERIOD
Classified News Ad	20 days	November 27, 2015	November 23, 2015	24 days
Posted Notice	20 days	November 27, 2015	November 22, 2015	25 days
Mailed Notice	10 days	December 7, 2015	November 23, 2015	24 days

**On December 28, 2015, new hearing notices, with the updated January 7, 2016 hearing date, were posted (full-sized) on each project frontage; and within the resident-serving lobby (11" x 17" poster) at the Subject building.*

PUBLIC COMMENT

The Project Sponsor held a community meeting at the Women's Building, at 3543 18th Street, to discuss the Project at 6:00 p.m. on May 13, 2015. Six (6) community members attended the meeting and asked questions about the proposed Project.

As of December 31, 2015, the Department has received calls and testimony (at the December 17th Planning Commission hearing) raising concerns about potential health effects related to radio-frequency (RF) emissions from the proposed WTS facility. Concerns were also raised regarding the potential loss of existing roof decks on the northern half of the roof.

Representatives for the property owner affirmed that the roof decks would remain in place for tenant use. A note indicating such (*a photo is included in case packet*) was also placed within the lobby area on December 29, 2015.

Given the directional nature of the panel antennas, their specific orientation, and their placement on the southern half of the roof, the RF emissions created by the proposed panel antennas would not result in exposure levels (for dwelling units or the roof decks on the northern half of the roof) that approach or exceed the public exposure limits set by the Federal Communications Commission (FCC). As noted on Page 3 of the revised Radio-Frequency (RF) emissions report, the maximum RF exposure at the east rooftop deck would reach up to 2.2% of the public exposure limit set by the FCC. Barricades (walls/fences) would be placed near each of the antenna sectors to preclude access by residents within areas that would exceed the FCC's public exposure limit.

ISSUES AND OTHER CONSIDERATIONS

- The proposed macro WTS facility would not affect the existing roof decks, nor significantly impair commercial and residential activities at the Subject building.

- Health and safety aspects (e.g. engineering review for structural loads, and backup battery storage) of all wireless Projects are reviewed by the Department of Public Health, San Francisco Fire Department, and the Department of Building Inspection. The RF emissions associated with this Project have been determined to comply with limits established by the FCC.

- An updated Five Year Plan with approximate longitudinal and latitudinal coordinates of proposed locations, including the Project Site, is on file with the Planning Department.

- All required public notifications were conducted in compliance with the Planning Code and adopted WTS policies.

- As the Project Site is considered a Location Preference 5 location, the Project Sponsor determined there are no available or viable Preference 1 through 4 locations available in the surrounding area.

REQUIRED COMMISSION ACTION

Pursuant to Sections 303 and 712.83 of the Planning Code, a Conditional Use Authorization is required for a macro WTS facility (Public Use).

BASIS FOR RECOMMENDATION

This Project is necessary and/or desirable under Section 303 of the Planning Code for the following reasons:

- The proposed facility would be screened from view by virtue of equipment placement (sufficiently setback from roof edges) and the use of three (3) faux rooftop-mounted mechanical penthouse structures. While the faux penthouse structures would be visible from surrounding public rights-of-way (e.g. sidewalks along surrounding streets) the size, height, and setback of the screening structures, and the placement and treatment of the generator plugs (setback from the primary façade along Mission Street) and conduit (designed to mimic hot water pipes) would not significantly detract from views of the Subject building. The Subject building was developed in 1956 and is considered a Potential Historic Resource. Furthermore, the proposed facility would not detract from the view of other surrounding buildings, nor adjacent streetscapes and vistas within the Mission and Bernal Heights neighborhoods.
- The Project complies with the applicable requirements of the Planning Code.
- The Project is consistent with the Objectives and Policies of the General Plan.
- The Project is consistent with the 1996 WTS Facilities Siting Guidelines, Planning Commission Resolution No. 14182, 16539, and 18523 supplementing the 1996 WTS Guidelines.
- Health and safety aspects of all wireless projects are reviewed under the Department of Public Health and the Department of Building Inspections.
- The expected RF emissions fall well within the limits established by the Federal Communications Commission (FCC).
- According to the Wireless Telecommunications Services (WTS) Facilities Siting Guidelines, the Project Site is Location Preference 5 (Preferred Location, Mixed-Use Buildings in High-Density Districts) site. As the Project Site is zoned NC-3, and features dwellings and floor offices.
- Based on propagation maps provided by Verizon Wireless, the Project would provide enhanced 700 – 2,100 Megahertz 4G/LTE (4th Generation, Long-Term-Evolution, voice and data) coverage in an area that currently experiences gaps in coverage and capacity.
- Based on the analysis provided by Verizon Wireless, the Project will provide additional capacity in an area that currently experiences insufficient service during periods of high data usage.
- Based on independent third-party evaluation, the maps, data, and conclusions about service coverage and capacity provided by Verizon Wireless are accurate.
- The Project has been reviewed by staff and found to be categorically exempt from further environmental review, as a Class 3(d) exemption of the California Environmental Quality Act.

RECOMMENDATION:	**Approval with Conditions**

☒	Executive Summary	☒	Project sponsor submittal
☒	Draft Motion		Drawings: Proposed Project
☒	Zoning District Map	☒	Check for legibility
☐	Height & Bulk Map	☒	Photo Simulations
☒	Parcel Map	☒	Coverage Maps
☒	Sanborn Map	☒	RF Report
☒	Aerial Photo	☒	DPH Approval
☒	Context Photos	☒	Community Outreach Report
☒	Site Photos	☒	Independent Evaluation

Exhibits above marked with an "X" are included in this packet om Planner's Initials

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Planning Commission Motion No. XXXXX

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Staff Contact:	Omar Masry – (415) 575-9116 Omar.Masry@sfgov.org

ADOPTING FINDINGS RELATING TO THE APPROVAL OF A CONDITIONAL USE AUTHORIZATION UNDER PLANNING CODE SECTIONS 303(c) AND 712.83 TO DEVLOP A VERIZON WIRELESS MACRO WIRELESS TELECOMMUNICATIONS SERVICES FACILITY CONSISTING OF UP TO TWELVE (12) SCREENED ROOFTOP MOUNTED PANEL ANTENNAS AND ASSOCIATED ROOFTOP EQUIPMENT AREA AS PART THE VERIZON WIRELESS TELECOMMUNICATIONS NETWORK WITHIN A NEIGHBORHOOD COMMERCIAL, MODERATE-SCALE ZONING DISTRICT, THE MISSION STREET FORMULA RETAIL RESTAURANT SUBDISTRICT, THE MISSION STREET ALCOHOL RESTRICTED USE DISTRICT, A FRINGE FINANCIAL SERVICES RESTRICTED USE DISTRICT, AND A 50-X HEIGHT AND BULK DISTRICT.

PREAMBLE

On May 29, 2015, Verizon Wireless (hereinafter "Project Sponsor"), submitted an application (hereinafter "Application"), for a Conditional Use Authorization on the property at 3120 Mission Street, Block 6574, Lot 001A, (hereinafter "Project Site") to develop a Verizon Wireless macro Wireless Telecommunications Services facility (hereinafter "WTS") consisting of up to twelve (12) screened rooftop-mounted panel antennas, and a rooftop equipment area, as part of the Verizon Wireless telecommunications network, within a Neighborhood Commercial, Moderate-Scale (NC-3) Zoning District, the Mission Street Formula Retail Restaurant Subdistrict, the Mission Street Alcohol Restricted Use District, and a 50-X Height and Bulk District.

The Project is exempt from the California Environmental Quality Act ("CEQA") as a Class 3 Categorical Exemption (Section 15303 of the California Environmental Quality Act). The Planning Commission has reviewed and concurs with said determination. The categorical exemption and all pertinent documents may be found in the files of the Planning Department (hereinafter "Department"), as the custodian of records, at 1650 Mission Street, Suite 400, San Francisco.

On December 7, 2016, the San Francisco Planning Commission (hereinafter "Commission") conducted a duly noticed public hearing at a regularly scheduled meeting on the Application for a Conditional Use Authorization. After receiving testimony, the Commission continued the application to a January 7, 2016 meeting.

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 in Application No. 2015-006755CUA, 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 on Assessor's Block 6574, Lot 001A. The subject lot fronts along Valencia, Cesar Chavez and Mission Streets, with the exception of three separate four-story residential and mixed-use (three stories of residences above retail uses) buildings at the northeast corner of the building near the intersection of Mission and Cesar Chavez Streets.

   The Project Site features a surface parking lot along the western side of the lot, and a three-story 117,920 square-foot building on the eastern edge of the Project site. The Subject building was developed in 1956 and at one time served as a Sears's department store. It features an iconic 95-foot tall tower element rising above the eastern edge of the building along Mission Street.

   In the late 1970's the building was converted, subject to building permits, to offices on the ground floor (City-affiliated workforce development center), and a mix of offices and residences on the upper floors. The Project site was rezoned from C-2 to NC-3 in the 1980s.

3. **Surrounding Properties and Neighborhood**. The Project Site is situated within the Bernal Heights neighborhood, near the southern edge of the Mission District. The Subject building is surrounded by the California Pacific Medical Campus (St. Lukes Hospital) to the west across Valencia Street, four-story mixed-use (residences above ground floor commercial space) to the north and east across Cesar Chavez and Mission Streets, and low rise (one or two stories) commercial uses (auto repair and nightclub) to the south.

4. **Project Description.** The proposal is to allow the development of a Verizon Wireless macro Wireless Telecommunications Services ("WTS") facility. The macro WTS facility would feature twelve (12) screened panel antennas within three (3) individual faux rooftop-mounted mechanical penthouses at the southern half of the rooftop. An equipment area, featuring equipment cabinets used to operate the WTS facility, is also proposed on the southern half of the roof of the Subject building.

   The screen walls would be composed of fibre-reinforced plastic ("FRP") which allows radio signals to pass through, but can be textured and painted to mimic elements such as walls of mechanical penthouses. The screen walls would rise approximately 13 feet above the approximately 41-foot tall roof. The Sector A penthouse walls, near the Mission Street façade, would be setback approximately 10 feet from the edge of the roof, and the two (2) remaining penthouse structures would be setback 15 feet from the southern (Sector B) and western (Gamma) roof edges. The proposed 250 square-foot rooftop-mounted equipment area would be setback 25 feet from the nearest roof edges, with equipment rising approximately seven (7) feet above the roof.

   A generator receptacle would be mounted along the south facing building wall near ground level, at a location near the existing exterior stairs. Conduit running from the generator plug to the roof would be designed to mimic steel water pipes (instead of a wide cable tray that is typically utilized). In addition, any existing abandoned antennas, satellite or microwave dishes at the Subject building will also be removed.

5. **Past History and Actions.** The Planning Commission adopted the *Wireless Telecommunications Services (WTS) Facilities Siting Guidelines* ("Guidelines") for the installation of wireless telecommunications facilities in 1996. These Guidelines set forth the land use policies and practices that guide the installation and approval of wireless facilities throughout San Francisco. A large portion of the Guidelines was dedicated to establishing location preferences for these installations. The Board of Supervisors, in Resolution No. 635-96, provided input as to where wireless facilities should be located within San Francisco. The Guidelines were updated by the Commission in 2003 and again in 2012, requiring community outreach, notification, and detailed information about the facilities to be installed.

   Section 8.1 of the Guidelines outlines Location Preferences for wireless facilities. There are five primary areas were the installation of wireless facilities should be located:

1. Publicly-used Structures: such facilities as fire stations, utility structures, community facilities, and other public structures;
2. Co-Location Site: encourages installation of facilities on buildings that already have wireless installations;
3. Industrial or Commercial Structures: buildings such as warehouses, factories, garages, service stations;
4. Industrial or Commercial Structures: buildings such as supermarkets, retail stores, banks; and
5. Mixed-Use Buildings in High Density Districts: buildings such as housing above commercial or other non-residential space.

Section 8.1 of the WTS Siting Guidelines further stipulates that the Planning Commission will not approve WTS applications for Preference 5 or below Location Sites unless the application describes (a) what publicly-used building, co-location site or other Preferred Location Sites are located within the geographic service area; (b) what good faith efforts and measures were taken to secure these more Preferred Locations, (c) explains why such efforts were unsuccessful; and (d) demonstrates that the location for the site is essential to meet demands in the geographic service area and the Applicant's citywide networks.

Before the Planning Commission can review an application to install a wireless facility, the Project Sponsor must submit a five-year facilities plan, which must be updated biannually, an emissions report and approval by the Department of Public Health, Section 106 Declaration of Intent, an independent evaluation verifying coverage and capacity, a submittal checklist and details about the facilities to be installed.

Under Section 704(B)(iv) of the 1996 Federal Telecommunications Act, local jurisdictions cannot deny wireless facilities based on Radio Frequency (RF) radiation emissions so long as such facilities comply with the FCC's regulations concerning such emissions.

6. **Location Preference.** The *WTS Facilities Siting Guidelines* identify different types of zoning districts and building uses for the siting of wireless telecommunications facilities. Based on the zoning and land use, the existing WTS facility is at a Location Preference 5 Site (Preferred Location, Mixed-Use Buildings in High-Density Districts) according to the WTS Facilities Siting Guidelines. The Project Sponsor has indicated the proposed WTS Facility is intended to replace an existing Verizon Wireless Macro WTS facility at the adjacent St. Luke's hospital campus (1580 Valencia Street), one block to the west, across Valencia Street. The hospital has requested that the existing WTS facility be removed.

   The Project Sponsor determined there are no available or viable Preference 1 through 4 locations available in the surrounding area.

7. **Radio Waves Range.** The Project Sponsor has stated that the proposed wireless network is designed to address coverage and capacity needs in the area. The network will operate in the 700 – 2,100 Megahertz (MHZ) bands, which are regulated by the Federal

Communications Commission (FCC) and must comply with the FCC-adopted health and safety standards for electromagnetic radiation and radio frequency radiation.

8. **Radiofrequency (RF) Emissions:** The Project Sponsor retained Hammett & Edison, a radio engineering consulting firm, to prepare a report describing the expected RF emissions from the proposed facility. Pursuant to the *Guidelines*, the Department of Public Health reviewed the report and determined that the proposed facility complies with the standards set forth in the Guidelines.

9. **Department of Public Health Review and Approval.** The proposed Project was referred to the Department of Public Health (DPH) for emissions exposure analysis. Existing radio-frequency (RF) levels at ground level were around 1% of the FCC public exposure limit.

   There are currently no antennas operated by Verizon installed on the roof top of the building at 3120 Mission Street. Existing RF levels at ground level were around 1% of the FCC public exposure limit. There were observed no other antennas within 100 feet of this site. Verizon proposes to install 12 new antennas. The antennas will be mounted at a height of 50 feet above the ground. The estimated ambient RF field from the proposed Verizon transmitters at ground level is calculated to be 0.02 mW/sq cm., which is 3.5% of the FCC public exposure limit. The three dimensional perimeter of RF levels equal to the public exposure limit extends 67 feet and includes portions of the rooftop areas. Barricades must be installed to prevent public access to these areas. Warning signs must be posted at the antennas, barricades and roof access points in English, Spanish and Chinese. Workers should not have access to within 26 feet of the front of the antennas while they are in operation. Worker notification areas should be marked with yellow striping on the rooftop.

10. **Coverage and Capacity Verification.** The maps, data, and conclusion provided by Verizon Wireless to demonstrate need for outdoor and indoor coverage and capacity have been determined by Hammett & Edison, and engineering consultant and independent third party to accurately represent the carrier's present and post-installation conclusions.

11. **Maintenance Schedule**. The proposed facility would operate without on-site staff but with a two-person maintenance crew visiting the property approximately four times a year, and on an as-needed basis to service and monitor the facility.

12. **Community Outreach.** Per the *Guidelines*, the Project Sponsor held a community meeting at the Women's Building, at 3543 18th Street, to discuss the Project at 6:00 p.m. on May 13, 2015. Six (6) community members attended the meeting and asked questions about the proposed Project. .

13. **Five-year plan:** Per the Guidelines, the Project Sponsor submitted an updated five-year plan, as required, in October 2015.

14. **Public Comment.** As of December 31, 2015, the Department has received calls and testimony (at December 17th Planning Commission hearing) raising concerns about potential health effects related to radio-frequency (RF) emissions from the proposed WTS facility. Concerns were also raised regarding the potential loss of existing roof decks on the northern half of the roof.

    Representatives for the property owner affirmed that the roof decks would remain in place for tenant use. A note indicating such (a photo is included in case packet) was also placed within the lobby area on December 29, 2015.

    Given the directional nature of the panel antennas, their specific orientation, and their placement on the southern half of the roof, the RF emissions created by the proposed panel antennas would not result in exposure levels that approach or exceed the public exposure limits set by the Federal Communications Commission (FCC). As noted on Page 3 of the revised Radio-Frequency (RF) emissions report, the maximum RF exposure at the east rooftop deck would reach up to 2.2% of the public exposure limit set by the FCC. Barricades (walls/fences) would be placed near each of the antenna sectors to preclude access by residents within areas that would exceed the FCC's public exposure limit.

15. **Planning Code Compliance.** The Commission finds that the Project is consistent with the relevant provisions of the Planning Code in the following manner:

    A. **Use.** Per Planning Code Section 712.83, a Conditional Use Authorization is required for a macro WTS facility (Public Use).

16. **Planning Code Section 303** establishes criteria for the Planning Commission to consider when reviewing applications for Conditional Use approval. On balance, the Project complies 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.

        i. *Desirable: San Francisco is a leader of the technological economy; it is important and desirable to the vitality of the City to have and maintain adequate telecommunications coverage and data capacity. This includes the installation and upgrading of systems to keep up with changing technology and increases in usage. It is desirable for the City to allow wireless facilities to be installed.*

        The proposed Project at 3120 Mission Street is generally desirable and compatible with the surrounding neighborhood because the Project will not conflict with the existing uses of the property and will be designed to be compatible with the surrounding neighborhood. The overall location, setback from public streets, height and design of the proposed

facility, including visible screening elements is situated so as to avoid intrusion into public vistas, and to insure harmony with the existing neighborhood character and promote public safety.

ii. *Necessary: In the case of wireless installations, there are two criteria that the Commission reviews: coverage and capacity.*

Coverage: San Francisco does have sufficient overall wireless coverage (note that this is separate from carrier capacity). San Francisco's unique coverage issues are due to topography and building heights. The hills and buildings disrupt lines of site between WTS base stations. Thus, telecommunication carriers continue to install additional installations to make sure coverage is sufficient.

Capacity: While a carrier may have adequate coverage in a certain area, the capacity may not be sufficient. With the continuous innovations in wireless data technology and demand placed on existing infrastructure, individual telecommunications carriers must upgrade and in some instances expand their facilities network to provide proper data and voice capacity. It is necessary for San Francisco, as a leader in technology, to have adequate capacity.

The proposed Project at 3120 Mission Street is necessary in order to achieve sufficient street and in-building mobile phone coverage and data capacity. Recent drive tests in the subject area conducted by the Verizon Wireless Radio Frequency Engineering Team provide that the Project Site is a preferable location, based on factors including quality of coverage and aesthetics.

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 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.

The Department of Public Health conducted an evaluation of potential health effects from Radio Frequency radiation, and 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.

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 facilities operating unmanned, with a maintenance crew visiting the Site once a month or on an as-needed basis.

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 installation of the antennas and transceiver equipment, noise or noxious emissions from continued use are not likely to be significantly greater than ambient conditions due to the operation of the wireless communication network.

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

The proposed facility will not affect landscaping, open space (including existing roof decks), required parking, lighting or signage at the Project Site or surrounding area.

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.

D. That the use as proposed would provide development that is in conformity with the purpose of the applicable Neighborhood Commercial District.

The Project site would provide enhanced communications services within the Neighborhood Commercial District.

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

HOUSING ELEMENT
Objectives and Policies

BALANCE HOUSING CONSTRUCTION AND COMMUNITY INFRASTRUCTURE

OBJECTIVE 12:
BALANCE HOUSING GROWTH WITH ADEQUATE INFRASTRUCTURE THAT SERVES THE CITY'S GROWING POPULATION.

Policy 12.3:
Ensure new housing is sustainable supported by the City's public infrastructure systems.

The Project will improve Verizon Wireless's coverage and capacity within the Bernal Heights and Mission neighborhoods.

URBAN DESIGN ELEMENT
Objectives and Policies

HUMAN NEEDS

OBJECTIVE 4:
IMPROVEMENT OF THE NEIGHBORHOOD ENVIRONMENT TO INCREASE PERSONAL SAFETY, COMFORT, PRIDE AND OPPORTUNITY.

Policy 4.14:
Remove and obscure distracting and cluttering elements.

The proposed project would involve the removal of any abandoned antennas and microwave dishes from the rooftop.

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 1.1:
Encourage development, which provides substantial net benefits and minimizes undesirable consequences. Discourage development, which has substantial undesirable consequences that cannot be mitigated.

Policy 1.2:
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 2.1:
Seek to retain existing commercial and industrial activity and to attract new such activity to the city.

Policy 2.3:
Maintain a favorable social and cultural climate in the city in order to enhance its attractiveness as a firm location.

The Site would be an integral part of a new wireless communications network that would 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 4.1:
Maintain and enhance a favorable business climate in the City.

Policy 4.2:
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.

VISITOR TRADE

OBJECTIVE 8:
ENHANCE SAN FRANCISCO'S POSITION AS A NATIONAL CENTER FOR CONVENTIONS AND VISITOR TRADE.

Policy 8.3:
Assure that areas of particular visitor attraction are provided with adequate public services for both residents and visitors.

The Project would ensure that residents and visitors have adequate public service in the form of Verizon Wireless telecommunications.

COMMUNITY SAFETY ELEMENT
Objectives and Policies

OBJECTIVE 3:
ESTABLISH STRATEGIES TO ADDRESS THE IMMEDIATE EFFECTS OF A DISASTER.

Policy 1.20

Increase communication capabilities in preparation for all phases of a disaster and ensure communication abilities extend to hard-to-reach areas and special populations.

Policy 2.4
Bolster the Department of Emergency Management's role as the City's provider of emergency planning and communication, and prioritize its actions to meet the needs of San Francisco.

Policy 2.15
Utilize advancing technology to enhance communication capabilities in preparation for all phases of a disaster, particularly in the high-contact period immediately following a disaster.

Policy 3.7:
Develop a system to convey personalized information during and immediately after a 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 providing communication services.

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.

The wireless communications network would enhance personal communication services for businesses and customers in the surrounding area.

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. The Project site features residential units on the upper stories and penthouse. The resident-serving roof decks would remain in place.

Given the directional nature of the panel antennas, their specific orientation, and their placement on the southern half of the roof, the RF emissions created by the proposed panel antennas would not result in exposure levels (for dwelling units or the roof decks on the northern half of the roof) that approach or exceed the public exposure limits set by the Federal Communications Commission (FCC). As noted on Page 3 of the revised Radio-Frequency (RF) emissions report, the maximum RF exposure at the east rooftop deck would reach up to 2.2% of the public exposure limit set by the FCC. Barricades (walls/fences) would be placed

near each of the antenna sectors to preclude access by residents within areas that would exceed the FCC's public exposure limit.

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

The Project would have no adverse effect on housing in the vicinity.

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

Due to the nature of the Project and minimal maintenance or repair, municipal transit service would not be significantly impeded and neighborhood parking would not be overburdened.

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.

The proposed facility would be screened from view by virtue of equipment placement (sufficiently setback from roof edges) and the use of three (3) faux rooftop-mounted mechanical penthouse structures. While the faux penthouse structures would be visible from surrounding public rights-of-way (e.g. sidewalks along surrounding streets) the size, height, and setback of the screening structures, and the placement and treatment of the generator plugs (setback from the primary façade along Mission Street) and conduit (designed to mimic hot water pipes) would not significantly detract from views of the Subject building. The Subject building was developed in 1956 and is considered a Potential Historic Resource. Furthermore, the proposed facility would not detract from the view of other surrounding buildings, including those considered historic resources, nor detract from adjacent streetscapes and vistas within the Mission and Bernal Heights neighborhoods.

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

The Project would have no adverse effect on parks or open space, or their access to sunlight or public 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 Conditional Use Authorization would promote the health, safety and welfare of the City.

DECISION

The Commission, after carefully balancing the competing public and private interests, and based upon the Recitals and Findings set forth above, in accordance with the standards specified in the Code, hereby approves the Conditional Use Authorization under Planning Code Sections 712.83 and 303 to develop a Verizon Wireless macro WTS facility and allow up to twelve (12) screened rooftop-mounted panel antennas, and an associated rooftop equipment area at the Project Site and as part of a wireless transmission network initially operated by Verizon Wireless on a Location Preference 5 (Mixed-Use Buildings in High Density Districts) area according to the Wireless Telecommunications Services (WTS) Facilities Siting Guidelines, within a Neighborhood Commercial, Moderate-Scale (NC-3) Zoning District, the Mission Street Formula Retail Restaurant Subdistrict, the Mission Street Alcohol Restricted Use District, and a 50-X Height and Bulk District., and subject to the conditions of approval attached hereto as **Exhibit A;** in general conformance with the plans, dated November 30, 2015, and stamped "Exhibit B."

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.

Protest of Fee or Exaction: You may protest any fee or exaction subject to Government Code Section 66000 that is imposed as a condition of approval by following the procedures set forth in Government Code Section 66020. The protest must satisfy the requirements of Government Code Section 66020(a) and must be filed within 90 days of the date of the first approval or conditional approval of the development referencing the challenged fee or exaction. For purposes of Government Code Section 66020, the date of imposition of the fee shall be the date of the earliest discretionary approval by the City of the subject development.

If the City has not previously given Notice of an earlier discretionary approval of the project, the Planning Commission's adoption of this Motion, Resolution, Discretionary Review Action or the Zoning Administrator's Variance Decision Letter constitutes the approval or conditional approval of the development and the City hereby gives **NOTICE** that the 90-day protest period under Government Code Section 66020 has begun. If the City has already given Notice that the 90-day approval period has begun for the subject development, then this document does not re-commence the 90-day approval period.

I hereby certify that the foregoing Motion was adopted by the Planning Commission on **January 7, 2016**.

Jonas P. Ionin
Commission Secretary

AYES:

NAYS:

ABSENT:

ADOPTED: January 7, 2016

EXHIBIT A

AUTHORIZATION

This authorization is for a Conditional Use Authorization under Planning Code Sections 712.83 and 303 to develop a Verizon Wireless macro WTS facility and allow up to twelve (12) screened rooftop-mounted panel antennas, and an associated rooftop equipment area at the Project Site and as part of a wireless transmission network initially operated by Verizon Wireless on a Location Preference 5 (Mixed-Use Buildings in High Density Districts) area according to the Wireless Telecommunications Services (WTS) Facilities Siting Guidelines, within a Neighborhood Commercial, Moderate-Scale (NC-3) Zoning District, the Mission Street Formula Retail Restaurant Subdistrict, the Mission Street Alcohol Restricted Use District, and a 50-X Height and Bulk District., and subject to the conditions of approval attached hereto as **Exhibit A;** in general conformance with the plans, dated November 30, 2015, and stamped "Exhibit B."

RECORDATION OF CONDITIONS OF APPROVAL

Prior to the issuance of the building permit or commencement of use for 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 for the subject property. This Notice shall state that the Project is subject to the conditions of approval contained herein and reviewed and approved by the Planning Commission on **January 7, 2016** under Motion No. XXXXX.

PRINTING OF CONDITIONS OF APPROVAL ON PLANS

The conditions of approval under the 'Exhibit A' of this Planning Commission Motion No. XXXXX shall be reproduced on the Index Sheet of construction plans submitted with the Site or Building permit application for the Project. The Index Sheet of the construction plans shall reference to the Conditional Use Authorization and any subsequent amendments or modifications.

SEVERABILITY

The Project shall comply with all applicable City codes and requirements. 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 remaining clauses, sentences, or sections of these conditions. This decision conveys no right to construct, or to receive a building permit. "Project Sponsor" shall include any subsequent responsible party.

CHANGES AND MODIFICATIONS

Changes to the approved plans may be approved administratively by the Zoning Administrator. Significant changes and modifications of conditions shall require Planning Commission approval of a new Conditional Use Authorization.

Conditions of Approval, Compliance, Monitoring, and Reporting

PERFORMANCE

1. **Validity and Expiration.** The authorization and right vested by virtue of this action is valid for thirty-six (36) months from the effective date of the Motion. A building permit from the Department of Building Inspection to construct the project and/or commence the approved use must be issued as this Conditional Use Authorization is only an approval of the proposed project and conveys no independent right to construct the Project or to commence the approved use. The Planning Commission may, in a public hearing, consider the revocation of the approvals granted if a site or building permit has not been obtained within thirty-six (36) months of the date of the Motion approving the Project. Once a site or building permit has been issued, construction must commence within the timeframe required by the Department of Building Inspection and be continued diligently to completion. The Commission may also consider revoking the approvals if a permit for the Project has been issued but is allowed to expire and more than thirty-six (36) months have passed since the Motion was approved.
   For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org.

2. **Extension.** This authorization may be extended at the discretion of the Zoning Administrator only where failure to issue a permit by the Department of Building Inspection to perform said tenant improvements is caused by a delay by a local, State or Federal agency or by any appeal of the issuance of such permit(s).
   For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org .

DESIGN – COMPLIANCE AT PLAN STAGE

3. **Plan Drawings - WTS**. 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.

For information about compliance, contact the Case Planner, Planning Department at 415-575-9078, www.sf-planning.org.

4. **Screening - WTS.** 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:
   a. Modify the placement of the facilities;
   b. Install fencing, barriers or other appropriate structures or devices to restrict access to the facilities;
   c. 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;
   d. Implement any other practice reasonably necessary to ensure that the facility is operated in compliance with adopted FCC RF emission standards.
   e. To the extent necessary to minimize visual obtrusion and clutter, installations shall conform to the following standards:
      a. Antennas and back up equipment shall be painted, fenced, landscaped or otherwise treated architecturally so as to minimize visual effects;
      b. Rooftop installations shall be setback such that back up facilities are not viewed from the street;
      c. Antennas attached to building facades shall be so placed, screened or otherwise treated to minimize any negative visual impact; and
      d. 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.

   For information about compliance, contact the Case Planner, Planning Department at 415-575-9078, www.sf-planning.org .

MONITORING - AFTER ENTITLEMENT

5. **Enforcement.** Violation of any of the Planning Department conditions of approval contained in this Motion or of any other provisions of Planning Code applicable to this Project shall be subject to the enforcement procedures and administrative penalties set forth under Planning Code Section 176 or Section 176.1. The Planning Department may also refer the violation complaints to other city departments and agencies for appropriate enforcement action under their jurisdiction.
   For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

6. **Monitoring.** The Project requires monitoring of the conditions of approval in this Motion. The Project Sponsor or the subsequent responsible parties for the Project shall pay fees as established under Planning Code Section 351(e) (1) and work with the Planning Department for information about compliance.

For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

7. **Revocation due to Violation of Conditions.** Should implementation of this Project result in complaints from interested property owners, residents, or commercial lessees which are not resolved by the Project Sponsor and found to be in violation of the Planning Code and/or the specific Conditions of Approval for the Project as set forth in Exhibit A of this Motion, the Zoning Administrator shall refer such complaints to the Commission, after which it may hold a public hearing on the matter to consider revocation of this authorization.
   For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org.

8. **Implementation Costs - WTS**.
   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 implementation of the conditions of approval contained in this authorization, including costs incurred by this Department, the Department of Public Health, the Department of Technology, Office of the City Attorney, or any other appropriate City Department or agency. 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.
      For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

9. **Implementation and Monitoring - WTS**. 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.
   For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

10. **Project Implementation Report - WTS**. 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.

For information about compliance, contact the Environmental Health Section, Department of Public Health at (415) 252-3800, www.sfdph.org.

11. **Notification prior to Project Implementation Report - WTS.** 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.

    For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

12. **Installation - WTS.** 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.

    For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

13. **Periodic Safety Monitoring - WTS.** 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.
For information about compliance, contact the Environmental Health Section, Department of Public Health at (415) 252-3800, www.sfdph.org.

OPERATION

14. **Community Liaison.** Prior to issuance of a building permit application to construct the project and implement the approved use, the Project Sponsor shall appoint a community liaison officer to deal with the issues of concern to owners and occupants of nearby properties. The Project Sponsor shall provide the Zoning Administrator written notice of the name, business address, and telephone number of the community liaison. Should the contact information change, the Zoning Administrator shall be made aware of such change. The community liaison 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.
For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

15. **Out of Service – WTS**. The Project Sponsor or Property Owner shall remove antennas and equipment that has been out of service or otherwise abandoned for a continuous period of six months.
For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

16. **Emissions Conditions – WTS**. 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.
For information about compliance, contact the Environmental Health Section, Department of Public Health at (415) 252-3800, www.sfdph.org.

