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Executive Summary
Conditional Use Authorization

HEARING DATE: DECEMBER 20, 2018

Record No.:	2018-008389CUA
Project Address:	88 King Street
Zoning:	SB-DTR (South Beach Downtown Residential) Zoning District 105/200-R Height and Bulk District
Block/Lot:	3793/005
Project Sponsor:	Sean Prior Precision Site Development LLC for Sprint 1524 Rainbow Street Roseville, CA 95747
Property Owner:	Clive Lainge One Embarcadero South Owners Association 88 King Street San Francisco, CA 94107
Staff Contact:	Ashley Lindsay – 415-575-9178 *ashley.lindsay@sfgov.org*

PROJECT DESCRIPTION

The Project includes installation of (6) new panel antennas; (12) new RRUs; (1) new microwave antenna; and (1) GPS antenna. All antennas will be located on the rooftop behind screen walls and are proposed to be painted to match the existing building. Ancillary equipment will be located inside the rooftop penthouse equipment room.

REQUIRED COMMISSION ACTION

In order for the Project to proceed, the Commission must grant a Conditional Use Authorization for a wireless telecommunications facility pursuant to Planning Code Section 303(c) and 829 to allow installation of a macro wireless telecommunications facility in a SB-DTR Zoning District.

ISSUES AND OTHER CONSIDERATIONS

- **Public Comment & Outreach.** Pursuant to the Wireless Telecommunications Facilities Siting guidelines, the Project Sponsor held a community meeting on Wednesday, May 16, 2018, at the Potrero Library, Branch Meeting Room, 1616 20th Street, San Francisco, CA 94107. No members of the community attended the meeting. As of December 10, 2018, the Department has not received any calls or testimony raising concerns about, or expressing support for the proposed project.

BASIS FOR RECOMMENDATION

The Department finds that the Project is, on balance, consistent with the Wireless Telecommunications Services Facilities Siting Guidelines and the Objectives and Policies of the General Plan. The proposed facility would be screened from view by virtue of proposed enclosures and their placement on the rooftop of the Project site. The proposal would not significantly detract from views of the Subject building or from view of other surrounding buildings, nor would it detract from adjacent streetscapes, and vistas.. The Department also finds the project to be necessary, desirable, and compatible with the surrounding neighborhood, and not to be detrimental to persons or adjacent properties in the vicinity.

ATTACHMENTS:

Draft Motion – Conditional Use Authorization
Exhibit A – Conditions of Approval
Exhibit B – Plans and Renderings
Exhibit C – Environmental Determination
Exhibit D – Community Outreach Summary
Exhibit E – Maps and Context Photos
Exhibit F - Radio Frequency Report
Exhibit G - Department of Public Health Approval
Exhibit H – Coverage Maps
Exhibit I – Independent Evaluation
Exhibit J – Alternatives Site Analysis

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Planning Commission Draft Motion

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ADOPTING FINDINGS RELATING TO A CONDITIONAL USE AUTHORIZATION PURSUANT TO PLANNING CODE SECTIONS 303(C) AND 829, TO INSTALL A SPRINT MACRO WIRELESS TELECOMMUNICATIONS FACILITY WHICH CONSISTS OF (6) NEW PANEL ANTENNAS; (12) NEW RRUS; (1) NEW MICROWAVE ANTENNA; AND (1) GPS ANTENNA. ALL ANTENNAS WILL BE LOCATED BEHIND SCREEN WALLS AND ARE PROPOSED TO BE PAINTED TO MATCH THE EXISTING BUILDING. ANCILLARY EQUIPMENT WILL BE LOCATED INSIDE THE ROOFTOP PENTHOUSE EQUIPMENT ROOM AS PART OF THE SPRINT TELECOMMUNICATIONS NETWORK. THE SUBJECT PROPERTY IS LOCATED AT 88 KING STREET, LOTS 005 IN ASSESSOR'S BLOCK 3793, WITHIN THE SB-DTR (SOUTH BEACH DOWNTOWN RESIDENTIAL) ZONING DISTRICT AND 105/200-R HEIGHT AND BULK DISTRICT, AND ADOPTING FINDINGS UNDER THE CALIFORNIA ENVIRONMENTAL QUALITY ACT.

PREAMBLE

On June 13, 2018, Sean Prior of Precision Site Development LLC (hereinafter "Project Sponsor") filed Application No. 2018-008389CUA (hereinafter "Application") with the Planning Department (hereinafter "Department") for a Conditional Use Authorization to construct a new macro Wireless Telecommunications Facility for Sprint (hereinafter "Project") at 88 King Street, Block 3793 Lots 005 (hereinafter "Project Site").

On December 20, 2018, the San Francisco Planning Commission (hereinafter "Commission") conducted a duly noticed public hearing at a regularly scheduled meeting on Conditional Use Authorization Application No. 2018-008389CUA.

On November 19, 2018 the Project was determined to be exempt from the California Environmental Quality Act ("CEQA") as a Class 3 Categorical Exemption under CEQA as described in the determination contained in the Planning Department files for this Project;

The Planning Department Commission Secretary is the custodian of records; the File for Record No. 2018-008389CUA is located at 1650 Mission Street, Suite 400, San Francisco, California.

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 Authorization as requested in Application No. 2018-008389CUA, 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. **Project Description.** The Project includes installation of (6) new panel antennas; (12) new RRUs; (1) new microwave antenna; and (1) GPS antenna. All antennas will be located on the rooftop behind screen walls and are proposed to be painted to match the existing building. Ancillary equipment will be located inside the rooftop penthouse equipment room.

3. **Site Description and Present Use.** The Project is located on the side of the view screen wall around mechanical equipment above the roof of the southern of two towers at 88 King Street with frontage along 2nd Street and King Street. The Project Site contains two 16-story high rises consisting of 230 residential condominiums.

4. **Surrounding Properties and Neighborhood.** The Project Site is located within the SB-DTR Zoning Districts in the East SoMa. The immediate context is mixed in character with high-density residential and supporting commercial and institutional. The immediate neighborhood includes one-to-four-story mixed use-office to the north, three-to-ten story mixed use-office to the west, a series of four-story residential and supporting commercial properties to the east, and South Beach Park and AT&T Park to the south.

5. **Public Outreach and Comments.** Pursuant to the Wireless Telecommunications Facilities Siting guidelines, the Project Sponsor held a community meeting on Wednesday, May 16, 2018, at the Potrero Library, Branch Meeting Room, 1616 20th Street, San Francisco, CA 94107. No members of

the community attended the meeting. As of December 10, 2018, the Department has not received any calls or testimony raising concerns about, or expressing support for the proposed project.

6. **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.

7. **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 proposed WTS facility is at a Location Preference 5 Site (Mixed Use Buildings in High Density Districts) according to the WTS Facilities Siting Guidelines, making it a desired location.

8. **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 690, 2940, and 4120 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.

9. **Radiofrequency (RF) Emissions:** The Project Sponsor retained Hammett & Edison, Inc., a radio engineering consulting firm, to prepare a report describing the expected RF emissions from the proposed facility. 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.

10. **Department of Public Health Review and Approval.** The Project was referred to the Department of Public Health (DPH) for emissions exposure analysis. Radio-Frequency (RF) levels from the proposed Sprint transmitters at any nearby publicly accessible building or area would 0.24% of the FCC public exposure limit.

    There are 0 antennas existing operated by Sprint installed on the roof top of the building at 88 King St. Existing RF levels at ground level were around 1% of the FCC public exposure limit. No other antennas were observed within 100 feet of this site. Sprint proposes to install 3 new antennas. The antennas are mounted at a height of 152.5 feet above the ground and 11 feet above the roof. The estimated ambient RF field from the proposed Sprint transmitters at ground level is calculated to be 0.0015 mW/sq cm., which is 0.17% of the FCC public exposure limit. The three dimensional perimeter of RF levels equal to the public exposure limit extends 30 feet and does not reach 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 6 feet of the front of the antennas while they are in operation. Due to the mounting locations and height, the antennas would not be accessible to unauthorized persons.

11. **Coverage and Capacity Verification.** The maps, data, and conclusion provided by Sprint to demonstrate the need for outdoor and indoor coverage and capacity have been determined by EBI Consulting, an engineering consultant and independent third party, to accurately represent the carrier's present and post-installation conclusions.

12. **Maintenance Schedule**. The facility would operate without on-site staff but with a maintenance crew visiting the property to service and monitor the facility.

13. **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 829, a Conditional Use Authorization is required for a macro WTS facility (Utility and Infrastructure Use).

14. **Conditional Use Findings.** Planning Code Section 303 establishes criteria for the Planning Commission to consider when reviewing applications for Conditional Use authorization. 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.

    The Project at 88 King 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. The Project is necessary in order to achieve LTE coverage and data capacity.

    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:

    (1) Nature of proposed site, including its size and shape, and the proposed size, shape and arrangement of structures;

    The Project height and bulk of the existing building will remain the same and will not significantly alter the existing appearance or character of the project vicinity. The proposed work will not affect the building envelope, yet the inclusion of outside seating will alter the use of the property.

    (2) 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;

The Planning Code does not require parking or loading for a telecommunications wireless facility. The proposed use is designed to meet the needs of the immediate neighborhood and should not generate significant amounts of vehicular trips from the immediate neighborhood or citywide.

(3) 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.

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

The facility will not affect landscaping, open space, 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.

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

HOUSING ELEMENT

Objectives and Policies

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 Sprint's coverage and capacity within the South of Market neighborhood.

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

OBJECTIVE 4:
IMPROVE THE VIABILITY OF EXISTING INDUSTRY IN THE CITY AND THE ATTRACTIVENESS OF THE CITY AS A LOCATION FOR NEW INDUSTRY.

Policy 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 will 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 will ensure that residents and visitors have adequate public service in the form of Sprint 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 will 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.

16. **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 complies 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 will 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 will be displaced or altered in any way by the granting of this Authorization.

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

    The Project will 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 will not be significantly impeded and neighborhood parking will 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 will not cause any 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.

    The Project will be designed and will be constructed to conform to the structural and seismic safety requirements of the Building Code. This proposal will not impact the property's ability to withstand an earthquake.

    G. That landmarks and historic buildings be preserved.

    Currently, the Project Site does not contain any City Landmarks or historic buildings.

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

The Project will not adversely affect parks or open space, nor their access to sunlight or public vistas.

17. 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.

18. The Commission hereby finds that approval of the Conditional Use Authorization would promote the health, safety and welfare of the City.

DECISION

That based upon the Record, the submissions by the Applicant, the staff of the Department and other interested parties, the oral testimony presented to this Commission at the public hearings, and all other written materials submitted by all parties, the Commission hereby **APPROVES Conditional Use Authorization Application No. 2018-008389CUA** subject to the following conditions attached hereto as "EXHIBIT A" in general conformance with plans on file, dated October 15, 2018, and stamped "EXHIBIT B", which is incorporated herein by reference as though fully set forth.

APPEAL AND EFFECTIVE DATE OF MOTION: Any aggrieved person may appeal this Conditional Use Authorization to the Board of Supervisors within thirty (30) days after the date of this Motion. 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 Planning Commission ADOPTED the foregoing Motion on December 20, 2018.

Jonas P. Ionin
Commission Secretary

AYES:

NAYS:

ABSENT:

ADOPTED: December 20, 2018

EXHIBIT A

AUTHORIZATION

This authorization is for a conditional use to allow a wireless telecommunications facility (d.b.a. **Sprint**) located at 88 King Street, Block 3793, and Lot 005 pursuant to Planning Code Section(s) **303(c) and 829** within the **SB-DTR** District and a **105/200-R** Height and Bulk District; in general conformance with plans, dated **October 15, 2018**, and stamped "EXHIBIT B" included in the docket for Record No. **2018-008389CUA** and subject to conditions of approval reviewed and approved by the Commission on **December 20, 2018** under Motion No **XXXXXX**. This authorization and the conditions contained herein run with the property and not with a particular Project Sponsor, business, or operator.

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 **December 20, 2018** under Motion No **XXXXXX**.

PRINTING OF CONDITIONS OF APPROVAL ON PLANS

The conditions of approval under the 'Exhibit A' of this Planning Commission Motion No. **XXXXXX** 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.** The authorization and right vested by virtue of this action is valid for three (3) years from the effective date of the Motion. The Department of Building Inspection shall have issued a Building Permit or Site Permit to construct the project and/or commence the approved use within this three-year period.
   For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

2. **Expiration and Renewal.** Should a Building or Site Permit be sought after the three (3) year period has lapsed, the project sponsor must seek a renewal of this Authorization by filing an application for an amendment to the original Authorization or a new application for Authorization. Should the project sponsor decline to so file, and decline to withdraw the permit application, the Commission shall conduct a public hearing in order to consider the revocation of the Authorization. Should the Commission not revoke the Authorization following the closure of the public hearing, the Commission shall determine the extension of time for the continued validity of the Authorization.
   For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

3. **Diligent pursuit.** 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. Failure to do so shall be grounds for the Commission to consider revoking the approval if more than three (3) years have passed since this Authorization was approved.
   For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

4. **Extension.** All time limits in the preceding three paragraphs may be extended at the discretion of the Zoning Administrator where implementation of the project is delayed by a public agency, an appeal or a legal challenge and only by the length of time for which such public agency, appeal or challenge has caused delay.
   For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

5. **Conformity with Current Law.** No application for Building Permit, Site Permit, or other entitlement shall be approved unless it complies with all applicable provisions of City Codes in effect at the time of such approval.
   For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

DESIGN – COMPLIANCE AT PLAN STAGE

6. **Final Materials.** The Project Sponsor shall continue to work with Planning Department on the building design. Final materials, glazing, color, texture, landscaping, and detailing shall be subject to Department staff review and approval. The architectural addenda shall be reviewed and approved by the Planning Department prior to issuance.
   For information about compliance, contact the Case Planner, Planning Department at 415-558-6378, www.sf-planning.org

7. **Rooftop Mechanical Equipment.** Pursuant to Planning Code 141, the Project Sponsor shall submit a roof plan to the Planning Department prior to Planning approval of the building permit application. Rooftop mechanical equipment, if any is proposed as part of the Project, is required to be screened so as not to be visible from any point at or below the roof level of the subject building.
   For information about compliance, contact the Case Planner, Planning Department at 415-558-6378, www.sf-planning.org

8. **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 415-558-6378, www.sf-planning.org

9. **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:
F. Antennas and back up equipment shall be painted, fenced, landscaped or otherwise treated architecturally so as to minimize visual effects;
G. Rooftop installations shall be setback such that back up facilities are not viewed from the street;
H. Antennae attached to building facades shall be so placed, screened or otherwise treated to minimize any negative visual impact; and
I. 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 415-558-6378, www.sf-planning.org

MONITORING - AFTER ENTITLEMENT

10. **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

11. **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

12. **Implementation Costs - WTS**. 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.

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.

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

13. **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

14. **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.
    E. Notification and Testing. The Project Implementation Report shall set forth the testing and measurements undertaken pursuant to Conditions 2 and 4.