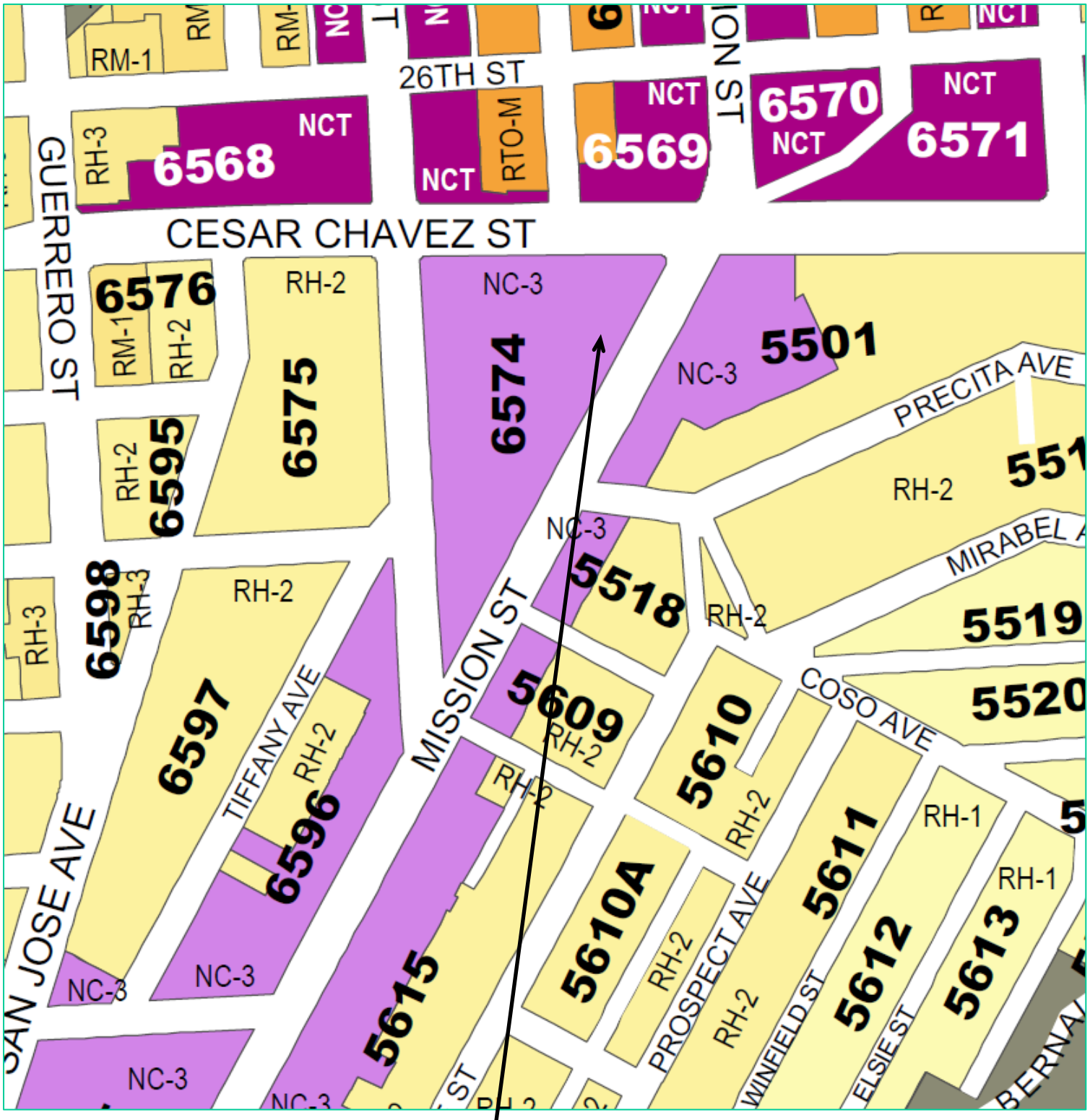
17. **Noise and Heat – WTS**. The WTS facility, including power source and cooling facility, shall be operated at all times within the limits of the San Francisco Noise Control Ordinance. The WTS facility, including power source and any heating/cooling facility, shall not be operated so as to cause the generation of heat that adversely affects a building occupant.
For information about compliance, contact the Environmental Health Section, Department of Public Health at (415) 252-3800, www.sfdph.org.

18. **Transfer of Operation – WTS**. 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.

For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

19. **Compatibility with City Emergency Services – WTS**. The facility shall not be operated or 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.
For information about compliance, contact the Department of Technology, 415-581-4000, http://sfgov3.org/index.aspx?page=1421

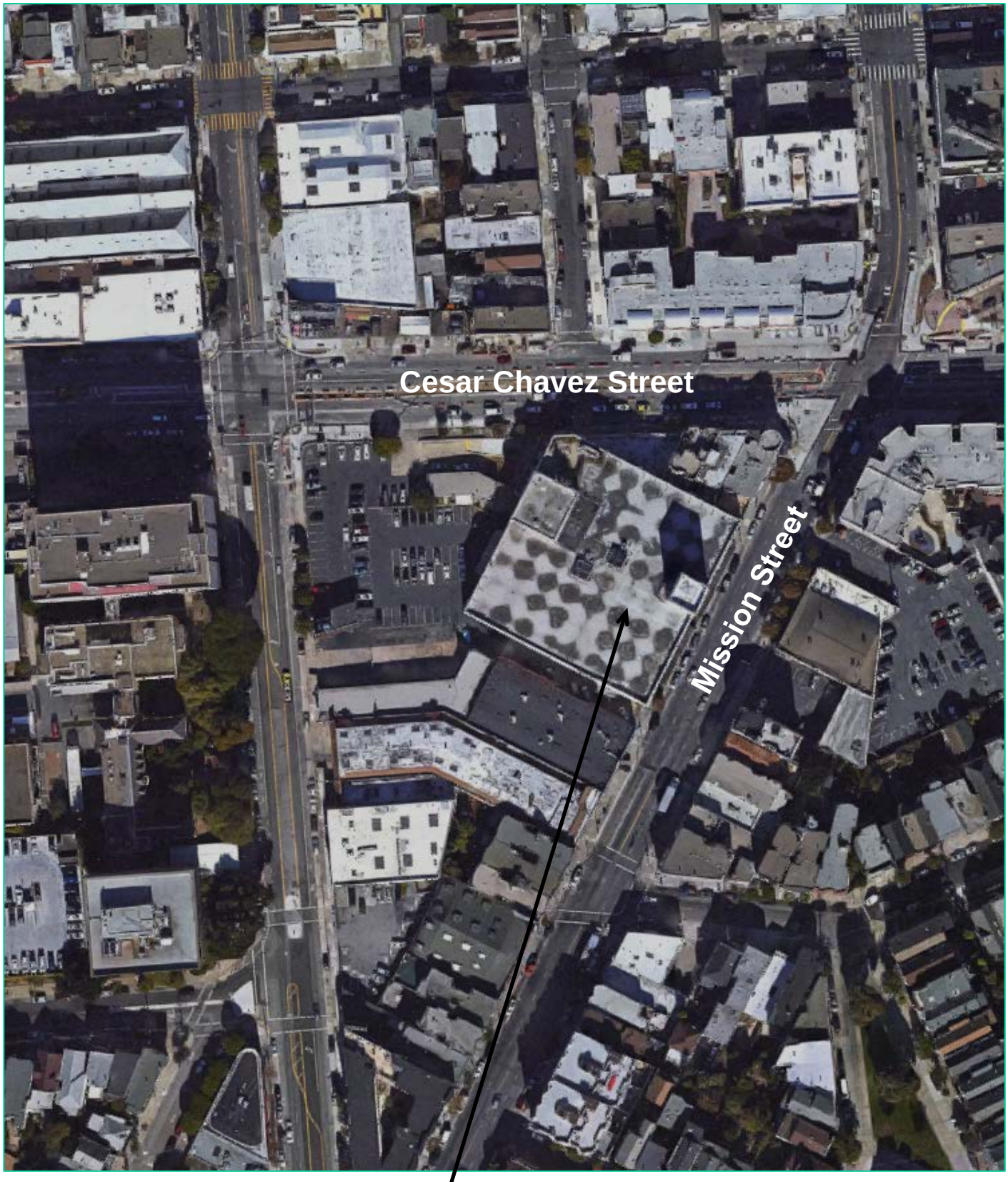
Zoning Map



Case Number 2015-006755CUA
Verizon Wireless Macro WTS Facility
4610 Mission Street

SAN FRANCISCO
PLANNING DEPARTMENT

Aerial Photo



Case Number 2015-006755CUA
Verizon Wireless Macro WTS Facility
4610 Mission Street

SAN FRANCISCO
PLANNING DEPARTMENT

Aerial Photo

Case Number 2015-006755CUA
Verizon Wireless Macro WTS Facility
4610 Mission Street

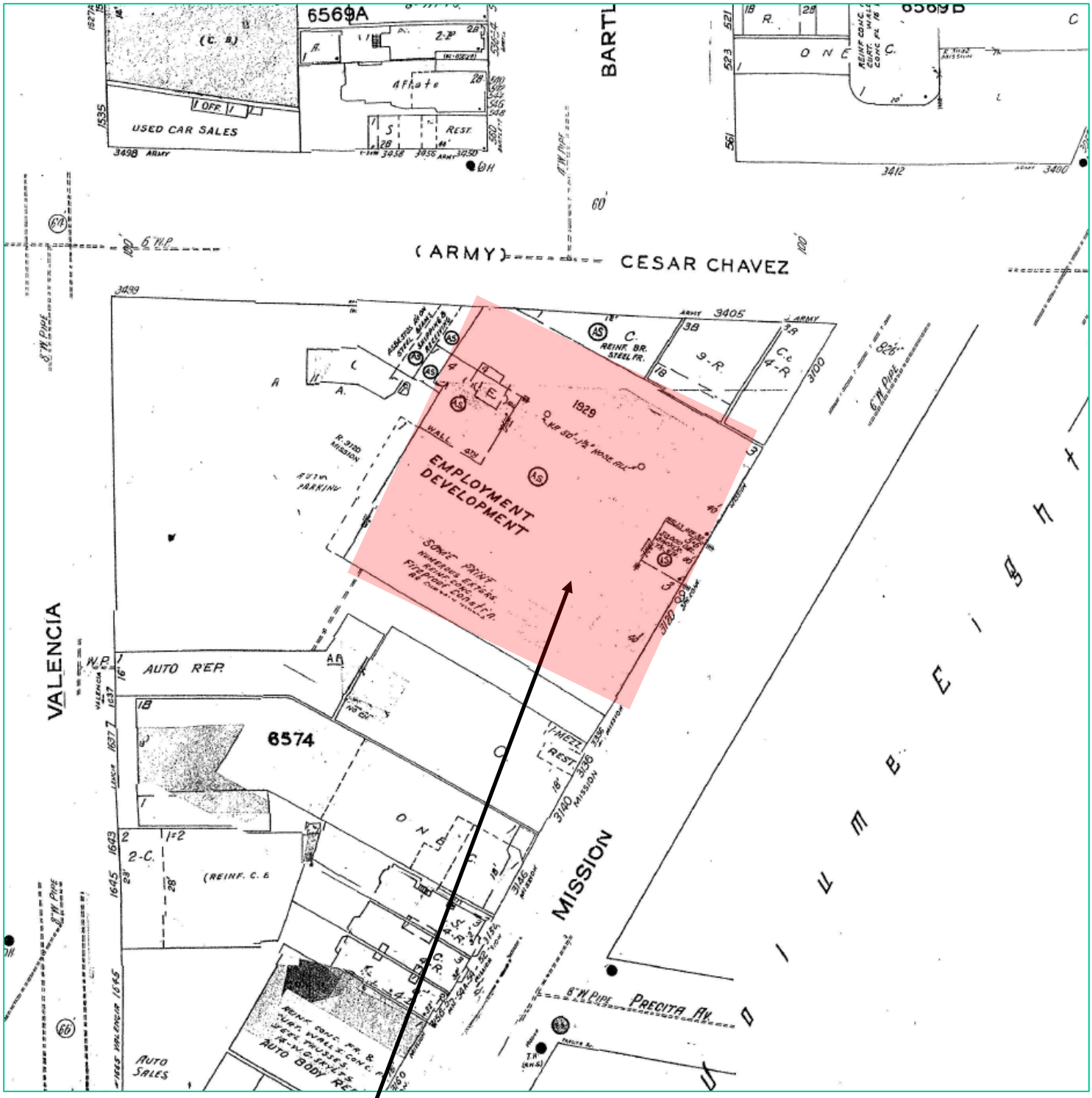
SAN FRANCISCO
PLANNING DEPARTMENT

Parcel Map

Case Number 2015-006755CUA
Verizon Wireless Macro WTS Facility
4610 Mission Street

SAN FRANCISCO
PLANNING DEPARTMENT

Sanborn Map*



*The Sanborn Maps in San Francisco have not been updated since 1998, and this map may not accurately reflect existing conditions.

Case Number 2015-006755CUA
Verizon Wireless Macro WTS Facility
4610 Mission Street

SAN FRANCISCO
PLANNING DEPARTMENT

J. Contextual Photographs – *Pictures of nearby buildings follow.*

View of intersection of Mission and Cesar Chavez Streets from rooftop of 3120 Mission St.

View of east side of Mission Street and Bernal Heights Park from Rooftop of 3120 Mission Street

View of Mission Street facing south from rooftop of 3120 Mission Street

View of California Pacific Medical Center at 3555 Cesar Chavez Street

View of from intersection of 3101 Mission Street and Cesar Chavez Street

View of Cesar Chavez Street facing west from Mission Street

Existing

Proposed

view from Mission Street looking southwest at site

278693 Army Mission Relo
3120 Mission Street, San Francisco, CA
Photosims Produced on 3-15-2015

AdvanceSim
Photo Simulation Solutions
Contact (925) 202-8507

Existing

Proposed

view from Mission Street looking north at site (View 3)

278693 Army Mission Relo
3120 Mission Street, San Francisco, CA
Photosims Produced on 10-1-2015

AdvanceSim
Photo Simulation Solutions
Contact (925) 202-8507

Existing

Proposed

view from Valencia Street looking southeast at site

278693 Army Mission Relo
3120 Mission Street, San Francisco, CA
Photosims Produced on 3-15-2015

AdvanceSim
Photo Simulation Solutions
Contact (925) 202-8507

Existing

Proposed

view from Valencia Street looking east at site

278693 Army Mission Relo
3120 Mission Street, San Francisco, CA
Photosims Produced on 3-15-2015

AdvanceSim
Photo Simulation Solutions
Contact (925) 202-8507

Verizon Wireless • Proposed Base Station (Site No. 278693 "Army Mission Relo")
3120 Mission Street • 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 personal wireless telecommunications carrier, to evaluate the base station (Site No. 278693 "Army Mission Relo") proposed to be located at 3120 Mission Street in San Francisco, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

Background

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

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

The site was visited by the undersigned engineer, during normal business hours on December 28, 2015, a non-holiday weekday, and reference has been made to information provided by Verizon, including zoning drawings by BayStone Architecture & Engineering, Inc., dated April 7, 2015.

Checklist

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

There were observed no wireless base stations installed at the site. Existing RF levels for a person at ground near the site were less than 1% of the most restrictive public exposure limit. The measurement equipment used was a Narda Type NBM-520 Broadband Field Meter with Type EF-0391 Isotropic Broadband Electric Field Probe (Serial No. D-0454). The meter and probe were under current calibration by the manufacturer.

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 installed.

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 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 install twelve Andrew Model SBNHH-1D65A directional panel antennas within three new view screen enclosures to be installed above the west, south, and east sides of the roof of the mixed-use building located at 3120 Mission Street. The antennas would be mounted with up to 9° downtilt at an effective height of about 50½ feet above ground, 10 feet above the roof, and would be oriented in groups of four toward 90°T, 210°T, and 320°T, to provide service in all directions.

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

The expected operating power of the Verizon transmitters is reflected in the resulting effective radiated power given in Item 6 below; the transmitters may operate at a power below their maximum rating.

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

The maximum effective radiated power proposed by Verizon in any direction is 9,670 watts, representing simultaneous operation at 3,010 watts for AWS, 3,860 watts for PCS, 1,360 watts for cellular, and 1,440 watts for 700 MHz service.

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

The drawings show the antennas to be installed as described in Item 4 above. There were noted buildings of similar height located across Mission Street, at least 90 feet away.

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

For a person anywhere at ground, the maximum RF exposure level due to the proposed Verizon operation is calculated to be 0.020 mW/cm^2, which is 3.5% of the applicable public exposure limit. Cumulative RF levels at ground near the site are therefore estimated to be below 4.5% of the limit. The maximum calculated RF exposure levels at other publicly accessible areas are provided in the table below; the levels on the various penthouses and roof decks/patios are also shown on Figure 1.

Location	Percentage of Public Limit
Building across Mission Street (top-floor)	16%
West penthouse	4.6%
West rooftop deck	0.90%
East penthouse	14%
East rooftop deck	2.2%
Northwest patio	0.54%
Top-floor of subject building	2.6%

The three-dimensional perimeter of RF levels equal to the public exposure limit is calculated to extend up to 67 feet out from the antenna faces and to much lesser distances above, below, and to the sides; this includes areas of the roof of the building but does not reach the penthouses and roof decks/patios, the dwellings below the antennas, or any nearby buildings.

9. Describe proposed signage at site.

It is recommended that child-proof barricades be erected, as shown in Figure 1, to preclude public access in certain areas in front of the antennas. To prevent occupational exposures in excess of the FCC guidelines, it is recommended that appropriate RF safety training, to include review of personal monitor use and lockout/tagout procedures, be provided to all authorized personnel who have access within the barricades, including employees and contractors of Verizon and of the property owner. No access within 26 feet directly in front of the antennas themselves, such as might occur during certain maintenance activities, should be allowed while the base station is in operation, unless other measures can be demonstrated to ensure that occupational protection requirements are met. It is recommended that "Worker Notification Areas" be marked with yellow paint stripes on the roof of the building in front of the antennas, as shown in Figure 1, and that explanatory signs* be posted at the roof access door, at the fire escape, and on the barricades, readily visible from any angle of approach to persons who might need to work within that distance.

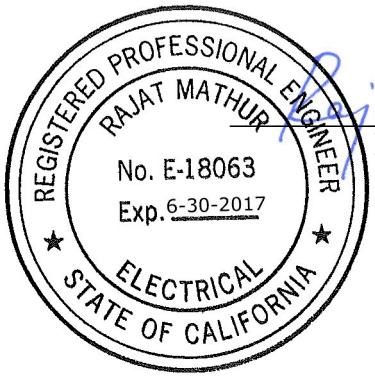
10. Statement of authorship.

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration No. E-18063, which expires on June 30, 2017. 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.

* Signs should comply with OET-65 color, symbol, and content recommendations. Contact information should be provided (*e.g.*, a telephone number) to arrange for access to restricted areas. The selection of language(s) is not an engineering matter; the San Francisco Department of Public Health recommends that all signs be written in English, Spanish, and Chinese.

Conclusion

Based on the information and analysis above, it is the undersigned's professional opinion that operation of the base station proposed by Verizon Wireless at 3120 Mission Street in San Francisco, California, can comply with the prevailing standards for limiting human exposure to radio frequency energy and, therefore, need not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations. Erecting child-proof barricades is recommended to establish compliance with public exposure limits; training authorized personnel, marking roof areas, and posting explanatory signs is recommended to establish compliance with occupational exposure limits.



Rajat Mathur, P.E.
707/996-5200

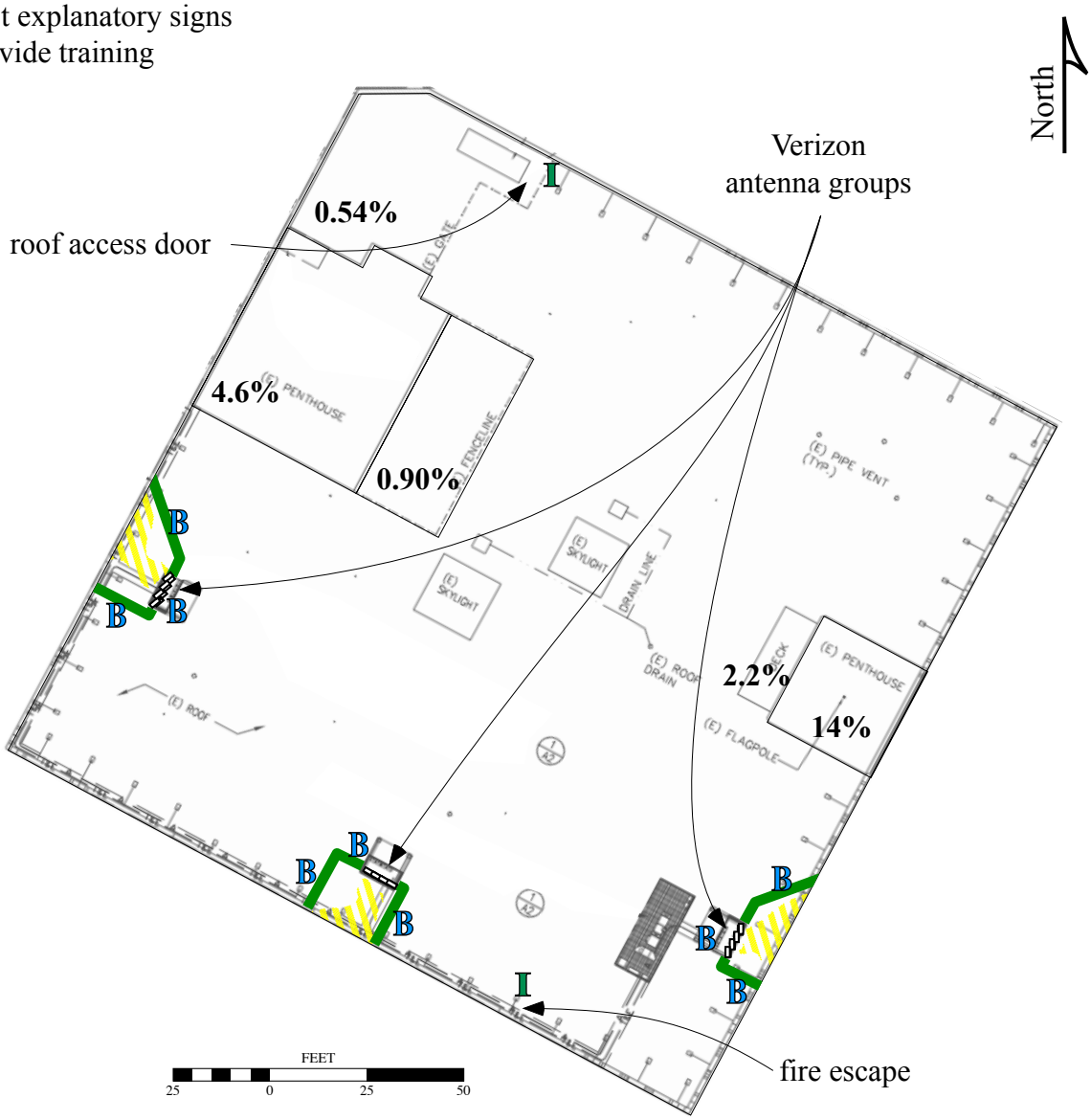
December 28, 2015

Verizon Wireless • Proposed Base Station (Site No. 278693 "Army Mission Relo")
3120 Mission Street • San Francisco, California

Calculated RF Exposure Levels on Roof

Recommended Mitigation Measures

- Install secure child-proof barricades
- Stripe roof areas as shown
- Post explanatory signs
- Provide training



Notes:
Base drawing from BayStone Architecture & Engineering, Inc., dated April 7, 2015.
Calculations performed according to OET Bulletin 65, August 1997.
Training should be provided to all persons requiring access within barricades.

Legend:	Less Than Public	Exceeds Public	Exceeds Occupational	Exceeds 10x Occupational
Striping color	N/A	yellow	red	N/A
Sign type	I - Green INFORMATION	B - Blue NOTICE	Y - Yellow CAUTION	O - Orange WARNING
Barricades shown as green lines				

City and County of San Francisco
DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH SECTION

Edwin M. Lee, Mayor
Barbara A. Garcia, MPA, Director of Health
Rajiv Bhatia, MD, MPH, Director of EH

Review of Cellular Antenna Site Proposals

Project Sponsor : *Verizon* **Planner:** *Omar Masry*

RF Engineer Consultant: *Hammett and Edison* **Phone Number:** *(707) 996-5200*

Project Address/Location: *3120 Mission St*

Site ID: *1884* **SiteNo.:** *278693*

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)

☑ Existing Antennas No Existing Antennas: **0**

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)

◉ **Yes** ○ **No**

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)

◉ **Yes** ○ **No**

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)

Maximum Power Rating: **9670** watts.

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).

Maximum Effective Radiant: **9670** watts.

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 $\mu w/cm^2$)

Maximum RF Exposure: **0.02** mW/cm^2 Maximum RF Exposure Percent: **3.5**

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.

☑ Public_Exclusion_Area Public Exclusion In Feet: **67**

☑ Occupational_Exclusion_Area Occupational Exclusion In Feet: **26**

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 currently no antennas operated by Verizon installed on the roof top of the building at 3120 Mission Street. Existing RF levels at ground level were around 1% of the FCC public exposure limit. There were observed no other antennas within 100 feet of this site. Verizon proposes to install 12 new antennas. The antennas will be mounted at a height of 50 feet above the ground. The estimated ambient RF field from the proposed Verizon transmitters at ground level is calculated to be 0.02 mW/sq cm., which is 3.5% of the FCC public exposure limit. The three dimensional perimeter of RF levels equal to the public exposure limit extends 67 feet and includes portions of the rooftop areas. Barricades must be installed to prevent public access to these areas. Warning signs must be posted at the antennas, barricades and roof access points in English, Spanish and Chinese. Workers should not have access to within 26 feet of the front of the antennas while they are in operation. Worker notification areas should be marked with yellow striping on the rooftop.

___ **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

Charges to Project Sponsor (in addition to previous charges, to be received at time of receipt by S

Signed: Dated: 5/7/2015

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

ON AIR

Wireless Site Acquisition & Construction Management

Omar Masry
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

December 28, 2015

Re: Wireless Telecommunications Facilities
Re: Request For Conditional Use Authorization - Continued to Jan. 7, 2016
Address: 3120 Mission Street, San Francisco, CA 94110
APN: 6574-001A
Case#: 2015-006755CUA

Mr. Masry,

Pursuant to the Planning Commission's decision to continue the project and in an effort to provide more concise information with regard to issues raised during the hearing, the below discussion is offered to aid in the revision of the Planning Packet, Findings and Motion:

In the late 1970's, the building was converted to office on the ground floor and 60 live/work units on the upper floors. The ground floor offices have been leased over the past 38 years to the State of California Employment Development Department up to 2001 and since then to the San Francisco CareerLink Center.

The building owner reported that there are currently 57 rented live/work units in the building. Although classified as live/work, some are simply used as offices. They estimate that there are 80-85 residents living in the building. Although live/work and not subject to open space requirements, the property owner has stated that they have no plans to change the ability for residences to utilize the rooftop garden area and are not requiring the removal of any existing rooftop decks. The only decrease in existing rooftop space will be the areas that Verizon Wireless's equipment and safety zones occupy. The attached annotated drawings and aerial photograph will help to clarify the configuration of the rooftop spaces.

a. It is estimated that the rooftop is approximately 190' x 190' (36,100sf).
b. The tall eastern tower penthouse is approximately 30' x 30' (900sf) and has a deck in the front that is approximately 10' x 30' (300sf).
c. The large western office penthouse is approximately 45' x 50' (2,250sf) and has a fenced area and deck in front of approximately 20' x 50' (1,000sf).
d. There are two skylight areas that are approximately 20' x 20' each (800sf).
e. Verizon's equipment and safety areas will occupy approximately (1,965sf).

A rough estimate of the open rooftop space after the deduction of the existing penthouses, skylights and Verizon equipment areas is approximately 28.885sf. There should be no impairment to any open space requirements (even if applicable).

465 First St. West, Suite 101 Sonoma, CA 95476 Tel: 707 933-9633 Fax: 707 933-9611

The discussion regarding Small Cell sites versus Macro Cell sites needs to be more clearly understood as it is important to correlate that the proposed Macro site at 3120 Mission St. will be in an effort to “replace” the current Macro at St. Luke’s Hospital.

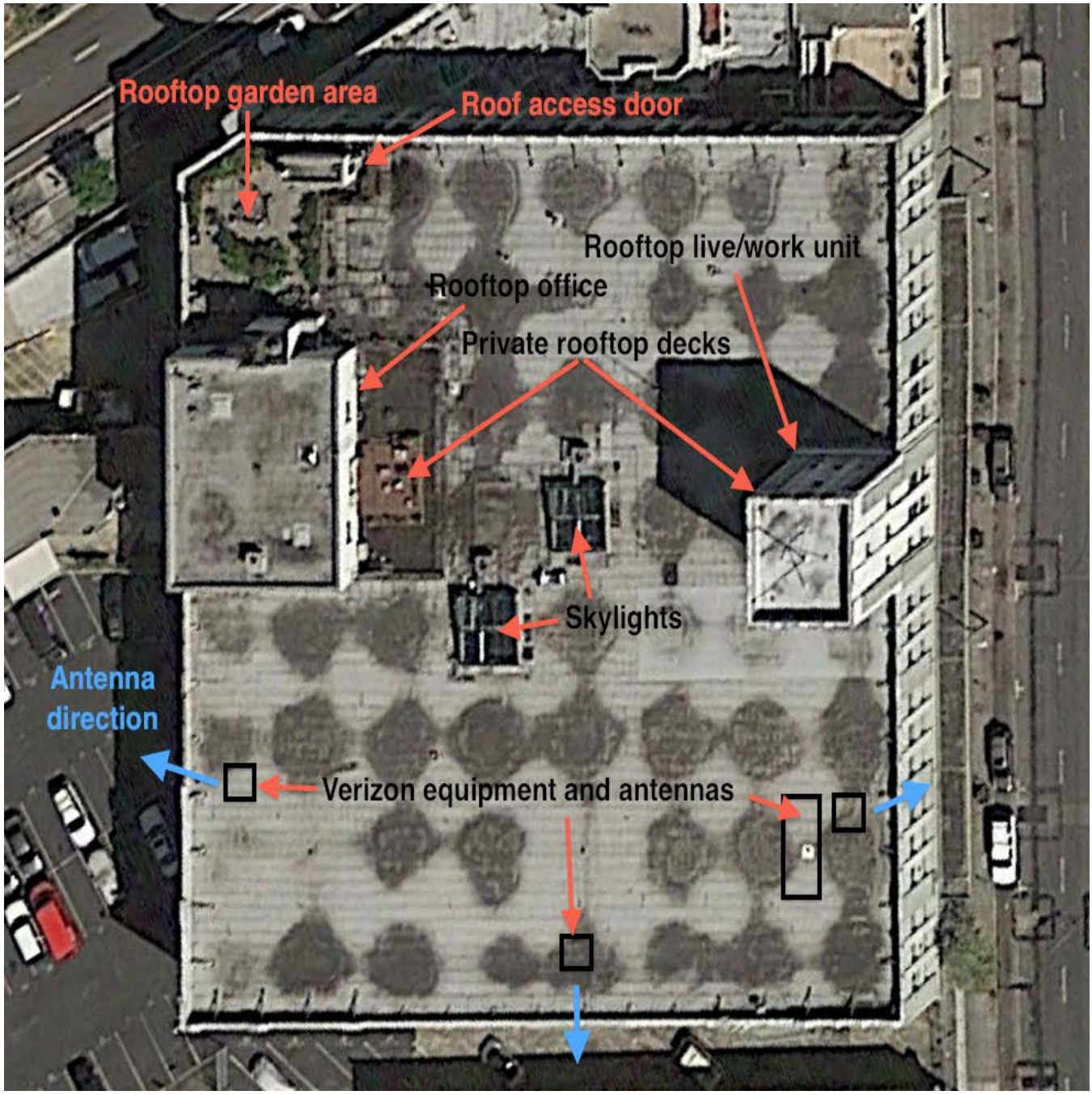
Small Cells are provisioned to support a limited number of subscribers that range in the tens of subscribers. This feature separates them from larger ‘macro’ base stations that typically have larger capabilities in terms of output power and number of supported subscribers. Thus, it is common to deploy small cells at relatively low height to cover a limited area (e.g. 400 feet) to provide capacity to a hot spot or coverage in a dead zone. Macro base stations on the other hand are mounted higher, and used to provide wider coverage (e.g. 1,600 feet or more). Therefore, this project is designed as a Macro to serve this broad area.

We have received the revised Hammett & Edison RF Report to include “childproof” barriers at the antennas and estimated RF levels at varying points from the antennas, specifically at the rooftop live/work unit in the eastern penthouse tower. The site drawings will also be updated to include the protective barriers. The RF Report was sent to you today.

Please give me a call with any questions.

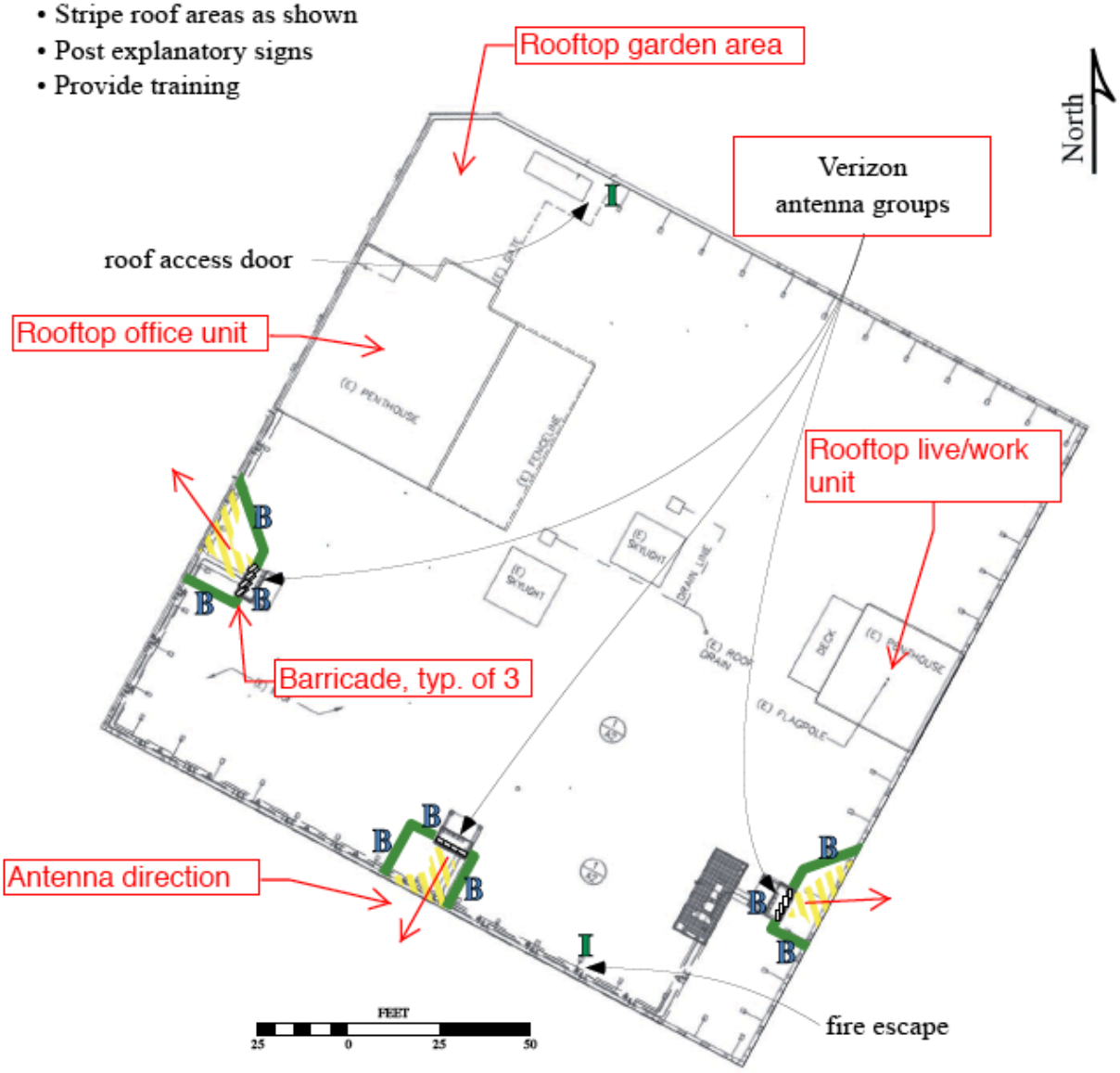
Best Regards,

Peter Hilliard
On Air, LLC
707.732.7227


Rooftop garden area
Roof access door
Rooftop live/work unit
Rooftop office
Private rooftop decks
Skylights
Antenna direction
Verizon equipment and antennas

Recommended Mitigation Measures

- Install secure barricades
- Stripe roof areas as shown
- Post explanatory signs
- Provide training



Notes:
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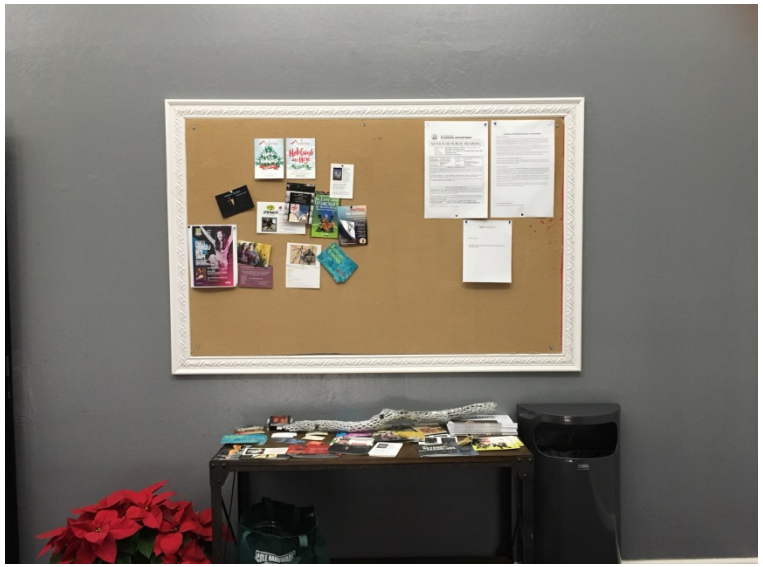
Calculations performed according to OET Bulletin 65, August 1997.
Training should be provided to all persons requiring access within barricades.

Legend:	Less Than Public	Exceeds Public	Exceeds Occupational	Exceeds 10x Occupational
Striping color	N/A	yellow	red	N/A
Sign type	I - Green INFORMATION	B - Blue NOTICE	Y - Yellow CAUTION	O - Orange WARNING
Barricades shown as green lines				

Letter posted by property manager in resident lobby



KLW 3435 Army Street, Suite 344
San Francisco, California 94110

Notice to Residents:

"Installation of the Verizon antennas will not impact residents' use of the rooftop garden."

Army Mission Relo

3120 Mission Street
San Francisco, CA 94110

Alternative Sites Discussion

Pursuant to the WTS Facilities Siting Guidelines there are Preferred Locations Sites, Limited Preference Sites and Disfavored Sites.

Because the proposed facility will be located on a Neighborhood Commercial (NC3) Building, it would be considered a Preferred Location Site.

The other preferred locations are publically-used structures such as the St. Lukes Hospital campus and Salvation Army building across Cesar Chaves from St. Lukes. Verizon Wireless currently operates a wireless telecommunication facility at the California Pacific Medical Center St. Luke's Campus at 1580 Valencia Street. The Medical Center has decided not to renew the lease and Verizon Wireless must relocate the facility in order to maintain its wireless capacity and coverage in the area. The applicant sent an inquiry to the Salvation Army but received no response. In addition the Salvation Army building was deemed to be of insufficient height to effectively host a replacement facility.

The applicant also investigated whether there were any co-location sites in the area but the only one is the hospital and as mentioned, they are not interested.

There are a couple of industrial or commercial structures in the vicinity, however, they to were deemed to be of insufficient height to host a macro facility that would be able to provide the coverage that the Hospital affords the Verizon network.

The project meets the criteria for NC-3 districts because advanced telecommunications services will make positive contributions to the neighborhood. The need for coverage/capacity to provide on-demand communications for personal safety, business, emergency services, arts, movies, education etc. is growing and this will help meet that need. The proposed use is of a small size and intensity and is compatible with the district in which it is located.

ON AIR

465 First Street West, Suite 101
Sonoma, CA 95476

MEMO

TO: Omar Masry, San Francisco Planning Department

FROM: Peter Hilliard/ On Air, LLC

SUBJECT: Summary of Community Outreach Meeting
(Case No. _____ - Verizon Wireless)

DATE: May 26, 2015

Mr. Masry:

On Air LLC held a community outreach meeting on behalf of Verizon Wireless on Wednesday, May 13th to hear public comment and answer questions about the proposed wireless telecommunications facility at 3120 Mission St.

Over 1,140 notices were mailed out to owners/occupants within a 500' radius including 34 Bernal Heights and Mission District neighborhood associations. Approximately 55 notices were returned as vacant or undeliverable.

The meeting was held in the Auditorium at the Women's Building at 3543 18th Street in the Mission District.

The meeting began at 6:00PM and eventually 6 people attended. The discussion was lively and consisted of a detailed project discussion on the necessity of relocating the existing wireless telecommunications facility at the California Pacific Medical Center St. Luke's campus building at 1580 Valencia Street. Copies of the zoning drawings, photo simulations and RF study were made available to everyone in attendance. Also, a full size set of drawings and an overhead presentation of the documents were provided for review.

Throughout the meeting the floor was open for comments and questions. Much of the discussion regarded the following:

(a) Health concerns from RF emissions from the proposed antennas;

(b) FCC regulation of laws;

(c) Planning Commission discretion with regard to RF Emissions;

(d) Secondary address of 3435 Cesar Chavez St. for the proposed site was not on the notice (although all received notices);

(e) Site alternatives/back-up plan;

(f) My planning experiences and failures;

(g) Planning Commission power to deny a site and how often;

(h) Timing of project;

(i) Lease agreements/arrangements;

(j) Information on the Community Liaison (Melissa White Region Director, Government & Public Affairs) for Sutter Health for the San Francisco Bay Area;

(k) Appeals of PC decisions;

(l) One attendee met with representatives of the Northwest Bernal Alliance, the Mission Bernal Merchants Association and the Tiffany Neighborhood Association on Monday May 11th and they addressed the proposed project and none of the representatives of the three associations had any concerns about the project;

(m) Unmanned Facility;

(n) Lighting;

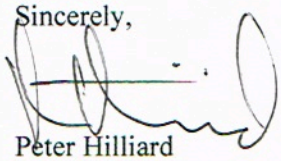
(o) RF testing/training;

(p) Temporary portable generator location;

The people who came were provided plans, photosimulations and drawings and were encouraged to attend the Planning Commission hearing that will take place in the near future.

Please let me know if you have any questions regarding this community outreach meeting.

Sincerely,



Peter Hilliard
On Air, LLC
(707) 732-7227

Encl:

1. Community Meeting Sign-In Sheet
2. Meeting Notice

COMMUNITY OUTREACH MEETING

Name	Address	Email	Phone
RANDY Shelton	3435 Cesar Chavez	randy.shelton@gmail.com	415.244.5842
Amanda Fridey	3435 cesar Chavez	kiwiamanda@gmail.com	303.917.1002
Leslie Keir	161 Precita	leslieker@yahoo	
Jeremy Mull	3435 Cesar Chavez	jjmulder1@gmail.com	(510) 919-9435
SARAH GRINSTEIN	3435 CESAR CHAVEZ	gumdropproductions@yahoo.com	
Abner Marks	376 Precita Ave	abner@mbmasf.org	(510) 316-6672

Women's Center Auditorium
3543 18th Street
San Francisco, CA 94110
Wednesday, May 13, 2015 @ 6:00 PM

NOTICE OF NEIGHBORHOOD MEETING

To: All Neighbors and Owners within a 500-foot radius of 3120 Mission Street, San Francisco CA 94110

Meeting Information

Date: Wednesday, May 13, 2015
Time: 6:00 PM
Where: The Women's Building
Auditorium
3543 18th Street
San Francisco, CA 94110

Site Information

Address: 3120 Mission Street
Block/Lot: 6574-001A
Zoning: NC-3

Applicant
Verizon Wireless

Contact Information
Peter Hilliard
On Air, LLC
(707) 933-9633

Verizon Wireless is proposing to install a new wireless telecommunications facility located on the rooftop of 3120 Mission Street (Mission Street One Stop Career Link Center). Verizon's proposal includes the installation of twelve (12) panel antennas and outdoor equipment cabinets mounted on steel platforms on the rooftop. The antennas will be mounted behind fiber reinforced plastic screens designed to resemble existing rooftop penthouse structures. This project will be scheduled for a Planning Commission hearing subsequent to this neighborhood meeting.

You are invited and encouraged to attend our Community Outreach Meeting, to be held in the Auditorium at the Women's Center, at 3543 18th Street, San Francisco CA 94110 on Wednesday, May 13th at 6:00 PM to learn more about the project.

If you have any questions regarding the proposal and are unable to attend the meeting, please contact Peter Hilliard at (707) 933-9633. Please contact Omar Masry, City of San Francisco Planning Department, at (415) 575-9116, e-mail: omar.masry@sfgov.org should you have questions regarding the City of San Francisco Planning permit process.

NOTE: If you require an interpreter to be present at the meeting, please contact our office at (707) 933-9633 at your earliest convenience and we will make every effort to provide you with an interpreter.

AVISO DE REUNIÓN EN EL VECINDARIO

A: Vecinos y propietarios dentro de un radio de 500 pies desde 3120 Mission Street, San Francisco, CA 94110

Información sobre la reunión

Fecha: Miércoles 13 de Mayo de 2015
Hora: 6.00 p. m.
Lugar: Edificio de Mujeres
Auditorio
3543 18th Street
San Francisco, CA 94110

Información sobre el lugar

Dirección: 3120 Mission Street
Manzana/Lote: 6574-001A
Zonificación: NC-3

Solicitante
Verizon Wireless

Información de contacto
Peter Hilliard
On Air, LLC
(707) 933-9633

Verizon Wireless propone realizar una nueva instalación de telecomunicaciones inalámbricas en la azotea de 3120 Mission Street (Mission Street One Stop Career Link Center). En la propuesta de Verizon se incluye la instalación de doce (12) antenas de paneles y gabinetes para equipos de uso exterior, que se montarían sobre plataformas de acero en la azotea. Las antenas se montarán detrás de paneles de plástico reforzado con fibra, diseñados para imitar las estructuras de las azoteas de los áticos. Con posterioridad a esta reunión vecinal, se programará una audiencia de la Comisión de Planificación para tratar este proyecto.

Para conocer más sobre el proyecto, lo invitamos y alentamos a asistir a nuestra reunión de extensión comunitaria, que se llevará a cabo el miércoles 13 de mayo a las 6.00 p. m. en el Auditorio del Edificio de Mujeres, en 3543 18th Street, San Francisco CA 94110.

Si tiene preguntas sobre la propuesta y no puede asistir a la reunión, póngase en contacto con Peter Hilliard llamando al (707) 933-9633. Por preguntas vinculadas al proceso para la obtención de permisos del Departamento de Planificación de la Ciudad de San Francisco, comuníquese con Omar Masry, de dicho departamento, llamando al (415) 575-9116, o enviando un correo electrónico a omar.masry@sfgov.org.

AVISO: Si requiere la presencia de un intérprete en la reunión, por favor comuníquese con nuestra oficina a la mayor brevedad llamando al (707) 933-9633, y haremos lo posible para proporcionarle uno.

社区会议通告

致：加州旧金山市教会街（Mission Street）3120 号（邮编 94110）半径 500 英尺内的居民和业主

会议详情

日期：2015 年 5 月 13 日，星期三
时间：下午 6:00
地点：加州旧金山市
第 18 街 3543 号（3543 18th Street）
女子大厦（The Women's Building）
礼堂（Auditorium）

设备安装地点信息

地址:教会街（Mission Street）3120 号街
区/地段（Block/Lot）：6574-001A
分区（Zoning）：NC-3

申请公司
威讯无线（Verizon Wireless）

联系信息
Peter Hilliard(彼得·希利亚德)
On Air 有限公司
（707）933-9633

威讯无线（Verizon Wireless）提出在教会街 3120 号——即教会街一站式就业服务中心(Mission Street One Stop Career Link Center)——的屋顶安装一个新的无线通信设备。威讯（Verizon）的项目包括在屋顶上安装十二（12）个平板天线和架置在钢平台上的室外设备机柜。天线将安装在纤维强化塑料隔板后面，这些隔板的设计与当前的顶层单位的结构相似。在本次社区会议之后，将为该项目安排一场规划委员会听证会。

我们邀请并鼓励您参加我们的社区外展会议，以了解更多关于该项目的详情，会议将于 5 月 13 日星期三下午 6:00，在女子中心的礼堂举行（地址：加州旧金山市第 18 街 3543 号，邮编：94110）。

如果您对该项目有任何问题，但又无法出席本会议，请致电（707）933-9633，与 Peter Hilliard(彼得·希利亚德)联系。如果您有任何关于旧金山市规划许可审批的问题，请致电(415)575-9116 或发信至电子邮件：omar.masry@sfgov.org，与旧金山市规划部 Omar Masry(奥马尔·马斯利)联系。

注：如果您在会议上需要口译员，请在您方便的时候，尽早致电（707）933-9633，与我们的办公室联系，我们将竭尽全力为您提供口译员。

HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
BROADCAST & WIRELESS

WILLIAM F. HAMMETT, P.E.
STANLEY SALEK, P.E.
ROBERT P. SMITH, JR.
RAJAT MATHUR, P.E.
ANDREA L. BRIGHT, P.E.
NEIL J. OLIJ
SAMMIT S. NENE
BRIAN F. PALMER

ROBERT L. HAMMETT, P.E.
1920-2002
EDWARD EDISON, P.E.
1920-2009

DANE E. ERICKSEN, P.E.
CONSULTANT

BY E-MAIL PHILLIARD@VOM.COM

June 4, 2015

Mr. Peter Hilliard
On Air, LLC
465 First Street West, Suite 101
Sonoma, California 95476

Dear Peter:

As you requested, we have conducted the review required by the City of San Francisco of the coverage maps that Verizon will submit as part of its application package for its base station proposed to be located at 3120 Mission Street (Site No. 278693 "Army Mission Relo"). This is to fulfill the submittal requirements for Planning Department review.

Executive Summary

We concur with the maps, data, and conclusions provided by Verizon. The maps provided to show the before and after conditions accurately represent the carrier's present and post-installation coverage.

Verizon presently has nine directional panel antennas installed at about 99 feet above ground on the face of the Monteagle Medical Building located at 1580 Valencia Street (Site No. 123783 "SF Army Mission"). Due to the loss of its lease at that site, Verizon proposes to relocate its facility to the office building located at 3120 Mission Street, about 400 feet to the northeast.

Verizon proposes to install twelve Andrew Model SBNHH-1D65A directional panel antennas within three new view screen enclosures to be installed above the west, south, and east sides of the roof of that building. The antennas would be mounted with up to 9° downtilt at an effective height of about 50½ feet above ground, 10 feet above the roof, and would be oriented in groups of four toward 90°T, 210°T, and 320°T, to provide service in all directions. The maximum effective radiated power proposed by Verizon in any direction is 9,670 watts, representing simultaneous operation at 3,010 watts for AWS, 3,860 watts for PCS, 1,360 watts for cellular, and 1,440 watts for 700 MHz service.

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

Verizon provided for review three coverage maps, attached for reference. The maps show Verizon's 4G LTE 700 MHz coverage from the *existing* Monteagle Medical building, coverage without the site at the Monteagle building, and coverage from the *proposed* site at 3120 Mission Street. All three LTE maps show six levels of coverage, which Verizon colors and defines as follows:

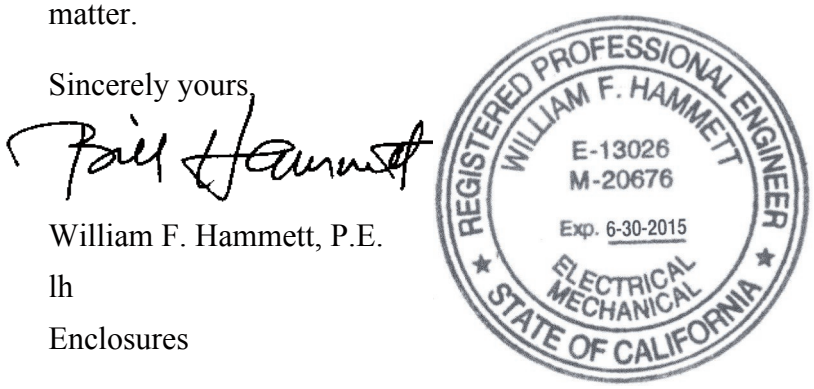
Green	-75 dBm or higher signal strength
Yellow	-85 dBm or higher signal strength
Grey	-95 dBm or higher signal strength
Red	-105 dBm or higher signal strength
Blue	-110 dBm or higher signal strength
White	-110 dBm or lower signal strength

We obtained information from Verizon on the software used to generate its coverage maps – this carrier uses proprietary software to produce the maps

We note that the existing map does not show a gap in coverage that the proposed relocation is intended to improve, and so measurements of the actual coverage in the area would not be relevant to this proposal. The service area shown in the proposed map is smaller than that shown in the existing map, as would be expected from the reduction in antenna height above ground (99 feet to 50½ feet).

We appreciate the opportunity to be of service. Please let us know if any questions arise on this matter.

Sincerely yours,

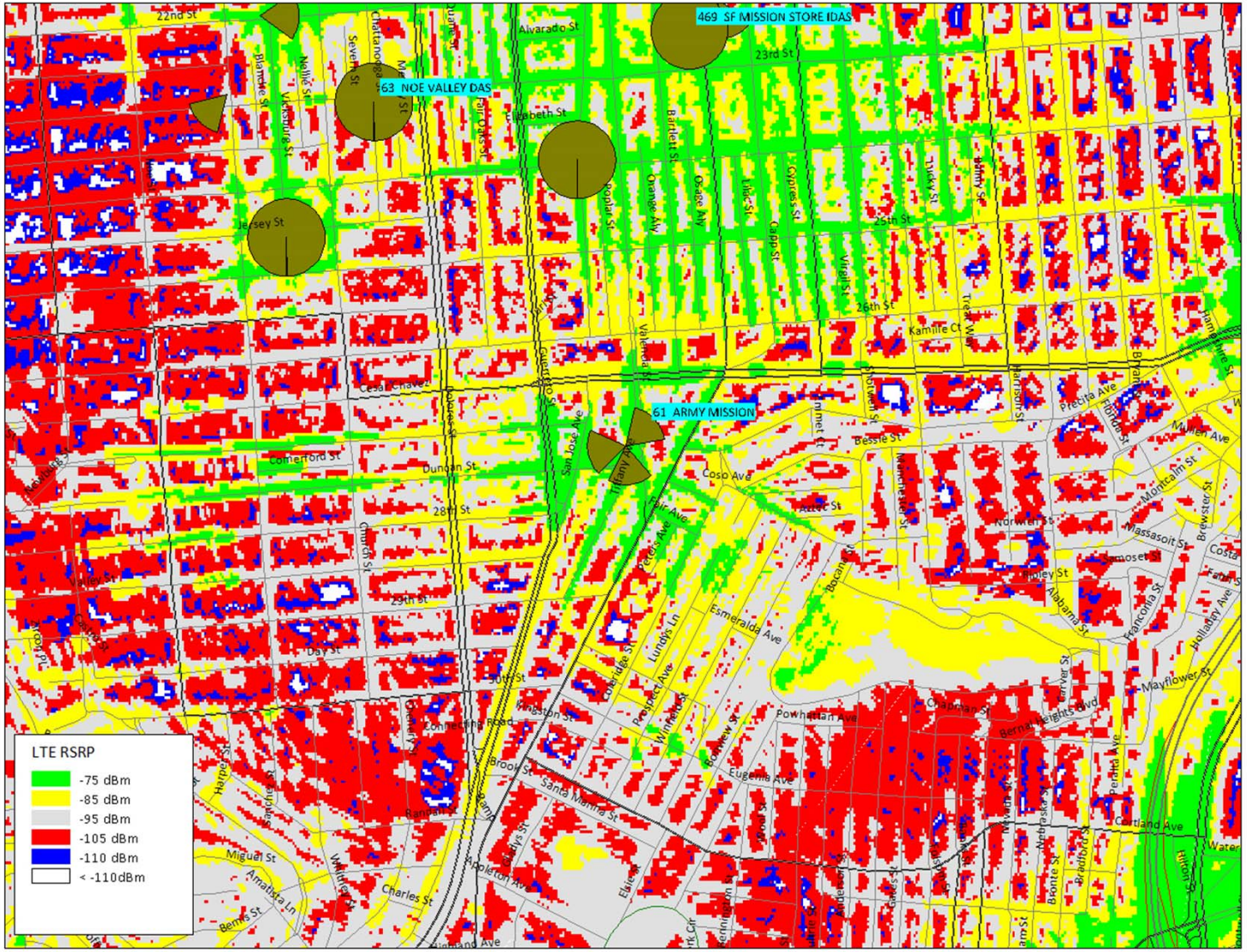


William F. Hammett, P.E.

lh

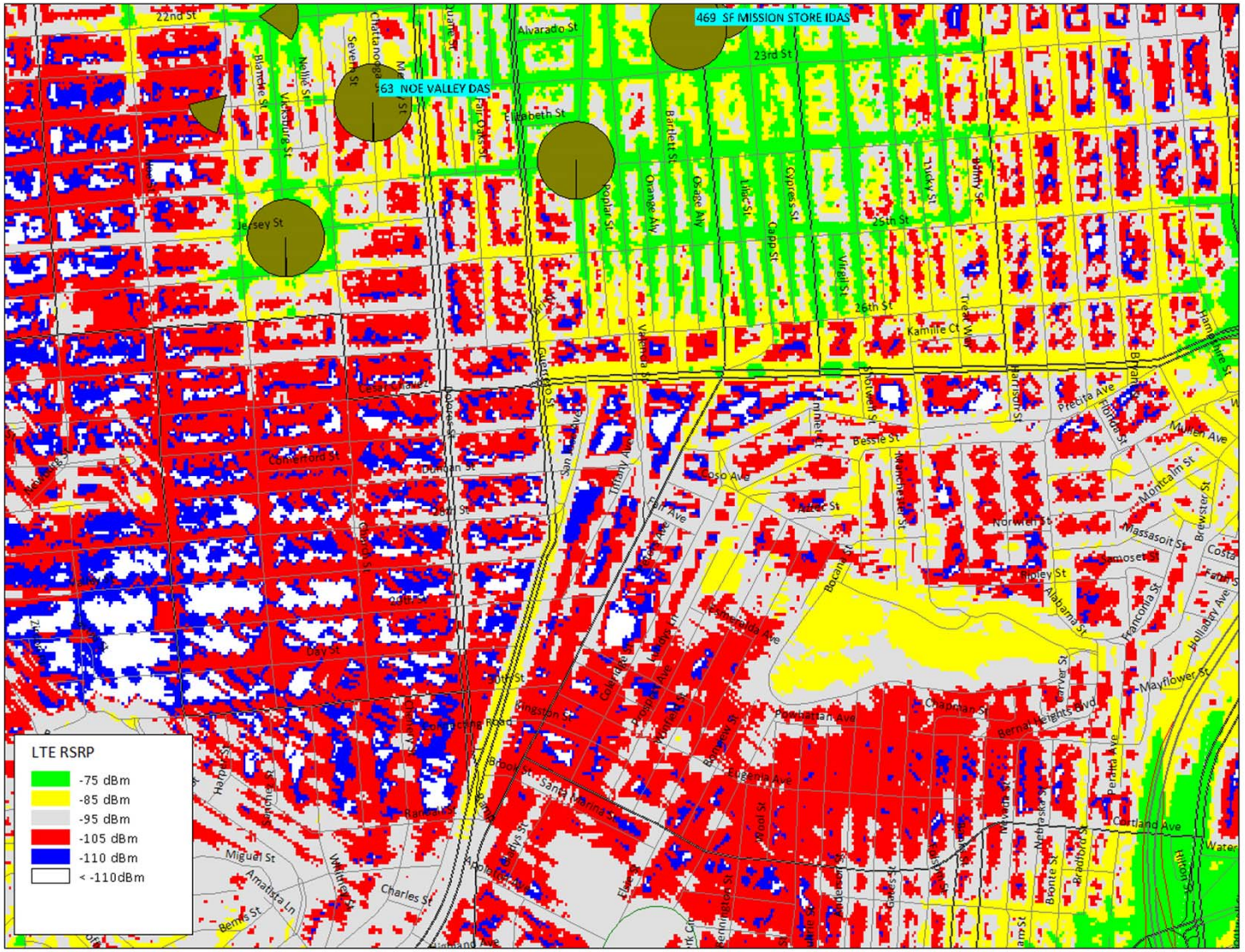
Enclosures

EXISTING 700MHz LTE COVERAGE



LTE 700MHz COVERAGE

(Without ARMY MISSION Site)



LTE 700MHz COVERAGE

(With relocated ARMY MISSION Site)

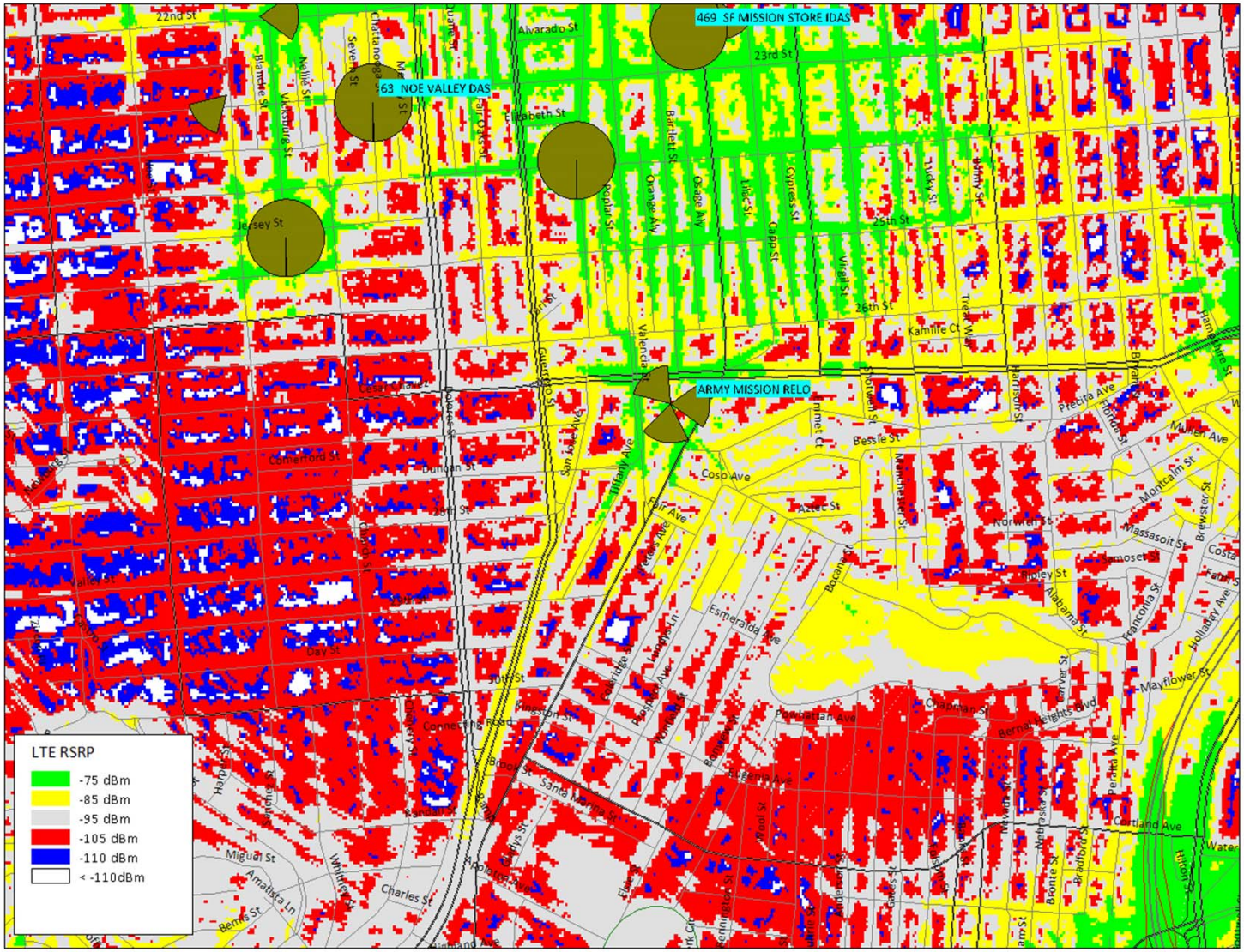


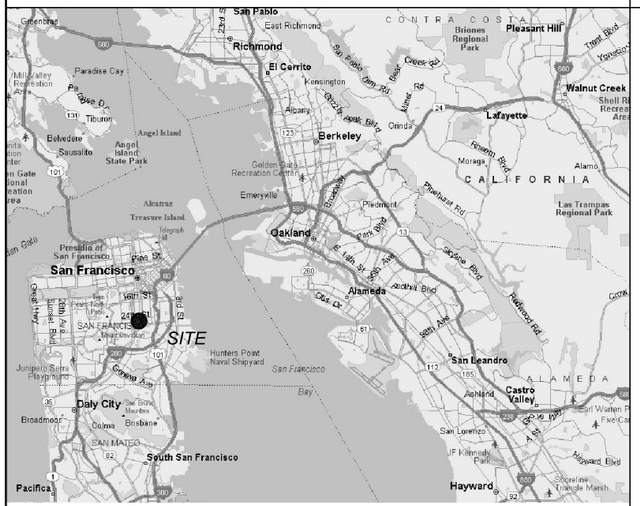
EXHIBIT B : CONDITIONAL USE AUTHORIZATION 2015-006755CUA

278693

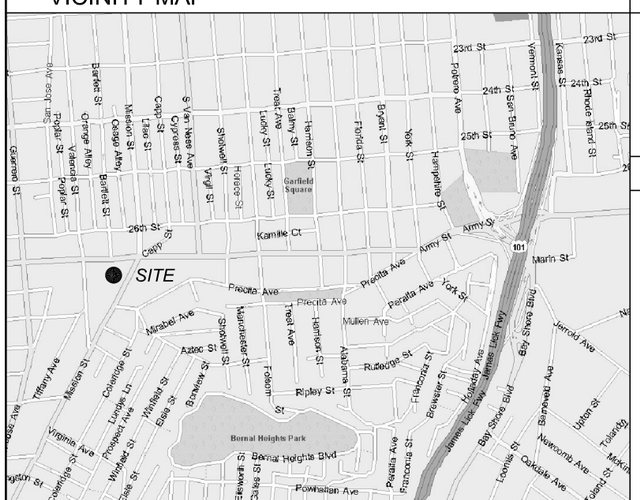
ARMY MISSION RELO

3120 MISSION STREET
SAN FRANCISCO, CA 94110

LOCATION MAP



VICINITY MAP



PROPERTY INFORMATION

PROPERTY OWNER:	KLW LLC 139 MITCHELL AVE. SUITE 236 SOUTH SAN FRANCISCO, CA 94080
A.P.N.:	6574-001A
ZONING:	NC3 (NEIGHBORHOOD COMMERCIAL DISTRICT, MODERATE SCALE 3+ COMMERCIAL STORIES)
OCCUPANCY:	B, UNMANNED
TYPE OF CONSTRUCTION:	V-B
AREA OF CONSTRUCTION:	550 SQ. FT.
HANDICAP REQUIREMENTS:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS NOT REQUIRED.
ELEVATION:	68.4'± AMSL (NAVD88) (GROUND AT STRUCTURE)

GENERAL NOTES

1. DO NOT SCALE DRAWINGS. ALL DIMENSIONS OF AND BETWEEN EXISTING BUILDINGS/STRUCTURES AND THE TRUE NORTH ARE TO BE CONFIRMED BY THE SURVEYOR.