F. 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

15. **Coverage and Capacity Verification.** Use is authorized as long as an independent evaluator, selected by the Planning Department, determines that the information and conclusions submitted by the wireless service provider in support of its request for conditional use are accurate. The wireless service provider shall fully cooperate with the evaluator and shall provide any and all data requested by the evaluator to allow the evaluator to verify that the maps, data, and conclusions about service coverage and capacity submitted are accurate. The wireless service provider shall bear all costs of said evaluation. The independent evaluator, upon request by the wireless service provider shall keep the submitted data confidential and shall sign a confidentiality agreement acceptable to the wireless service provider. The independent evaluator shall be a professional engineer licensed by the State of California.
For information about compliance, contact the Case Planner, Planning Department at 415-575-9079, www.sf-planning.org .

16. **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

17. **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

18. **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

19. **Community Liaison.** Prior to issuance of a building permit 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 and all registered neighborhood groups for the area with written notice of the name, business address, and telephone number of the community liaison. Should the contact information change, the Zoning Administrator and registered neighborhood groups 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

20. **Out of Service – WTS**. The Project Sponsor or Property Owner shall remove antennae 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

21. **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

22. **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

23. **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

24. **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

Sprint

EXHIBIT B

PROJECT NAME: NEW SITE BUILD

SITE NAME: PIER 48 RELO

CASCADE #: SF25XC213-A

SITE ADDRESS: 88 KING STREET
SAN FRANCISCO, CA 94107

SITE TYPE: ROOFTOP

SITE INFORMATION

SITE ADDRESS:
88 KING STREET
SAN FRANCISCO, CA 94107

PROPERTY OWNER:
ONE EMBARCADERO SOUTH
OWNERS ASS.
CLIVE LAINGE
88 KING STREET
SAN FRANCISCO, CA 94107
PH: (415) 341-2869

SITE ACQUISITION:
PRECISION SITE DEVELOPMENT LLC
1524 RAINBOW TROUT STREET
ROSEVILLE, CA 95747
contact: JEREMY JORDAN
ph: (916) 918-9322
email: jeremy@precisionSD.com

ZONING MANAGER:
PRECISION SITE DEVELOPMENT LLC
1524 RAINBOW TROUT STREET
ROSEVILLE, CA 95747
contact: JEREMY JORDAN
ph: (916) 918-9322
email: jeremy@precisionSD.com

CONSTRUCTION MANAGER:
SPRINT
12657 ALCOSTA BLVD, SUITE 300
SAN RAMON, CA 94583
contact: MOISES PALACIOS
ph: (925) 380-2223
email: moises.palacios@sprint.com

SECTOR C- LATITUDE (NAD83):
37° 46' 49.45" N (NAD83)

SECTOR C-LONGITUDE (NAD83):
122° 23' 23.21" W (NAD83)

ARCHITECT:
BORGES ARCHITECTURAL GROUP, INC.
1478 STONE POINT DRIVE, SUITE 350
ROSEVILLE, CA 95661
contact: Matthew Dougherty
ph: (916) 782-7200
email: matthew@borgesarch.com

STRUCTURAL ENGINEER:
PZSE
1478 STONE POINT DR., 190
ROSEVILLE, CA 95661
contact: PAUL ZACHER, S.E.,MSLE
ph: (916) 961-3960

POWER COMPANY:
PG&E CORPORATION
1 MARKET STREET, SPEAR TOWER
SAN FRANCISCO, CA 94105-1126
ph: (800) 743-5000

TELEPHONE COMPANY:
AT&T CALIFORNIA
525 MARKET STREET
SAN FRANCISCO, CA 94105
ph: (800) 310-2355

APPLICANT:
SPRINT
12657 ALCOSTA BLVD, SUITE 300
SAN RAMON, CA 94583

COUNTY:
SAN FRANCISCO COUNTY

ZONING JURISDICTION:
CITY OF SAN FRANCISCO

ZONING DISTRICT:
SAN FRANCISCO COUNTY

ZONING INFORMATION:
SB-DTR

APN:
3793-005

BUILDING INFORMATION:

TYPE OF CONSTRUCTION: WOOD OR STEEL FRAME
NO. OF STORIES: 12
PRESENT USE: COMMERCIAL STORE CONDO
OCCUPANCY CLASS:
HEIGHTS & BULK DISTRICTS: 105/200-R

NOTE:

NO PLUMBING ON SITE

GROUND ELEVATION: +/- 15.6' AMSL

DISABLED ACCESS REQUIREMENTS

FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION, ACCESSIBILITY REQUIREMENTS ARE NOT REQUIRED, IN ACCORDANCE WITH CALIFORNIA BUILDING CODE, CODE OF REGULATIONS, TITLE 24, PART 2, VOLUME 1, CHAPTER 11B, DIVISION 2, SECTION 11B-203.5

SPECIAL INSPECTIONS

AREA MAP

AREA MAP

DRIVING DIRECTIONS: 12657 ALCOSTA BLVD. SAN RAMON, CA, 94583

1. DEPART ALCOSTA BLVD TOWARD BISHOP RANCH FIFTEEN
2. MAKE A U-TURN AT HOSPITAL
3. TURN LEFT ONTO CROW CANYON RD
4. TAKE RAMP RIGHT FOR I-680 NORTH TOWARD SACRAMENTO
5. TAKE RAMP RIGHT FOR CA-24 TOWARD OAKLAND / LAFAYETTE
6. TAKE RAMP RIGHT FOR I-580 WEST TOWARD SACRAMENTO / SAN FRANCISCO
7. TAKE RAMP LEFT FOR I-80 WEST TOWARD SAN FRANCISCO
8. KEEP RIGHT ONTO I-80 W
9. TOLL ROAD
10. AT EXIT 2B, TAKE RAMP LEFT FOR HARRISON ST TOWARD EMBARCADERO
11. TURN RIGHT ONTO HARRISON ST
12. TURN RIGHT ONTO THE EMBARCADERO

APPLICABLE CODES

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

1) 2016 CALIFORNIA ADMINISTRATIVE CODE, CHAPTER 10, PART 1, TITLE 24 CODE OF REGULATIONS
2) 2016 CALIFORNIA BUILDING CODE (CBC) WITH CALIFORNIA AMENDMENTS, BASED ON THE 2015 IBC (PART 2, VOL 1-2)
3) 2016 CALIFORNIA RESIDENTIAL CODE (CRC) WITH APPENDIX H, PATIO COVERS, BASED ON THE 2015 IRC (PART 2.5)
4) 2016 CALIFORNIA GREEN BUILDINGS STANDARDS CODE (CALGREEN) (PART 11) (AFFECTED ENERGY PROVISIONS ONLY
5) 2016 CALIFORNIA FIRE CODE (CFC), BASED ON THE 2015 IFC, WITH CALIFORNIA AMENDMENTS (PART 9)
6) 2016 CALIFORNIA MECHANICAL CODE (CMC), BASED ON THE 2015 UMC (PART 4)
7) 2016 CALIFORNIA PLUMBING CODE (CPC), BASED ON THE 2015 UPC (PART 5)
8) 2016 CALIFORNIA ELECTRICAL CODE (CEC) WITH CALIFORNIA AMENDMENTS, BASED ON THE 2015 NEC (PART 3)
9) 2016 CALIFORNIA ENERGY CODE (CEC)
10) ANSI / EIA-TIA-222-H
11) 2015 NFPA 101, LIFE SAFETY CODE
12) 2016 NFPA 72, NATIONAL FIRE ALARM CODE
13) 2016 NFPA 13, FIRE SPRINKLER CODE

PROJECT DESCRIPTION

INSTALL AN UNMANNED TELECOMMUNICATIONS FACILITY.

1. INSTALL (2) (P) & (2) (F) EQUIPMENT CABINETS ON (P) STEEL SKID PLATFORM INSIDE ROOFTOP PENTHOUSE EQUIPMENT ROOM.
2. INSTALL PPC CABINET, DISCONNECT, TELCO CABINET & CIENA CABINET WITH UAM WITHIN EQUIPMENT LEASE AREA
3. INSTALL (1) PANEL ANTENNA PER SECTOR, (3) TOTAL
3. INSTALL MOUNTS FOR (F) PANEL ANTENNA PER SECTOR, (3) TOTAL
4. INSTALL (3) RRHs PER SECTOR, (9) TOTAL BELOW PARAPET FOR SECTOR A OR INSIDE ROOFTOP MECHANICAL WALL AT SECTORS B & C. ALL OUT OF PUBLIC VIEW.
5. INSTALL (1) MICROWAVE ANTENNA FLUSH MOUNTED TO WALL
6. INSTALL (1) GPS ANTENNA MOUNTED INSIDE SCREEN WALL OUT OF PUBLIC VIEW.
7. INSTALL STEALTH SCREEN AT SECTORS A, B, & C. PAINT AND TEXTURE TO MATCH EXISTING BUILDING

DRAWING INDEX

SHEET NO:	SHEET TITLE
T-1	TITLE SHEET & PROJECT DATA
GN-1	GENERAL NOTES
GN-2	GENERAL NOTES
C-1	SITE SURVEY
EME-1	EME REPORT
PS-1	PHOTOSIMS
PS-2	PHOTOSIMS
A-1.1	OVERALL SITE PLAN
A-1.2A	ENLARGED SITE & EQUIPMENT PLANS
A-1.2B	ENLARGED SITE & EQUIPMENT PLANS
A-2A	ENLARGED ANTENNA PLAN
A-2B	ENLARGED ANTENNA PLAN
A-3.1A	ELEVATIONS
A-3.1B	ELEVATIONS
A-3.2A	ELEVATIONS
A-3.2B	ELEVATIONS
A-4.1	EQUIPMENT DETAILS
A-4.2	DETAILS
A-4.3	DETAILS
A-5	MICROWAVE SPECIFICATION
S-1	STEALTH SCREEN DETAILS
S-2	STEALTH SCREEN DETAILS
E-1	ELECTRICAL SCHEDULE & SINGLE LINE DIAGRAM
G-1	GROUNDING NOTES & DETAILS

Sprint
12657 Alcosta Blvd., Suite 300
San Ramon, CA 94583

PRECISION
1524 RAINBOW TROUT STREET
ROSEVILLE, CA 95747

Borges ARCHITECTURAL GROUP
borgesarch.com
1478 STONE POINT DRIVE, SUITE 350
ROSEVILLE CA 95661
916 782 7200 TEL
916 773 3037 FAX

PROJECT NO: T-16503-41
DRAWN BY: JVM
CHECKED BY: MTD

REV	DATE	DESCRIPTION
2	10/15/18	100% PLAN CHECK
1	08/15/18	100% CD SUBMITTAL
0	07/18/18	90% CD SUBMITTAL

10/15/18

100% Plan Check

LICENSED ARCHITECT
RICHARD SAMBUCETTI
No. C11535
Ren. 09-30-19
STATE OF CALIFORNIA

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SF25XC213-A
PIER 48 RELO
88 KING STREET
SAN FRANCISCO, CA 94107

SHEET TITLE
TITLE SHEET & PROJECT DATA

SHEET NUMBER
T-1

THESE OUTLINE SPECIFICATIONS IN CONJUNCTION WITH THE SPRINT STANDARD CONSTRUCTION SPECIFICATIONS, INCLUDING CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

SECTION 01 100 - SCOPE OF WORK

THE WORK:
SHALL COMPLY WITH APPLICABLE NATIONAL CODES AND STANDARDS, LATEST EDITION, AND PORTIONS THEREOF.

PRECEDENCE:
SHOULD CONFLICTS OCCUR BETWEEN THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES INCLUDING THE STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES AND THE CONSTRUCTION DRAWINGS, THE MORE STRINGENT REQUIREMENT SHALL TAKE PRECEDENCE.

SITE FAMILIARITY:
CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS PRIOR TO PROCEEDING WITH CONSTRUCTION.

ON-SITE SUPERVISION:
THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

DRAWINGS, SPECIFICATIONS AND DETAILS REQUIRED AT JOBSITE:
THE CONSTRUCTION CONTRACTOR SHALL MAINTAIN A FULL SET OF THE CONSTRUCTION DRAWINGS AT THE JOBSITE FROM MOBILIZATION THROUGH CONSTRUCTION COMPLETION.

A. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. PROVIDE ALL MATERIALS AND LABOR AS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONING SYSTEM. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.

B. CONTRACTOR SHALL NOTIFY SPRINT CONSTRUCTION MANAGER OF ANY VARIATIONS PRIOR TO PROCEEDING WITH THE WORK.DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS NOTED OTHERWISE. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.

C. MARK THE FIELD SET OF DRAWINGS IN RED, DOCUMENTING ANY CHANGES FROM THE CONSTRUCTION DOCUMENTS.

METHODS OF PROCEDURE (MOPS) FOR CONSTRUCTION:
CONTRACTOR SHALL PERFORM WORK AS DESCRIBED IN THE FOLLOWING INSTALLATION AND COMMISSIONING MOPS.

A. TOP HAT
B. HOW TO INSTALL A NEW CABINET
C. BASE BAND UNIT IN EXISTING UNIT
D. INSTALLATION OF BATTERIES
E. INSTALLATION OF HYBRID CABLE
F. INSTALLATION OF RRU'S
G. CABLING
H. TS-0200 REV 4 - ANTENNA LINE ACCEPTANCE STANDARDS
I. SPRINT CELL SITE ENGINEERING NOTICE - EN 2012-001, REV 1.
J. COMMISSIONING MOPS

SECTION 01 200 - COMPANY FURNISHED MATERIAL AND EQUIPMENT

COMPANY FURNISHED MATERIAL AND EQUIPMENT IS IDENTIFIED ON THE RF DATA SHEET IN THE CONSTRUCTION DRAWINGS.

CONTRACTOR IS RESPONSIBLE FOR SPRINT PROVIDED MATERIAL AND EQUIPMENT TO ENSURE IT IS PROTECTED AND HANDLED PROPERLY THROUGHOUT THE CONSTRUCTION DURATION.

CONTRACTOR RESPONSIBLE FOR RECEIPT OF SPRINT FURNISHED EQUIPMENT AT CELL SITE OR CONTRACTORS LOCATION. CONTRACTOR TO COMPLETE SHIPPING AND RECEIPT DOCUMENTATION IN ACCORDANCE WITH COMPANY PRACTICE.

SECTION 01 300 - CELL SITE CONSTRUCTION CO.

NOTICE TO PROCEED:
NO WORK SHALL COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED AND THE ISSUANCE OF WORK ORDER.

SITE CLEANLINESS:
CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH. AT THE COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE FROM THE SITE ALL REMAINING RUBBISH, IMPLEMENTS, TEMPORARY FACILITIES, AND SURPLUS MATERIALS.