2. POWER/TELCO ROUTING AND DESIGN ARE PRELIMINARY AND MUST BE VERIFIED WITH LOCAL UTILITY COMPANIES.

DRIVING DIRECTIONS

FROM: VERIZON WIRELESS REGIONAL OFFICE
(2785 MITCHELL DRIVE, WALNUT CREEK, CA)

TAKE CA-24 W TOWARD OAKLAND

TAKE I-580/SAN FRANCISCO EXIT ONTO I-580 W

TAKE I-80 W TOWARD SAN FRANCISCO

MERGE ONTO US-101 S

TAKE THE C CHAVEZ ST/POTRERO AVENUE EXIT

MERGE ONTO CESAR CHAVEZ ST W

TURN LEFT ONTO MISSION ST

THE SITE IS ON THE RIGHT

THIS TRIP: 29.7 MILE, 40 MINUTES

PROJECT DESCRIPTION

PROJECT SCOPE INCLUDES INSTALLATION OF AN UNMANNED VERIZON WIRELESS TELECOMMUNICATIONS FACILITY. THE PROJECT CONSISTS OF:

1. INSTALLATION OF NEW EQUIPMENT PLATFORM ON (E) ROOFTOP;
2. INSTALLATION OF NEW EQUIPMENT CABINETS & STEP-DOWN TRANSFORMER ON PLATFORM;
3. INSTALLATION OF (12) PANEL ANTENNAS, (2) GPS ANTENNAS, (12) RRUS ON (E) ROOFTOP BEHIND FRP SCREENINGS W/ ASSOCIATED CABLES;
4. INSTALLATION OF 100A 277/480V POWER METER/MAIN @ BASEMENT, EMERGENCY GENERATOR RECEPTACLE @ GROUND LEVEL, AND ASSOCIATED UTILITY RUNS THROUGH (E) BLDG. TO LEASE AREA;
5. THOSE (KNOWN DEAD) ANTENNAS/DISHES WILL BE REMOVED BY THE BUILDING OWNER AND VERIZON AS PART OF THE PROJECT

PROJECT TEAM

APPLICANT:

VERIZON WIRELESS
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

AGENT:

ON AIR, LLC
465 FIRST ST. WEST, SUITE 101
SONOMA, CA 95476
PHONE: 707-933-9633
FAX: 707-933-9611

CONTACT:
PETER HILLIARD (LEASING)
(707) 933-9633
OLIVIER FONTANA (CONSTRUCTION)
(925) 250-5945

ARCHITECT:

BAYSTONE ARCHITECTURE & ENGINEERING, INC.
5075 VALLEY CREST DR. #252
CONCORD, CA 94521
CONTACT: JASON X. YU
TEL: (925) 363-4661
FAX: (925) 798-8123

ENGINEER:

BAYSTONE ARCHITECTURE & ENGINEERING, INC.
5075 VALLEY CREST DR. #252
CONCORD, CA 94521

SURVEYOR:

GEIL ENGINEERING
1226 HIGH STREET
AUBURN, CA 95603
CONTACT: KENNETH GEIL
PHONE: (530) 885-0426

CODE COMPLIANCE

CONSTRUCTION WORKS AND MATERIALS MUST COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL JURISDICTION, INCLUDING BUT NOT LIMITED TO:

1. CALIFORNIA ADMINISTRATIVE CODE (INCL TITLE 24 & 25)
2. 2013 CALIFORNIA BUILDING CODE
3. 2013 CALIFORNIA ELECTRICAL CODE
4. 2013 CALIFORNIA MECHANICAL CODE
5. 2013 CALIFORNIA PLUMBING CODE
6. 2013 CALIFORNIA ENERGY CODE
7. 2013 CALIFORNIA FIRE CODE
8. 2013 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE
9. NFPA 72, 2013 EDITION, NATIONAL FIRE ALARM CODE, AS AMENDED
10. ANSI/EIA-222-G LIFE SAFETY CODE NFPA-101
11. LOCAL BUILDING CODE
12. CITY/COUNTY ORDINANCES

SHEET INDEX

SIGNATURE/ APPROVAL BLOCK

DISCIPLINE	SIGNATURE	DATE
CONSTRUCTION MANAGER		
EQUIPMENT ENGINEER		
RF ENGINEER		
PROJECT MANAGER		
PROPERTY OWNER		
AGENT-LEASING		
AGENT-ZONING		
AGENT-CONSTRUCTION		

verizon wireless
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

SITE NO. & NAME:

278693
ARMY MISSION RELO

SITE ADDRESS:

3120 MISSION STREET
SAN FRANCISCO, CA 94110
SAN FRANCISCO COUNTY

ISSUE STATUS:

REV.	DATE	DESCRIPTION
A	10/22/14	ZD 100% FINAL
B	11/10/14	ZD REV. GRND ELE.
C	11/16/14	CD 90% REVIEW
1	04/07/15	ZD REV. PLANNING
B	04/20/15	ZD 100% FINAL
B	06/09/15	CD 90% REVIEW REV.
10	07/23/15	CD 100% FINAL
11	07/29/15	CD REV. PLANNING
12	10/01/15	CD REV. GEN. RELO
13	11/30/15	CD REV. UTILITY RTS

DESIGN FIRM:

BayStone
Architecture & Engineering, Inc.
5075 VALLEY CREST DR. #252
CONCORD, CA 94521
TEL: (925) 890-7494
JYu@BayStoneEngineering.com

JOB NUMBER: COV005

SEAL:

SHEET TITLE:

TITLE SHEET

(EXHIBIT B: CONDITIONAL USE AUTHORIZATION 2015-006755CUA)

SHEET NUMBER:

T-1

SPECIAL INSPECTION:

- ☐ SOILS COMPLIANCE PRIOR TO FOUNDATION INSPECTION
- ☐ STRUCTURAL CONCRETE OVER 2500 PSI
- ☐ STRUCTURAL MASONRY
- ☐ SPRAYED-ON FIREPROOFING
- ☐ FIELD WELDING
- ☐ HIGH STRENGTH BOLTING
- ☒ EXPANSION/EXPOXY ANCHORS
- ☐

DIGALERT
DIAL TOLL FREE
1-800-227-2600
48 HOURS
BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF NORTHERN CALIFORNIA

NOTIFICATIONS 4

PRIMARY MODCELL ANTENNA PORTS – REAR VIEW

7	6	5	4	3	2	1
GPS	GAMMA "B2"	GAMMA "B1"	BETA "B2"	BETA "B1"	ALPHA "B2"	ALPHA "B1"

ANTENNA WAVEGUIDE PORT – INSIDE VIEW

ALPHA SECTOR 1	1	2	3	4	5	6
BETA SECTOR 2	7	8	9	10	11	12
GAMMA SECTOR 3	13	14	15	16	17	18
	19	20	21	22	23	24
			850	PCS		LTE

ANTENNA COLOR CODE SCHEME FOR LUCENT 850/PCS/LTE MODCELL

PORT NO.	DESCRIPTION	COLOR CODE	COMMENTS
	SECTOR SITE – 120 DEGREE (MODCELL)		
	ALPHA SECTOR 1 (850)		
1	ANTENNA TX1/RX1	YELLOW/RED/GREEN	850 SYSTEM
2	ANTENNA TX2/RX2	YELLOW/RED/RED/GREEN/GREEN	850 SYSTEM
	BETA SECTOR 2 (850)		
7	ANTENNA TX3/RX3	BLUE/RED/GREEN	850 SYSTEM
8	ANTENNA TX4/RX4	BLUE/RED/RED/GREEN/GREEN	850 SYSTEM
	GAMMA SECTOR 3 (850)		
13	ANTENNA TX5/RX5	ORANGE/RED/GREEN	850 SYSTEM
14	ANTENNA TX6/RX6	ORANGE/RED/RED/GREEN/GREEN	850 SYSTEM
	ALPHA SECTOR 1 (PCS)		
3	ANTENNA TX1/RX1	PURPLE/YELLOW/RED/GREEN	PCS SYSTEM
4	ANTENNA TX2/RX2	PURPLE/YELLOW/RED/RED/GREEN/GREEN	PCS SYSTEM
	BETA SECTOR 2 (PCS)		
9	ANTENNA TX3/RX3	PURPLE/BLUE/RED/GREEN	PCS SYSTEM
10	ANTENNA TX4/RX4	PURPLE/BLUE/RED/RED/GREEN/GREEN	PCS SYSTEM
	GAMMA SECTOR 3 (PCS)		
15	ANTENNA TX5/RX5	PURPLE/ORANGE/RED/GREEN	PCS SYSTEM
16	ANTENNA TX6/RX6	PURPLE/ORANGE/RED/RED/GREEN/GREEN	PCS SYSTEM
	ALPHA SECTOR 1 (LTE)		
5	ANTENNA TX1/RX1	PURPLE/PURPLE/YELLOW/RED/GREEN	LTE SYSTEM
6	ANTENNA TX2/RX2	PURPLE/PURPLE/YELLOW/RED/RED/GREEN/GREEN	LTE SYSTEM
	BETA SECTOR 2 (LTE)		
11	ANTENNA TX3/RX3	PURPLE/PURPLE/BLUE/RED/GREEN	LTE SYSTEM
12	ANTENNA TX4/RX4	PURPLE/PURPLE/BLUE/RED/RED/GREEN/GREEN	LTE SYSTEM
	GAMMA SECTOR 3 (LTE)		
17	ANTENNA TX5/RX5	PURPLE/PURPLE/ORANGE/RED/GREEN	LTE SYSTEM
18	ANTENNA TX6/RX6	PURPLE/PURPLE/ORANGE/RED/RED/GREEN/GREEN	LTE SYSTEM

PORT NO.	DESCRIPTION	COLOR CODE	COMMENTS
	GPS COLOR CODE		
23	GPS (850/PCS)	BLUE	850/PCS SYSTEM
24	GPS (LTE)	PURPLE/PURPLE/BLUE	LTE SYSTEM

NOTE:
SHARED 850 AND PCS FREQUENCIES THROUGH A DIPLEXED MAINLINE COAX RUN IS TO BE MARKED (1) WITH A DOUBLE BAND OF THE SECTOR COLOR ON THE FIRST LINE, AND (2) WITH TRIPLE BAND OF THE SECTOR COLOR ON THE SECOND LINE.
EX: Y/Y AND Y/Y/Y; B/B AND B/B/B; O/O AND O/O/O

ANTENNA COLOR CODE FOR 850_PCS_LTE MODCELL 100608 REV 4A

ANTENNA WAVEGUIDE PORT – INSIDE VIEW

ALPHA SECTOR 1	1	2	3	4	5	6
BETA SECTOR 2	7	8	9	10	11	12
GAMMA SECTOR 3	13	14	15	16	17	18
	19	20	21	22	23	24
			850	PCS		LTE

PORT NO.	DESCRIPTION	COLOR CODE
	ANTENNA MICROWAVE GUIDE COLOR CODES	
19	MICROWAVE #1 (MW-1)	RED/RED/RED
20	MICROWAVE #2 (MW-2)	BLUE/BLUE/BLUE
21	MICROWAVE #3 (MW-3)	GREEN/GREEN/GREEN
22	MICROWAVE #4 (MW-4)	YELLOW/YELLOW/YELLOW
X	MICROWAVE #5 (MW-5)	ORANGE/ORANGE/ORANGE
X	MICROWAVE #6 (MW-6)	PURPLE/PURPLE/PURPLE
X	MICROWAVE #7 (MW-7)	WHITE/WHITE/WHITE
X	MICROWAVE #8 (MW-8)	WHITE/RED/RED
X	MICROWAVE #9 (MW-9)	WHITE/BLUE/BLUE
X	MICROWAVE #10 (MW-10)	WHITE/GREEN/GREEN

ANTENNA COLOR CODE FOR 850_PCS_LTE MODCELL 100608 REV 4B

CABLE SPEC. & COLOR CODE SCHEDULE 5

	AZIMUTH	CABLE LENGTH (L.F.)	CABLE SIZE
ALPHA SECTOR 1	90°	50±	PER RF
BETA SECTOR 2	210°	50±	PER RF
GAMMA SECTOR 3	320°	290±	PER RF
GPS ANTENNA	---	20	1/2"ø

NOTE:
1. CABLE SIZE & OTHER RF DESIGN SUBJECT TO FINAL APPROVAL BY RF ENGINEER;
2. CONTRACTOR TO FIELD VERIFY CABLE LENGTH PRIOR TO ORDERING, CUTTING, INSTALLATION OF CABLES

A.B.	ANCHOR BOLT
ABV.	ABOVE
AC	AIRE CONDITIONING
ADD'L	ADDITIONAL
A.F.F.	ABOVE FINISHED FLOOR
A.F.G.	ABOVE FINISHED GRADE
AGL.	ABOVE GROUND LEVEL
ALUM.	ALUMINUM
ALT.	ALTERNATE
AMSL	ABOVE MEAN SEA LEVEL
ANT.	ANTENNA
APPRX.	APPROXIMATE(LY)
ARCH.	ARCHITECT(URAL)
AWG.	AMERICAN WIRE GAUGE
BLDG.	BUILDING
BLK.	BLOCK
BLKG.	BLOCKING
BM.	BEAM
B.N.	BOUNDARY NAILING
B/U	BACK-UP CABINET
CAB.	CABINET
BTCW.	BARE TINNED COPPER WIRE
B.O.F.	BOTTOM OF FOOTING
CANT.	CANTILEVER(ED)
C.I.P.	CAST IN PLACE
CLG.	CEILING
CLR.	CLEAR
CMU	CONCRETE MASONRY UNIT
CONC.	CONCRETE
CONN.	CONNECTION(OR)
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
d	PENNY (NAILS)
DBL.	DOUBLE
DEPT.	DEPARTMENT
D.F.	DOUGLAS FIR
DIA.	DIAMETER
DIAG.	DIAGONAL
DIM.	DIMENSION
DWG.	DRAWING(S)
DWL.	DOWEL(S)
EA.	EACH
EL.	ELEVATION
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
EMT.	ELECTRICAL METALLIC TUBING
E.N.	EDGE NAIL
ENG.	ENGINEER
EQ.	EQUAL
EXP.	EXPANSION
(E)	EXISTING
EXT.	EXTERIOR
(F)	FUTURE
FAB.	FABRICATION(OR)
F.F	FINISH FLOOR
F.G.	FINISH GRADE
FIN.	FINISH(ED)
FLR.	FLOOR
FDN.	FOUNDATION
F.O.C.	FACE OF CONCRETE
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUD
F.O.W.	FACE OF WALL
F.S.	FINISH SURFACE
FT.(')	FOOT(FEET)
FTG.	FOOTING
G.C.	GENERAL CONTRACTOR
GA.	GAUGE
GALV.	GALVANIZE(D)
G.F.I.	GROUND FAULT CIRCUIT INTERRUPTER
GLB.(GLU-LAM)	GLUE LAMINATED BEAM
GPS	GLOBAL POSITIONING SYSTEM
GRND.	GROUND
GYP.	GYPSUM
GEN'R	GENERATOR
HDR.	HEADER
HGR.	HANGER
HT.	HEIGHT
IN.(")	INCH(ES)
INT.	INTERIOR
LB.(#)	POUND(S)
L.B.	LAG BOLTS
L.F.	LINEAR FEET (FOOT)
L.	LONG(ITUDINAL)
MAS.	MASONRY
MAX.	MAXIMUM
M.B.	MACHINE BOLT
MECH.	MECHANICAL
MFR.	MANUFACTURER
M.G.B.	MASTER GROUND BUS
MIN.	MINIMUM
MISC.	MISCELLANEOUS
MTL.	METAL
(N)	NEW
NO.(#)	NUMBER
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
OPNG.	OPENING
(P)	PROPOSED
P/C	PRECAST CONCRETE
PLY.	PLYWOOD
P.O.C.	POINT OF CONNECTION
P.S.F.	POUNDS PER SQUARE FOOT
P.S.I.	POUNDS PER SQUARE INCH
P.T.	PRESSURE TREATED
PWR.	POWER (CABINET)
QTY.	QUANTITY
RAD.(R)	RADIUS
REF.	REFERENCE
REINF.	REINFORCEMENT(ING)
REQ'D.	REQUIRED
RGS.	RIGID GALVANIZED STEEL
SCH.	SCHEDULE
SHT.	SHEET
SIM.	SIMILAR
SPEC.	SPECIFICATION(S)
SQ.	SQUARE
S.S.	STAINLESS STEEL
STD.	STANDARD
STL.	STEEL
STRUC.	STRUCTURAL
TBD	TO BE DETERMINED
TEMP.	TEMPORARY
THK.	THICK(NESS)
T.N.	TOE NAIL
T.O.A.	TOP OF ANTENNA
T.O.C.	TOP OF CURB
T.O.F.	TOP OF FOUNDATION
T.O.P.	TOP OF PLATE (PARAPET)
T.O.S.	TOP OF STEEL
T.O.W.	TOP OF WALL
TYP.	TYPICAL
U.G.	UNDER GROUND
U.L.	UNDERWRITERS LABORATORY
U.N.O.	UNLESS NOTED OTHERWISE
V.I.F.	VERIFY IN FIELD
W	WIDE(WIDTH)
W/	WITH
W/O	WITHOUT
WD.	WOOD
W.P.	WEATHERPROOF
WT.	WEIGHT
℄	CENTERLINE
ℙ	PLATE

ABBREVIATIONS 2

Northstar Battery Lead and Acid weights per 12 Volt Battery

Battery Type	Electrolyte Weight /kg	Electrolyte Weight /lbs	Electrolyte Volume /litres	Electrolyte Volume /gallons	Acid Weight /kg	Acid Weight /lbs	Acid Volume /litres	Acid Volume /gallons	Lead Weight /kg	Lead Weight /lbs	Lead Oxide Weigh /kg	Lead Oxide Weigh /lbs
NSB40/NSB12-180	2.6	5.7	2.0	0.5	1.1	2.4	0.8	0.2	9.1	20.2	3.4	7.6
NSB70/NSB12-330	4.3	9.4	3.2	0.9	1.8	4.0	1.4	0.4	15.3	33.8	5.2	11.5
NSB75/NSB12-270	4.3	9.5	3.3	0.9	1.8	4.0	1.4	0.4	15.0	33.0	5.9	12.9
NSB90/NSB12-370	6.2	13.6	4.7	1.2	2.6	5.7	2.0	0.5	20.1	44.2	8.0	17.6
NSB125/NSB12-475	8.1	17.9	6.2	1.6	3.4	7.5	2.6	0.7	26.8	59.1	11.0	24.3
NSB40FT	2.4	5.3	1.8	0.5	1.0	2.2	0.8	0.2	7.2	15.9	3.3	7.2
NSB60FT	3.7	8.1	2.8	0.7	1.6	3.4	1.2	0.3	10.9	24.1	4.7	10.4
NSB90FT	5.3	11.6	4.0	1.1	2.2	4.9	1.7	0.4	16.0	35.3	7.4	16.4
NSB100FT	6.2	13.6	4.7	1.2	2.6	5.7	2.0	0.5	18.1	39.8	8.0	17.7
NSB110FT	6.8	15.0	5.2	1.4	2.9	6.3	2.2	0.6	19.9	43.8	9.1	20.1
NSB145FT	9.0	19.8	6.8	1.8	3.8	8.3	2.9	0.8	25.7	56.6	12.0	26.5
NSB170FT	10.4	22.9	7.8	2.08	4.4	9.7	3.3	0.9	28.7	63.3	14.4	31.8

All weights and volumes are for 12V-monobloc

BATTERY MODEL NO. NSB170FT (STORED INSIDE OF BATTERY CABINETS)

BATTERY TYPE: LEAD ACID

TOTAL NUMBERS OF BATTERY: 24 MAX.

TOTAL ELECTROLYTE: (24) X 2.08 GAL=49.92 GAL (MAX.)

THE TOTAL BATTERY ELECTROLYTE TO BE INSTALLED IS LESS THAN 50 GALLONS, THUS SECTION 608 OF 2013 CALIFORNIA FIRE CODE REQUIREMENT IS EXEMPTED.

BATTERY SPECIFICATIONS 3

1. ALL WORK PERFORMED AND MATERIALS INSTALLED SHALL BE IN ACCORDANCE WITH 2013 C.B.C. AND ALL APPLICABLE FEDERAL, STATE AND MUNICIPAL CODES, INCLUDING THE CALIFORNIA ADMINISTRATIVE CODES TITLE 8, 19, AND 24, AND UTILITY COMPANY SPECIFICATIONS. THE MOST RESTRICTIVE CODE SHALL GOVERN.
2. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO SUBMITTING BID. ANY DISCREPANCIES, CONFLICTS OR OMISSIONS SHALL BE REPORTED TO THE ENGINEER PRIOR TO SUBMITTING BIDS, AND PROCEEDING WITH ANY WORK.
3. ALL DRAWINGS ARE INTERRELATED. IN PERFORMANCE OF THE WORK, THE CONTRACTOR MUST REFER TO ALL DRAWINGS. ALL COORDINATION IS THE RESPONSIBILITY OF THE CONTRACTOR.
4. DETAILS INCLUDED HEREIN ARE INTENDED TO SHOW THE END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB CONDITIONS OR SITUATIONS AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE SCOPE OF WORK.
5. CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AT THE SITE BEFORE ORDERING ANY MATERIALS OR DOING ANY WORK. NO EXTRA CHARGE OR COMPENSATION SHALL BE ALLOWED DUE TO DIFFERENCES BETWEEN ACTUAL DIMENSIONS AND DIMENSIONS INDICATED ON THE CONSTRUCTION DRAWINGS. SUBMIT ANY DISCREPANCY IN DIMENSIONS TO THE CONSTRUCTION MANAGER & ARCHITECT IN WRITING FOR CONSIDERATION BEFORE PROCEEDING WITH WORK IN THE AFFECTED AREA.
6. A COPY OF THE APPROVED PLANS SHALL BE KEPT IN A PLACE SPECIFIED BY THE JURISDICTION, AND SHALL BE AVAILABLE FOR INSPECTION AT ALL TIMES. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE ALL CONSTRUCTION SETS REFLECT THE SAME INFORMATION AS THE APPROVED PLANS. THE CONTRACTOR SHALL ALSO MAINTAIN ONE SET OF PLANS AT THE SITE FOR THE PURPOSE OF DOCUMENTING ALL AS-BUILT CHANGES, REVISIONS, ADDENDA, OR CHANGE ORDERS. THE CONTRACTOR SHALL FORWARD THE AS-BUILT/RECORD DRAWINGS TO THE SITE OWNER AT THE CONCLUSION OF THE PROJECT.
7. WHEN REQUIRED STORAGE OF MATERIALS OCCURS, THEY SHALL BE EVENLY DISTRIBUTED OVER THE FLOOR OR ROOF SO AS NOT TO EXCEED THE DESIGNED LIVE LOADS FOR THE STRUCTURE. TEMPORARY SHORING OR BRACING SHALL BE PROVIDED WHERE THE STRUCTURE OR SOIL HAS NOT ATTAINED THE DESIGN STRENGTH FOR THE CONDITIONS PRESENT.
8. THE CONTRACTOR SHALL SUPERVISE AND COORDINATE ALL WORK, AND IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION & SAFETY MEANS, METHODS, TECHNIQUES, PROCEDURES, SEQUENCING AND COORDINATING ALL PORTIONS OF THE WORK UNDER THE PROJECT.
9. ALL DIMENSIONS TAKE PRECEDENCE OVER SCALE. DRAWINGS ARE NOT TO BE SCALED UNDER ANY CIRCUMSTANCES.
10. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BLOCKING, BACKING, FRAMING, HANGERS OR SUPPORTS FOR INSTALLATION OF ITEMS INDICATED ON THE DRAWINGS.
11. THE CONTRACTOR SHALL PROVIDE THE FIRE MARSHALL OR U.L. APPROVED MATERIALS TO FILL/SEAL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES.
12. NEW CONSTRUCTION ADDED TO EXISTING CONSTRUCTION SHALL BE MATCHED IN FORM, TEXTURE, MATERIAL AND PAINT COLOR EXCEPT AS NOTED IN THE PLANS.
13. MATERIALS TESTING SHALL BE TO THE LATEST STANDARDS AVAILABLE AS REQUIRED BY THE GOVERNING AGENCY RESPONSIBLE FOR APPROVING THE RESULTS.
14. ALL DEBRIS AND REFUSE IS TO BE REMOVED FROM THE PROJECT. PREMISES SHALL BE LEFT IN A CLEAN BROOM FINISHED CONDITION AT ALL TIMES.
15. BUILDING INSPECTORS AND/OR OTHER BUILDING OFFICIALS ARE TO BE NOTIFIED PRIOR TO ANY GRADING AND CONSTRUCTION EFFORT AS MANDATED BY THE GOVERNING AGENCY.
16. ALL SYMBOLS AND ABBREVIATIONS ARE CONSIDERED CONSTRUCTION INDUSTRY STANDARDS. IF A CONTRACTOR HAS A QUESTION REGARDING THEIR EXACT MEANING, THE ENGINEER SHALL BE NOTIFIED IN WRITING FOR CLARIFICATIONS.
17. THE PREPARATION OF THE SITE FOR CONSTRUCTION SHALL INCLUDE THE REMOVAL OF ALL BROKEN CONCRETE, TREE TRUNKS AND ANY OTHER DEBRIS THAT WOULD BE DAMAGING TO THE FOOTINGS OF THE NEW STRUCTURE.
18. BACKFILLING AT TRENCHES SHALL BE OF CLEAN, STERILE SOIL HAVING A SAND EQUIVALENT OF 30 OR GREATER. BACKFILLING SHALL BE DONE IN 8 INCH LAYERS, MOISTURE CONDITIONED AND PROPERLY COMPACTED TO SPECIFIED COMPACTION PERCENTAGE PER ASTM D1557 (90% MIN.). ADEQUATE DRAINAGE SHALL BE PROVIDED SUCH THAT NO PONDING OCCURS AFTER JOB COMPLETION.
19. ALL FOUNDATION FOOTINGS SHALL EXTEND INTO AND BEAR AGAINST NATURAL UNDISTURBED SOIL OR APPROVED COMPACTED FILL. FOOTINGS SHALL EXTEND INTO SOIL DEPTH INDICATED ON DETAILS.
20. SHOULD ANY LOOSE FILL, EXPANSIVE SOIL, GROUND WATER OR ANY OTHER DANGEROUS CONDITIONS BE ENCOUNTERED DURING THE EXCAVATION FOR THE NEW FOUNDATION, THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER OR OWNER'S REPRESENTATIVE IMMEDIATELY.
21. SHOP DRAWINGS SHALL BE SUBMITTED TO GENERAL CONTRACTOR FOR APPROVAL FOR ITEMS INDICATED ON PLANS. SHOP DRAWINGS SHALL INCLUDE ALL DATA WITH CAPACITIES, SIZES, DIMENSIONS, CATALOG NUMBERS AND MANUFACTURER'S BROCHURES.
22. NEITHER THE ARCHITECT'S REVIEW NOR APPROVAL OF SHOP DRAWINGS SHALL RELIEVE THE GENERAL CONTRACTOR FROM RESPONSIBILITY FOR DEVIATIONS FROM DRAWINGS OR SPECIFICATIONS UNLESS G.C. HAS CALLED THE ARCHITECT'S ATTENTION IN WRITING TO SUCH DEVIATIONS AT THE TIME OF SUBMISSION, NOR SHALL IT RELIEVE G.C. OF RESPONSIBILITY FOR ERRORS OF ANY SORT IN THE SHOP DRAWINGS.
23. PROVIDE PORTABLE FIRE EXTINGUISHER(S) WITH A RATING OF NOT LESS THAN 2-A OR 2-10BC WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF THE PROJECT AREA DURING CONSTRUCTION.
24. THE EXISTING STRUCTURAL COMPONENTS OF THIS PROJECT SITE ARE NOT TO BE ALTERED BY THIS CONSTRUCTION PROJECT UNLESS NOTED OTHERWISE.
25. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, TREES, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
26. THE CONTRACTOR SHALL ALWAYS USE EXTREME CAUTION AND BE RESPONSIBLE FOR ALL SAWCUTTING, TRENCHING, UNDERGROUND BORING, BACKFILLING, COMPACTING AND PATCHING OF CONCRETE AND ASPHALT AS REQUIRED TO PERFORM ITS WORK. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION AND COORDINATION WITH ALL PROPERTY OWNERS, UTILITIES, AND APPROPRIATE "DIG ALERT" UNDERGROUND MARKING AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER AND APPROVED REPAIR OF ANY AND ALL DAMAGES CAUSED DURING THE COURSE OF ITS WORK.
27. THE ARCHITECT WAS NOT CONTRACTED FOR CONSTRUCTION OBSERVATION ON THIS PROJECT. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE QUALITY CONTROL AND CONSTRUCTION STANDARDS FOR THE PROJECT.
28. ALL ROOFING RE-SEAL/WATER PROOFING WORK NECESSITATED BY THE INSTALLATION OF NEW EQUIPMENT, ANTENNA MOUNTS, CABLE TRAY, CABLE DOGHOUSE, HVAC CONDENSING UNITS, ETC. SHALL BE PERFORMED BY A QUALIFIED ROOFING CONTRACTOR W/ SUFFICIENT WARRANTY AND LANDLORD CONSENT.
29. SEALANT: NON-MODIFIED, ONE PART, SILICONE-RUBBER-BASED, AIR CURING, NON SAG, UV-RESISTANT ELASTOMERIC SEALANT.

GENERAL CONSTRUCTION NOTES 1

verizon wireless
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

SITE NO. & NAME:

278693
ARMY MISSION RELO

SITE ADDRESS:

3120 MISSION STREET
SAN FRANCISCO, CA 94110
SAN FRANCISCO COUNTY

ISSUE STATUS:

REV.	DATE	DESCRIPTION
A	10/22/14	ZD 100% FINAL
B	11/10/14	ZD REV. GRND ELE.
C	11/16/14	CD 90% REVIEW
1	04/07/15	ZD REV. PLANNING
A	04/20/15	ZD 100% FINAL
B	06/09/15	CD 90% REVIEW REV.
10	07/23/15	CD 100% FINAL
11	07/29/15	CD REV. PLANNING
12	10/01/15	CD REV. GEN. RELO
13	11/30/15	CD REV. UTILITY RTS

DESIGN FIRM:

BayStone
Architecture & Engineering, Inc.
5075 VALLEY CREST DR. #252
CONCORD, CA 94521
TEL: (925) 890-7494
JYu@BayStoneEngineering.com

JOB NUMBER: COV005

SEAL:

SHEET TITLE:

GENERAL NOTES
RF & BATTERY SPEC'S
ABBREVIATIONS

SHEET NUMBER:

T-2

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of Verizon Wireless, a personal wireless telecommunications carrier, to evaluate the base station (Site No. 278693 "Army Mission Relo") proposed to be located at 3120 Mission Street in San Francisco, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

Background

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

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

The site was visited by Mr. Neil Olij, a qualified engineer employed by Hammett & Edison, Inc., during normal business hours on July 2, 2014, a non-holiday weekday, and reference has been made to information provided by Verizon, including zoning drawings by BayStone Architecture & Engineering, Inc., dated April 7, 2015.

Checklist

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

There were observed no wireless base stations installed at the site. Existing RF levels for a person at ground near the site were less than 1% of the most restrictive public exposure limit. The measurement equipment used was a Narda Type NBM-520 Broadband Field Meter with Type EF-0391 Isotropic Broadband Electric Field Probe (Serial No. D-0454). The meter and probe were under current calibration by the manufacturer.

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 installed.

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 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 install twelve Andrew Model SBNHH-1D65A directional panel antennas within three new view screen enclosures to be installed above the west, south, and east sides of the roof of the office building located at 3120 Mission Street. The antennas would be mounted with up to 9° downtilt at an effective height of about 50½ feet above ground, 10 feet above the roof, and would be oriented in groups of four toward 90°T, 210°T, and 320°T, to provide service in all directions.

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

The expected operating power of the Verizon transmitters is reflected in the resulting effective radiated power given in Item 6 below; the transmitters may operate at a power below their maximum rating.

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

The maximum effective radiated power proposed by Verizon in any direction is 9,670 watts, representing simultaneous operation at 3,010 watts for AWS, 3,860 watts for PCS, 1,360 watts for cellular, and 1,440 watts for 700 MHz service.

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

The drawings show the antennas to be installed as described in Item 4 above. There were noted buildings of similar height located at least 90 feet away.

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

For a person anywhere at ground, the maximum RF exposure level due to the proposed Verizon operation is calculated to be 0.020 mW/cm^2, which is 3.5% of the applicable public exposure limit. Ambient RF levels at ground near the site are therefore estimated to be below 4.5% of the limit. The maximum calculated level at any nearby building is 16% of the public exposure limit. The three-dimensional perimeter of RF levels equal to the public exposure limit is calculated to extend up

to 67 feet out from the antenna faces and to much lesser distances above, below, and to the sides; this includes areas of the roof of the building but does not reach any other publicly accessible areas.

9. Describe proposed signage at site.

It is recommended that barricades be erected, as shown in Figure 1, to preclude public access in certain areas in front of the antennas. To prevent occupational exposures in excess of the FCC guidelines, it is recommended that appropriate RF safety training, to include review of personal monitor use and lockout/tagout procedures, be provided to all authorized personnel who have access within the barricades, including employees and contractors of Verizon and of the property owner. No access within 26 feet directly in front of the antennas themselves, such as might occur during certain maintenance activities, should be allowed while the base station is in operation, unless other measures can be demonstrated to ensure that occupational protection requirements are met. It is recommended that "Worker Notification Areas" be marked with yellow paint stripes on the roof of the building in front of the antennas, as shown in Figure 1, and that explanatory signs* be posted at the roof access door and on the barricades, readily visible from any angle of approach to persons who might need to work within that distance.

10. Statement of authorship.

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration No. E-20309, which expires on March 31, 2017. This work has been carried out under her direction, and all statements are true and correct of her own knowledge except, where noted, when data has been supplied by others, which data she believes to be correct.

* Signs should comply with OET-65 color, symbol, and content recommendations. Contact information should be provided (*e.g.*, a telephone number) to arrange for access to restricted areas. The selection of language(s) is not an engineering matter; the San Francisco Department of Public Health recommends that all signs be written in English Spanish, and Chinese.

Conclusion

Based on the information and analysis above, it is the undersigned's professional opinion that operation of the base station proposed by Verizon Wireless at 3120 Mission Street in San Francisco, California, can comply with the prevailing standards for limiting human exposure to radio frequency energy and, therefore, need not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations. Erecting barricades is recommended to establish compliance with public exposure limits; training authorized personnel, marking roof areas, and posting explanatory signs is recommended to establish compliance with occupational exposure limits.

REGISTERED PROFESSIONAL ENGINEER — ANDREA L. BRIGHT — E 20309 — Exp. 3-31-2017 — ELECTRICAL — STATE OF CALIFORNIA

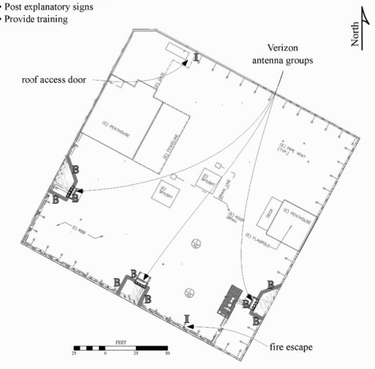
Andrea L. Bright, P.E.
707/996-5200

May 5, 2015

Calculated RF Exposure Levels on Roof

Recommended Mitigation Measures

- Install secure barricades
- Stripe roof areas as shown
- Post explanatory signs
- Provide training



Notes:
Base drawing from BayStone Architecture & Engineering, Inc., dated April 7, 2015.
Calculations performed according to OET Bulletin 65, August 1997.
Training should be provided to all persons requiring access within barricades.

Legend:	Less Than Public	Exceeds Public	Exceeds Occupational	Exceeds 10x Occupational
Striping color	N/A	yellow	red	N/A
Sign type	I - Green INFORMATION	B - Blue NOTICE	Y - Yellow CAUTION	O - Orange WARNING
Barricades shown as green lines				

City and County of San Francisco
DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH SECTION

Edwin M. Lee, Mayor
Barbara A. Garcia, MPA, Director of Health
Richard J. Lee, MPH, CIH RSHS, Director of EH

Review of Cellular Antenna Site Proposals

Project Sponsor : *Verizon* **Planner:** *Omar Masry*
RF Engineer Consultant: *Hammett and Edison* **Phone Number:** *(707) 996-5200*
Project address/Location: *3120 Mission St*
Site ID: *1884* **SiteNo.:** *278693*

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)
☑ Existing Antennas No Existing Antennas: 0

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)
◉ Yes ○ No

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)
◉ Yes ○ No

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)
Maximum Power Rating: 6860 watts.

X 6. The total number of watts per installation and the total number of watts per sector for all installations on the building (roof or side) (WTS-FSG, Section 10.5.1).
Maximum Effective Radiant: 6860 watts.

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 cumulative radio frequency fields for the proposed site including ground level (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 mw/cm2)
Maximum RF Exposure: 0.05 mW/cm^2 Maximum RF Exposure Percent: 8

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.
☑ Public_Exclusion_Area Public Exclusion In Feet: 57
☑ Occupational_Exclusion_Area Occupational Exclusion In Feet: 22

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 CFR47.1.1310. **Approval of the subsequent Project Implementation Report is based on project sponsor completing recommendations by project consultant and DPH.**

Comments:

There are currently no antennas operated by Verizon installed on the roof top of the building at 3120 Mission Street. Existing RF levels at ground level were around 1% of the FCC public exposure limit. There were observed no other antennas within 100 feet of this site. Verizon proposes to install 12 new antennas. The antennas will be mounted at a height of 56 feet above the ground. The estimated ambient RF field from the proposed Verizon transmitters at ground level is calculated to be 0.05 mW/sq cm., which is 8% of the FCC public exposure limit. The three dimensional perimeter of RF levels equal to the public exposure limit extends 57 feet and does not reach the rooftop or any publicly accessible areas. Warning signs must be posted at the antennas and roof access points in English, Spanish and Chinese. Workers should not have access to within 22 feet of the 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
Changes to Project Sponsor (in addition to previous charges, to be received at time of receipt by Sponsor)

Signed: Phil Fosdahl Dated: 10/24/2014

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
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

SITE NO. & NAME:

278693
ARMY MISSION RELO

SITE ADDRESS:

3120 MISSION STREET
SAN FRANCISCO, CA 94110
SAN FRANCISCO COUNTY

ISSUE STATUS:

REV.	DATE	DESCRIPTION
A	10/22/14	ZD 100% FINAL
A	11/10/14	ZD REV. GRND ELE.
A	11/16/14	CD 90% REVIEW
1	04/07/15	ZD REV. PLANNING
A	04/20/15	ZD 100% FINAL
A	06/09/15	CD 90% REVIEW REV.
10	07/23/15	CD 100% FINAL
11	07/29/15	CD REV. PLANNING
12	10/01/15	CD REV. GEN. RELO
13	11/30/15	CD REV. UTILITY RTS

DESIGN FIRM:

BayStone
Architecture & Engineering, Inc.
5075 VALLEY CREST DR. #252
CONCORD, CA 94521
TEL: (925) 890-7494
JYu@BayStoneEngineering.com

JOB NUMBER:

COV005

SEAL:

SHEET TITLE:

RF REPORT
& DPH APPROVAL

SHEET NUMBER:

T-3

	2.06 Submittal Requirements for Cellular Antenna Sites
	REFERENCE: 2010 SFBC, 2010 SFFC, 2010 SFMC and FCC OET Bulletin 65 (97-01)
T-1	1. Provide a description of work on the plans.
A-1 TO A-4	2. Plans shall include plan views and elevations showing all equipment locations and cable runs.
T-6 & 1/A-5	3. Plans shall include antenna cut-sheets and equipment list on a drawing sheet.
T-3	4. Include a copy of the signed and stamped RF report on a drawing sheet as a reference to identify the exclusion area required to prevent occupational exposures in excess of the FCC guidelines (47CFR1.1310 and FCC OET Bulletin 65 edition 97-01).
T-3	5. The RF report shall indicate whether or not the site under review is a part of a multiple transmitter site and shall show compliance with FCC 47CFR1.1307(b)(3), as amended - all transmitters shall not exceed 5% of the power density exposure limit.
N/A	6. Drawings shall reflect the striped/exclusion areas for workers per the above RF Report with a minimum radius of 1 foot.
T-6	7. Plans shall include a quantitative three-dimensional image of the RF levels from each antenna located near an egress point (e.g. penthouse stair; fire escape, roof walking paths; skylights, etc.).
DETAIL 2, 3, 4, 6/A-6	8. "Notice to Workers" warning signage, as applicable per the above RF Report, shall be permanently mounted at the stairwell side of the roof-access door (ANSI C95.2-1982 (Reference [3]) – yellow or more durable color for outdoor longevity)
DETAIL 5/A-6	9. Camouflaged antennas shall have 4inch x 4inch signage permanently mounted to the exterior of the RF screen as provided below. The sign shall be weatherproof with contrasting background color and shall contain the yellow triangle around the antenna symbol (ANSI C95.2-1982 (Reference [3]) – yellow or more durable color for outdoor longevity). Signage location(s) and detail of the sign shall be included on the plans.
COMPLIED	10. Cables/wiring shall not be allowed in exit enclosures, smoke-proof towers, elevator shafts, or in front of dry standpipes. 2010 CFC 1022.4 and 509.2
COMPLIED	11. Antennas shall not be mounted closer than the exclusion zone plus 4 feet for installations near fire escapes, stair penthouse doors, exterior standpipe outlets, skylights, or other fire department operations consideration.
	12. There is no guarantee that the fire department will not shut down the power to the site in an emergency situation although in order to reduce the site operator's possible loss of service the following information may be provided at the equipment room entrance:
	• Provide emergency shutdown procedure signage. The sign shall include the following:

EMERGENCY
SHUT DOWN

FOR IMMEDIATE SHUT DOWN OF ALL RADIO FREQUENCY EMISSIONS OF THIS SITE,

1) CALL CONTACT NUMBER AND GIVE SITE IDENTIFICATION NO.

CONTACT PHONE NUMBER: 1-XXX-XXX-XXXX

SITE IDENTIFICATION NUMBER: XXXXXXX

2) DISCONNECT POWER AT MAIN SERVICE DISCONNECT:

Map and/or verbiage

3) DISCONNECT BACK-UP POWER AT BATTERY DISCONNECT:

Map and/or verbiage

Drawing notes:

1. Sign shall be a phenolic label with white background and black lettering. The title block shall be a red background and 1" high white lettering.
2. Contractor to place signs in following locations:
   a) Cell site equipment room door
   b) Battery location within proximity of battery disconnect
   c) FCC room within proximity of the fire alarm panel
   d) Building's main electrical room within proximity of the main shutoff and/or at the cell site main electrical disconnect

T-4	1. Emergency 24 hour/7 day a week NOC / field technician telephone number for RF shut-down
T-4	2. Cell site identification number
T-4	3. Map to location of electrical main – electrical main shall be clearly identified with a permanent red label and white lettering.
T-4	4. Map to location of battery cabinets and breakers – cabinets and breakers shall be clearly identified with a permanent red label and white lettering.
N/A	5. Any other relevant information or procedures as required for the individual cellular site.

- 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. Multiple signs may need to be installed based upon the cellular site configuration.
- A copy of the signage shall be included on a drawing sheet. See attached sample.

For further Information see the FCC website: http://www.fcc.gov/oet/rfsafety

SITE SIGNAGE

verizon wireless
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

SITE NO. & NAME:

278693

ARMY MISSION RELO

SITE ADDRESS:

3120 MISSION STREET
SAN FRANCISCO, CA 94110
SAN FRANCISCO COUNTY

ISSUE STATUS:

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8	04/20/15	ZD 100% FINAL
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DESIGN FIRM:

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TEL: (925) 890-7494
JYu@BayStoneEngineering.com

JOB NUMBER:

COV005

SEAL:

SHEET TITLE:

SFFD CHECKLIST FOR CELLULAR SITE PERMIT

SHEET NUMBER:

T-4

MATERIAL SAFETY DATA SHEET
LEAD ACID BATTERY

NorthStar — Springfield, Missouri

I. PRODUCT IDENTIFICATION:

A. Chemical/Trade Name (per on label): Lead Acid Battery

B. Chemical Family/Classification: Electrical Storage Battery

C. Manufacturer's Name & Address: NorthStar Battery Co. LLC
4000 Continental Way
Springfield, MO 65803

D. Contact: U.S. - NSB Safety and Health Department
Phone: (417) 575-8219
Fax: (417) 575-8250

Aust. NorthStar Battery Pty Ltd
Phone: 02 9888 1998

E. Emergency Information: Chemtrec (US, Canada & Mexico)
Phone: (800) 424-9300

Chemtrec (Outside US, Canada & Mexico)
Phone: +1 (703) 527-3887 (call collect)

F. Non-Hazardous Classification

Per US DOT, Northstar Battery Company products, submitted and tested by Wyle Labs, have been deemed to meet all requirements as specified in 49CFR§ 173.159 (d) for **exception** as hazardous material classification.

II. HAZARDOUS INGREDIENTS/IDENTITY INFORMATION:

NORTH AMERICAN INFORMATION:

Materials	Approx % by Wt.*	CAS Number	Air Exposure Limits (ug/m³) OSHA	AGGIH (TLV)	NIOSH
Lead	50	7439-92-1	50	150	100
Lead Oxide	20	1309-60-0	50	150	100
Electrolyte (Sulfuric Acid) 1.400 sg	17	7664-93-9	1	1	1

*Please reference **Appendix I** for detailed product data.

AUSTRALIAN INFORMATION

Chemical or Material	Australian Dangerous Goods Classification	Hazardous Substance Classification as per NOHSC Australia	Australian Poison Schedule Classification
Non-Spillable Lead Acid Battery	Exempt under A67 (IVATA Identification Guide) and Clause 238 of the Australian Dangerous Goods Code, Appendix 3	R34/R41	Schedule 6 Agricultural, Domestic and Industrial Substances

Note: Product contains toxic chemicals that are subject to the reporting requirements of Section 302 and 313 of the Emergency Planning and Community Right-to-Know Act of 1986.

MATERIAL SAFETY DATA SHEET
LEAD ACID BATTERY
NorthStar — Springfield, Missouri

III. PHYSICAL DATA:

Material is solid at normal temperatures.

A. Electrolyte:
1. Specific Gravity:
(a) Stancard Product 1.320 +/- 0.01 kg/dm³
(b) BLUE Product 1.290 +/- 0.01 kg/dm³
2. Boiling Point: 110°C (230°F)
3. % Volatiles By Weight: Not Applicable
4. Solubility in Water: 100%
5. Melting Point Lead: 327°C (621°F)
6. Vapor Density Not Determined

B. Appearance and Odor
1. Electrolyte is a clear liquid with an acidic odor.

IV. HEALTH HAZARD INFORMATION:

Under normal operating conditions, because the battery is "non-spillable", the internal material will not be hazardous to your health. Only internally exposed material during production or case breakage or extreme heat (fire) may be hazardous to your health.

A. Routes of Entry:
1. Inhalation: Acid mist from formation process may cause respiratory irritation.
2. Skin Contact: Acid may cause irritation, burns and/or ulceration.
3. Skin Absoption Not a significant route of entry.
4. Eye Contact: Acid may cause sever irritation, burns, cornea damage and/or blindness.
5. Ingestion: Acid may cause irritation of mouth, throat, esophagus and stomach.

B. Signs and Symptoms of Over Exposure:
1. Acute Effects: Over exposure to lead may lead to loss of appetite, constipation, sleeplessnss and fatigue. Over exposure to acid may lead to skin irritation, corneal damage of the eyes and upper respiratory system.
2. Chronic Effects: Lead and its components may cause damage to kidneys and nervous system. Acid and its components may cause lung damage and pulmonary conditions.
3. Potential to Cause Cancer: The International Agency for Research on Cancer has classifed "strong inorganic acid mist containing sulfuric acid" as a Category 1 carcinogen, a substance that is carcinogenic to humans. This classification does not apply to liquid forms of sulfuric acid or sulfuric acid solutions contained within a battery. Inorganic acid mist is not generated under normal use of this product. Misuse of the product, such as overcharging, may however result in the generation of sulfuric acid mist.

MATERIAL SAFETY DATA SHEET
LEAD ACID BATTERY
NorthStar — Springfield, Missouri

C. Emergency and First Aid Procedures:
1. Inhalation: Remove from exposure, move to fresh air, and apply oxygen if breathing is difficult. Consult physician immediately.
2. Skin: Wash with plenty of soap and water for at least 15 minutes. Remove any contaminated clothing. Consult physician if skin irritation appears.
3. Eyes: Flush with plenty of water immediately for at least 15 minutes, lifting lower and upper eyelids occasionally. Consult a physician immediately.
4. Ingestion: Do not induce vomiting. Give large quantities of water. Never give anything by mouth to an unconscious person. Consult a physician immediately.

D. HANDLING AND STORAGE
1. Safe Storage: Store in a cool, dry place in closed containers. Keep away from ignition sources and high temperatures.
1. Contact NorthStar Battery Company (417-575-8200) for shelf life information.
2. Handling: Avoid skin or eye contact. Avoid breathing vapors. Do not use near sources of ignition

V. CARCINOGENICITY: See section IV, Part B "Signs and Symptoms of Over Exposure"
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: See section IV, Part B "Signs and Symptoms of Over Exposure"

VI. FIRE AND EXPLOSION HAZARD DATA:

A. Flash Point: Hydrogen = 259°C

B. Auto ignition Temperature: Hydrogen = 580°C

C. Extinguishing Media: Dry chemical, foam, CO_2

D. Unusual Fire and Explosion Hazards: Hydrogen and oxygen gases are produced in the cells during normal battery operation (hydrogen is flammable and oxygen supports combustion). These gases enter the air through the vent caps. To avoid the chance of a fire or explosion, keep sparks and other sources of ignition away from the battery.

E. Firefighting PPE: Full protective clothing and
NIOSH-approved self-contained breathing apparatus with full facepiece

VII. REACTIVITY DATA:

A. Stability: Stable

B. Conditions to Avoid: Sparks and other sources of ignition.

C. Incompatibility: (materials to avoid)

MATERIAL SAFETY DATA SHEET
LEAD ACID BATTERY
NorthStar — Springfield, Missouri

1. Lead/lead compounds: Potassium, carbides, sulfides, peroxides, phosphorus, sulfur.
2. Battery electrolyte (acid): Combustible materials, strong reducing agents, most metals, carbides, organic materials, chlorates, nitrates, picrates, and fulminates.

D. Hazardous Decomposition Products:
1. Lead/lead compounds: Oxides of lead and sulfur.
2. Battery electrolyte (acid): Hydrogen, sulfur dioxide, and sulfur trioxide.

E. Conditions to Avoid:
High temperature. Battery electrolyte (acid) will react with water to produce heat. Can react with oxidizing or reducing agents.

VIII. CONTROL MEASURES:

A. Engineering Controls:
Store lead/acid batteries with adequate ventilation. Room ventilation is required for batteries utilized for standby power generation. Never recharge batteries in an unventilated, enclosed space.

B. Work Practices:
Do not remove vent covers. Follow shipping and handling instructions which are applicable to the battery type. To avoid damage to terminals and seals, do not double-stack industrial batteries.

C. Personal Protective Equipment:
1. Respiratory Protection: None required under normal handling conditions. During battery formation (high-rate charge cordition), acid mist can be generated which may cause respiratory irritation. Also, if acid spillage occurs in a confined space, exposure may occur. If irritation occurs, wear a respirator suitable for protection against acid mist.
2. Eyes and Face: Chemical splash goggles are preferred. Also acceptable are "visor-gogs" or a chemical face shield worn over safety glasses.
3. Hands, Arms, Body: Vinyl coated, VC, gauntlet type gloves with rough finish are preferred.
4. Other Special Clothing and Equipment: Safety shoes are recommended when handling batteries. All footwear must meet requirements of ANSI Z41.1 -Rev. 1972.

IX. ACCIDENTAL RELEASE MEASURES:

A. Not applicable under normal conditions.

B. In case of damage resulting in breakage of the battery container, see VIII, Sec. C Personal Protective Equipment.

MATERIAL SAFETY DATA SHEET
LEAD ACID BATTERY
NorthStar — Springfield, Missouri

X. PRECAUTIONS FOR SAFE HANDLING AND USE:

A. Hygiene Practices: Following contact with internal battery components, wash hands thoroughly before eating, drinking, or smoking.

B. Respiratory Protecion: Wear safety glasses. Do not permit flames or sparks in the vicinity of battery(s). If battery electrolyte (acid) comes in contact with clothing, discard clothing.

C. Protective Measures:
1. Remove combustible materials and all sources of ignition. Cover spills with soda ash (sodium carbonate) or quicklime (calcium oxide). Mix well. Make certain mixture is neutral, then collect residue and place in a drum or other suitable container. Dispose of as hazardous waste.
2. Wear acid-resistant boots, chemical face shield, chemical splash goggles, and acid-resistant gloves. Do not release unneutralized acid.

D. Waste Disposal Method (*):
1. Battery electrolyte (acid): Neutralize as above for a spill, collect residue, and place in a drum or suitable container. Dispose of as hazardous waste.
2. Do not flush lead contaminated acid to sewer.
3. In case of accidental spill, utilize personal protective equipment, i.e., face shield, rubber apron, rubber safety shoes.
4. Batteries: Send to lead smelter for reclamation following applicable Federal, State and local regulations. Product can be recycled along with automotive (SLI) lead acid batteries.
5. Battery may be returned, shipping pre-paid, to the manufacturer or any distributor for recycling. See 1.C for manufacturer's address or visit our web site @ www.northstarbattery.com.

*In accordance to Local, State and Feceral regulations and laws.

E. Other Handling and Storage Precautions: None Required.

XI. ECOLOGICAL INFORMATION:

Lead and its compounds can pose a threat if released to the environment.
See Waste Disposal Method in Section X, Part D.

MATERIAL SAFETY DATA SHEET
LEAD ACID BATTERY
NorthStar — Springfield, Missouri

XII. NFPA HAZARD RATING: SULFURIC ACID:

Flammability (Red)	=	0
Health (Blue)	=	3
Reactivity (Yellow)	=	1

XIII. DEPARTMENT OF TRANSPORTATION AND INTERNATIONAL SHIPPING REGULATIONS:

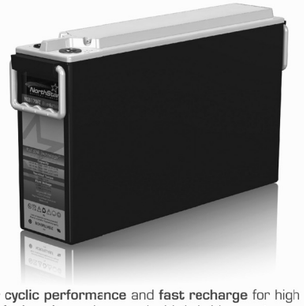
Proper Shipping Name	UN2800 - Battery, wet, non-spillable (electric storage)
IATA	Batteries must be packed to protect against short circuits and firmly secured to skids or pallets. Packaging instruction 806 Not restricted per special provision A67.
US DOT	Northstar Battery Company products, submitted and tested by Wyle Labs, have been deemed to meet all requirements as specified in 49CFR§ 173.159 (d) for exception as hazardous material classification.
IMDG	Northstar Battery Company products, submitted and tested by Wyle Labs, have been deemed to meet all requirements as specified in special provision 238 for determination of "Non-Spillable" and are not subject to the provision of this Code.

XIV. SPECIAL REQUIREMENTS:

TLV

- Sulfuric Acid - Occupation Exposure Limit - AUSTRALIA TWA 1mg/m3,JAN1993
- Lead - Occupation Exposure Limit - AUSTRALIA TWA 0.15 mg/m3, 2002

NSB 170FT *Blue Battery*™
Specifically designed for **unstable mains**



Superior cyclic performance and **fast recharge** for high potential **fuel savings** when used with hybrid gensets.

- Ideal for demanding environments with unstable AC power
- High modulus Polyphenylene Oxide (PPO) plastic materials designed to withstand extended elevated operating temperatures and maintain high battery compression essential for reliable operation
  - Non-halogenated, thermally sealed plastic casing and cover
  - Flame retardant (UL 94 V0) and LOI of at least 28%
- Operating temperature range -40°C to +65°C
- High cycling and superior fast recharge performance
- Modified electrochemistry for repeated outages
  - Optimized paste additives and grid alloy
  - Less reliance on full recharge following an outage
  - No need for regular overcharge factor
  - Capable of uncontrolled Partial State of Charge (uPSOC)* operation without loss of capacity

* *For a detailed description of uPSOC, please see the Blue Star Technology™ section of the Telecom Application Manual*

Visit our **website** to find out more **www.northstarbattery.com**

NorthStar

Form: SBS-042-07 Issued: 09-02-11 ECO: 1637-611

NSB 170FT *Blue Battery*™
Technical Specifications

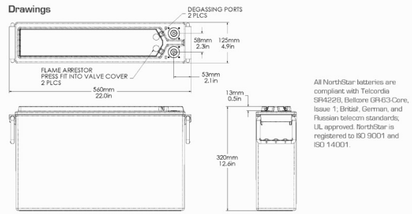
Electrical

10 hour capacity to 1.80 VPC @ 25°C (77°F)	141 Ah
8 hour capacity to 1.75 VPC @ 25°C (77°F)	140 Ah
10 hour capacity to 1.80 VPC @ 20°C (68°F)	139 Ah
Float Voltage	2.27 +/- 0.02 VPC @ 25°C (77°F)
Nominal Voltage	12 V
Impedance (1kHz)	2.3 mΩ @ 25°C (77°F)
Conductance	2,201 S
Short Circuit Current	8,000 A
Maximum Charge Current	no limit

Dimensions

Height	320 mm (12.6 in)	Weight	58 kg (128 lbs)
Width	125 mm (4.9 in)	Terminal	Female M8 x 1.25
Depth	560 mm (22.0 in)	Terminal Torque	8.0 Nm (71 in-lbs)

Drawings



All NorthStar batteries are compliant with Telcordia SR4228, Bellcore GR63-Core, Issue 1; Britaf, German, and Russian telecom standards; UL approved. NorthStar is registered to ISO 9001 and ISO 14001

NorthStar in the Americas
NorthStar Battery Company LLC
4000 Continental Way
Springfield, MO, 65803,
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info@northstarbattery.com
Tel: +1 417 575 8200
Fax: +1 417 575 8250

NorthStar in Europe, Middle East, Africa
SiteTel Sweden AB
Staffans Väg 6-8
Box 7033, SE-192 07 Sollentuna,
Stockholm, Sweden
emea@northstarsitetel.com
Tel: +46 8 410 192 00
Fax: +46 8 638 06 00

NorthStar in Asia-Pacific
SiteTel Shanghai Co Ltd
Building 9, 1210 Gui Qiao Road
Jin Qiao Export Process Zone,
201206 Shanghai, China
asia@northstarsitetel.com
Tel: +86 21 5899 7510
Fax: +86 21 3872 2201

www.northstarbattery.com

NorthStar

Form: SBS-042-07 Issued: 09-02-11 ECO: 1637-611

verizon wireless
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

SITE NO. & NAME:
278693
ARMY MISSION RELO

SITE ADDRESS:
3120 MISSION STREET
SAN FRANCISCO, CA 94110
SAN FRANCISCO COUNTY

ISSUE STATUS:

REV.	DATE	DESCRIPTION
A	10/22/14	ZD 100% FINAL
B	11/10/14	ZD REV. GRND ELE.
C	11/16/14	CD 90% REVIEW
1	04/07/15	ZD REV. PLANNING
A	04/20/15	ZD 100% FINAL
B	06/09/15	CD 90% REVIEW REV.
1	07/23/15	CD 100% FINAL
1	07/29/15	CD REV. PLANNING
A	10/01/15	CD REV. GEN. RELO
A	11/30/15	CD REV. UTILITY RTS

DESIGN FIRM:

BayStone
Architecture & Engineering, Inc.
5075 VALLEY CREST DR. #252
CONCORD, CA 94521
TEL: (925) 890-7494
JYu@BayStoneEngineering.com

JOB NUMBER:
COV005

SEAL:

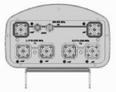
SHEET TITLE:
BATTERY DATA SHEET

SHEET NUMBER:
T-5

Product Specifications

COMMSCOPE®

on the go



Andrew Solutions

SBNHH-1D65A

Andrew® DualPol® Tri-band Teletilt® SmartBeam® Antenna, 1 x 698–896 MHz and 2 x 1710–2360 MHz, 65° horizontal beamwidth, RET compatible

- Three DualPol® antennas under one radome
- Interleaved dipole technology provicing for attractive, low wind load mechanical package

Electrical Specifications

Frequency Band, MHz	698–806	806–896	1710–1880	1850–1990	1924–2180	2300–2360
Gain, dBi	13.0	12.8	15.8	16.7	16.1	17.0
Beamwidth, Horizontal, degrees	66	62	71	64	62	61
Beamwidth, Vertical, degrees	17.9	16.1	7.2	6.7	6.1	5.4
Beam Tilt, degrees	0–18	0–18	0–10	0–10	0–10	0–10
USLS, typical, dB	15	15	15	15	15	15
Front-to-Back Ratio, Copolarization 180° ± 20°, dB	27	25	32	33	26	27
CPR at Boresight, dB	15	15	15	15	15	15
CPR at Sector, dB	12	8	13	12	9	7
Isolation, dB	27	27	28	28	28	29
Isolation, Intersystem, dB	30	30	30	30	30	30
VSWR | Return Loss, dB	1.5:1 | 14.0	1.5:1 | 14.0	1.5:1 | 14.0	1.5:1 | 14.0	1.5:1 | 14.0	1.5:1 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-150	-150	-150	-150	-150	-150
Input Power per Port, maximum, watts	400	400	350	350	350	350
Polarization	±45°	±45°	±45°	±45°	±45°	±45°
Impedance	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm
Lightning Protection	dc Ground	dc Ground	dc Ground	dc Ground	dc Ground	dc Ground

Mechanical Specifications

Color | Radome Material	Light gray | Fiberglass, UV resistant
Connector Interface | Location | Quantity	7-16 DIN Female | Bottom | 6
Wind Loading, maximum	441.0 N @ 150 km/h 99.1 lbf @ 150 km/h
Wind Speed, maximum	241.4 km/h | 150.0 mph

Dimensions

Depth	181.0 mm | 7.1 in
Length	1397.00 mm | 55.00 in
Width	301.00 mm | 11.85 in
Net Weight	18.56 kg | 40.92 lb

Remote Electrical Tilt (RET) Information

Annual Failure Rate, maximum	0.01%
Power Consumption, during motor movements, maximum	11.0 W
Power Consumption, idle state, maximum	2.0 W
Power Input	10–30 V
Protocol	3GPP/AISG 2.0 Multi-RET

Product Specifications

COMMSCOPE®

on the go

SBNHH-1D65A

RET Interface

RS-485 Female (daisy chain port ,1) | RS-485 Male (input port, 1)

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant by Exemption
China RoHS SJ/T 11364-2006	Above Maximum Concentration Value (MCV)
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system

Included Products

DB380-50B3 — Standard two point mounting system to secure BSA panels to pipes with an OD measuring 2.4-4.5" (60-115mm). Includes ocking downtilt brackets and heavy guage pipe brackets to provide superior windload performance.

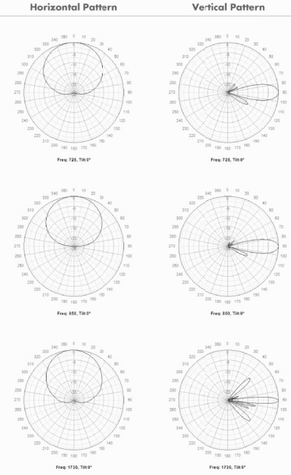
Product Specifications

COMMSCOPE®

on the go

SBNHH-1D65A

Horizontal Pattern **Vertical Pattern**

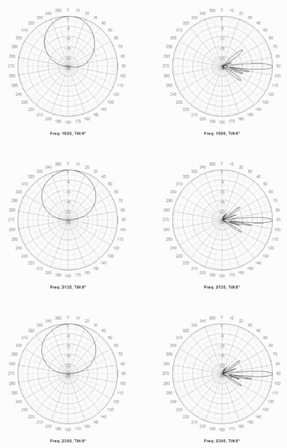


Product Specifications

COMMSCOPE®

on the go

SBNHH-1D65A



Product Specifications

COMMSCOPE®

POWERED BY ANDREW.

BSAMNT-1

Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

General Specifications

Antenna Brand	Andrew®
Mount Type	Pipe mounts
Application	Outdoor
Includes	Brackets | Hardware
Package Quantity	1

Mechanical Specifications

Color	Silver
Material Type	Galvanized steel

Dimensions

Compatible Diameter, maximum	114.3 mm | 4.5 in
Compatible Diameter, minimum	61.0 mm | 2.4 in
Net Weight	5.6 kg | 12.3 lb

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant
China RoHS SJ/T 11364-2006	Below Maximum Concentration Value (MCV)

verizon wireless

2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

SITE NO. & NAME:

278693

ARMY MISSION RELO

SITE ADDRESS:

3120 MISSION STREET
SAN FRANCISCO, CA 94110
SAN FRANCISCO COUNTY

ISSUE STATUS:

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DESIGN FIRM:

BayStone
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5075 VALLEY CREST DR. #252
CONCORD, CA 94521

TEL: (925) 890-7494
JYu@BayStoneEngineering.com

JOB NUMBER:

COV005

SEAL:

SHEET TITLE:

ANTENNA SPECIFICATIONS

SHEET NUMBER:

T-6

Lease Area Description

All that certain lease area being a portion of those certain lands bounded by Cesar Chavez Street on the North, Valencia Street on the West, and Mission Street on the Southeast, being located in the City and County of San Francisco, State of California., being more particularly described as follows:

ROOFTOP EQUIPMENT LEASE AREA:
Commencing at the most Southerly interior angle of the rooftop parapet wall from which the most Easterly interior angle of the rooftop parapet bears North 28°07'46" East and running thence from said point of commencement North 16°52'14" West 33.66 feet to the True Point of Beginning; thence from said point of beginning North 28°07'46" East 25.00 feet; thence North 61°52'14" West 10.00 feet; thence South 28°07'46" West 25.00 feet; thence South 61°52'14" East 10.00 feet to the point of beginning.

ANTENNA LEASE AREA NO. 1:
Commencing at the most Southerly interior angle of the rooftop parapet wall from which the most Easterly interior angle of the rooftop parapet bears North 28°07'46" East and running thence from said point of commencement North 46°07'42" West 179.87 feet to the True Point of Beginning; thence from said point of beginning North 28°07'46" East 10.00 feet; thence North 61°52'14" West 10.00 feet; thence South 28°07'46" West 10.00 feet; thence South 61°52'14" East 10.00 feet to the point of beginning.

ANTENNA LEASE AREA NO. 2:
Commencing at the most Southerly interior angle of the rooftop parapet wall from which the most Easterly interior angle of the rooftop parapet bears North 28°07'46" East and running thence from said point of commencement North 53°24'44" West 93.82 feet to the True Point of Beginning; thence from said point of beginning North 28°07'46" East 10.00 feet; thence North 61°52'14" West 10.00 feet; thence South 28°07'46" West 10.00 feet; thence South 61°52'14" East 10.00 feet to the point of beginning.

ANTENNA LEASE AREA NO. 3:
Commencing at the most Southerly interior angle of the rooftop parapet wall from which the most Easterly interior angle of the rooftop parapet bears North 28°07'46" East and running thence from said point of commencement North 15°21'03" East 39.78 feet to the True Point of Beginning; thence from said point of beginning North 28°07'46" East 10.00 feet; thence North 61°52'14" West 10.00 feet; thence South 28°07'46" West 10.00 feet; thence South 61°52'14" East 10.00 feet to the point of beginning.

Together with a non-exclusive easement for utility purposes three feet in width the centerline of which is described as follows: beginning at a point on the Southwest boundary of the above described equipment lease area which bears North 61°52'14" West 1.50 feet from the most Southerly corner thereof and running thence South 28°07'46" West 23.50 feet; thence North 61°52'14" West 69.00 feet to a point hereafter defined as Point "A"; thence continuing North 61°52'14" West 102.32 feet; thence North 28°07'46" East 53.00 feet to a point hereafter defined as Point "B"; thence continuing North 28°07'46" East 96.72 feet; thence South 61°52'14" East 24.85 feet; thence North 28°07'46" East 8.00 feet.

Also together with a non-exclusive easement for utility purposes three feet in width the centerline of which is described as follows: beginning at Point "A" as previously defined and running thence North 28°07'46" East 13.50 feet more or less to the above described antenna lease area no. 2.

Also together with a non-exclusive easement for utility purposes three feet in width the centerline of which is described as follows: beginning at Point "B" as previously defined and running thence South 61°52'14" West 13.50 feet more or less to the above described antenna lease area no. 1.

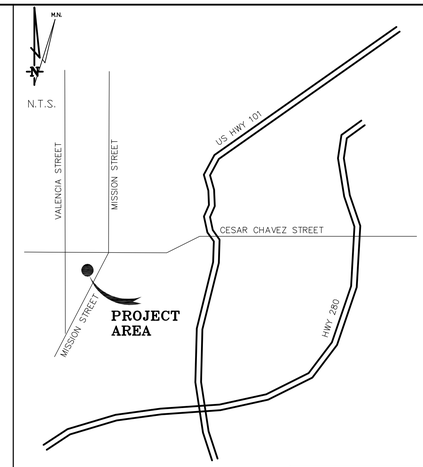
Also together with a non-exclusive easement for utility purposes three feet in width the centerline of which is described as follows: beginning at a point on the Southeasterly boundary of the above described equipment lease area which bears South 28°07'46" West 8.50 feet from the most Easterly corner thereof and running thence South 28°07'46" East 5.00 feet more or less to the above described antenna lease area no. 3.

Also together with a non-exclusive easement for utility purposes as is necessary from the above described equipment lease area and running over, in, upon and through the underlying building as is necessary to the existing power and telephone facilities.

Also together with an easement for pedestrian and vehicular access and generator parking of variable width, from the above described lease areas, over, across, and through the underlying building and parcel, to the public right of way.

BOUNDARY SHOWN IS BASED ON MONUMENTATION FOUND AND RECORD INFORMATION. THIS IS NOT A BOUNDARY SURVEY. THIS IS A SPECIALIZED TOPOGRAPHIC MAP WITH PROPERTY LINES AND EASEMENTS BEING A GRAPHIC DEPICTION BASED ON INFORMATION GATHERED FROM VARIOUS SOURCES OF RECORD AND AVAILABLE MONUMENTATION FOUND DURING THE FIELD SURVEY. NO EASEMENTS WERE RESEARCHED OR PLOTTED. PROPERTY LINES AND LINES OF TITLE WERE NOT INVESTIGATED NOR SURVEYED EXCEPT AS SHOWN ON THIS PLAN. NO PROPERTY MONUMENTS WERE SET.

THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OF SERVICE, ARE THE EXCLUSIVE PROPERTY OF GEIL ENGINEERING AND THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE AND CARRIER FOR WHICH THEY ARE PREPARED. REUSE, REPRODUCTION OR PUBLICATION BY ANY METHOD, IN WHOLE OR IN PART, IS PROHIBITED EXCEPT BY WRITTEN PERMISSION FROM GEIL ENGINEERING TITLE TO THESE PLANS AND/OR SPECIFICATIONS SHALL REMAIN WITH GEIL ENGINEERING WITHOUT PREJUDICE AND VISUAL CONTACT WITH THEM SHALL CONSTITUTE PRIMA FACIE EVIDENCE OF ACCEPTANCE OF THESE RESTRICTIONS.



SAN FRANCISCO, CA

VICINITY MAP

Geil Engineering
Engineering * Surveying * Planning
1226 High Street
Auburn, California 95603-5015
Phone: (530) 885-0426 * Fax: (530) 823-1309

VERIZON WIRELESS

Project Name: Army & Mission Relo

Project Site Location: 3120 Mission Street
San Francisco, CA 94110
San Francisco County

Date of Observation: 04-17-14

Equipment/Procedure Used to Obtain Coordinates: Trimble Geo-XT post processed with Pathfinder Office software.