SECTION 01 400 - SUBMITTALS & TESTS

ALTERNATES:
AT THE COMPANY'S REQUEST, ANY ALTERNATIVES TO THE MATERIALS OR METHODS SPECIFIED SHALL BE SUBMITTED TO SPRINTS CONSTRUCTION MANAGER FOR APPROVAL. SPRINT WILL REVIEW AND APPROVE ONLY THOSE REQUESTS MADE IN WRITING. NO VERBAL APPROVALS WILL BE CONSIDERED,

TESTS AND INSPECTIONS:

A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTS, INSPECTIONS AND PROJECT DOCUMENTATION.

B. CONTRACTOR SHALL ACCOMPLISH TESTING INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. COAX SWEEPS AND FIBER TESTS PER TS-0200 REV 4 ANTENNA LINE ACCEPTANCE STANDARDS.
2. AGL, AZIMUTH AND DOWNTILT PROVIDE AN AUTOMATED REPORT UPLOADED TO SITERRA USING A COMMERCIAL MADE-FOR THE PURPOSE ELECTRONIC ANTENNA ALIGNMENT TOOL (AAT). INSTALLED AZIMUTH, CENTERLINE AND DOWNTILT MUST CONFORM WITH RF CONFIGURATION DATA
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL CORRECTIONS TO ANY WORK IDENTIFIED AS UNACCEPTABLE IN SITE INSPECTION ACTIVITIES AND/OR AS A RESULT OF TESTING.
4. ALL TESTING REQUIRED BY APPLICABLE INSTALLATION MOPS.

C. REQUIRED CLOSEOUT DOCUMENTATION INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING;

1. AZIMUTH, DOWNTILT, AGL FROM SUNSIGHT INSTRUMENTS - ANTENNALIGN ALIGNMENT TOOL (AAT)
2. SWEEP AND FIBER TESTS
3. SCANABLE BARCODE PHOTOGRAPHS OF TOWER TOP AND INACCESSIBLE SERIALIZED EQUIPMENT
4. ALL AVAILABLE JURISDICTIONAL INFORMATION
5. PDF SCAN OF REDLINES PRODUCED IN FIELD
6. A PDF SCAN OF REDLINE MARK-UPS SUITABLE FOR USE IN ELECTRONIC AS-BUILT DRAWING PRODUCTION
7. LIEN WAIVERS
8. FINAL PAYMENT APPLICATION
9. REQUIRED FINAL CONSTRUCTION PHOTOS
10. CONSTRUCTION AND COMMISSIONING CHECKLIST COMPLETE WITH NO DEFICIENT ITEMS
11. ALL POST NTP TASKS INCLUDING DOCUMENT UPLOADS COMPLETED IN SITERRA (SPRINTS DOCUMENT REPOSITORY OF RECORD).
12. CLOSEOUT PHOTOGRAPHS:

a PROVIDE PHOTOGRAPHS OF FINAL PROJECT PER THE FOLLOWING LIST. ADDITIONAL PHOTOGRAPHS MAY BE REQUIRED TO SUPPORT ACCEPTANCE PROCESSES

(i) BACK MAIN HYBRID CABLE ROUTE (MINIMUM TWO PHOTOS)
(ii) OF EACH ANTENNA AND RRU
(iii) MANUFACTURERS NAME TAG FOR ALL SERIALIZED EQUIPMENT
(iv) PULL AND DISTRIBUTION BOXES INTERMEDIATE BETWEEN RRU'S AND MMBS (DOOR OPEN)
(v) MMBS CABINET WITH DOOR OPEN SHOWING MODIFICATIONS
(vi) POWER CABINET, DOORS OPEN, BATTERIES INSTALLED
(vii) BREAK OUT CYLINDERS
(viii) ASR SIGNAGE FOR SPRINT OWNED TOWERS
(ix) RADIATION EXPOSURE WARNING SIGNS
(x) PHOTOGRAPH FROM EACH SECTOR FROM APPROXIMATELY RAD CENTER OF ANY NEW ANTENNA AT HORIZON.

b LOAD PHOTOS TO SITERRA PROJECT LIBRARY I5. IN I5 CREATE NEW CATEGORY; 2.5 DEPLOYMENT, AND SECTION; PERMANENT CONSTRUCTION. LABEL PHOTOS WITH SITE CASCADE AND VIEW BEING DEPICTED. CAMERAS USED TO TAKE PHOTOGRAPHS SHALL GPS ENABLED SUCH THAT THE GPS COORDINATES ARE INCLUDED IN THE PHOTO MEDIA-FILE INFORMATION.

COMMISSIONING:
PERFORM ALL COMMISSIONING AS REQUIRED BY APPLICABLE MOPS

INTEGRATION:
PERFORM ALL INTEGRATION ACTIVITIES AS REQUIRED BY APPLICABLE MOPS

SECTION 09 900 - PAINTING

QUALITY ASSURANCE:

A. COMPLY WITH GOVERNING CODES AND REGULATIONS. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

B. COMPLY WITH ALL ENVIRONMENTAL REGULATIONS FOR VOLATILE ORGANIC COMPOUNDS.

MATERIALS:

A. MANUFACTURERS: BENJAMIN MOORE, ICI DEVOE COATINGS, PPG, SHERWIN WILLIAMS OR APPROVED EQUAL. PROVIDE PREMIUM GRADE, PROFESSIONAL-QUALITY PRODUCTS FOR COATING SYSTEMS

PAINT SCHEDULE:

A. EXTERIOR ANTENNAE AND ANTENNA MOUNTING HARDWARE: ONE COAT OF PRIMER AND TWO FINISH COATS. PAINT FOR ANTENNAE SHALL BE NON-METALLIC BASED AND CONTAIN NO METALLIC PARTICLES. PROVIDE COLORS AND PATTERNS AS REQUIRED TO MASK APPEARANCE OF ANTENNAE ON ADJACENT BUILDING SURFACES AND AS ACCEPTABLE TO THE OWNER. REFER TO ANTENNA MANUFACTURER'S INSTRUCTIONS WHENEVER POSSIBLE.

B. WATER TANKS: TOUCH UP - PREPARE SURFACES TO BE REPAIRED. FOLLOW INDUSTRY STANDARDS AND REQUIREMENTS OF OWNER TO MATCH EXISTING COATING AND FINISH.

PAINTING APPLICATION:

1. INSPECT SURFACES, REPORT UNSATISFACTORY CONDITIONS IN WRITING; BEGINNING WORK MEANS ACCEPTANCE OF SUBSTRATE.
2. COMPLY WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS FOR PREPARATION, PRIMING AND COATING WORK. COORDINATE WITH WORK OF OTHER SECTIONS.
3. MATCH APPROVED MOCK-UPS FOR COLOR, TEXTURE, AND PATTERN. RE-COAT OR REMOVE AND REPLACE WORK WHICH DOES NOT MATCH OR SHOWS LOSS OF ADHESION.
4. CLEAN UP, TOUCH UP AND PROTECT WORK.

TOUCHUP PAINTING:

1. GALVANIZING DAMAGE AND ALL BOLTS AND NUTS SHALL BE TOUCHED UP AFTER TOWER ERECTION WITH "GALVANOX," "DRY GALV," OR "ZINC-IT."
2. FIELD TOUCHUP PAINT SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
3. ALL METAL COMPONENTS SHALL BE HANDLED WITH CARE TO PREVENT DAMAGE TO THE COMPONENTS, THEIR PRESERVATIVE TREATMENT, OR THEIR PROTECTIVE COATINGS.

SECTION 11 700 - ANTENNA ASSEMBLY, REMOTE RADIO UNITS AND CABLE INSTALLATION

SUMMARY:
THIS SECTION SPECIFIES INSTALLATION OF ANTENNAS, RRU'S, AND CABLE EQUIPMENT, INSTALLATION, AND TESTING OF COAXIAL FIBER CABLE.

ANTENNAS AND RRU'S:
THE NUMBER AND TYPE OF ANTENNAS AND RRU'S TO BE INSTALLED IS DETAILED ON THE CONSTRUCTION DRAWINGS.

HYBRID CABLE:
HYBRID CABLE WILL BE DC/FIBER AND FURNISHED FOR INSTALLATION AT EACH SITE. CABLE SHALL BE INSTALLED PER THE CONSTRUCTION DRAWINGS AND THE APPLICABLE MANUFACTURER'S REQUIREMENTS.

JUMPERS AND CONNECTORS:
INSTALL 1/2" COAX JUMPER CABLES BETWEEN THE RRU'S AND ANTENNAS. JUMPERS FURNISHED BY SPRINT FOR INSTALLATION BY CONTRACTOR PER CURRENT SPRINT STANDARDS. JUMPERS BETWEEN THE RRU'S AND ANTENNAS OR TOWER TOP AMPLIFIERS SHALL CONSIST OF 1/2 INCH FOAM DIELECTRIC, OUTDOOR RATED COAXIAL CABLE, MIN LENGTH FOR JUMPER SHALL BE 10"-0".

REMOTE ELECTRICAL TILT (RET) CABLES: INSERT SPEC

MISCELLANEOUS:
INSTALL SPLITTERS, COMBINERS, FILTERS PER RF DATA SHEET, FURNISHED BY SPRINT.

ANTENNA INSTALLATION:
THE CONTRACTOR SHALL ASSEMBLE ALL ANTENNAS ONSITE IN ACCORDANCE WITH THE INSTRUCTIONS SUPPLIED BY THE MANUFACTURER. ANTENNA HEIGHT, AZIMUTH, AND FEED ORIENTATION INFORMATION SHALL BE A DESIGNATED ON THE CONSTRUCTION DRAWINGS.

A. THE CONTRACTOR SHALL POSITION THE ANTENNA ON TOWER PIPE MOUNTS SO THAT THE BOTTOM STRUT IS LEVEL. THE PIPE MOUNTS SHALL BE PLUMB TO WITHIN 1 DEGREE.

B. ANTENNA MOUNTING REQUIREMENTS: PROVIDE ANTENNA MOUNTING HARDWARE AS INDICATED ON THE DRAWINGS.

HYBRID CABLES INSTALLATION:

A. THE CONTRACTOR SHALL ROUTE, TEST, AND INSTALL ALL CABLES AS INDICATED ON THE CONSTRUCTION DRAWINGS AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

B. THE INSTALLED RADIUS OF THE CABLES SHALL NOT BE LESS THAN THE MANUFACTURER'S SPECIFICATIONS FOR BENDING RADII.

C. EXTREME CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE CABLES DURING HANDLING AND INSTALLATION.

1. FASTENING MAIN HYBRID CABLES: ALL CABLES SHALL BE PERMANENTLY FASTENED TO THE COAX LADDER AT 4'-0" OC USING NON-MAGNETIC STAINLESS STEEL CLIPS.
2. FASTENING INDIVIDUAL FIBER AND DC CABLES ABOVE BREAKOUT ENCLOSURE (MEDUSA), WITHIN THE MMBS CABINET AND ANY INTERMEDIATE DISTRIBUTION BOXES:
   a. FIBER: SUPPORT FIBER BUNDLES USING ½" VELCRO STRAPS OF THE REQUIRED LENGTH @ 18" OC. STRAPS SHALL BE UV, OIL AND WATER RESISTANT AND SUITABLE FOR INDUSTRIAL INSTALLATIONS AS MANUFACTURED BY TEXTOL OR APPROVED EQUAL.
   b. DC: SUPPORT DC BUNDLES WITH ZIP TIES OF THE ADEQUATE LENGTH. ZIP TIES TO BE UV STABILIZED, BLACK NYLON, WITH TENSILE STRENGTH AT 12,000 PSI AS MANUFACTURED BY NELCO PRODUCTS OR EQUAL.
3. FASTENING JUMPERS: SECURE JUMPERS TO THE SIDE ARMS OR HEAD FRAMES USING STAINLESS STEEL TIE WRAPS OR STAINLESS STEEL BUTTERFLY CLIPS.
4. CABLE INSTALLATION:
   a. INSPECT CABLE PRIOR TO USE FOR SHIPPING DAMAGE, NOTIFY THE CONSTRUCTION MANAGER.
   b. CABLE ROUTING: CABLE INSTALLATION SHALL BE PLANNED TO ENSURE THAT THE LINES WILL BE PROPERLY ROUTED IN THE CABLE ENVELOP AS INDICATED ON THE DRAWINGS. AVOID TWISTING AND CROSSOVERS.
   c. HOIST CABLE USING PROPER HOISTING GRIPS. DO NOT EXCEED MANUFACTURES RECOMMENDED MAXIMUM BEND RADIUS.

Sprint
12657 Alcosta Blvd., Suite 300
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PRECISION SITE DEVELOPMENT
1524 RAINBOW TROUT STREET
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ROSEVILLE CA 95661
916 782 7200 TEL
916 773 3037 FAX

PROJECT NO:	T-16503-41
DRAWN BY:	JVM
CHECKED BY:	MTD

REV	DATE	DESCRIPTION
2	10/15/18	100% PLAN CHECK
1	08/15/18	100% CD SUBMITTAL
0	07/18/18	90% CD SUBMITTAL

10/15/18

100% Plan Check

LICENSED ARCHITECT
RICHARD SAMBUCETTI
No. C11535
Ren. 09-30-19
STATE OF CALIFORNIA

SF25XC213-A

PIER 48 RELO

88 KING STREET
SAN FRANCISCO, CA 94107

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-1

CONTINUE FROM SP-1

5. GROUNDING OF TRANSMISSION LINES: ALL TRANSMISSION LINES SHALL BE GROUNDED AS INDICATED ON DRAWINGS.

6. HYBRID CABLE COLOR CODING: ALL COLOR CODING SHALL BE AS REQUIRED IN TS 0200 REV 4.

7. HYBRID CABLE LABELING: INDIVIDUAL HYBRID AND DC BUNDLES SHALL BE LABELED ALPHA-NUMERICALLY ACCORDING TO SPRINT CELL SITE ENGINEERING NOTICE - EN 2012-001, REV 1

WEATHERPROOFING EXTERIOR CONNECTORS AND HYBRID CABLE GROUND KITS:

A. ALL FIBER & COAX CONNECTORS AND GROUND KITS SHALL BE WEATHERPROOFED.

B. WEATHERPROOFED USING ONE OF THE FOLLOWING METHODS. ALL INSTALLATIONS MUST BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND INDUSTRY BEST PRACTICES.

1. COLD SHRINK: ENCOMPASS CONNECTOR IN COLD SHRINK TUBING AND PROVIDE A DOUBLE WRAP OF 2" ELECTRICAL TAPE EXTENDING 2" BEYOND TUBING. PROVIDE 3M COLD SHRINK CXS SERIES OR EQUAL.

2. SELF-AMALGAMATING TAPE: CLEAN SURFACES. APPLY A DOUBLE WRAP OF SELF-AMALGAMATING TAPE 2" BEYOND CONNECTOR. APPLY A SECOND WRAP OF SELF-AMALGAMATING TAPE IN OPPOSITE DIRECTION. APPLY DOUBLE WRAP OF 2" WIDE ELECTRICAL TAPE EXTENDING 2" BEYOND THE SELF-AMALGAMATING TAPE.

3. 3M SLIM LOCK CLOSURE 716 OR OTHER SPRINT APPROVED WEATHER PROOFING ENCLOSURE.

4. OPEN FLAME ON JOB SITE IS NOT ACCEPTABLE

SECTION 11 800 - INSTALLATION OF MULTIMODAL BASE STATIONS (MMBS) AND RELATED EQUIPMENT

SUMMARY:

A. THIS SECTION SPECIFIES MMBS CABINETS, POWER CABINETS, AND INTERNAL EQUIPMENT INCLUDING BY NOT LIMITED TO RECTIFIERS, POWER DISTRIBUTION UNITS, BASE BAND UNITS, SURGE ARRESTORS, BATTERIES, AND SIMILAR EQUIPMENT FURNISHED BY THE COMPANY FOR INSTALLATION BY THE CONTRACTOR (OFCI).

B. CONTRACTOR SHALL PROVIDE AND INSTALL ALL MISCELLANEOUS MATERIALS AND PROVIDE ALL LABOR REQUIRED FOR INSTALLATION EQUIPMENT IN EXISTING CABINET OR NEW CABINET AS SHOWN ON DRAWINGS AND AS REQUIRE BY THE APPLICABLE INSTALLATION MOPS.

C. COMPLY WITH MANUFACTURERS INSTALLATION AND START-UP REQUIREMENTS

DC CIRCUIT BREAKER LABELING

A. LABEL CIRCUIT BREAKERS ACCORDING TO SPRINT CELL SITE ENGINEERING NOTICE - EN 2012-001, REV 1.

SECTION 26 100 - BASIC ELECTRICAL REQUIREMENTS

SUMMARY:
THIS SECTION SPECIFIES BASIC ELECTRICAL REQUIREMENTS FOR SYSTEMS AND COMPONENTS.

QUALITY ASSURANCE:

A. ALL EQUIPMENT FURNISHED UNDER DIVISION 26 SHALL CARRY UL LABELS AND LISTINGS WHERE SUCH LABELS AND LISTINGS ARE AVAILABLE IN THE INDUSTRY.

B. MANUFACTURERS OF EQUIPMENT SHALL HAVE A MINIMUM OF THREE YEARS EXPERIENCE WITH THEIR EQUIPMENT INSTALLED AND OPERATING IN THE FIELD IN A USE SIMILAR TO THE PROPOSED USE FOR THIS PROJECT.

C. MATERIALS AND EQUIPMENT: ALL MATERIALS AND EQUIPMENT SPECIFIED IN DIVISION 26 OF THE SAME TYPE SHALL BE OF THE SAME MANUFACTURER AND SHALL BE NEW, OF THE BEST QUALITY AND DESIGN, AND FREE FROM DEFECTS

SUPPORTING DEVICES:

A. ALL EQUIPMENT FURNISHED UNDER DIVISION 26 SHALL CARRY UL LABELS AND LISTINGS WHERE SUCH LABELS AND LISTINGS ARE AVAILABLE IN THE INDUSTRY.

B. MANUFACTURERS OF EQUIPMENT SHALL HAVE A MINIMUM OF THREE YEARS EXPERIENCE WITH THEIR EQUIPMENT INSTALLED AND OPERATING IN THE FIELD IN A USE SIMILAR TO THE PROPOSED USE FOR THIS PROJECT.

C. MATERIALS AND EQUIPMENT:
ALL MATERIALS AND EQUIPMENT SPECIFIED IN DIVISION 26 OF THE SAME TYPE SHALL BE OF THE SAME MANUFACTURER AND SHALL BE NEW, OF THE BEST QUALITY AND DESIGN, AND FREE FROM DEFECTS

SUPPORTING DEVICES:

A. MANUFACTURED STRUCTURAL SUPPORT MATERIALS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY THE FOLLOWING:

1. ALLIED TUBE AND CONDUIT

2. B-LINE SYSTEM

3. SUNISTRUT DIVERSIFIED PRODUCTS

4. THOMAS & BETTS

B. FASTENERS: TYPES, MATERIALS, AND CONSTRUCTION FEATURES AS FOLLOWS:

1. EXPANSION ANCHORS: CARBON STEEL WEDGE OR SLEEVE TYPE.

2. POWER-DRIVEN THREADED STUDS: HEAT-TREATED STEEL, DESIGNED SPECIFICALLY FOR THE INTENDED SERVICE.

3. FASTEN BY MEANS OF WOOD SCREWS ON WOOD.

4. TOGGLE BOLTS ON HOLLOW MASONRY UNITS.

5. CONCRETE INSERTS OR EXPANSION BOLTS ON CONCRETE OR SOLID MASONRY.

6. MACHINE SCREWS, WELDED THREADED STUDS, OR SPRING-TENSION CLAMPS ON STEEL.

7. EXPLOSIVE DEVICES FOR ATTACHING HANGERS TO STRUCTURE SHALL NOT BE PERMITTED.

8. DO NOT WELD CONDUIT, PIPE STRAPS, OR ITEMS OTHER THAN THREADED STUDS TO STEEL STRUCTURES.

9. IN PARTITIONS OF LIGHT STEEL CONSTRUCTION, USE SHEET METAL SCREWS.

SUPPORTING DEVICES:

A. INSTALL SUPPORTING DEVICES TO FASTEN ELECTRICAL COMPONENTS SECURELY AND PERMANENTLY IN ACCORDANCE WITH NEC.

B. COORDINATE WITH THE BUILDING STRUCTURAL SYSTEM AND WITH OTHER TRADES.

C. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, FASTEN ELECTRICAL ITEMS AND THEIR SUPPORTING HARDWARE SECURELY TO THE STRUCTURE IN ACCORDANCE WITH THE FOLLOWING:

D. ENSURE THAT THE LOAD APPLIED BY ANY FASTENER DOES NOT EXCEED 25 PERCENT OF THE PROOF TEST LOAD.

E. USE VIBRATION AND SHOCK-RESISTANT FASTENERS FOR ATTACHMENTS TO CONCRETE SLABS.

ELECTRICAL IDENTIFICATION:

A. UPDATE AND PROVIDE TYPED CIRCUIT BREAKER SCHEDULES IN THE MOUNTING BRACKET, INSIDE DOORS OF AC PANEL BOARDS WITH ANY CHANGES MADE TO THE AC SYSTEM.

B. BRANCH CIRCUITS FEEDING AVIATION OBSTRUCTION LIGHTING EQUIPMENT SHALL BE CLEARLY IDENTIFIED AS SUCH AT THE BRANCH CIRCUIT PANELBOARD.

SECTION 26 200 - ELECTRICAL MATERIALS AND EQUIPMENT

CONDUIT:

A. RIGID GALVANIZED STEEL (RGS) CONDUIT SHALL BE USED FOR EXTERIOR LOCATIONS ABOVE GROUND AND IN UNFINISHED INTERIOR LOCATIONS AND FOR ENCASED RUNS IN CONCRETE. RIGID CONDUIT AND FITTINGS SHALL BE STEEL, COATED WITH ZINC EXTERIOR AND INTERIOR BY THE HOT DIP GALVANIZING PROCESS. CONDUIT SHALL BE PRODUCED TO ANSI SPECIFICATIONS C80.1, FEDERAL SPECIFICATION WW-C-581 AND SHALL BE LISTED WITH THE UNDERWRITERS' LABORATORIES. FITTINGS SHALL BE THREADED - SET SCREW OR COMPRESSION FITTINGS WILL NOT BE ACCEPTABLE. RGS CONDUITS SHALL BE MANUFACTURED BY ALLIED, REPUBLIC OR WHEATLAND.

B. UNDERGROUND CONDUIT IN CONCRETE SHALL BE POLYVINYLCHLORIDE (PVC) SUITABLE FOR DIRECT BURIAL AS APPLICABLE. JOINTS SHALL BE BELLED, AND FLUSH SOLVENT WELDED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. CONDUIT SHALL BE CARLON ELECTRICAL PRODUCTS OR APPROVED EQUAL.

C. TRANSITIONS BETWEEN PVC AND RIGID (RGS) SHALL BE MADE WITH PVC COATED METALLIC LONG SWEEP RADIUS ELBOWS.

D. EMT OR RIGID GALVANIZED STEEL CONDUIT MAY BE USED IN FINISHED SPACES CONCEALED IN WALLS AND CEILINGS. EMT SHALL BE MILD STEEL, ELECTRICALLY WELDED, ELECTRO-GALVANIZED OR HOT-DIPPED GALVANIZED AND PRODUCED TO ANSI SPECIFICATION C80.3, FEDERAL SPECIFICATION WW-C-563, AND SHALL BE UL LISTED. EMT SHALL BE MANUFACTURED BY ALLIED, REPUBLIC OR WHEATLAND, OR APPROVED EQUAL. FITTINGS SHALL BE METALLIC COMPRESSION. SET SCREW CONNECTIONS SHALL NOT BE ACCEPTABLE.

E. LIQUID TIGHT FLEXIBLE METALLIC CONDUIT SHALL BE USED FOR FINAL CONNECTION TO EQUIPMENT. FITTINGS SHALL BE METALLIC GLAND TYPE COMPRESSION FITTINGS, MAINTAINING THE INTEGRITY OF CONDUIT SYSTEM. SET SCREW CONNECTIONS SHALL NOT BE ACCEPTABLE. MAXIMUM LENGTH OF FLEXIBLE CONDUIT SHALL NOT EXCEED 6-FEET. LFMC SHALL BE PROTECTED AND SUPPORTED AS REQUIRE BY NEC. MANUFACTURERS OF FLEXIBLE CONDUITS SHALL BE CAROL, ANACONDA METAL HOSE OR UNIVERSAL METAL HOSE, OR APPROVED EQUAL.

F. MINIMUM SIZE CONDUIT SHALL BE 3/4 INCH (21MM).

HUBS AND BOXES:

A. AT ENTRANCES TO CABINETS OR OTHER EQUIPMENT NOT HAVING INTEGRAL THREADED HUBS PROVIDE METALLIC THREADED HUBS OF THE SIZE AND CONFIGURATION REQUIRED. HUB SHALL INCLUDE LOCKNUT AND NEOPRENE O-RING SEAL. PROVIDE IMPACT RESISTANT 105 DEGREE C PLASTIC BUSHINGS TO PROTECT CABLE INSULATION.

B. CABLE TERMINATION FITTINGS FOR CONDUIT

1. CABLE TERMINATORS FOR RGS CONDUITS SHALL BE TYPE CRC BY O-Z/GEDNEY OR EQUAL.

2. CABLE TERMINATORS FOR LFMC SHALL BE ETCO - CL2075; OR MADE FOR THE PURPOSE PRODUCTS BY ROXTEC.

C. EXTERIOR PULL BOXES AND PULL BOXES IN INTERIOR INDUSTRIAL AREAS SHALL BE PLATED CAST ALLOY, HEAVY DUTY, WEATHERPROOF, DUST PROOF, WITH GASKET, PLATED IRON ALLOY COVER AND STAINLESS STEEL COVER SCREWS, CROUSE-HINDS WAB SERIES OR EQUAL.

D. CONDUIT OUTLET BODIES SHALL BE PLATED CAST ALLOY WITH SIMILAR GASKETED COVERS. OUTLET BODIES SHALL BE OF THE CONFIGURATION AND SIZE SUITABLE FOR THE APPLICATION. PROVIDE CROUSE-HINDS FORM 8 OR EQUAL.

E. MANUFACTURER FOR BOXES AND COVERS SHALL BE HOFFMAN, SQUARE "D", CROUSE-HINDS, COOPER, ADALET, APPLETON, O-Z GEDNEY, RACO, OR APPROVED EQUAL.

SUPPLEMENTAL GROUNDING SYSTEM

A. FURNISH AND INSTALL A SUPPLEMENTAL GROUNDING SYSTEM AS INDICATED ON THE DRAWINGS. SUPPORT SYSTEM WITH NON-MAGNETIC STAINLESS STEEL CLIPS WITH RUBBER GROMMETS. GROUNDING CONNECTORS SHALL BE TINNED COPPER WIRE, SIZES AS INDICATED ON THE DRAWINGS. PROVIDE STRANDED OR SOLID BARE OR INSULATED CONDUCTORS AS INDICATED.

B. SUPPLEMENTAL GROUNDING SYSTEM: ALL CONNECTIONS TO BE MADE WITH CAD WELDS, EXCEPT AT EQUIPMENT USE LUGS OR OTHER AVAILABLE GROUNDING MEANS AS REQUIRED BY MANUFACTURER; AT GROUND BARS USE TWO HOLE SPADES WITH NO OX.

C. STOLEN GROUND-BARS: IN THE EVENT OF STOLEN GROUND BARS, CONTACT SPRINT CM FOR REPLACEMENT INSTRUCTION USING THREADED ROD KITS.

EXISTING STRUCTURE:

A. EXISTING EXPOSED WIRING AND ALL EXPOSED OUTLETS, RECEPTACLES, SWITCHES, DEVICES, BOXES, AND OTHER EQUIPMENT THAT ARE NOT TO BE UTILIZED IN THE COMPLETED PROJECT SHALL BE REMOVED OR DE-ENERGIZED AND CAPPED IN THE WALL, CEILING, OR FLOOR SO THAT THEY ARE CONCEALED AND SAFE. WALL, CEILING, OR FLOOR SHALL BE PATCHED TO MATCH THE ADJACENT CONSTRUCTION.

CONDUIT AND CONDUCTOR INSTALLATION:

A. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON-PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER, PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.

B. CONDUCTORS SHALL BE PULLED IN ACCORDANCE WITH ACCEPTED GOOD PRACTICE.

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PRECISION
1524 RAINBOW TROUT STREET
ROSEVILLE, CA 95747

ARCHITECTURAL GROUP Borges
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1478 STONE POINT DRIVE, SUITE 350
ROSEVILLE CA 95661
916 782 7200 TEL
916 773 3037 FAX

PROJECT NO:	T-16503-41
DRAWN BY:	JVM
CHECKED BY:	MTD

REV	DATE	DESCRIPTION
2	10/15/18	100% PLAN CHECK
1	08/15/18	100% CD SUBMITTAL
0	07/18/18	90% CD SUBMITTAL

10/15/18

100% Plan Check

LICENSED ARCHITECT
RICHARD SAMBUCETTI
No. C11535
Ren. 09-30-19
STATE OF CALIFORNIA

SF25XC213-A

PIER 48 RELO

88 KING STREET
SAN FRANCISCO, CA 94107

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-2

Plot Date:10/15/2018 5:45:24 PM File Name:F:\2016\T-16503\Precision Site Development LLC-SF25XC213-41\SF25XC213-Shavers Building A GN-2 GENERAL NOTES.dwg Plotted By:John McDonnell

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

SPRINT

Project Number/Name: SF25XC213 / PIER 48 RELO

Project Site Location: 88 King Street
San Francisco, CA 94107
San Francisco County

Date of Observation: 07–12–17

Equipment/Procedure Used to Obtain Coordinates: Trimble Pathfinder Pro XL post processed with Pathfinder Office software.