Antenna Location #1

NAD 83 Coordinates	NAD 27 Coordinates
Latitude: N 37° 44' 51.57"	Latitude: N 37° 44' 51.82"
Longitude: W 122° 25' 09.99"	Longitude: W 122° 25' 06.09"

Antenna Location #2

NAD 83 Coordinates	NAD 27 Coordinates
Latitude: N 37° 44' 50.84"	Latitude: N 37° 44' 51.09"
Longitude: W 122° 25' 09.31"	Longitude: W 122° 25' 05.41"

Antenna Location #3

NAD 83 Coordinates	NAD 27 Coordinates
Latitude: N 37° 44' 50.66"	Latitude: N 37° 44' 50.91"
Longitude: W 122° 25' 08.24"	Longitude: W 122° 25' 04.34"

ELEVATION of Ground at Structure (NAVD88): 68.4' AMSL
STRUCTURE HEIGHT: (Top Penthouse) 95.4' AGL
OVERALL HEIGHT: (Top Flagpole) 142.2' AGL

CERTIFICATION: I, the undersigned, do hereby certify elevation listed above is based on a field survey done under my supervision and that the accuracy of those elevations meet or exceed 1-A Standards as defined in the FAA ASAC Information Sheet 91:003, and they are true and accurate to the best of my knowledge and belief.

Kenneth D. Geil California R.C.E. 14803

DATE OF SURVEY: 04-17-14

SURVEYED BY OR UNDER DIRECTION OF: KENNETH D. GEIL, R.C.E. 14803

LOCATED IN THE COUNTY OF SAN FRANCISCO, STATE OF CALIFORNIA

BEARINGS SHOWN ARE BASED UPON MONUMENTS FOUND AND RECORD INFORMATION. THIS IS NOT A BOUNDARY SURVEY.

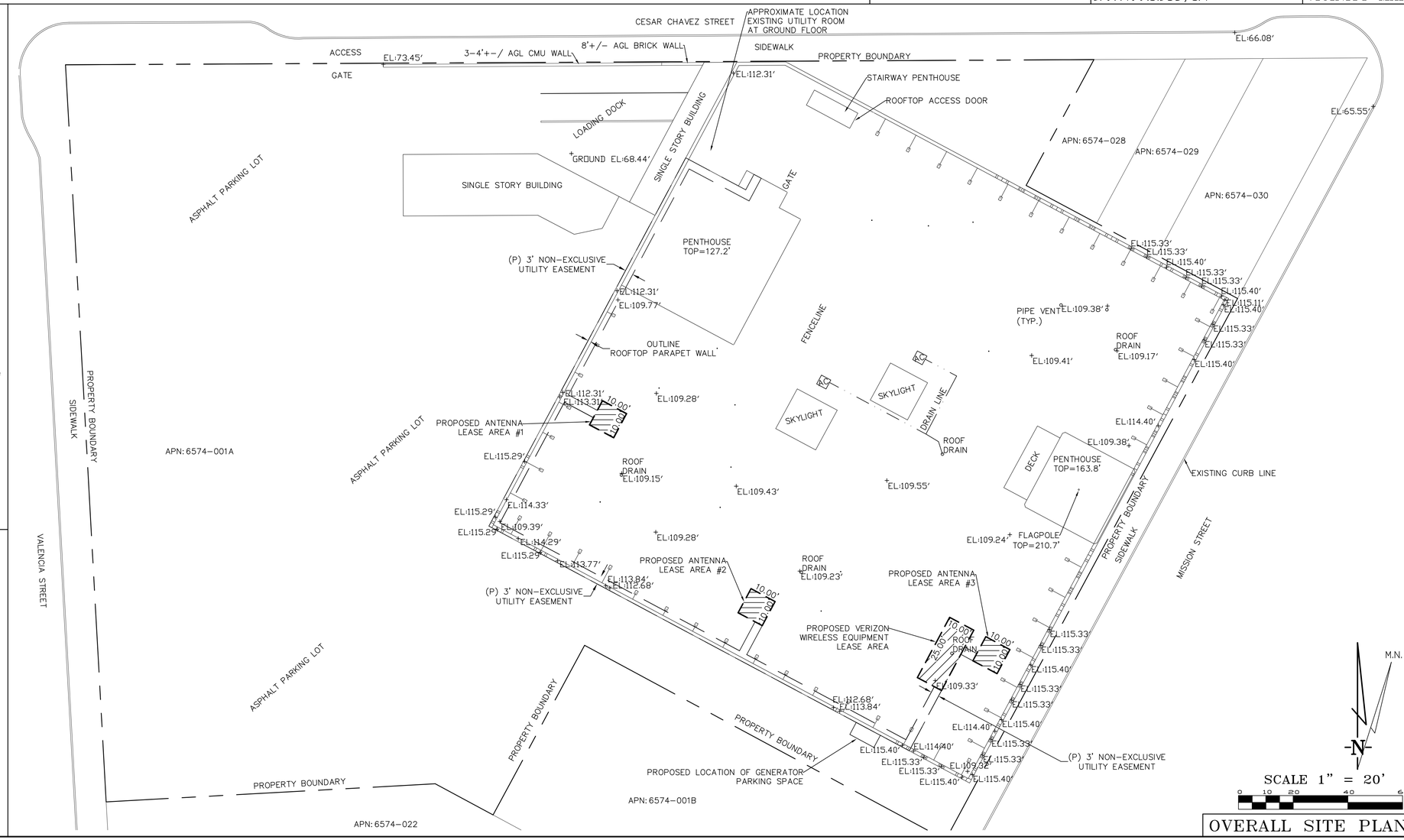
ELEVATIONS SHOWN ON THIS PLAN ARE BASED UPON U.S.G.S. N.A.V.D. 88 DATUM. ABOVE MEAN SEA LEVEL UNLESS OTHERWISE NOTED.

N.G.V.D. 1929 CORRECTION: SUBTRACT 2.76' FROM ELEVATIONS SHOWN.

CONTOUR INTERVAL: N/A

ASSESSOR'S PARCEL NUMBER: 6574-001A

OWNER(S): KLW LLC
3120 MISSION STREET
SAN FRANCISCO, CA 94110



OVERALL SITE PLAN

DEPT	APPROVED	DATE
A&C		
RE		
RF		
INT		
EE\IN		
OPS		
EE\OUT		

Surveyor
GEIL ENGINEERING
ENGINEERING * SURVEYING * PLANNING
1226 HIGH STREET
AUBURN, CALIFORNIA 95603
Phone: (530) 885-0426
Fax: (530) 823-1309

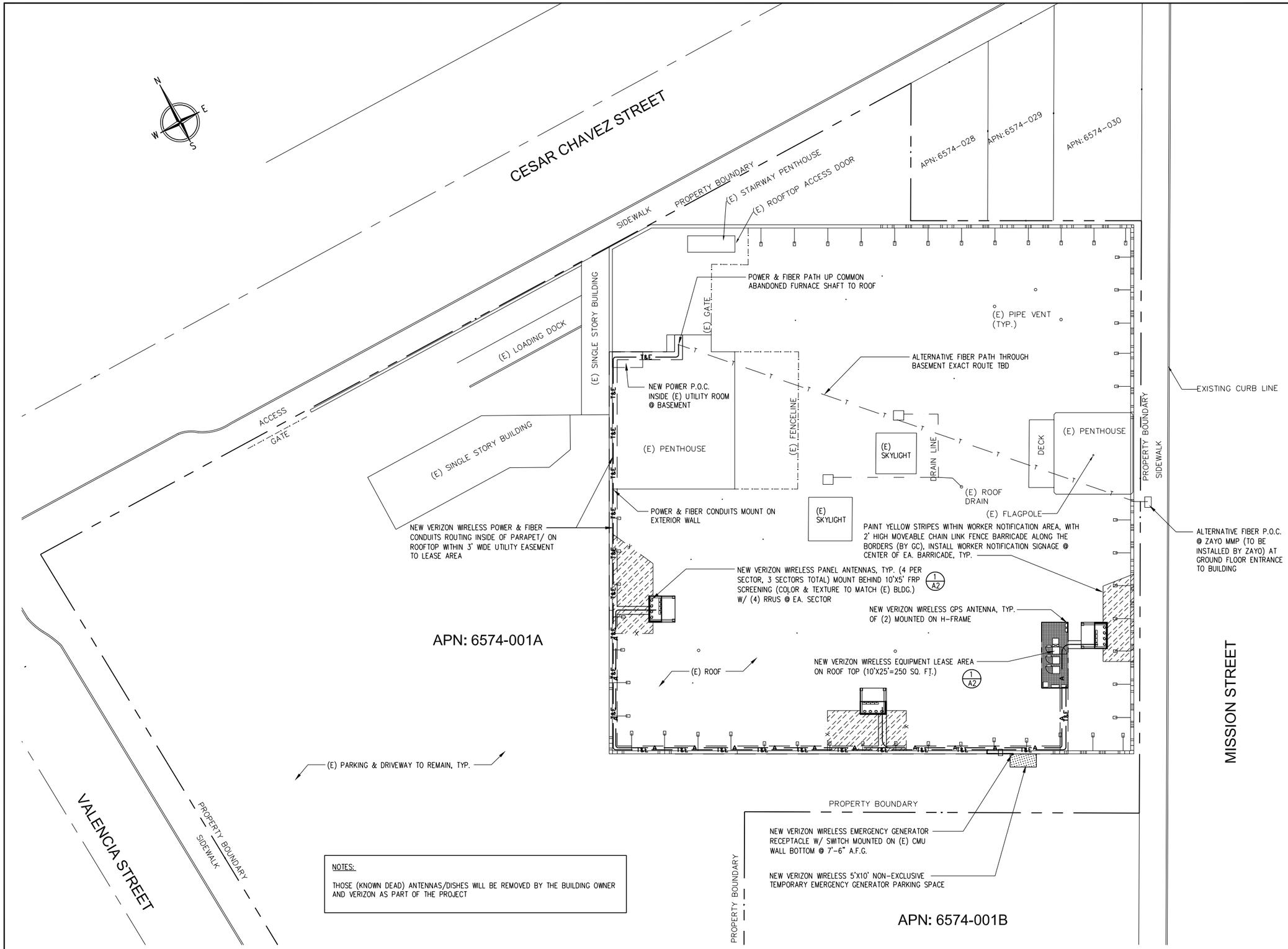
verizon wireless

ARMY & MISSION RELO
3120 MISSION STREET
SAN FRANCISCO, CA 94110

PLOT PLAN AND SITE TOPOGRAPHY

REVISIONS			
04-21-14	REV	NR	Preliminary Drawing
04-24-14	REV	NR	Lease Area Added
05-09-14	REV	NR	Spot El. Font Change
09-12-14	REV	NR	Lease Area Mod.
04-04-15	REV	NR	Lease Area Mod.
07-29-15	REV	NR	Easement Mod.
10-01-15	REV	NR	Easement Mod.
11-30-15	REV	NR	Easement Mod.

Sheet
C-1



NOTES:

THOSE (KNOWN DEAD) ANTENNAS/DISHES WILL BE REMOVED BY THE BUILDING OWNER AND VERIZON AS PART OF THE PROJECT

OVERALL SITE PLAN

SCALE 1/16"=1' (24x36) 1/32"=1' (11x17) 16' 0' 16' 32' 1

verizon wireless
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

SITE NO. & NAME:

278693
ARMY MISSION RELO

SITE ADDRESS:

3120 MISSION STREET
SAN FRANCISCO, CA 94110
SAN FRANCISCO COUNTY

ISSUE STATUS:

REV.	DATE	DESCRIPTION
A	10/22/14	ZD 100% FINAL
B	11/10/14	ZD REV. GRND ELE.
C	11/16/14	CD 90% REVIEW
1	04/07/15	ZD REV. PLANNING
2	04/20/15	ZD 100% FINAL
3	06/09/15	CD 90% REVIEW REV.
10	07/23/15	CD 100% FINAL
11	07/29/15	CD REV. PLANNING
12	10/01/15	CD REV. GEN. RELO
13	11/30/15	CD REV. UTILITY RTS

DESIGN FIRM:

BayStone
Architecture & Engineering, Inc.
5075 VALLEY CREST DR. #252
CONCORD, CA 94521
TEL: (925) 890-7494
JYu@BayStoneEngineering.com

JOB NUMBER:

COV005

SEAL:

SHEET TITLE:

OVERALL SITE PLAN

SHEET NUMBER:

A-1

CESAR CHAVEZ STREET

MISSION STREET

(E) SKYLIGHT

APN: 6574-001A

(E) ROOF

PAINT YELLOW STRIPES WITHIN WORKER NOTIFICATION AREA, WITH 2' HIGH MOVEABLE CHAIN LINK FENCE BARRICADE ALONG THE BORDERS (BY GC), INSTALL WORKER NOTIFICATION SIGNAGE @ CENTER OF EA. BARRICADE, TYP.

15'

10'

KICKER SUPPORTING 10'X5' FRP SCREENING TOP @ 12' A.F.F.

2'-2" TYP.

10'

5' FRP

GAMMA SECTOR AZIMUTH 320°

NEW VERIZON WIRELESS PANEL ANTENNAS, TYP. (4 PER SECTOR, 3 SECTORS TOTAL) MOUNT BEHIND 10'X5' FRP SCREENING TOP @ 12' A.F.F. (COLOR & TEXTURE TO MATCH (E) BLDG.) W/ (4) RRUS @ EA. SECTOR

NEW VERIZON WIRELESS POWER & FIBER CONDUITS ROUTING INSIDE OF PARAPET/ ON ROOFTOP WITHIN 3' WIDE UTILITY EASEMENT TO LEASE AREA

50'

NEW VERIZON WIRELESS 6" WIDE COAX CABLE TRAY ROUTING ALONG INSIDE OF PARAPET/ ON ROOFTOP WITHIN 3' WIDE UTILITY EASEMENT FROM LEASE AREA TO ANTENNAS

10'

10'

15'

2.5"ø O.D. CONDUIT ALONG INSIDE CORNER OF (E) EXTERIOR WALL TO EMERGENCY GENERATOR RECEPTACLE @ GROUND LEVEL

BETA SECTOR AZIMUTH 210°

NEW VERIZON WIRELESS EMERGENCY GENERATOR RECEPTACLE W/ SWITCH MOUNTED ON (E) CMU WALL BOTTOM @ 7'-6" A.F.G.

ALTERNATIVE FIBER P.O.C. @ ZAYO MMP (TO BE INSTALLED BY ZAYO) AT GROUND FLOOR ENTRANCE TO BUILDING

NEW VERIZON WIRELESS PANEL ANTENNAS, TYP. (4 PER SECTOR, 3 SECTORS TOTAL) MOUNT BEHIND 10'X5' FRP SCREENING TOP @ 13' A.F.F. (COLOR & TEXTURE TO MATCH (E) BLDG.) W/ (4) RRUS @ EA. SECTOR

10' NEW VERIZON WIRELESS EQUIPMENT LEASE AREA

25'

NEW VERIZON WIRELESS GPS ANTENNA, TYP. OF (2) MOUNTED ON H-FRAME

ALPHA SECTOR AZIMUTH 90°

25' NEW VERIZON WIRELESS EQUIPMENT LEASE AREA

NEW VERIZON WIRELESS EQUIPMENT LEASE AREA ON ROOF TOP (10'X25'=250 SQ. FT.) W/ EQUIPMENT CABINET MOUNTED ON 10'X25' STL. PLATFORM TOP @ 20" A.F.F.

10'

10'

10'

94'

40'

25'

5'

10'

37'

NEW VERIZON WIRELESS 5'X10' NON-EXCLUSIVE TEMPORARY EMERGENCY GENERATOR PARKING SPACE

N E S W

ENLARGED SITE PLAN, ANTENNA LAYOUT

SCALE 1/8"=1' (24x36) 1/16"=1' (11x17) 8' 0' 8' 16'

1

verizon wireless

2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

SITE NO. & NAME:

278693

ARMY MISSION RELO

SITE ADDRESS:

3120 MISSION STREET
SAN FRANCISCO, CA 94110
SAN FRANCISCO COUNTY

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CONCORD, CA 94521
TEL: (925) 890-7494
JYu@BayStoneEngineering.com

JOB NUMBER:

COV005

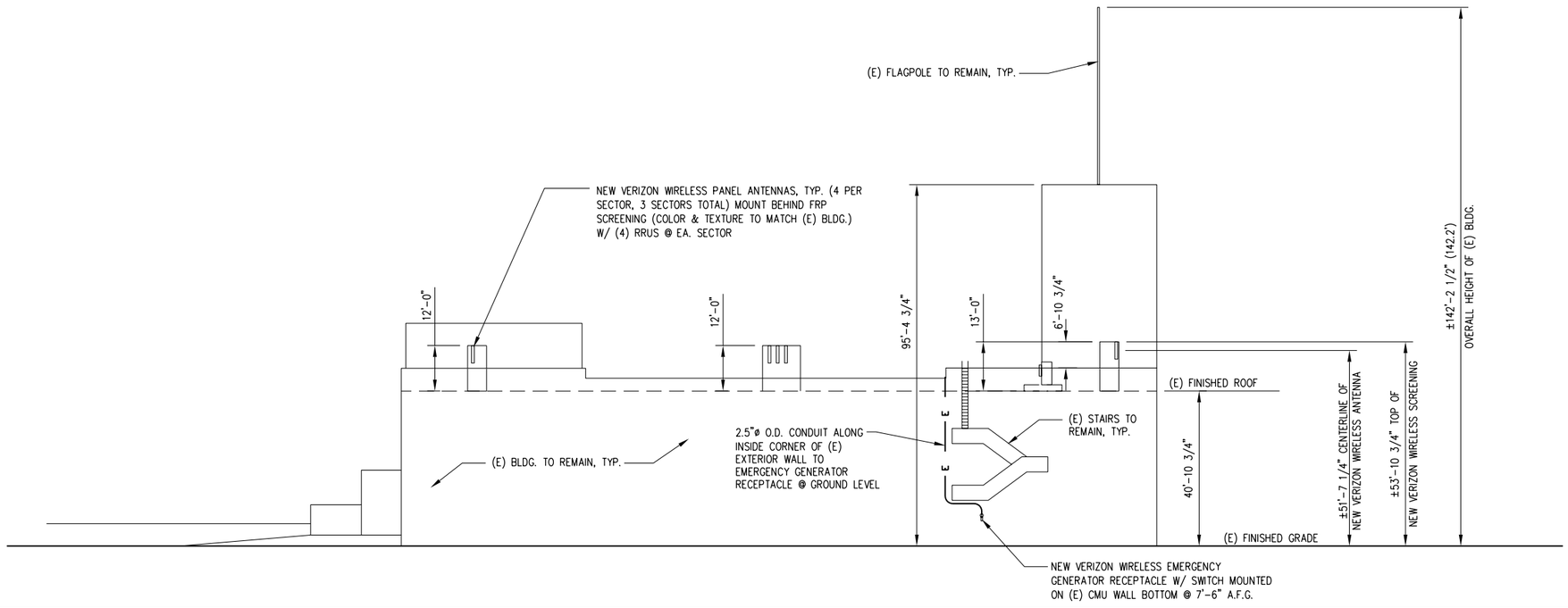
SEAL:

SHEET TITLE:

ENLARGED SITE PLAN
ANTENNA LAYOUT

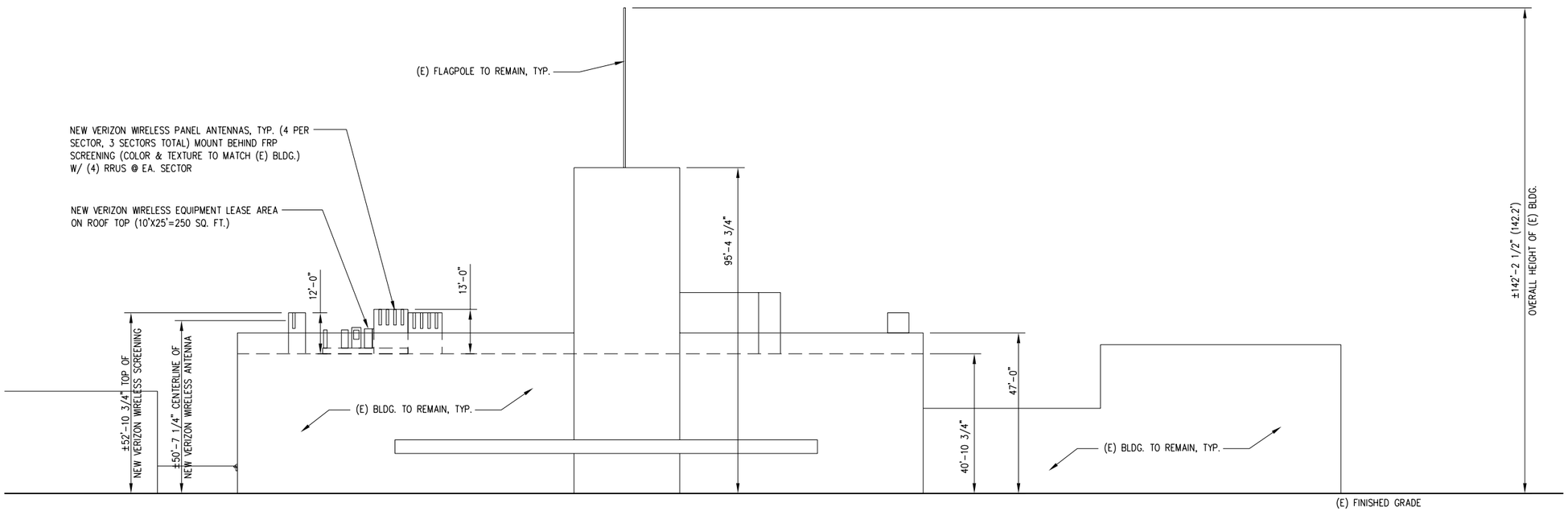
SHEET NUMBER:

A-2



SOUTH ELEVATION

SCALE 1/16"=1' (24x36) 1/32"=1' (11x17) 16' 0' 16' 32' 1



EAST ELEVATION (ALONG MISSION STREET)

SCALE 1/16"=1' (24x36) 1/32"=1' (11x17) 16' 0' 16' 32' 2

verizon wireless
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SAN FRANCISCO, CA 94110
SAN FRANCISCO COUNTY

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TEL: (925) 890-7494
JYu@BayStoneEngineering.com

JOB NUMBER:

COV005

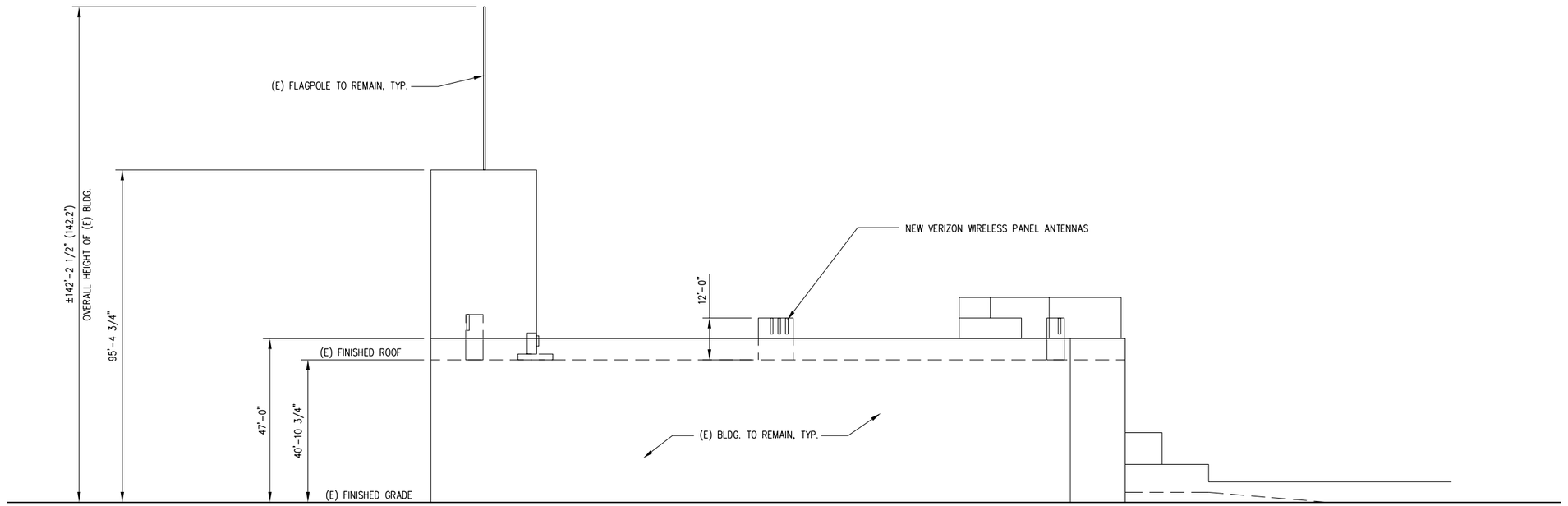
SEAL:

SHEET TITLE:

SOUTH ELEVATION
EAST ELEVATION

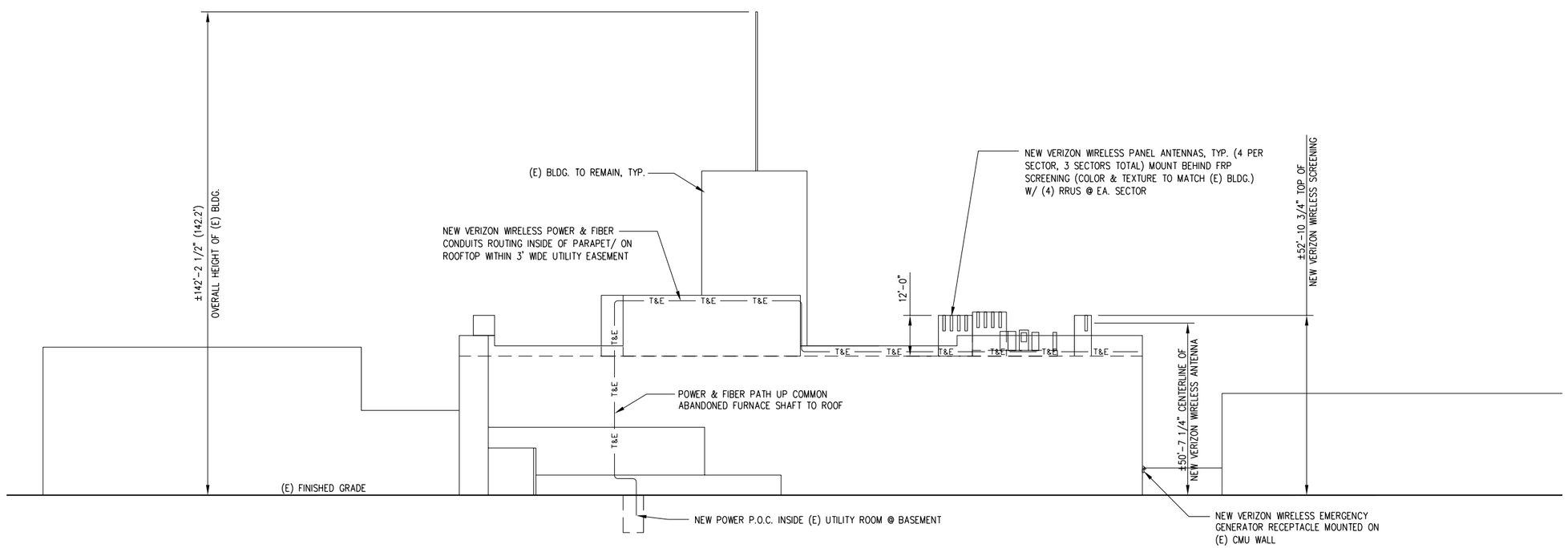
SHEET NUMBER:

A-3



NORTH ELEVATION

SCALE 1/16"=1' (24x36) 1/32"=1' (11x17) 16' 0' 16' 32' 1



WEST ELEVATION

SCALE 1/16"=1' (24x36) 1/32"=1' (11x17) 16' 0' 16' 32' 2

verizon wireless
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

SITE NO. & NAME:

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ARMY MISSION RELO

SITE ADDRESS:

3120 MISSION STREET
SAN FRANCISCO, CA 94110
SAN FRANCISCO COUNTY

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JOB NUMBER:

COV005

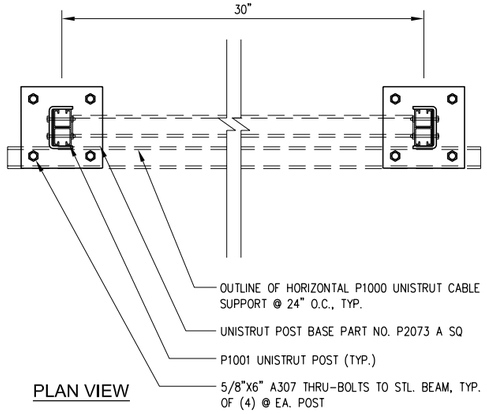
SEAL:

SHEET TITLE:

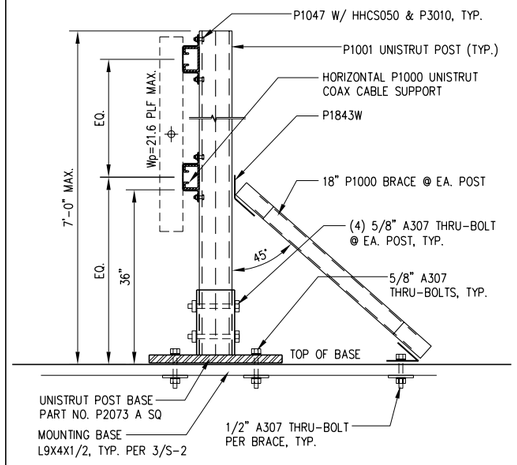
NORTH ELEVATION
WEST ELEVATION

SHEET NUMBER:

A-4

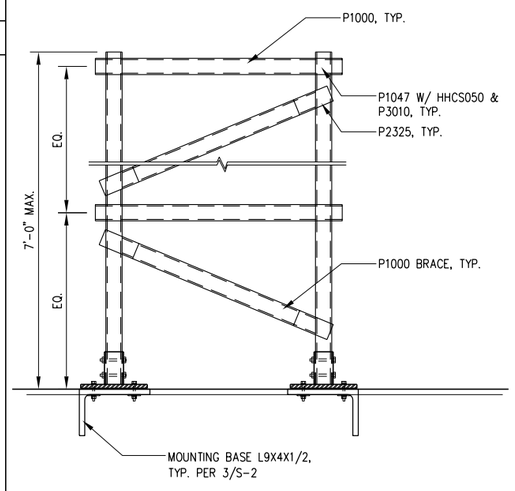


PLAN VIEW



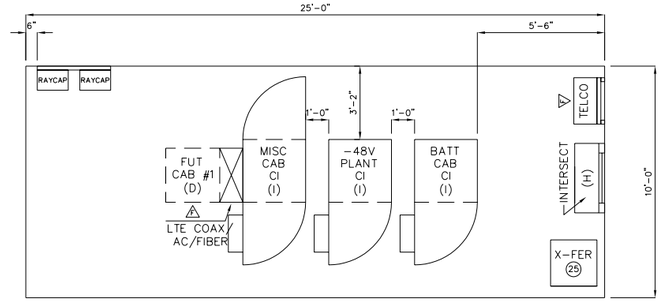
SECTION VIEW

6		



FRONT ELEVATION

7	COAX CABLE SUPPORT DETAIL	4



SYM	WIDTH	DEPTH	HEIGHT
A	3'-1 1/2"	8'-2 1/2"	7'-0"
B	2'-11 1/2"	3'-4"	7'-0"
C	2'-1"	2'-0"	3'-4"
D	2'-4"	2'-4"	7'-0"
E	2'-8"	3'-4"	7'-0"
F	2'-6"	1'-1"	3'-8"
G	2'-0"	2'-0"	6'-6"
H	3'-0"	1'-0 1/2"	7'-0"
I	2'-8 1/2"	3'-4"	7'-0"

EQUIPMENT MOUNTING TO PLATFORM DETAIL SEE 3/S3

PROPOSED OUTDOOR EQUIPMENT LAYOUT

NOTES: BATT CAB = CHARLES INDUSTRIES W/ 3 STRINGS OF 170AH BATTERIES (510AH)
LTE/AWS/PCS RRH'S
SITE HAS NO PERM GENERATOR

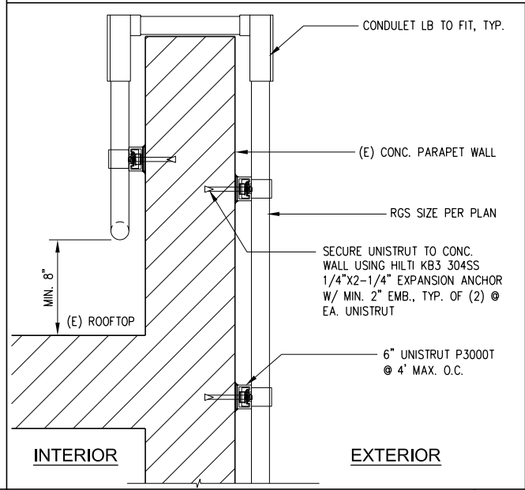
LEGEND:

1. WAVE GUIDE ENTRY PORT
2. MASTER GROUND BAR
3. TELCO ENTRANCE PANEL (4' X 8' X 3/4")
4. a)GNB 3-75A27 BATTERY MODULES (6V - 1015 AH)
   b)GNB 3-90A27 BATTERY MODULES (6V - 1140 AH)
   c)GNB 3-85A29 BATTERY MODULES (6V-1210 AH) MUST BE STACKED
   d)POWERSAFE VH-34 BATTERY MODULES (2V - 1040 AH)
   e)C&D HD1100 BATTERY MODULES (6V - 1100 AH)
5. AIR CONDITIONING UNIT
6. SECONDARY AC POWER DISTRIBUTION PANEL
7. TRANSFER SWITCH (MANUAL OR AUTOMATIC)
8. MAIN AC POWER DISTRIBUTION PANEL
9. COMMERCIAL POWER DISCONNECT SWITCH
10. FENWAL FIRE ALARM PANEL
11. ALARM TERMINAL CABINET
12. IRRIGATION CONTROLLER
13. HALON GAS STORAGE TANK/FM200 TANK
14. +24V POWER BUSBAR
15. -48V POWER BUSBAR
16. LIGHTNING ARRESTOR
17. ELECTROSTATIC DISCHARGE MAT (ESD MAT)
18. SNAP CONNECTOR FOR ESD MAT
19. TIME CLOCK PANEL
20. AIR CONDITIONING CONTROL PANEL
21. THERMOSTAT
22. EXHAUST FAN CONTROL PANEL
23. SURGE ARRESTOR
24. DEHYDRATOR
25. TRANSFORMER
26. FIRE EXTINGUISHER
27. EXHAUST FAN
28. AIR INTAKE
29. APPLETON PLUG

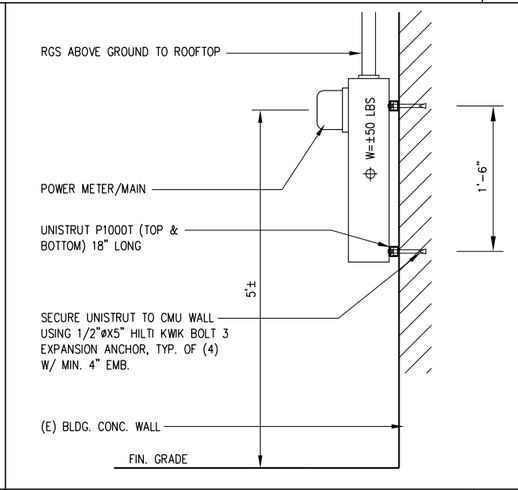
NOTES:
EFP = EQUIPMENT FLOOR PLAN
PPD = POWER PLANT DETAILS
EQR = EQUIPMENT RACK PROFILES
SID = SITE INTERCONNECT DETAILS
– – = FUTURE
—— = EQUIPPED

PBM +24V MODULAR POWER BAY
PB +24V STANDARD POWER DISTRIBUTION BAYS (E/W LORAIN RL200F25 RECTIFIERS)
PBR LORAIN RL200F25 RECTIFIER BAY
MISC MISCELLANEOUS BAY
AIF AT&T ANTENNA INTERFACE FRAME
RCF AT&T RADIO CHANNEL FRAME
LAF AT&T LINEAR AMPLIFIER FRAME
MW MICROWAVE BAY
CDPD CELLULAR DIGITAL PACKET DATA
△ DENOTES FRONT OF BAY LINEUP

EQUIPMENT LAYOUT	1



CONDUIT @ PARAPET WALL	3



METER/MAIN MOUNTING	2

verizon wireless
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

SITE NO. & NAME:

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SAN FRANCISCO, CA 94110
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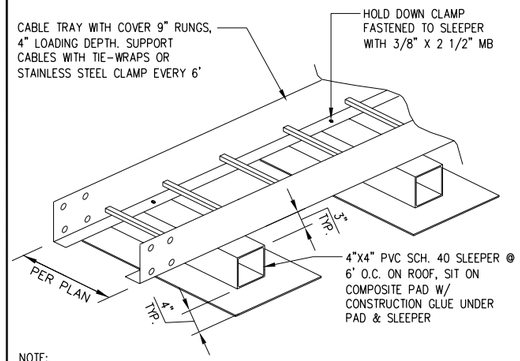
JOB NUMBER:
COV005

SEAL:

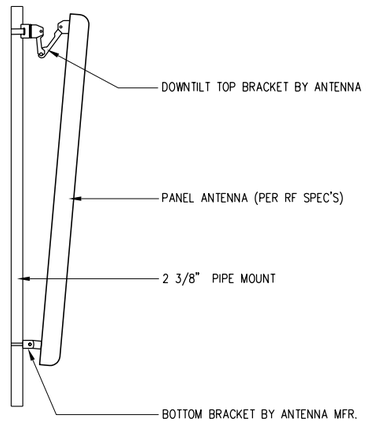
SHEET TITLE:
DETAILS

SHEET NUMBER:
A-5

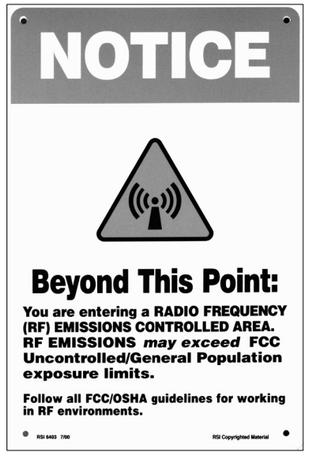


NOTE:
1. RUN #2 AWG BTCW GROUND CONDUCTOR ALONG CABLE TRAY AND GROUND AT BOTH ENDS.
2. CABLE TRAYS SHALL BE FREE OF SHARP OBJECTS AND BURRS WHICH COULD INJURE CABLES.
3. COVERS SHALL BE FASTENED USING HOLD DOWN CLIPS. SHEET METAL SCREWS ARE NOT ACCEPTABLE.