Type of Antenna Mount: Proposed Rooftop

GPS Location:
Latitude: N 37° 46' 49.45" (NAD83) N 37° 46' 49.70" (NAD27)
Longitude: W 122° 23' 23.21" (NAD83) W 122° 23 19.32" (NAD27)

ELEVATION of Ground at Structure (NAVD88) 15.6' AMSL
STRUCTURE HEIGHT: (Top of Building) 165.0' AGL
OVERALL HEIGHT: (Top of Steel Railing) 167.0' 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 that they are true and accurate to the best of my knowledge and belief.

Kenneth D. Geil California RCE 14803

Lease Area Description

All that certain lease area being a portion of that certain parcel of land being bounded by Townsend Street and King Street to the Northwest and Southeast respectively, and 2nd Street and Assessors Block 3792 to the Southwest and Northeast respectively, being located in the City and County of San Francisco, State of California, being more particularly described as follows:

EQUIPMENT LEASE AREA:
Beginning at a point on the roof of an existing building from which a nail and tag monument stamped "Chaudharry Ass. #224" set along the Northwesterly curb of Townsend Street bears South 28°41'38" West 158.31 feet; thence from said point of beginning North 46°09'52" East 14.00 feet; thence North 31°19'54" West 10.25 feet; thence South 46°09'52" West 16.22 feet; thence South 43°50'08" East 10.00 feet to the point of beginning.

Together with a non–exclusive easement for access purposes as is necessary from the above described lease area(s) and running thence over, across, in, and through the underlying building and parcel to the public right of way more commonly known as King Street.

Also together with a non–exclusive easement for utility purposes as is necessary from and between the above described lease area and to the necessary utility points of connection within the underlying building and antenna locations.

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. NO PROPERTY MONUMENTS WERE SET.

DATE OF SURVEY: 07–12–17

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.

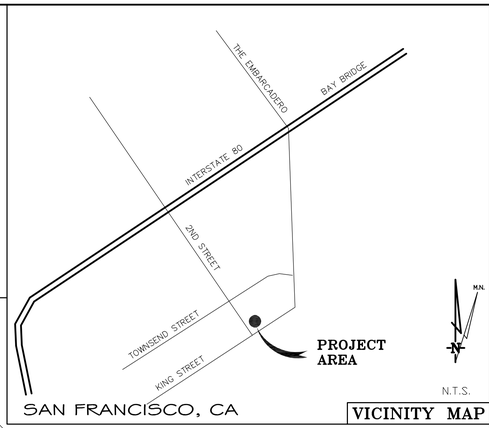
ELEVATIONS SHOWN ON THIS PLAN ARE BASED UPON U.S.G.S. N.A.V.D. 88 DATUM. ABOVE MEAN SEA LEVEL UNLESS OTHERWISE NOTED.

N.G.V.D. 1929 CORRECTION: SUBTRACT 2.72' FROM ELEVATIONS SHOWN.

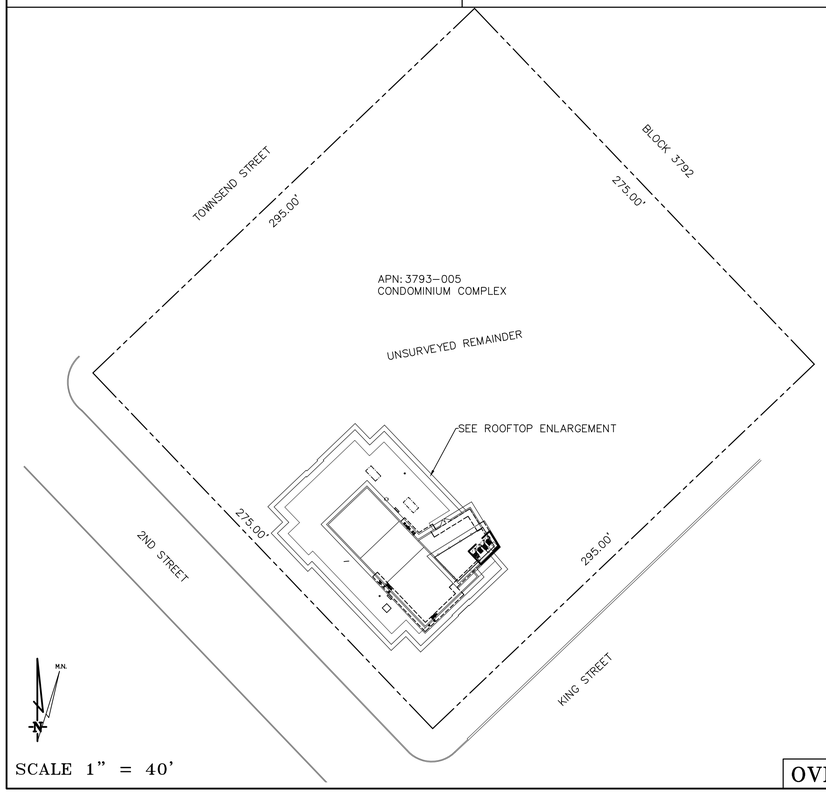
CONTOUR INTERVAL: N/A

ASSESSOR'S PARCEL NUMBER: 3793–005

OWNER(S): ONE EMBARCADERO SOUTH OWNERS ASS.
88 KING STREET
SAN FRANCISCO, CA 94107

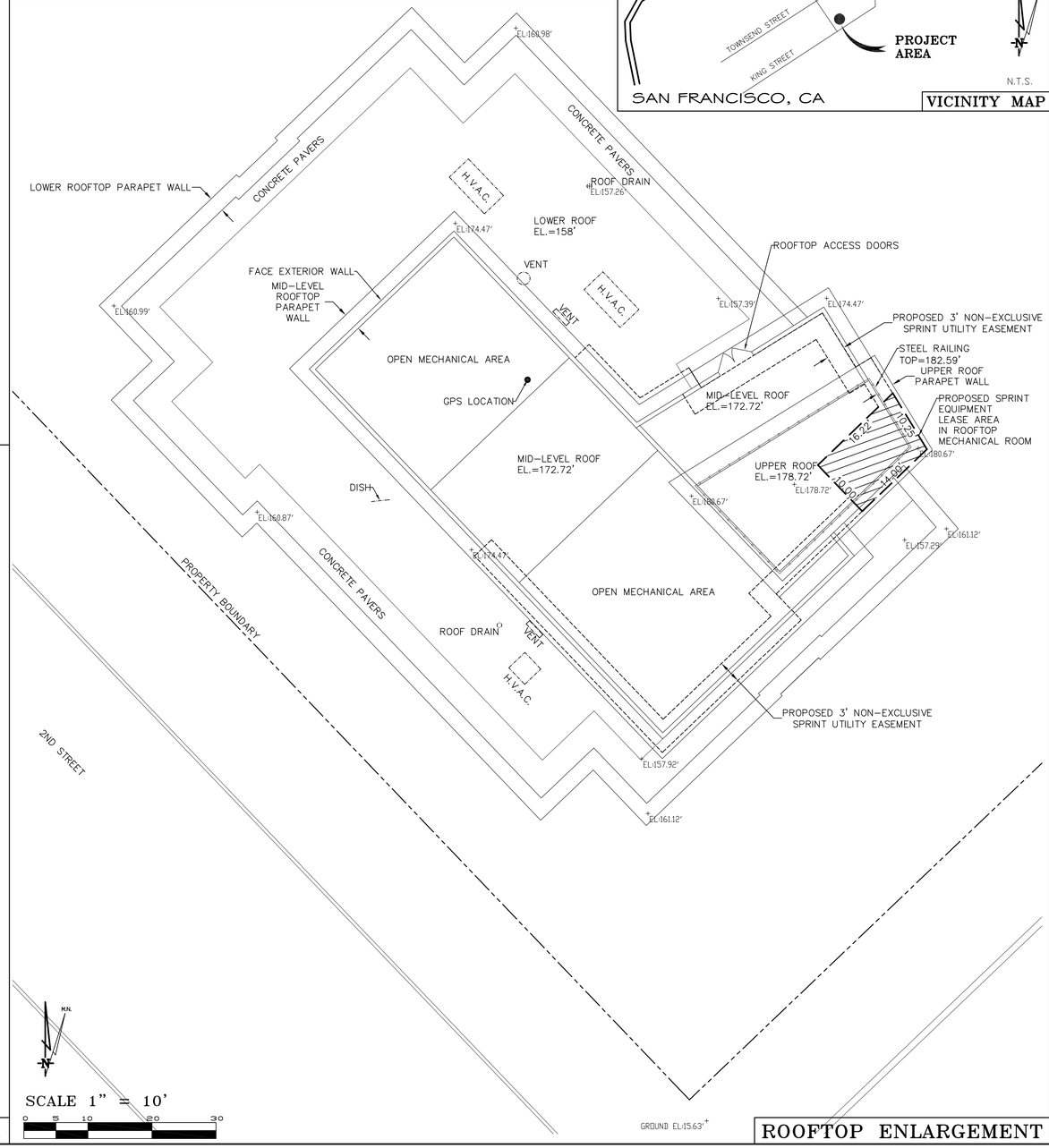


VICINITY MAP



SCALE 1" = 40'

OVERALL PROJECT AREA



SCALE 1" = 10'

ROOFTOP ENLARGEMENT

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

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PIER 48 RELO
88 KING STREET
SAN FRANCISCO, CA 94107
PLOT PLAN AND
SITE TOPOGRAPHY

REVISIONS			
REV	07–13–17 N. ROHDE	PRELIMINARY DRAWING	
REV	09–12–17 N. ROHDE	LEASE AREA PLACED	
REV	12–20–17 N. ROHDE	LEASE AREA MOD.	
REV			
REV			

Sheet
C–1

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained by Sprint, a personal wireless telecommunications carrier, to evaluate the base station (Site No. SF25xc213) proposed to be located at 88 King 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 an 11-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

Checklist

Reference has been made to information provided by Sprint, including zoning drawings by Borges Architectural Group, Inc., dated January 25, 2018. It should be noted that the calculation results in this Statement include several "worst-case" assumptions and therefore are expected to overstate actual power density levels from the proposed operations.

1. *The location, identity, and total number of all operational radiating antennas installed at this site.*

There are reported no wireless base stations installed at the 13-story residential building located at 88 King Street in San Francisco.

2. *List all radiating antennas located within 100 feet of the site that could contribute to the cumulative radio frequency energy at this location.*

There are reported no other WTS facilities within 100 feet of the site.

3. *Provide a narrative description of the proposed work for this project.*

Sprint proposes to install six antennas. This is consistent with the scope of work described in the drawings for transmitting elements.

4. *Provide an inventory of the make and model of antennas or transmitting equipment being installed or removed.*

Sprint proposes to install three KMW Model ETCR-654L12H6 directional panel antennas* behind view screens to be constructed high on the side of the mechanical equipment penthouse above the roof of the building. The antennas would employ up to 6° downtilt, would be mounted at an effective height of about 152½ feet above ground, 11 feet above the roof, and would be oriented in pairs toward 30°T, 160°T, and 225°T. Also proposed to be located on the side of the penthouse is one RFS Model SC2-220BIPN microwave "dish" antenna, mounted at an effective height of about 149½ feet above ground, 8 feet above the roof, for interconnection of this site with others in the Sprint network.

5. *Describe the existing radio frequency energy environment at the nearest walking/working surface to the antennas and at ground level. This description may be based on field measurements or calculations.*

Because there are no antennas at the site presently, existing RF levels for a person on the roof near the proposed antenna locations and at ground near the site are presumed to be well below the applicable public exposure limit.

6. *Provide the maximum effective radiated power per sector for the proposed installation. The power should be reported in watts and reported both as a total and broken down by frequency band.*

The maximum effective radiated power proposed by Sprint in any direction would be 7,750 watts, representing simultaneous operation at 2,940 watts for BRS, 4,120 watts for PCS, and 690 watts for SMR service.

7. *Describe the maximum cumulative predicted radio frequency energy level for any nearby publicly accessible building or area.*

The maximum calculated level at any nearby building is 0.24% of the public exposure limit; this occurs at the nine-story residential building located about 80 feet to the southwest.

8. *Report the estimated cumulative radio frequency fields for the proposed site at ground level.*

For a person anywhere at ground, the maximum RF exposure level due to the proposed Sprint operation, including the contribution of the microwave antenna, is calculated to be 0.0015 mW/cm^2, which is 0.17% of the applicable public exposure limit. Cumulative RF levels at ground level near the site are therefore estimated to be well below the applicable public limit.

* The drawings show that mounting space is included next to the antennas for three "future" antennas, the make and model of which are not identified.

9. *Provide the maximum distance (in feet) the three dimensional perimeter of the radio frequency energy level equal to the public and occupational exposure limit is calculated to extend from the face of the antennas.*

The three-dimensional perimeters of RF levels equal to the public and occupational exposure limits are calculated to extend up to 30 and 6 feet out from the antenna faces, respectively, and to much lesser distances above, below, and to the sides; this does not reach any publicly accessible areas.

10. *Provide a description of whether or not the public has access to the antennas. Describe any existing or proposed warning signs, barricades, barriers, rooftop striping or other safety precautions for people nearing the equipment as may be required by any applicable FCC-adopted standards.*

Due to their mounting locations and height, the Sprint antennas would not be accessible to unauthorized persons, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. To prevent occupational exposures in excess of the FCC guidelines, it is recommended that appropriate RF safety training, to include review of personal monitor use and lockout/tagout procedures, be provided to all authorized personnel who have access to the roof, including employees and contractors of Sprint and of the property owner. No access within 6 feet directly in front of the Sprint panel antennas themselves, such as might occur during certain maintenance activities above the roof, should be allowed while the pertinent antennas are in operation, unless other measures can be demonstrated to ensure that occupational protection requirements are met. It is recommended that explanatory signs† be posted at the roof access door and at the panel antennas, readily visible from any angle of approach to persons who might need to work within that distance. Operation of the microwave antenna is intrinsically compliant with the FCC exposure guidelines.

11. *Statement of authorship and qualification.*

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

† 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 Sprint at 88 King Street in San Francisco, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. 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. Training authorized personnel and posting explanatory signs are recommended to establish compliance with occupational exposure limits.

REGISTERED PROFESSIONAL ENGINEER
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E-13026
M-20676
Exp. 6-30-2019
ELECTRICAL
MECHANICAL
STATE OF CALIFORNIA

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

March 8, 2018

Sprint
12657 Alcosta Blvd., Suite 300
San Ramon, CA 94583

PRECISION
1524 RAINBOW TROUT STREET
ROSEVILLE, CA 95747

ARCHITECTURAL GROUP Borges
borgesarch.com
1478 STONE POINT DRIVE, SUITE 350
ROSEVILLE CA 95661
916 782 7200 TEL
916 773 3037 FAX

PROJECT NO: T-16503-41
DRAWN BY: JVM
CHECKED BY: MTD

REV	DATE	DESCRIPTION
2	10/15/18	100% PLAN CHECK
1	08/15/18	100% CD SUBMITTAL
0	07/18/18	90% CD SUBMITTAL

10/15/18

100% Plan Check

LICENSED ARCHITECT
RICHARD SAMBUCETTI
No. C11535
Renewal 09-30-19
STATE OF CALIFORNIA

SF25XC213-A
PIER 48 RELO
88 KING STREET
SAN FRANCISCO, CA 94107

SHEET TITLE
EME REPORT

SHEET NUMBER
EME-1

Precision Site Development
1524 Rainbow Trout Street, Roseville CA 95747
Contact: Jeremy Jordan
jeremy@precisionsd.com (916) 918 9322

Sprint - SF25XC213
88 King Street,
San Francisco, CA
Partial view of building from Embarcadero

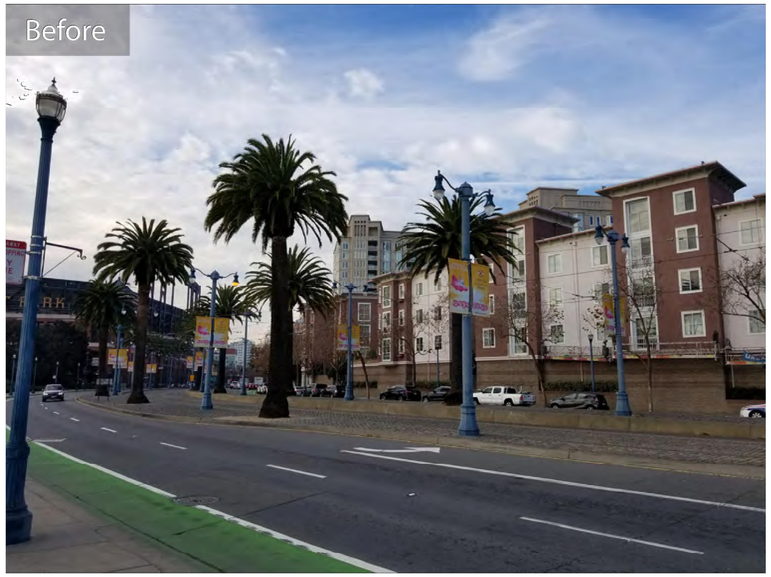

Photo simulations based on photographs taken December 12, 2017

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jeremy@precisionsd.com (916) 918 9322

Sprint - SF25XC213
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Sprint - SF25XC213
88 King Street,
San Francisco, CA
View of front of building from King St.

Photo simulations based on photographs taken December 12, 2017

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jeremy@precisionsd.com (916) 918 9322

Sprint - SF25XC213
88 King Street,
San Francisco, CA
View of front of building from King St.

Photo simulations based on photographs taken December 12, 2017

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San Ramon, CA 94583

PRECISION SITE DEVELOPMENT
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88 KING STREET
SAN FRANCISCO, CA 94107

SHEET TITLE

PHOTOSIMS

SHEET NUMBER

PS-1

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Partial view of building from King Street

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Partial view of building from King Street

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RICHARD SAMBUCETTI
No. C11535
Rev 09-30-18
STATE OF CALIFORNIA

SF25XC213-A

PIER 48 RELO

88 KING STREET
SAN FRANCISCO, CA 94107

SHEET TITLE

PHOTOSIMS

SHEET NUMBER

PS-2

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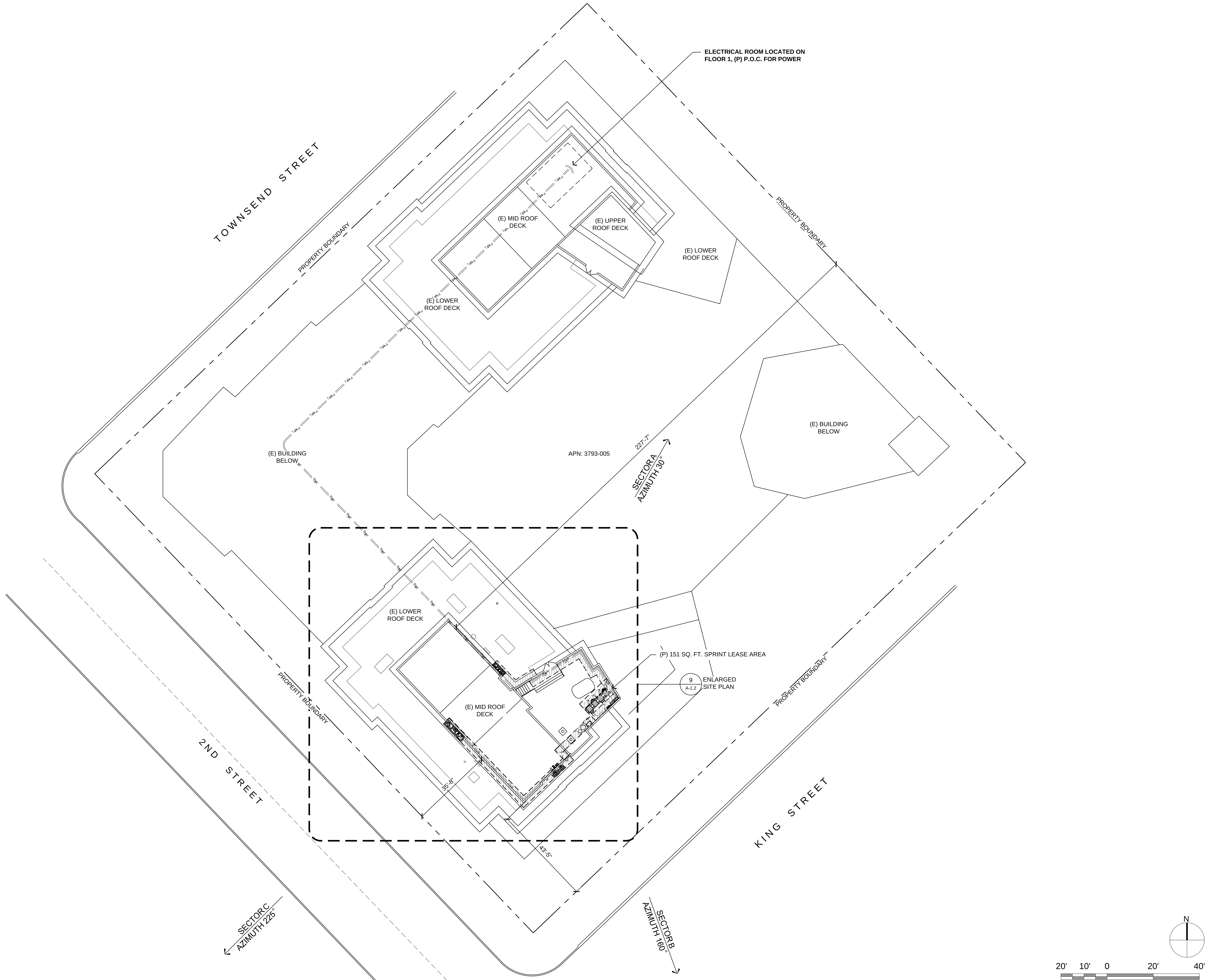

17 OVERALL SITE PLAN
1"=20'

Sprint
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PRECISION
1524 RAINBOW TROUT STREET
ROSEVILLE, CA 95747

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LICENSED ARCHITECT RICHARD SAMBUCETTI No. C11535 Ren. 09-30-19 STATE OF CALIFORNIA