HORIZONTAL CABLE TRAY DETAIL | 10



ANTENNA MOUNT DETAIL | 7

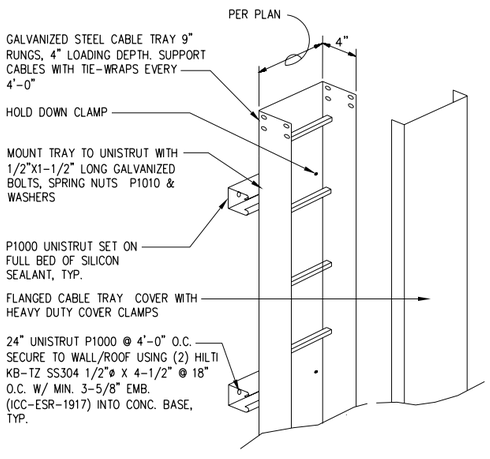


SITE SIGNAGE | 4

SITE SIGNAGE NOTES:

1. ALL SAFETY SIGNS, WARNING & NOTICES ARE TO BE PROVIDED BY THE WIRELESS CARRIER;
2. ALL PLACEMENT OF SUCH SIGNS ARE TO BE IN ACCORDANCE WITH CAL OSHA & OTHER GOVERNING SAFETY REGULATION REQUIREMENT;
3. CONTRACTOR TO EMPLOY REASONABLE MEANS TO SECURE SUCH SIGNS.

SITE SIGNAGE NOTES | 1



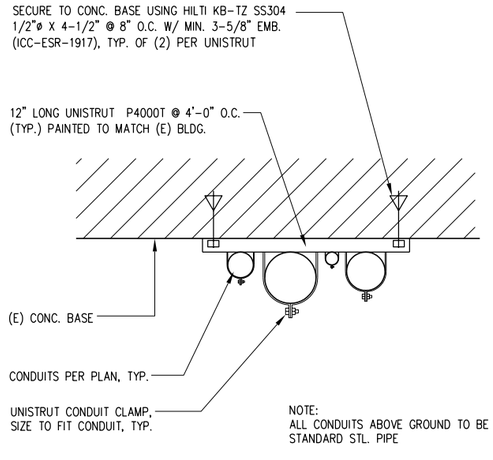
NOTE:
1) CABLE TRAYS SHALL BE FREE OF SHARP OBJECTS AND BURRS WHICH COULD INJURE CABLES. COVERS SHALL BE FASTENED USING HOLD DOWN CLIPS. SHEET METAL SCREWS ARE NOT ACCEPTABLE.
2) VERTICAL TRAY AND COVER SHALL BE PAINTED TO MATCH EXISTING BUILDING.
3) RUN #2 AWG BTCW GROUND CONDUCTOR ALONG CABLE TRAY AND GROUND AT BOTH ENDS.

WATER PROOFING NOTES:

AT ALL ROOFTOP BOLTING/PENETRATION LOCATIONS, ALL ROOFTOP DRAINAGE & WATER PROOFING CONSTRUCTION TO BE DONE BY BUILDING OWNER CONTRACTED QUALIFIED ROOFER TO KEEP ROOF WATER PROOFING WARRANTY & 1% MIN. SLOPE TOWARD DRAINAGE OUTLETS

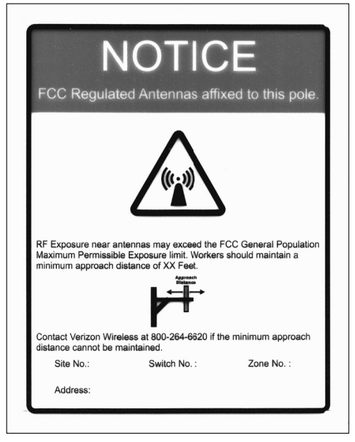
CABLE TRAY DETAIL | 12

| 8 |



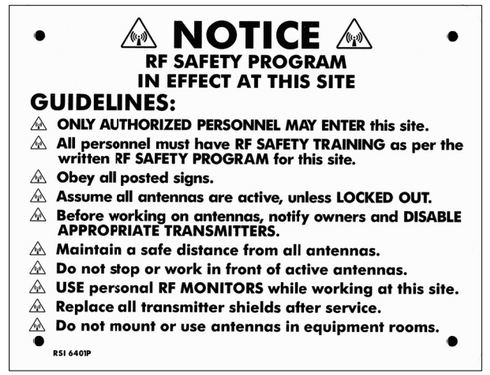
NOTE:
ALL CONDUITS ABOVE GROUND TO BE STANDARD STL. PIPE

CONDUIT @ WALL | 9

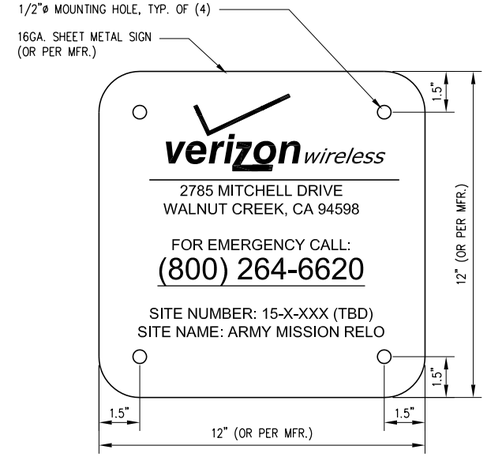


SITE SIGNAGE (MOUNTED @ EA. SECTORS) | 5

SITE SIGNAGE | 6



SITE SIGNAGE | 3



SITE SIGNAGE | 2

verizon wireless
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

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JOB NUMBER:

COV005

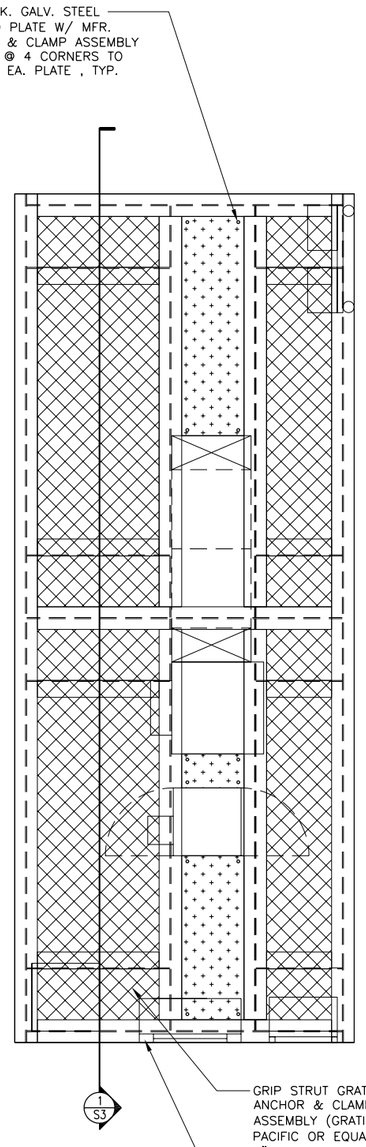
SEAL:

SHEET TITLE:

DETAILS

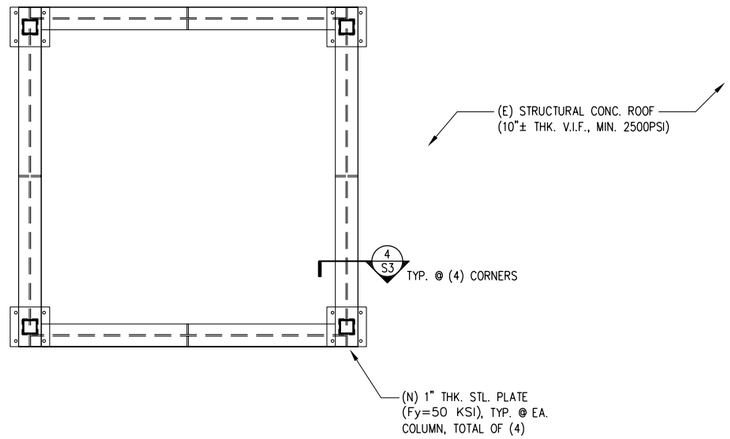
SHEET NUMBER:

A-6

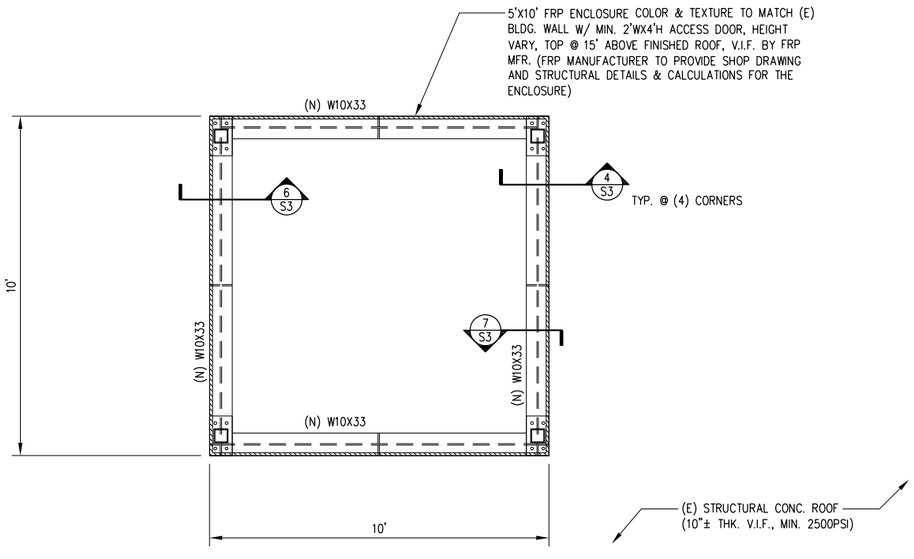


GRATING PLAN

NOTE:
1. ALL (E) BLDG. CONDITIONS IN THIS DRAWING SET ARE FOR REFERENCE ONLY, EXACT CONDITIONS MUST BE V.I.F. BY CONTRACTOR BEFORE CONSTRUCTION;
2. ALL ROOFTOP DRAINAGE & WATER PROOFING CONSTRUCTION TO BE DONE BY BUILDING OWNER CONTRACTED QUALIFIED ROOFER TO KEEP ROOF WATER PROOFING WARRANTY & 1% MIN. SLOPE TOWARD DRAINAGE OUTLETS



BASE PLAN



FRAMING PLAN

STRUCTURAL METAL

1. ALL STRUCTURAL STEEL SHALL COMPLY WITH CURRENT CBC 2013 ADOPTED ASTM STANDARDS.
2. ALL CONNECTIONS AND FABRICATIONS SHALL COMPLY WITH MOST RECENT A.I.S.C. SPECIFICATIONS.
3. ALL WELDING SHALL BE PERFORMED BY OPERATORS WHO HAVE BEEN RECENTLY QUALIFIED AS PRESCRIBED IN MOST RECENT "QUALIFICATION PROCEDURE" OF THE AMERICAN WELDING SOCIETY.
4. ALL WELDING SHALL BE DONE IN ACCORDANCE WITH CFC ARTICLE 49.
5. ALL STEEL PIPE COLUMNS SHALL CONFORM TO ASTM A-53 GRADE "B".
6. ALL TUBE STEEL COLUMNS SHALL CONFORM TO ASTM A-500 GRADE "B", Fy=46ksi.
7. ALL EXTERIOR STRUCTURAL STEEL PERMANENTLY EXPOSED TO THE WEATHER SHALL BE HOT-DIP GALVANIZING AFTER FABRICATION.
8. BOLTED CONNECTIONS SHALL USE BEARING TYPE GALVANIZED ASTM A325 BOLTS (3/4" DIA..) AND SHALL HAVE A MINIMUM OF TWO BOLTS U.N.O.
9. CONTRACTOR IS TO ENSURE THAT THE GALVANIZATION LAYER ON ALL STEEL MEMBERS ARE NOT REMOVED NOR "REDUCED" DURING DELIVERY, INSTALLATION, OR BOLTING, ETC. TOUCH-UP WITH ZINC-RICH PAINT (CONTAIN EITHER BETWEEN 65% TO 69% METALLIC ZINC BY WEIGHT OR GREATER THAN 92% METALLIC ZINC BY WEIGHT IN DRY FILM) IF DAMAGED, AND THE BOLTS AND THE CONNECTING STEEL MEMBERS, ARE OF EXACTLY THE SAME MATERIALS.
10. ALL NEW STRUCTURAL STEEL IN W SHAPE TO BE 50 ksi(Fy)

OTHER:

11. EXPANSION ANCHORS: HILTI KB-TZ.

NOTE:
1. ALL (E) BLDG. CONDITIONS IN THIS DRAWING SET ARE FOR REFERENCE ONLY, EXACT CONDITIONS MUST BE V.I.F. BY CONTRACTOR BEFORE CONSTRUCTION
2. CONTRACTOR & FABRICATOR MUST FIELD MEASURE/VERIFY ALL RELATED STRUCTURAL DIMENSIONS & CONDITIONS BEFORE MANUFACTURING/INSTALLATION
3. ALL ROOFTOP DRAINAGE & WATER PROOFING CONSTRUCTION TO BE DONE BY BUILDING OWNER CONTRACTED QUALIFIED ROOFER TO KEEP ROOF WATER PROOFING WARRANTY & 1% MIN. SLOPE TOWARD DRAINAGE OUTLETS
4. ALL ELECTRODE Fexx=70ksi. MIN.

verizon wireless
2785 MITCHELL DRIVE, SUITE 9
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SITE NO. & NAME:

278693

ARMY MISSION RELO

SITE ADDRESS:

3120 MISSION STREET
SAN FRANCISCO, CA 94110
SAN FRANCISCO COUNTY

ISSUE STATUS:

REV.	DATE	DESCRIPTION
A	10/22/14	ZD 100% FINAL
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11	07/29/15	CD REV. PLANNING
12	10/01/15	CD REV. GEN. RELO
13	11/30/15	CD REV. UTILITY RTS

DESIGN FIRM:

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CONCORD, CA 94521
TEL: (925) 890-7494
JYu@BayStoneEngineering.com

JOB NUMBER:

COV005

SEAL:

SHEET TITLE:

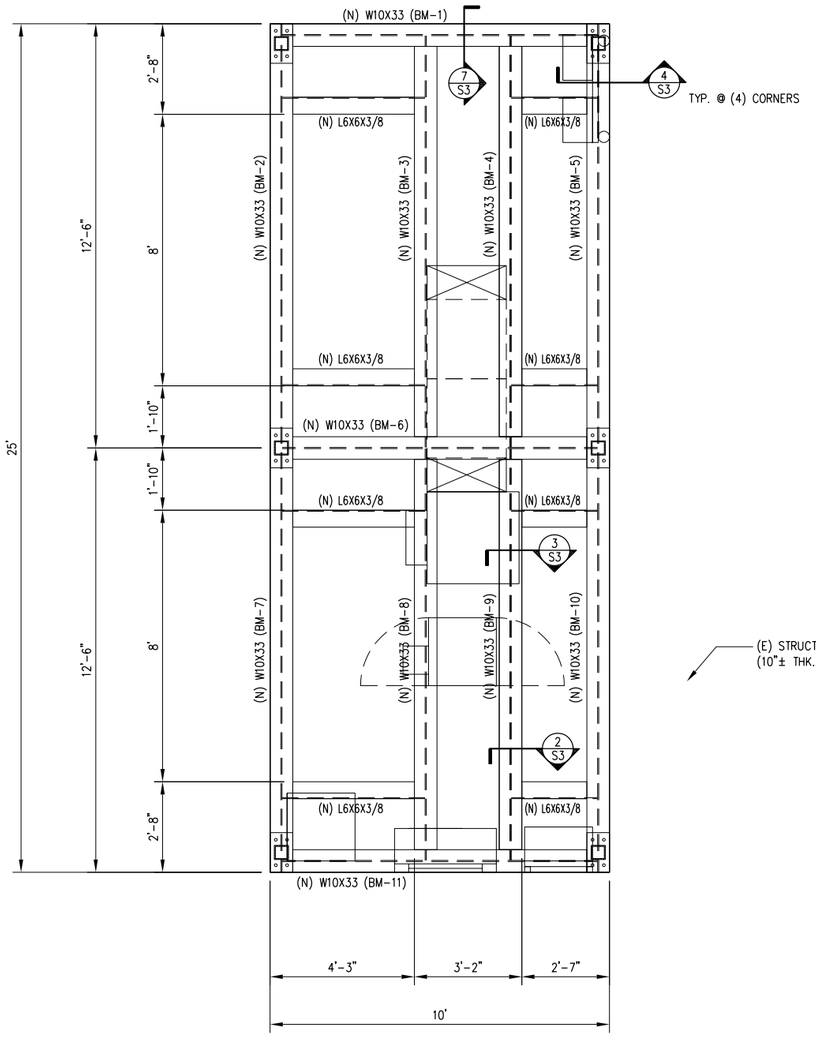
STRUCTURAL NOTES & DETAILS

SHEET NUMBER:

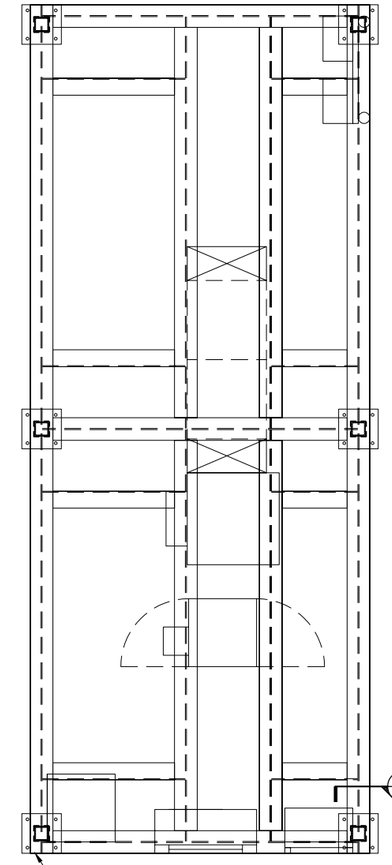
S-1

EQUIPMENT PLATFORM DETAILS | 3 | ANTENNA BASE FRAMING DETAILS | SCALE 1/2"=1' (24x36) 1/4"=1' (11x17) 2' 0' 2' 4' | 2 | STRUCTURAL NOTES | 1

NOTE:
1. ALL (E) BLDG. CONDITIONS IN THIS DRAWING SET ARE FOR REFERENCE ONLY, EXACT CONDITIONS MUST BE V.I.F. BY CONTRACTOR BEFORE CONSTRUCTION;
2. ALL ROOFTOP DRAINAGE & WATER PROOFING CONSTRUCTION TO BE DONE BY BUILDING OWNER CONTRACTED QUALIFIED ROOFER TO KEEP ROOF WATER PROOFING WARRANTY & 1% MIN. SLOPE TOWARD DRAINAGE OUTLETS



(E) STRUCTURAL CONC. ROOF
(10"± THK. V.I.F., MIN. 2500PSI)



(E) STRUCTURAL CONC. ROOF
(10"± THK. V.I.F., MIN. 2500PSI)

EQUIPMENT PLATFORM FRAMING PLAN SCALE 1/2"=1' (24x36) 1/4"=1' (11x17) 2' 0' 2' 4' 2

PLATFORM MOUNTING BASE PLAN 1/2"=1' (24x36) 1/4"=1' (11x17) 2' 0' 2' 4' 1

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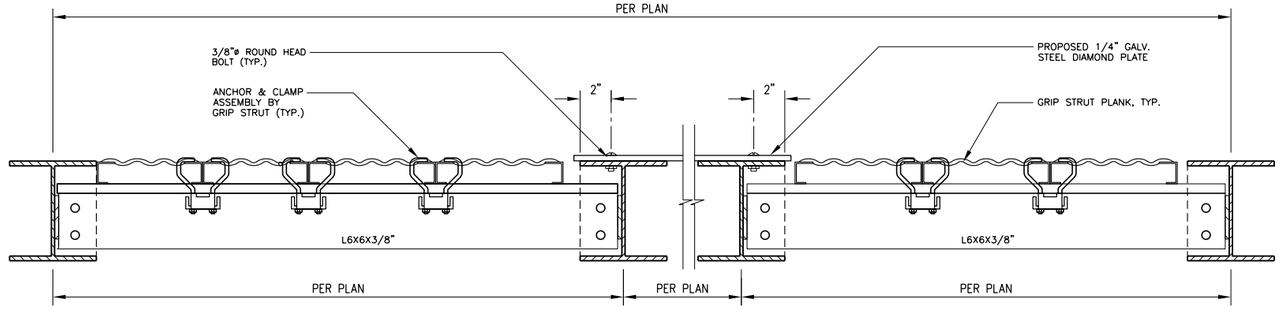
COV005

SEAL:

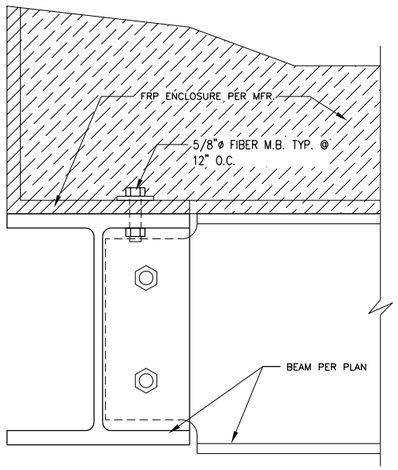
SHEET TITLE:
DETAILS

SHEET NUMBER:
S-2

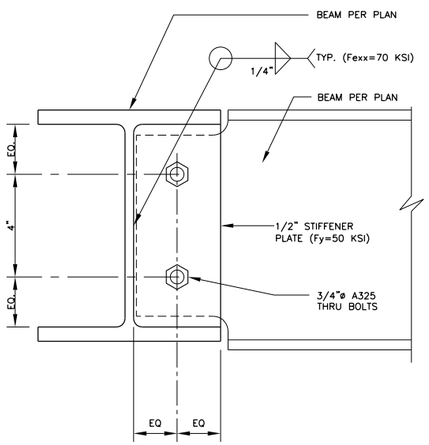


NOTE:
CONTRACTOR TO INSURE THAT THE GALVANIZATION LAYER ON ALL STEEL MEMBERS ARE NOT REMOVED NOR "REDUCED" DURING DELIVERY, INSTALLATION, OR BOLTING, ETC. AND THE BOLTS AND THE CONNECTING STEEL MEMBERS, ARE OF EXACTLY THE SAME MATERIALS.

5 PLATFORM SECTION 1

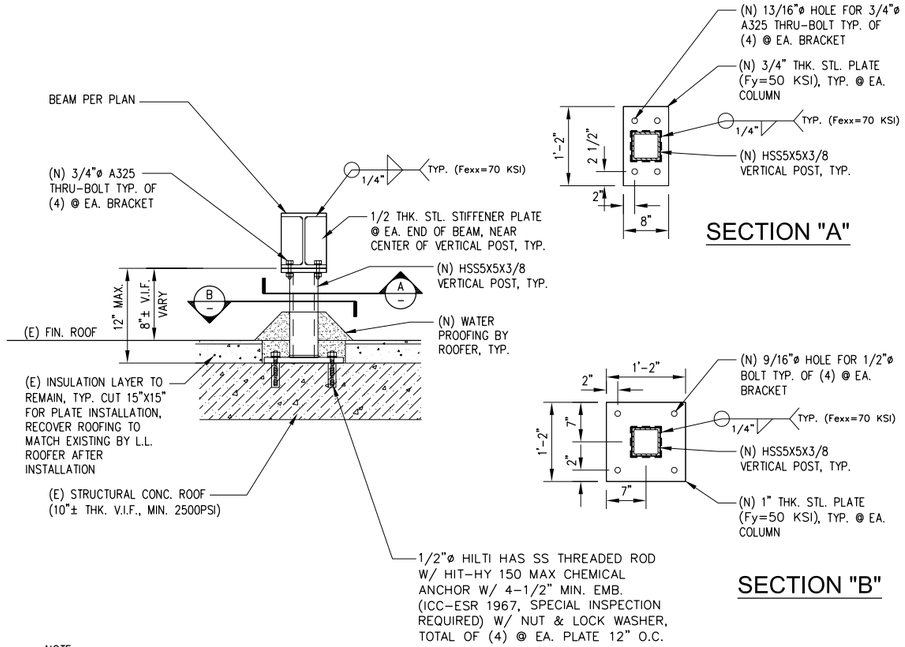


FRP TO BEAM CONNECTION 6



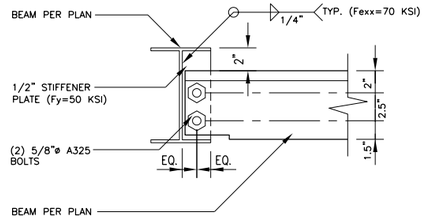
BEAM CONNECTION 7

NOTE:
1. ALL (E) BLDG. CONDITIONS IN THIS DRAWING SET ARE FOR REFERENCE ONLY, EXACT CONDITIONS MUST BE V.I.F. BY CONTRACTOR BEFORE CONSTRUCTION;
2. ALL ROOFTOP DRAINAGE & WATER PROOFING CONSTRUCTION TO BE DONE BY BUILDING OWNER CONTRACTED QUALIFIED ROOFER TO KEEP ROOF WATER PROOFING WARRANTY & 1% MIN. SLOPE TOWARD DRAINAGE OUTLETS

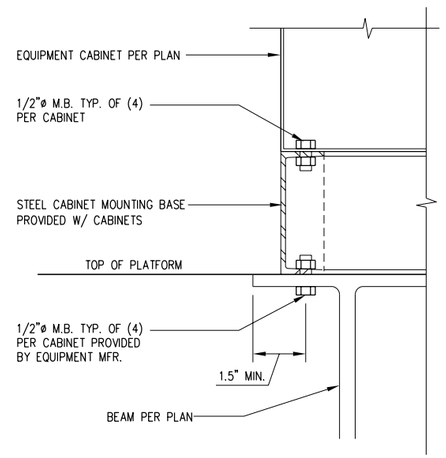


NOTE:
(N) HSS5X5X3/8 VERTICAL POST LENGTH TO BE V.I.F. BY CONTRACTOR (MAX. 12"), ENSURE ALL TOP PLATE @ SAME ELEVATION, TYP.

PLATFORM MOUNTING BASE DEATAL 4



ANGLE TO BEAM CONNECTION 2



CABINET MOUNTING DETAILS 3

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DETAILS

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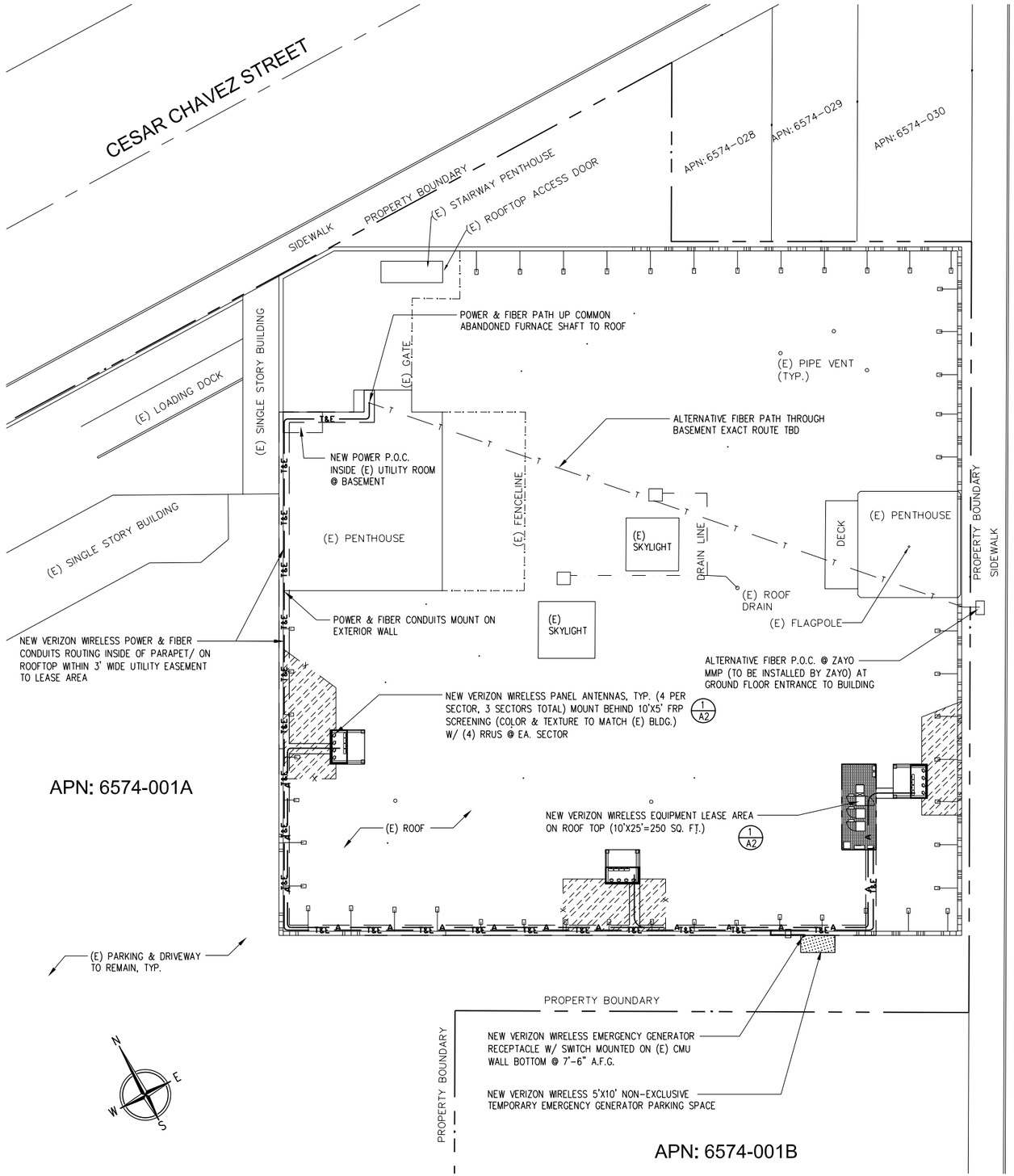
S-3



UTILITIES SITE PLAN

SCALE 1/16"=1' (24x36) 1/32"=1' (11x17) 16' 0' 16' 32'

2

1. UTILITY POINTS OF SERVICE AND WORK/MATERIALS SHOWN ARE BASED UPON PRELIMINARY INFORMATION PROVIDED BY THE UTILITY COMPANIES AND ARE FOR BID PURPOSES ONLY.
2. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY FOR FINAL AND EXACT WORK/MATERIALS REQUIREMENTS.
3. ALL CONDUCTOR SHALL BE PERMANENTLY TAGGED IN EACH PANELBOARD, PULLBOX, J-BOX, SWITCH BOX, ETC., IN COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ACT (O.S.H.A.)
4. ALL CONDUIT ONLY (C.O.) SHILL HAVE A PULL WIRE OR ROPE AND A TRUE TAPE
5. ALL CONDUCTORS SHALL BE COPPER, ALL HARDWARE SHOULD BE STAINLESS, U.N.O.
6. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE A MIN. OF 10,000 A.I.C. INTERRUPTING RATING, AND NOT LESS THAN THE MAXIMUM SHORT CIRCUIT CURRENT WHICH THEY MAY BE SUBJECTED TO
7. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY ALL APPLICABLE CODES
8. CONTRACTOR TO USE APPROPRIATE METHODS AND EQUIPMENT VIA X-RAY OR OTHER DEVICES TO LOCATE THE REINFORCING AND/OR STEEL TENDONS BEFORE ANY DRILLING.
9. PENETRATIONS IN FIRE RATED WAILS SHALL BE FIRE STOPPED IN ACCORDANCE WITH APPLICABLE LOCAL BUILDING CODES USING U.L. RATED MATERIALS.
10. ALL EXTERIOR WALL PENETRATIONS SHALL BE SEALED WITH POLYSEAM SEALANT.
11. RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH ZINC INTERIOR
12. ELECTRICAL METALLIC TUBING SHALL HAVE U.L. LABEL, FITTINGS SHALL BE GLAND RING COMPRESSION TYPE. EMT SHALL BE USED ONLY FOR INTERIOR RUNS.
13. FLEXIBLE METALLIC CONDUIT SHALL HAVE U.L. LISTED LABEL AND MAY BE USED WHERE PERMITTED BY CODE. ALL CONDUIT IN EXCESS OF SIX FEET IN LENGTH SHALL HAVE FULL SIZE GROUND WIRE.
14. ALL UNDERGROUND CONDUIT SHALL BE PVC SCHEDULE 40 U.N.O. AT A MINIMUM DEPTH OF 24' BELOW GRADE. OR GREATER IF REQUIRED OTHERWISE BY LOCAL CODE OR UTILITY SERVICE PROVIDER.
15. RIGID GALVANIZED STEEL CONDUIT SHALL BE FULL WEIGHT THREADED TYPE. ELECTRICAL METALLIC TUBING (EMT) MAY BE USED IN WALLS OR CEILING SPACES WHERE NOT SUBJECT TO MECHANICAL DAMAGE. DIRECT BURIED PVC SCHEDULE 40 MAY BE INSTALLED BENEATH SLAB OR BELOW GRADE AND SHALL BE CONCRETE ENCASED U.N.O. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE PROVIDED IN ALL CONDUIT RUNS. PROVIDE CONDUIT SUPPORTS NOT TO EXCEED 8'-0". PROVIDE 3-PC CONNECTORS FOR SECONDARY GROWTH PATH OF SURFACE MOUNTED EMT.
16. RIGID STEEL CONDUIT FITTINGS INCLUDING COUPLINGS, LOCKOUTS, NIPPLES, ETC. SHALL BE THREADED AND THOROUGHLY GALVANIZED EXCEPT WHERE AN ADAPTER IS NEEDED TO CONNECT TO PVC. ELECTRICAL METALLIC TUBING (EMT) CONDUIT FITTINGS SHALL BE STEEL, RAINTIGHT THREADLESS COMPRESSION TYPE. DIE CAST, SET SCREW, OR INDENTED TYPES ARE NOT ACCEPTABLE.
17. ALL TELCO CONDUIT INSTALLATIONS AND OTHER EMPTY CONDUIT RUNS AND STUBS SHALL INCLUDE A YELLOW 3/8" POLYPROPYLENE PULL STRING.
18. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED LABELS.
19. CONTRACTOR TO COORDINATE ELECTRICAL/TELCO SERVICE INSTALLATION WITH UTILITY COMPANIES.
20. SUBMIT TEST REPORTS AND FURNISH TO SITE OWNER ONE COMPLETE SET OF PRINTS FOR "INSTALLED WORK", SHOWING ACTUAL DIMENSIONS, ROUTINGS, AND CIRCUITS.
21. AIL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO OWNER AT JOB COMPLETION.
22. UPON COMPLETION OF WORK, CONDUCT CONTINUITY, SHORT CIRCUIT, AND FALL OF POTENTIAL GROUNDING TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER.
23. CONNECTIONS TO VIBRATING EQUIPMENT AND SEISMIC SEPARATIONS: LIQUID-TIGHT FLEXIBLE STEEL CONDUIT IN DRY INTERIOR LOCATIONS AND IN AREAS EXPOSED TO WEATHER, DAMP LOCATIONS, CONNECTIONS TO TRANSFORMER ENCLOSURES, AND FINAL CONNECTIONS TO MOTORS. PROVIDE A SEPARATE INSULATED GROUNDING CONDUCTOR IN FLEXIBLE CONDUIT RUNS. MAXIMUM LENGTH SHALL BE 6' U.N.O.
24. ALL CONDUCTORS SHALL BE COPPER #12 AWG MINIMUM SIZE, TYPE THHN/THWN THERMOPLASTIC, 600 VOLT, 75 DEGREES CELSIUS WET AND 90 DEGREES CELSIUS DRY AND UL LISTED U.N.O. CONDUCTORS #10 AWG AND SMALLER SHALL BE SOLID. CONDUCTORS #8 AWG AND LARGER SHALL BE STRANDED, U.N.O. ALL WIRE CONNECTORS SHALL BE CRIMP COMPRESSION TYPE BY "THOMAS AND BETT" OR APPROVED EQUIVALENT, INSTALLED AND INSULATED PER THE MANUFACTURER'S RECOMMENDATIONS. ALL WIRE ENDS SHALL BE MARKED FOR EASY IDENTIFICATION AND TRACING.
25. JUNCTION AND PULL BOXES: FOR INTERIOR DRY LOCATIONS, BOXES SHALL BE GALVANIZED ONE-PIECE, DRAWN STEEL, KNOCKOUT TYPE WITH REMOVABLE MACHINE SCREW SECURED COVERS. FOR OUTSIDE, DAMP, OR SURFACE LOCATIONS, BOXES SHALL BE HEAVY CAST ALUMINUM OR CAST IRON WITH REMOVABLE, GASKETS, NON-FERROUS MACHINE SCREW SECURED COVERS. BOXES SHALL BE SIZED FOR THE NUMBER AND SIZES OF CONDUCTORS AND CONDUIT ENTERING THE BOX AND EQUIPPED WITH PLASTER EXTENSION RINGS WHERE REQUIRED. BOXES SHALL BE LABELED TO INDICATE PANEL AND CIRCUIT NUMBER, OR TYPE OF SIGNAL OR COMMUNICATIONS SYSTEM.
26. ALL OUTDOOR ELECTRICAL DEVICES OR EQUIPMENT SHALL BE OF WEATHERPROOF TYPE.
27. MAIN CIRCUIT BREAKER SHALL BE RATED HIGHER THAN INCOMING A.I.C. FROM UTILITY COMPANY.
28. ALL EQUIPMENT SHALL BE U.L. LISTED.
29. ALL CONNECTIONS TO EXISTING MAIN SWITCHGEAR INCLUDING "BUS-TAPS" AND/OR "HOT-TAPS" REQUIRE CERTIFICATION AND APPROVAL. FABRICATION AND CERTIFICATION SHALL BE FURNISHED BY A CONTRACTOR APPROVED BY THE APPLICABLE UTILITY.

NOTES

1

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NOTES
& UTILITIES PLAN

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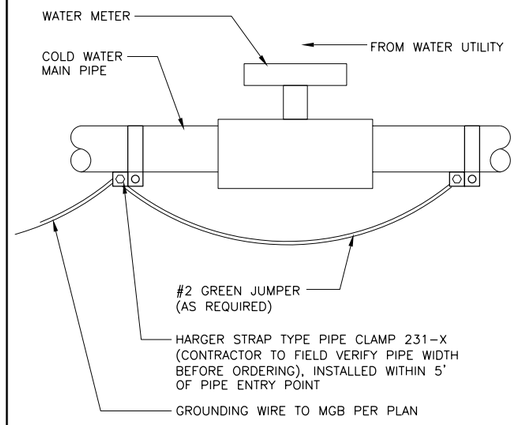
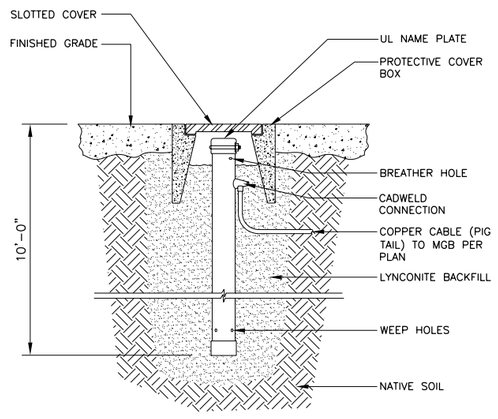
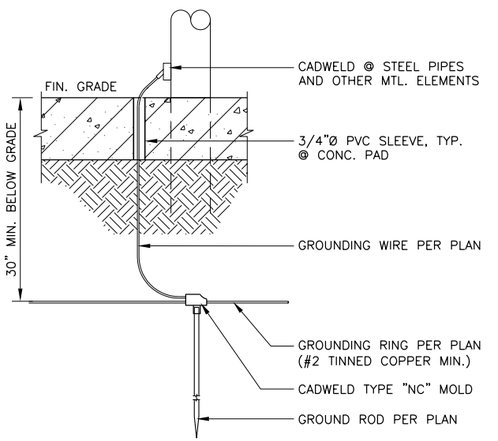
E-1



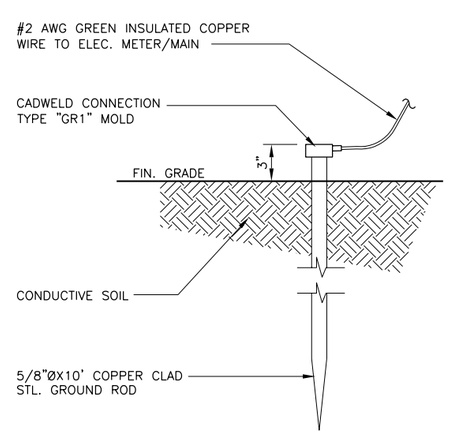
GROUNDING LEAD TO WATER PIPE | 6



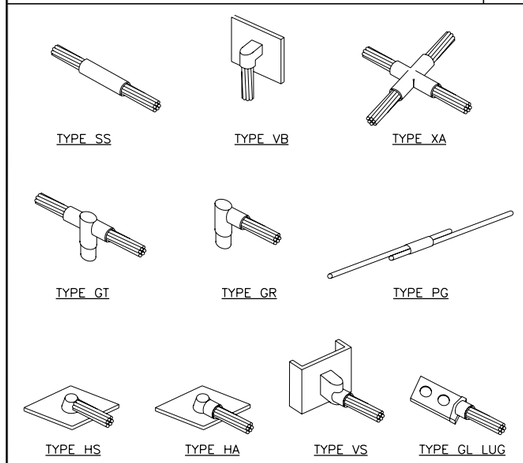
XIT CHEMICAL GROUND ROD | 3



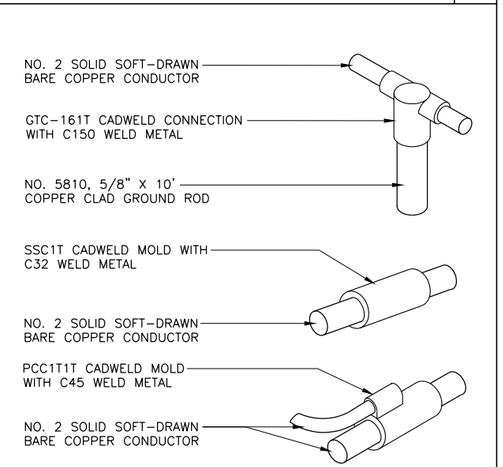
CONNECTION TO GROUNDING RING | 7



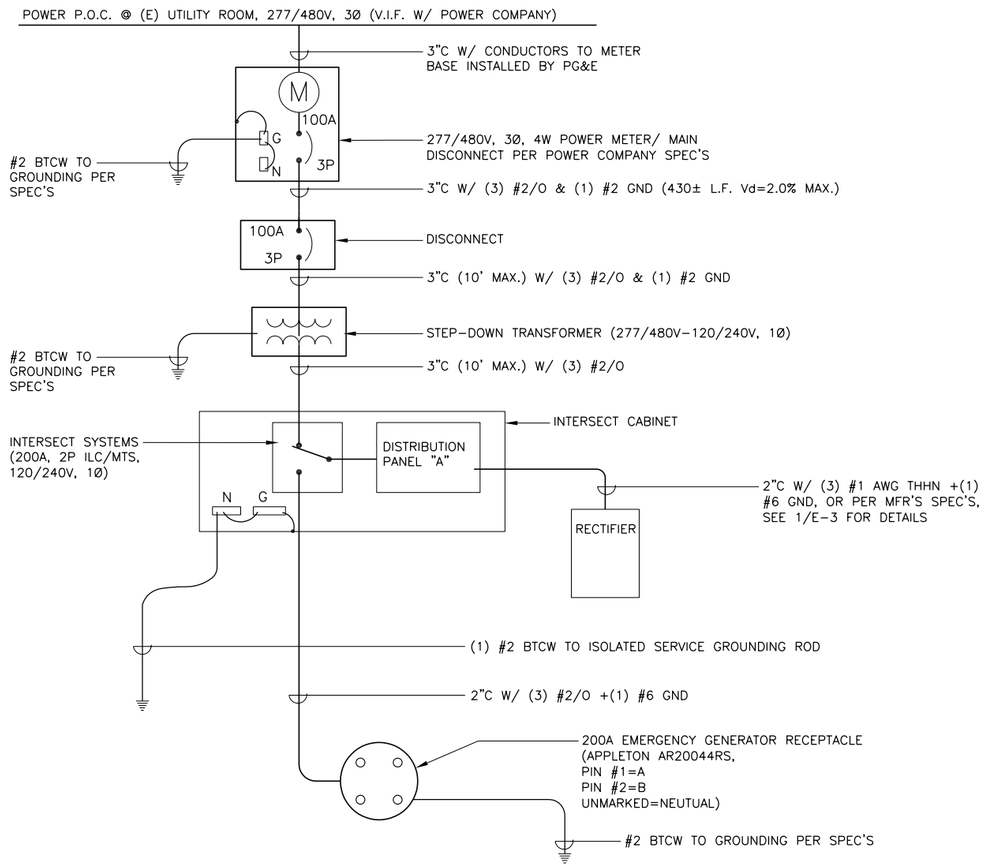
ELEC. SVC. GROUND DETAIL | 4



CADWELD TYPE | 8



CADWELD DETAILS | 5



200A, 120/240V 1Ø 3W AC
10,000 A.I.C.

PANEL "A"

MIN. 42 1" SPACES
NEMA 3R OUTDOOR ENCLOSURE

DESCRIPTION	C.B. POLE	NO.	PHASE (VA) A	PHASE (VA) B		NO.	C.B. POLE	DESCRIPTION
RECTIFIER #1	20/2	1	625			2		
		3		625		4		
RECTIFIER #2	20/2	5	625			6		
		7	500	625		8	20/1	MISC BAY
RECTIFIER #3	20/2	9	625			10		
		11		625		12		
RECTIFIER #4	20/2	13	625			14		
		15		625		16		
RECTIFIER #5	20/2	17	625			18		
		19		625		20		
RECTIFIER #6	20/2	21	625			22		
		23		625		24		
RECTIFIER #7	20/2	25	625			26		
		27	360	625		28	20/1	RECEPTACLE
RECTIFIER #8	20/2	29	625	300		30	20/1	GFCI RECEPTACLE
		31	1800	625		32	50/2	LTE
UTILITY OUTLET	15/1	33	500	1800		34		
		35		200		36	20/1	ALARM PANEL
		37				38		
		39				40		
		41				42		
LOAD PHASE			8,160	7,300				
TOTAL CONNECTED LOAD	15,460VA/240V X 125% = 80.52A < 200A							

NOTES:

1) ALL BREAKERS 10,000 A.I.C.

2) CONTRACTOR TO VERIFY WITH EQUIPMENT SPEC'S BEFORE INSTALLATION

3) PANEL SCHEDULE SUBJECT TO CHANGE IF CONFLICT W/ MFR'S SPEC'S

ELECTRICAL 1-LINE DIAGRAM & PANEL SCHEDULE | 1

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TEL: (925) 890-7494
JYu@BayStoneEngineering.com

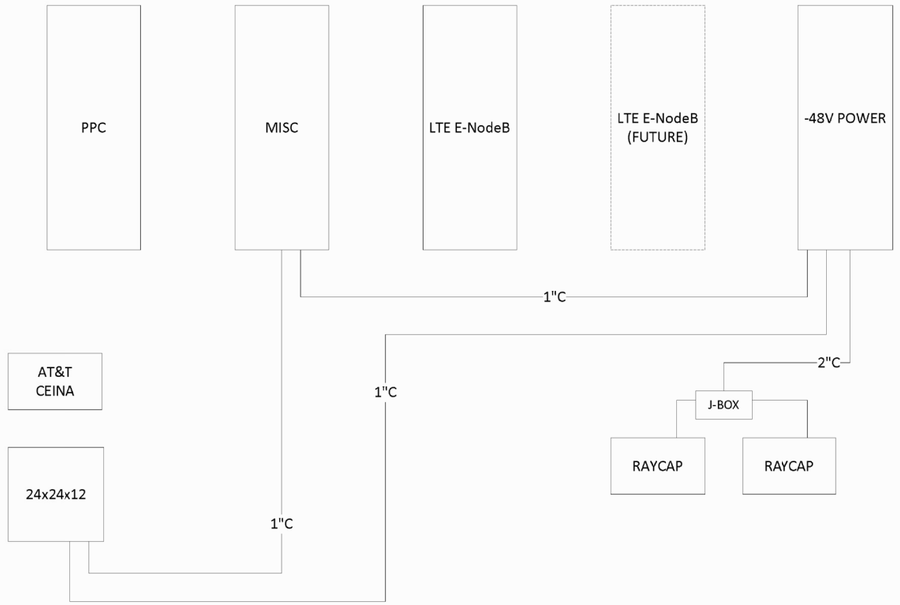
JOB NUMBER:
COV005

SEAL:

SHEET TITLE:
1-LINE DIAGRAM DETAILS

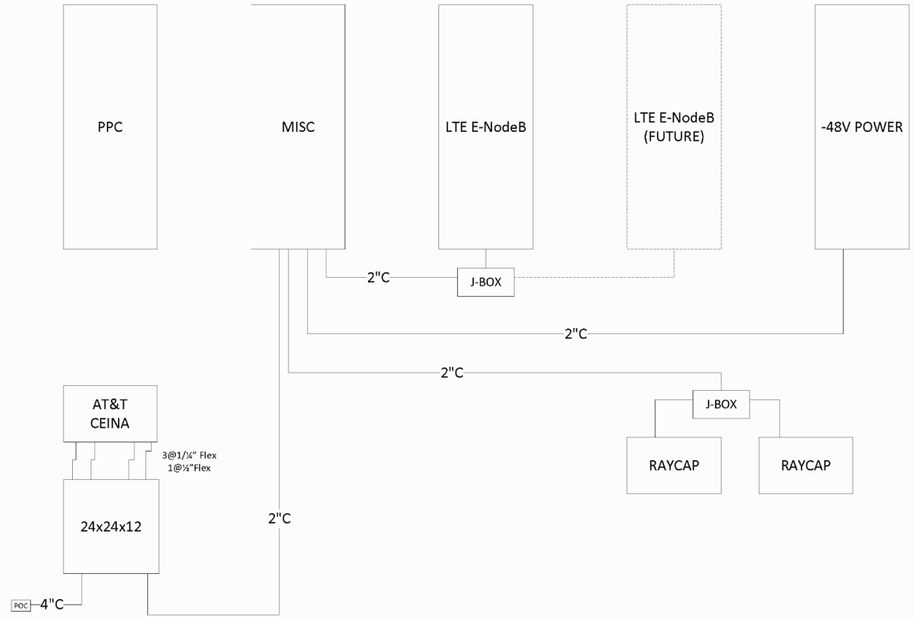
SHEET NUMBER:
E-2

DC VOLTAGE



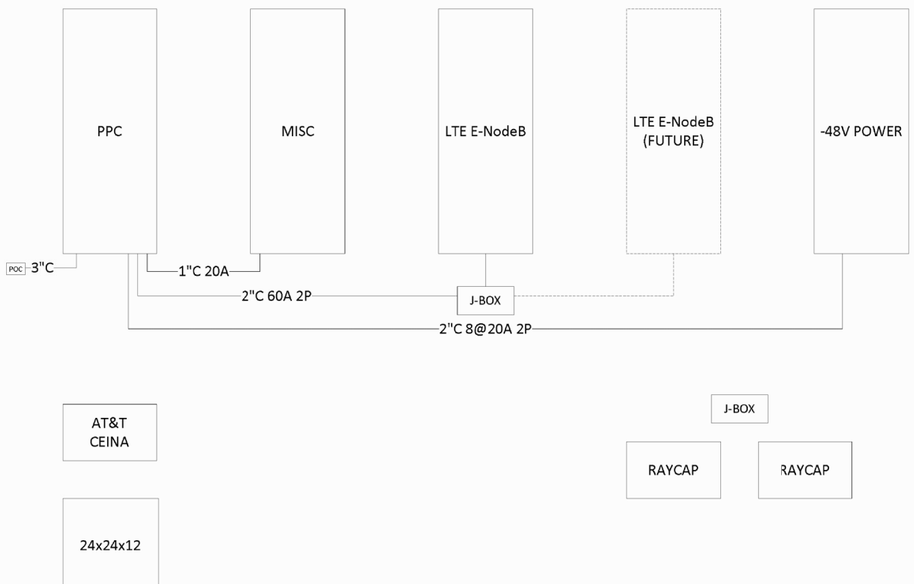
DC POWER CONDUITS DIAGRAM | 3

FIBER/TELCO



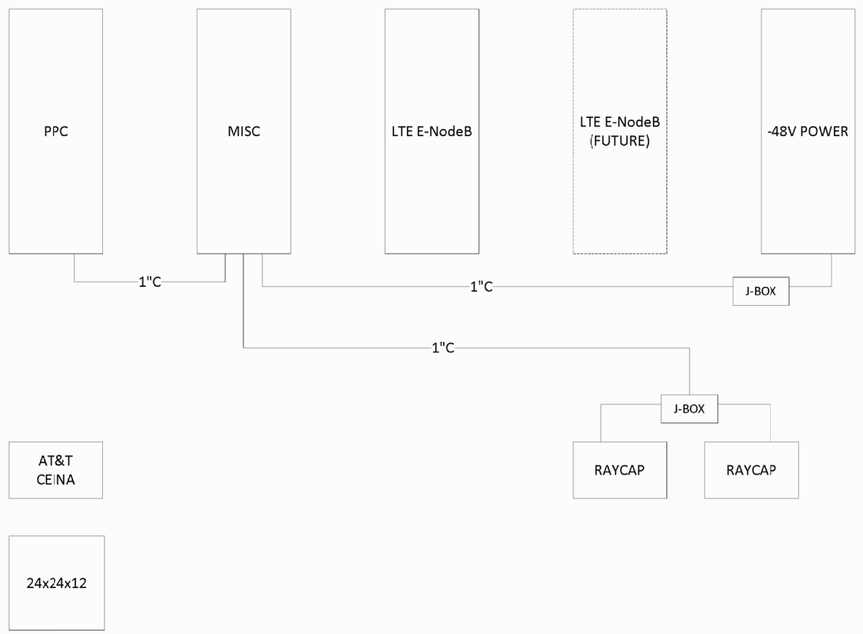
TELCO CONDUITS DIAGRAM | 1

AC VOLTAGE



AC POWER CONDUITS DIAGRAM | 4

ALARMS



ALARM CONDUITS DIAGRAM | 2

verizon wireless
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

SITE NO. & NAME:

278693
ARMY MISSION RELO

SITE ADDRESS:

3120 MISSION STREET
SAN FRANCISCO, CA 94110
SAN FRANCISCO COUNTY

ISSUE STATUS:

REV.	DATE	DESCRIPTION
A	10/22/14	ZD 100% FINAL
B	11/10/14	ZD REV. GRND ELE.
C	11/16/14	CD 90% REVIEW
D	04/07/15	ZD REV. PLANNING
E	04/20/15	ZD 100% FINAL
F	06/09/15	CD 90% REVIEW REV.
G	07/23/15	CD 100% FINAL
H	07/29/15	CD REV. PLANNING
J	10/01/15	CD REV. GEN. RELO
K	11/30/15	CD REV. UTILITY RTS

DESIGN FIRM:

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JOB NUMBER:

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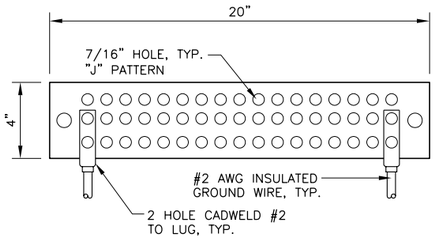
SEAL:

SHEET TITLE:

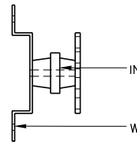
CABINETS CONDUITS CONNECTION DIAGRAMS

SHEET NUMBER:

E-3



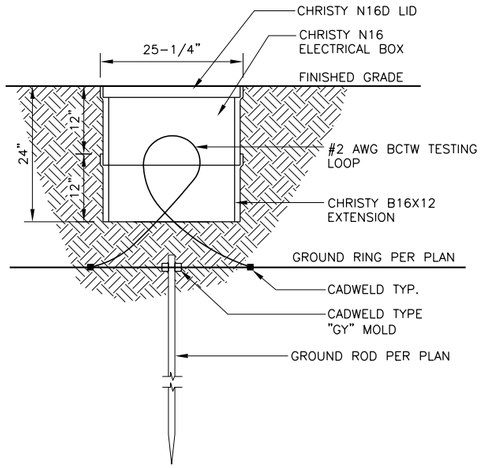
FRONT VIEW



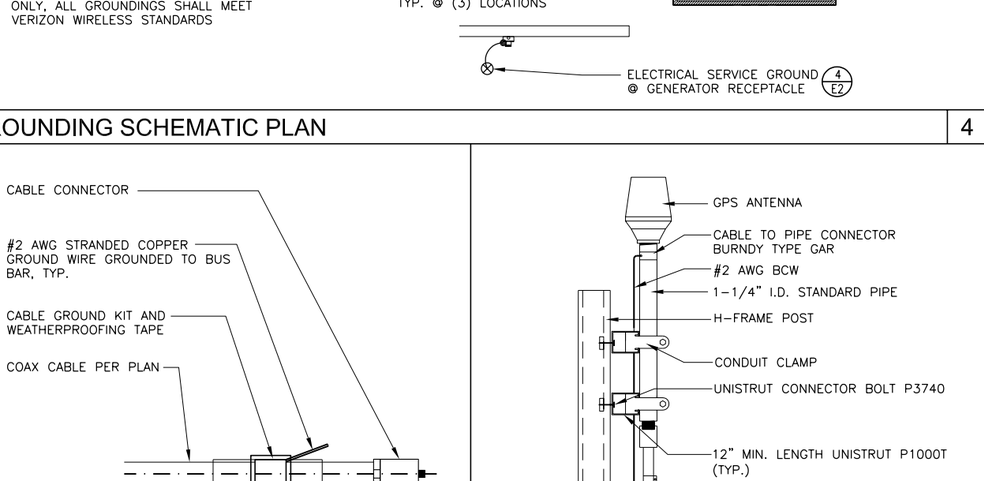
SIDE VIEW

MANUFACTURER: HARGER
(4"X20"X0.25", GBI1442OJ)

GROUND BUS DETAIL | 7



GROUNDING WELL DETAIL | 8



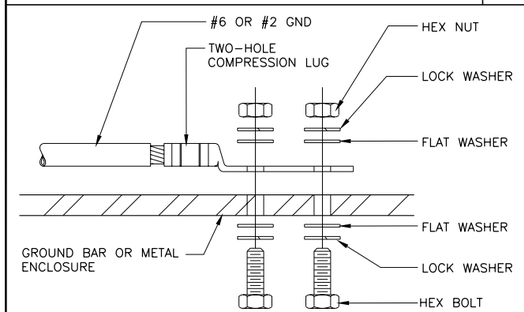
NOTE:

GROUNDING DIAGRAMS ARE FOR REFERENCE ONLY, ALL GROUNDINGS SHALL MEET VERIZON WIRELESS STANDARDS

GROUNDING SCHEMATIC PLAN | 4

1. PROVIDE A COMPLETE GROUNDING SYSTEM PER 2013 CALIFORNIA ELECTRICAL CODE AND EQUIPMENT MANUFACTURER'S REQUIREMENTS. USE THESE DRAWINGS AS MINIMUM GUIDELINE TO IMPLEMENT CARRIER AND EQUIPMENT CABINET MANUFACTURER SPECIFICATIONS.
2. ALL DETAILS ARE SHOWN IN GENERAL TERMS, ACTUAL GROUNDING INSTALLATION AND MOUNTING MAY VARY DUE TO SITE SPECIFIC CONDITIONS.
3. ALL GROUNDING CONDUCTORS SHALL BE COPPER.
4. ALL GROUNDING WIRE BELOW GRADE SHALL BE BURIED @ 30" MIN. UNO. ALL CONDUIT BELOW GRADE SHALL BE PVC SCHEDULE 40.
5. USE MINIMUM #2 AWG COPPER CONDUCTORS FOR COMMUNICATION SERVICE GROUNDING CONDUCTORS.
6. ALL GROUND CONNECTIONS SHALL BE LISTED FOR THE PURPOSED INTENDED.
7. ALL LUGS SHALL BE 2-HOLE LONG-BARREL SOLID COPPER BURNDY THOMAS & BETTS OR EQUAL.
8. MINIMUM BEND RADIUS FOR GROUNDING CONDUCTORS #2 AND LARGER SHALL BE 12", 8" MINIMUM RADIUS FOR SMALL CONDUCTORS.
9. ALL CONNECTIONS AT BELOW GRADE APPLICATIONS SHALL BE CADWELD.
10. ALL IRREVERSIBLE COMPRESSION TYPE CONNECTORS SHALL BE INSTALLED USING A 12 TON HYDRAULIC PRESS MINIMUM.
11. INSTALL GROUNDING AND BONDING CONDUCTORS WITH SUFFICIENT SLACK TO AVOID BREAKING DUE TO SETTLEMENT AND MOVEMENTS OF CONDUCTORS AT ATTACHED POINTS.
12. COAT ALL BOLTED LUG & BUS GROUND CONTACT SURFACES WITH KOPR-SHEILD, NO-OX, OR PRIOR TO ATTACHMENT.
13. GROUNDING RODS SHALL BE 5/8"ø X10'-0" LONG COPPER CLAD STEEL.
14. WHERE MULTIPLE GROUND RODS ARE INSTALLED, THEY SHALL NOT BE LESS THAN 8' NOR MORE THAN 12' APART UNLESS APPROVED BY THE CARRIER REPRESENTATIVE, OR CONSTRUCTION MANAGER.
15. DRIVEN GROUND RODS SHALL BE USED EXCEPT WHERE SPECIFIC SITE CONDITIONS PRESENT DIFFICULTY, IN WHICH CASE A ELECTROLYTIC (CHEMICAL) ROD SYSTEMS MAY BE USED, SUCH AS MANUFACTURED BY LYNCOLE KIT GROUNDING SYSTEM OR EQUAL.
16. CONTRACTOR SHALL TEST GROUND RESISTANCE AT "MGB" TO VERIFY THAT RESISTANCE SHALL NOT EXCEED 5 OHMS AND SHALL SUBMIT AN INDEPENDENT TESTING REPORT TO CONSTRUCTION MANAGER INDICATING RESISTANCE VALUE OBTAINED. CONTRACTOR SHALL PROVIDE GROUNDING SYSTEM AS PART OF ITS BID, AS REQUIRED TO ATTAIN A 5 OHM VALUE OR LESS.
17. TESTING: PERFORM FULL FALL OF POTENTIAL TEST PER SITE OWNER'S GROUNDING REQUIREMENTS.
18. FINAL GROUND TEST SHALL BE MADE IN PRESENCE OF THE CARRIER REPRESENTATIVE, OR CONSTRUCTION MANAGER.
19. REFER TO CARRIER AND EQUIPMENT CABINET MANUFACTURER DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL GROUNDING REQUIREMENTS.
20. ANTENNA GROUND BUS SHALL BE LOCATED AT TOP OF ANTENNA MOUNTING STRUCTURE, ADJACENT TO THE ANTENNA MOUNT(S).
21. TOWER GROUND BUS SHALL BE LOCATED AT THE BASE OF THE ANTENNA MOUNTING STRUCTURE, ADJACENT TO WHERE THE COAXIAL CABLES ARE ROUTED.
22. SEAL ALL GROUND KITS AND CONNECTIONS WITH "ANDREW" WEATHER SEAL.

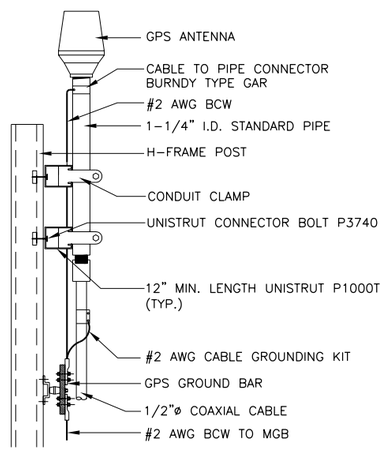
GROUNDING NOTES | 1



INSTALLATION NOTES:
1. BOLTS, WASHERS, AND NUTS SHALL BE STAINLESS STEEL.
2. USE 1/4" FOR ATTACHMENT TO METAL ENCLOSURES & 3/8" FOR ATTACHMENT TO GROUND BARS
3. SELECT BOLT LENGTH TO PROVIDE A MINIMUM OF TWO EXPOSED THREADS.
4. BURNISH MOUNTING SURFACE TO REMOVE PAINT IN THE AREA OF LUG CONTACT.
5. APPLY ANTI-OXIDANT COMPOUND TO MATING SURFACE OF LUG AND WIPE CLEAN EXCESS COMPOUND.

MECHANICAL CONNECTION DETAILS | 9

CABLE GROUNDING KIT | 6



GPS ANTENNA GROUNDING DETAIL | 5

- 5/8"ø X 10' LONG COPPER CLAD STL. GROUND ROD 4/E2
- GROUND ROD W/ TESTING WELL 8/—
- GROUND BUS BAR
- MECHANICAL CONNECTION
- CADWELD CONNECTION
- GROUND CONDUCTOR, #2 COPPER, THHN INSULATED, STRANDED, GREEN
- GROUNDING WIRE, (#2 AWG SOLID BTCW)

GROUNDING LEGEND | 2

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GROUNDING NOTES
SCHEMATIC PLAN
& DETAILS

SHEET NUMBER:

E-4