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SF25XC213-A

PIER 48 RELO

88 KING STREET
SAN FRANCISCO, CA 94107

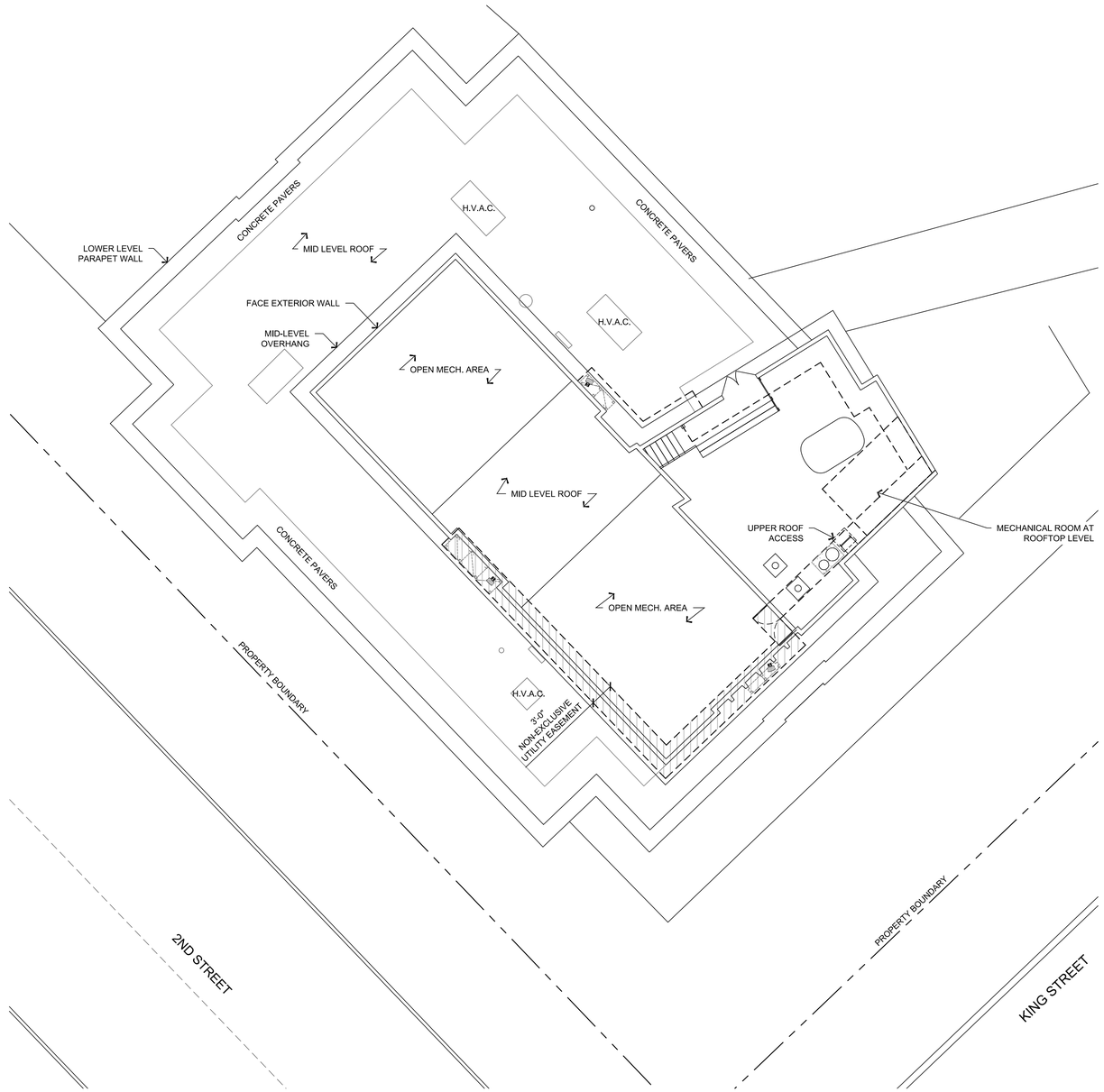
SHEET TITLE

OVERALL SITE PLAN

SHEET NUMBER

A-1.1

APN: 3793-005



1 ENLARGED SITE PLAN - EXISTING
1" = 10'-0"

Sprint
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San Ramon, CA 94583

PRECISION
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SF25XC213-A

PIER 48 RELO

88 KING STREET
SAN FRANCISCO, CA 94107

SHEET TITLE
ENLARGED SITE PLAN

SHEET NUMBER
A-1.2A

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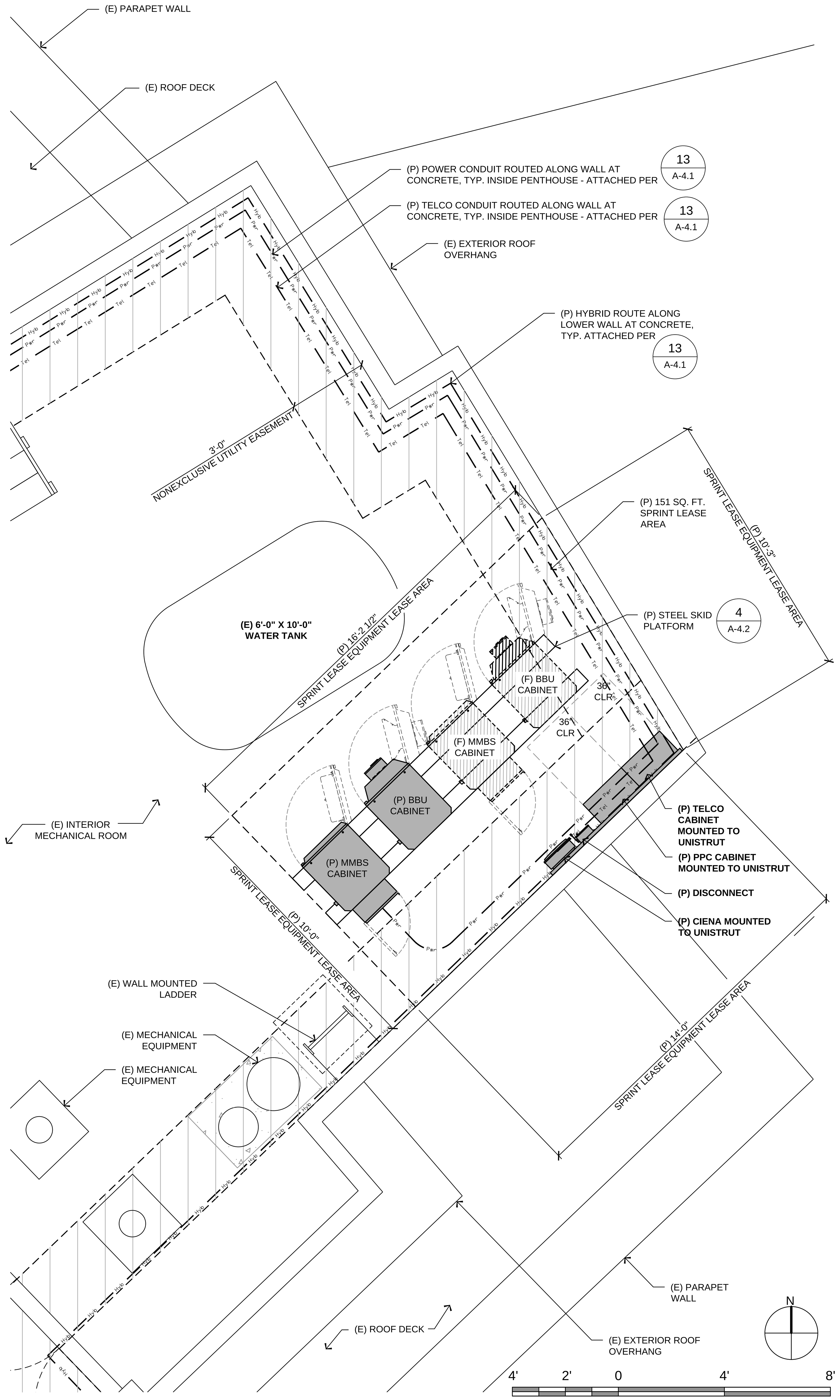
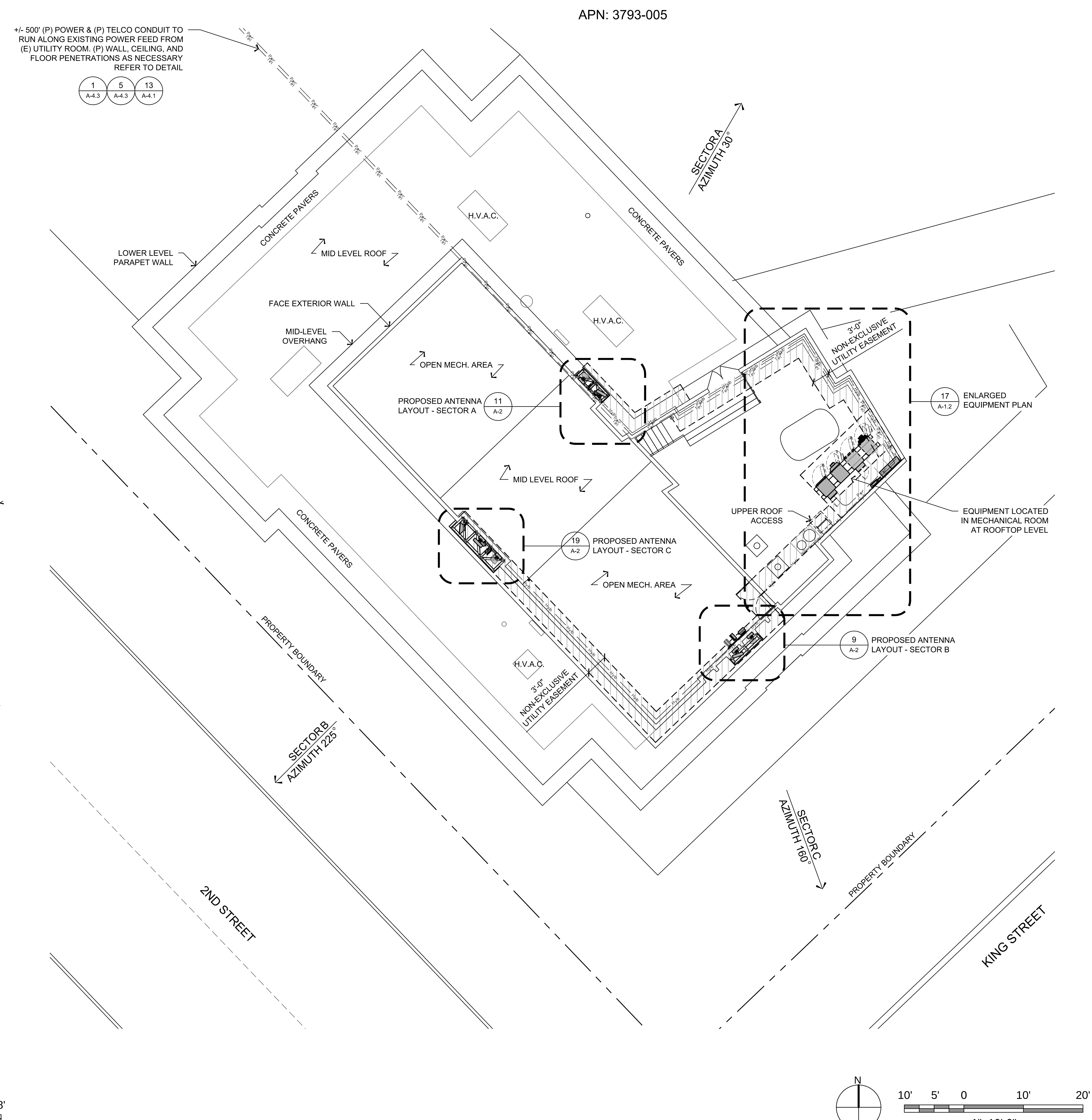


17 ENLARGED EQUIPMENT PLAN
3/8" = 1'-0"



9 ENLARGED SITE PLAN
1"=10'-0"

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PRECISION
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PROJECT NO: T-16503-41
DRAWN BY: JVM
CHECKED BY: MTD

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10/15/18

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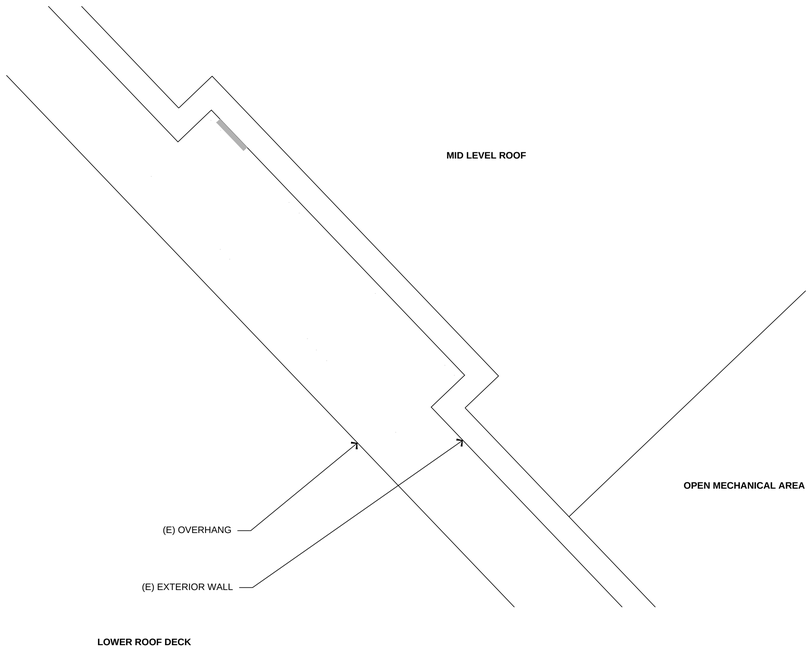
SF25XC213-A

PIER 48 RELO

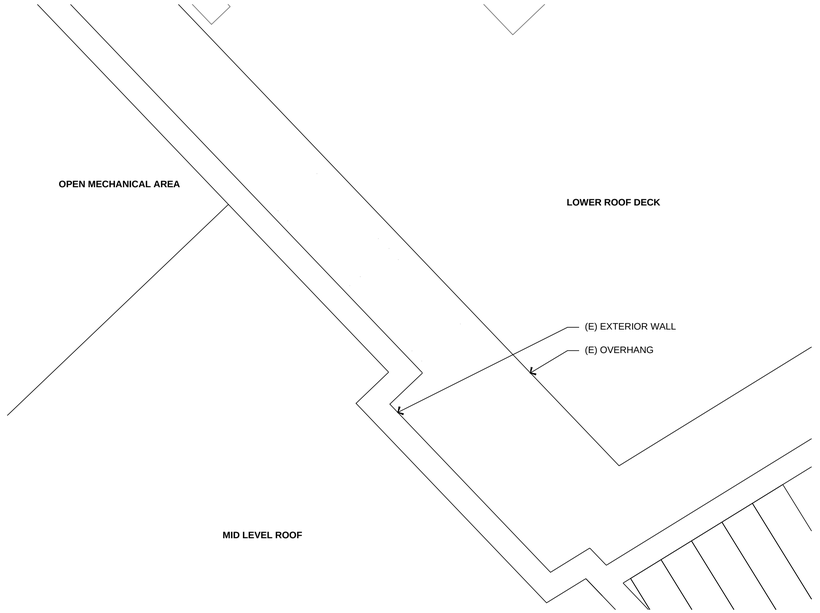
88 KING STREET
SAN FRANCISCO, CA 94107

SHEET TITLE
ENLARGED SITE & EQUIPMENT PLANS

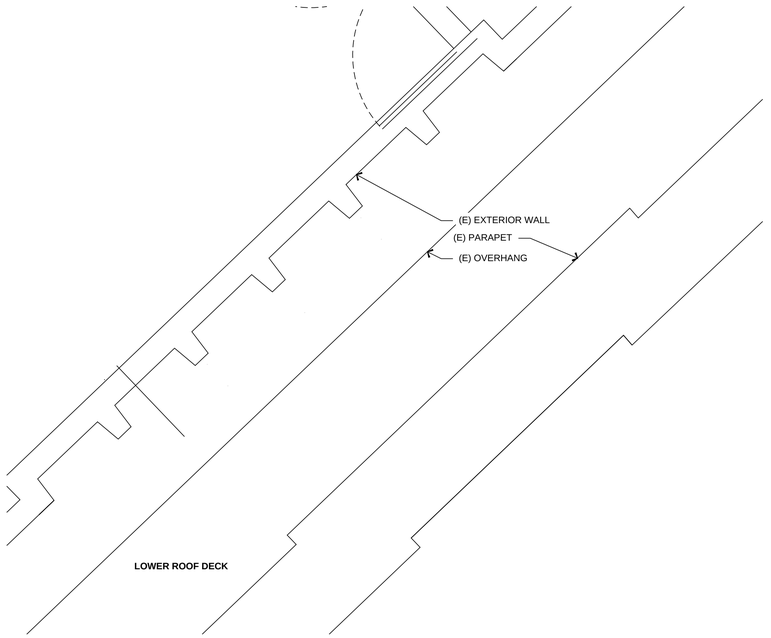
SHEET NUMBER
A-1.2B



15 EXISTING ANTENNA LAYOUT - SECTOR C
1/2" = 1'-0"



7 EXISTING ANTENNA LAYOUT - SECTOR A
1/2" = 1'-0"



5 EXISTING ANTENNA LAYOUT - SECTOR B
1/2" = 1'-0"

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PRECISION
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CHECKED BY:	MTD

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10/15/18

100% Plan Check

LICENSED ARCHITECT
RICHARD SAMBUCETTI
No. C11535
Exp. 09-30-19
STATE OF CALIFORNIA

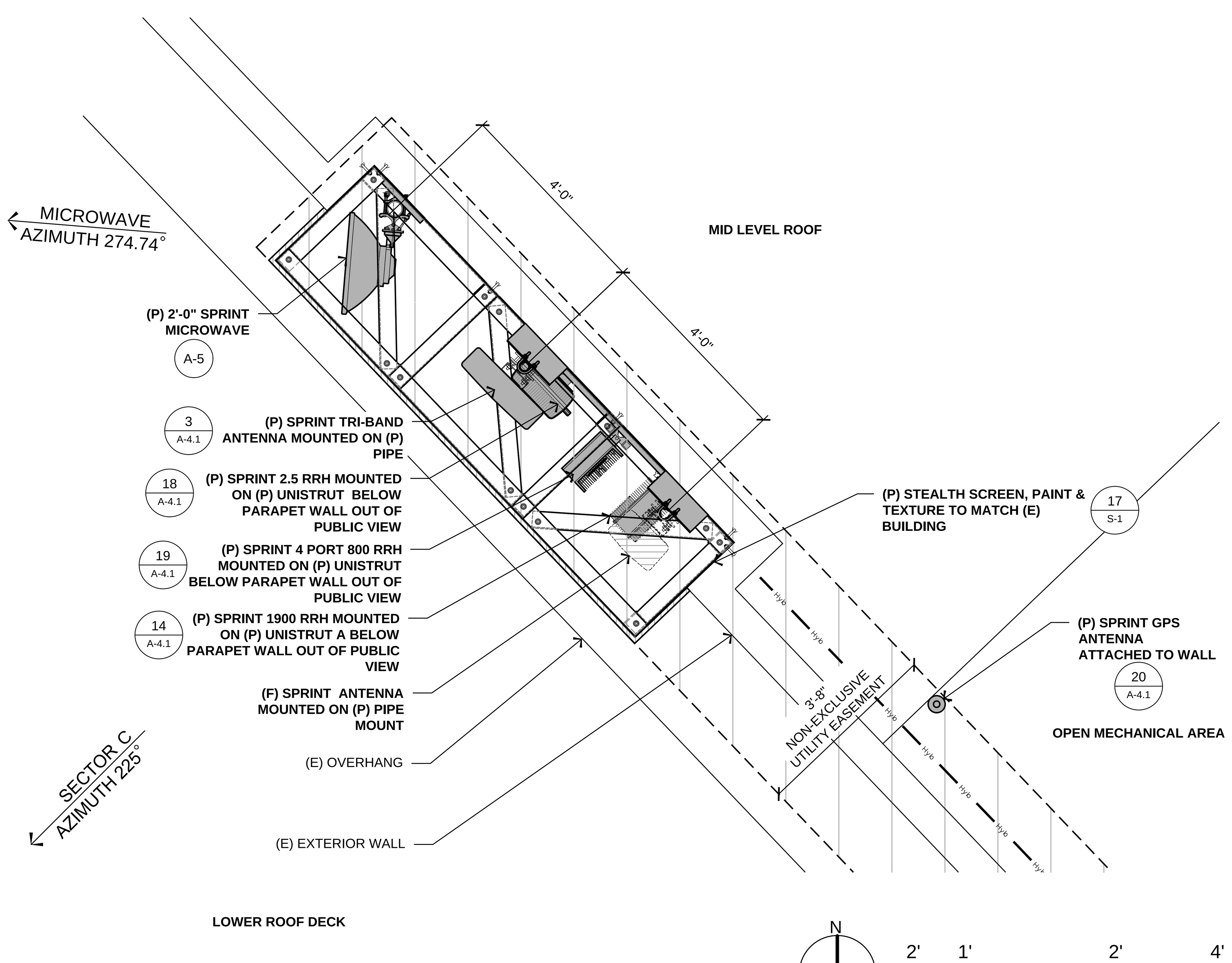
SF25XC213-A

PIER 48 RELO

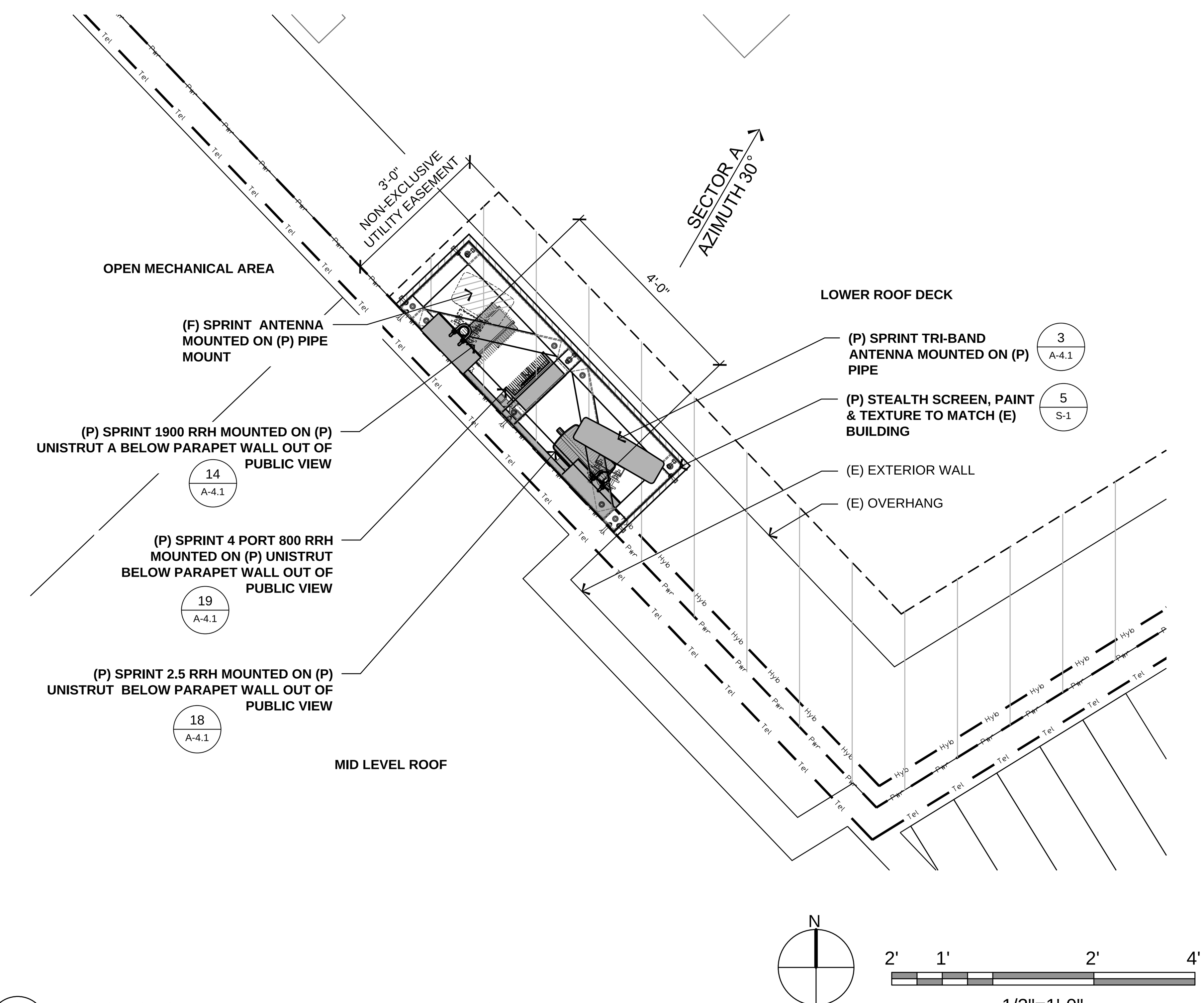
88 KING STREET
SAN FRANCISCO, CA 94107

SHEET TITLE
ENLARGED ANTENNA PLANS

SHEET NUMBER
A-2A



19 PROPOSED ANTENNA LAYOUT - SECTOR C
1/2" = 1'-0"



11 PROPOSED ANTENNA LAYOUT - SECTOR A
1/2" = 1'-0"

GRAPHICS LEGEND

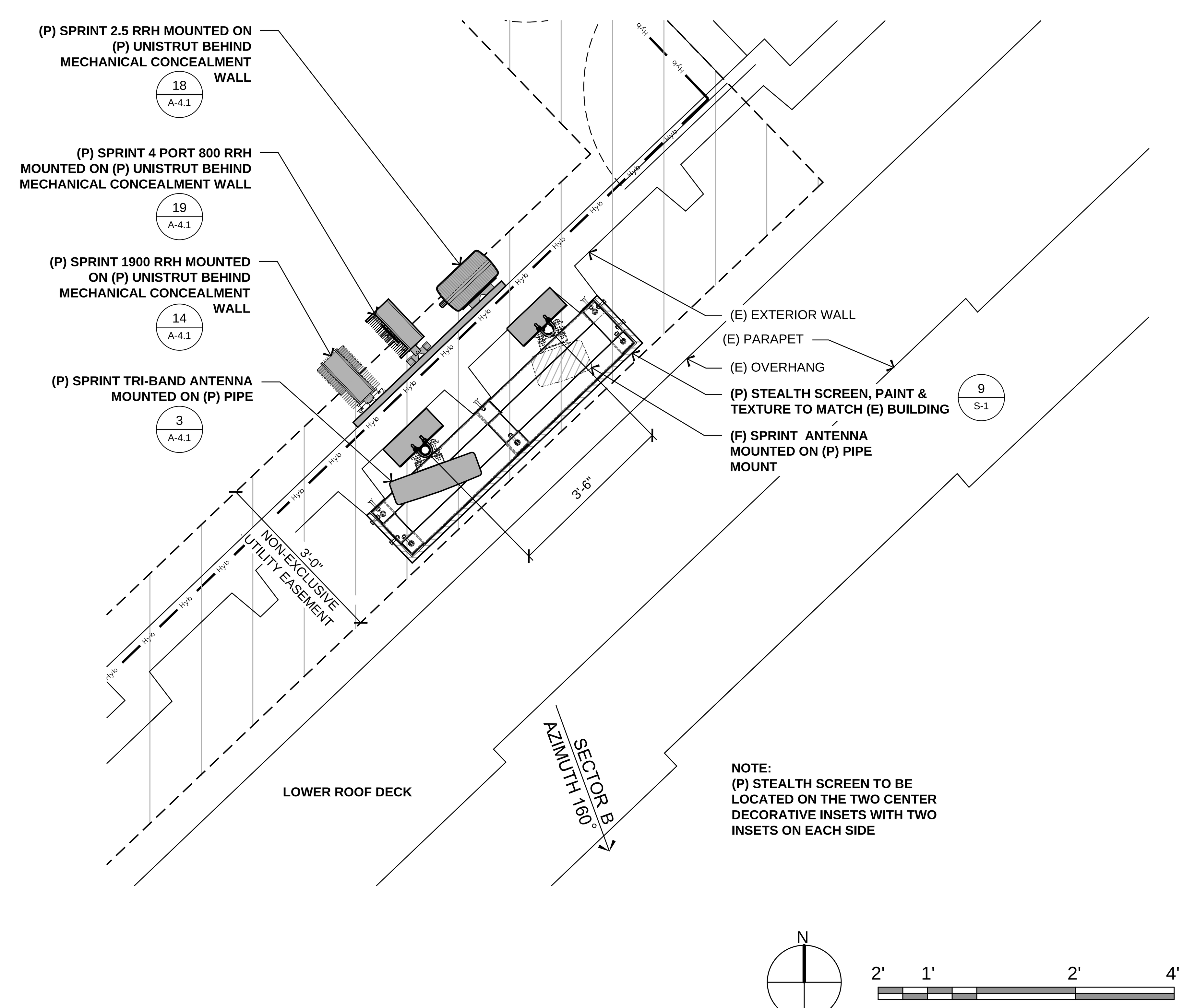
- ICE BRIDGE:
- CABLE TRAY:
- WALL/PARTITION:
- FENCE: x x x
- WOOD/IRON FENCE:
- LEASE AREA:
- POWER: Pwr Pwr Pwr
- TELCO: Tel Tel Tel
- HYBRID: Hyb Hyb Hyb

ACRONYM LEGEND

BBU:	BATTERY BACKUP UNIT
CAB:	CABINET
CDMA:	CODE DIVISION MULTIPLE ACCESS
CMU:	CONCRETE MASONRY UNIT
(E):	EXISTING
GND:	GROUND
GPS:	GLOBAL POSITIONING SYSTEM
HVAC:	HEATING VENTILATION AIR CONDITIONING
HYB:	HYBRID LINE
MMBS:	MULTI MODAL BASE STATION
(N):	NEW
(P):	PROPOSED
PPC:	POWER PROTECTION UNIT
PRI:	LEGACY PRIMARY CABINET
PWR:	POWER
RAD:	RADIATION CENTER
RET:	REMOTE ELECTRICAL TILT
RF:	RADIO FREQUENCY
RFP:	REINFORCED FIBERGLASS PANEL
RRU:	REMOTE RADIO UNIT
TEL:	TELCO
HFC:	HYDROGEN FUEL CELL
HSM:	HYDROGEN STORAGE MODULE

NOTES

1. CONDUIT ROUTING IS DIAGRAMMATICALLY SHOWN ON PLANS AND ARE ONLY APPROXIMATIONS. THE EXACT LOCATION AND ROUTING SHALL BE FIELD VERIFIED.
2. ALL ELECTRICAL EQUIPMENT AND CONTROLLING DEVICES SHALL BE PROVIDED WITH LAMI COLD NAMEPLATES, INDICATING THE CIRCUITS ORIGINATION AND ALL EQUIPMENT TERMINATIONS
3. CONTRACTOR SHALL SUPPLY BREAKERS, CONDUITS AND CIRCUIT CONDUCTORS, AS REQUIRED FOR A COMPLETED SYSTEM AND SHALL BE IN COMPLIANCE WITH MANUFACTURER SPECIFICATIONS.



NOTE:
(P) STEALTH SCREEN TO BE LOCATED ON THE TWO CENTER DECORATIVE INSETS WITH TWO INSETS ON EACH SIDE

N
2' 1' 2' 4'
1/2"=1'-0"

9 PROPOSED ANTENNA LAYOUT - SECTOR B
1/2" = 1'-0"

ANTENNA SCHEDULE

SECTOR		ANTENNA MODEL NO.	AZIMUTH	RAD CENTER
ALPHA	A1	KMW ETCR-654L12H6	30°	152'-7"
	A2	DT465B-2XR (FUTURE)	30°	152'-7"
BETA	B1	KMW ETCR-654L12H6	160°	152'-7"
	B2	DT465B-2XR (FUTURE)	160°	152'-7"
GAMMA	C1	KMW ETCR-654L12H6	225°	152'-7"
	C2	DT465B-2XR (FUTURE)	225°	152'-7"

1 ANTENNA SCHEDULE
1/2" = 1'-0"

Sprint
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San Ramon, CA 94583

PRECISION
1524 RAINBOW TROUT STREET
ROSEVILLE, CA 95747

ARCHITECTURAL GROUP Borges
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1478 STONE POINT DRIVE, SUITE 350
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916 782 7200 TEL
916 773 3037 FAX

PROJECT NO:	T-16503-41
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10/15/18

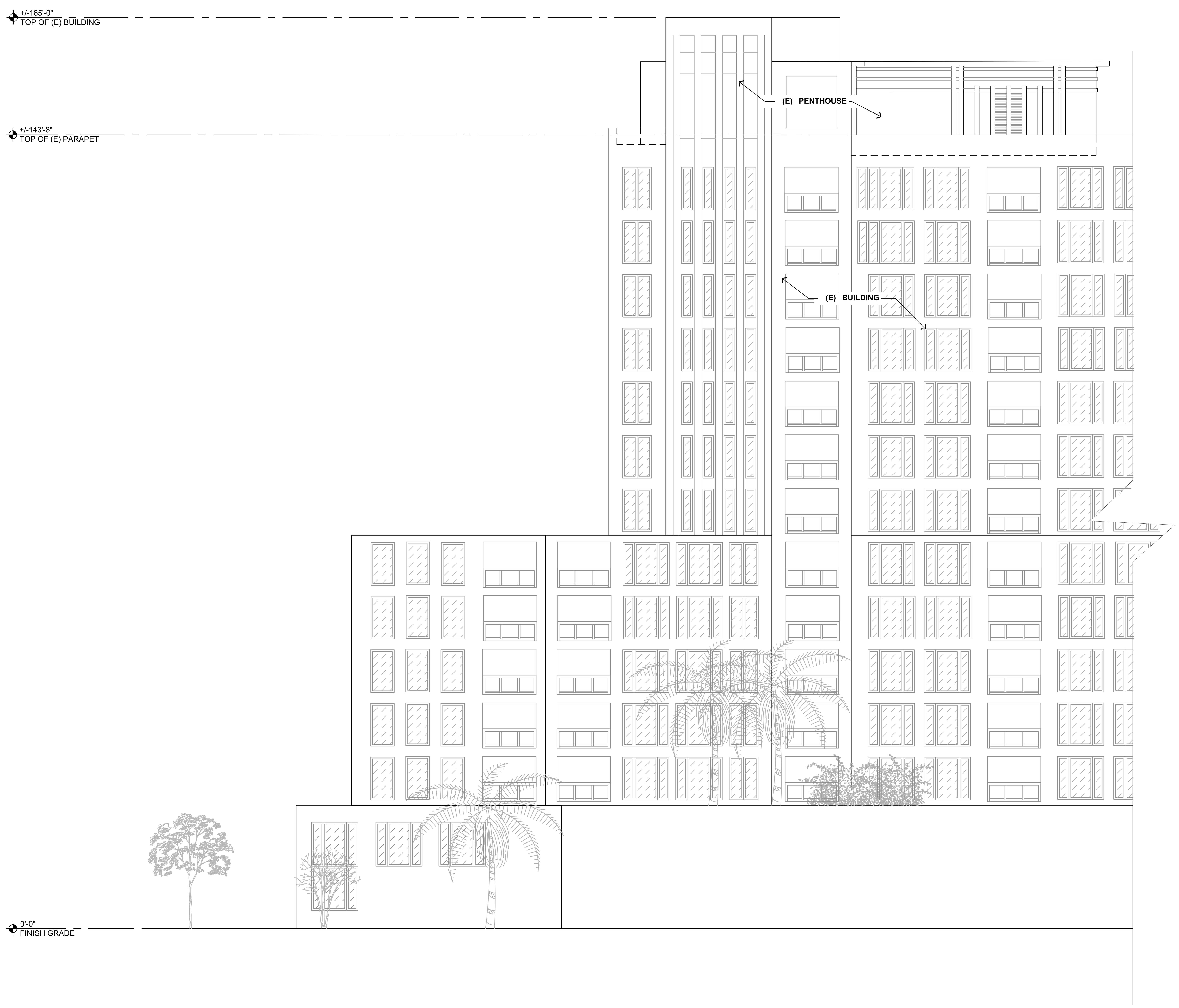
100% Plan Check

LICENSED ARCHITECT
RICHARD SAMBUCETTI
No. C11535
Ren. 09-30-19
STATE OF CALIFORNIA

SF25XC213-A
PIER 48 RELO
88 KING STREET
SAN FRANCISCO, CA 94107

SHEET TITLE
ENLARGED ANTENNA PLANS

SHEET NUMBER
A-2B



17 PROPOSED NORTHEAST ELEVATION
3/32" = 1'-0"

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PRECISION
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10/15/18

100% Plan Check

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STATE OF CALIFORNIA

SF25XC213-A

PIER 48 RELO

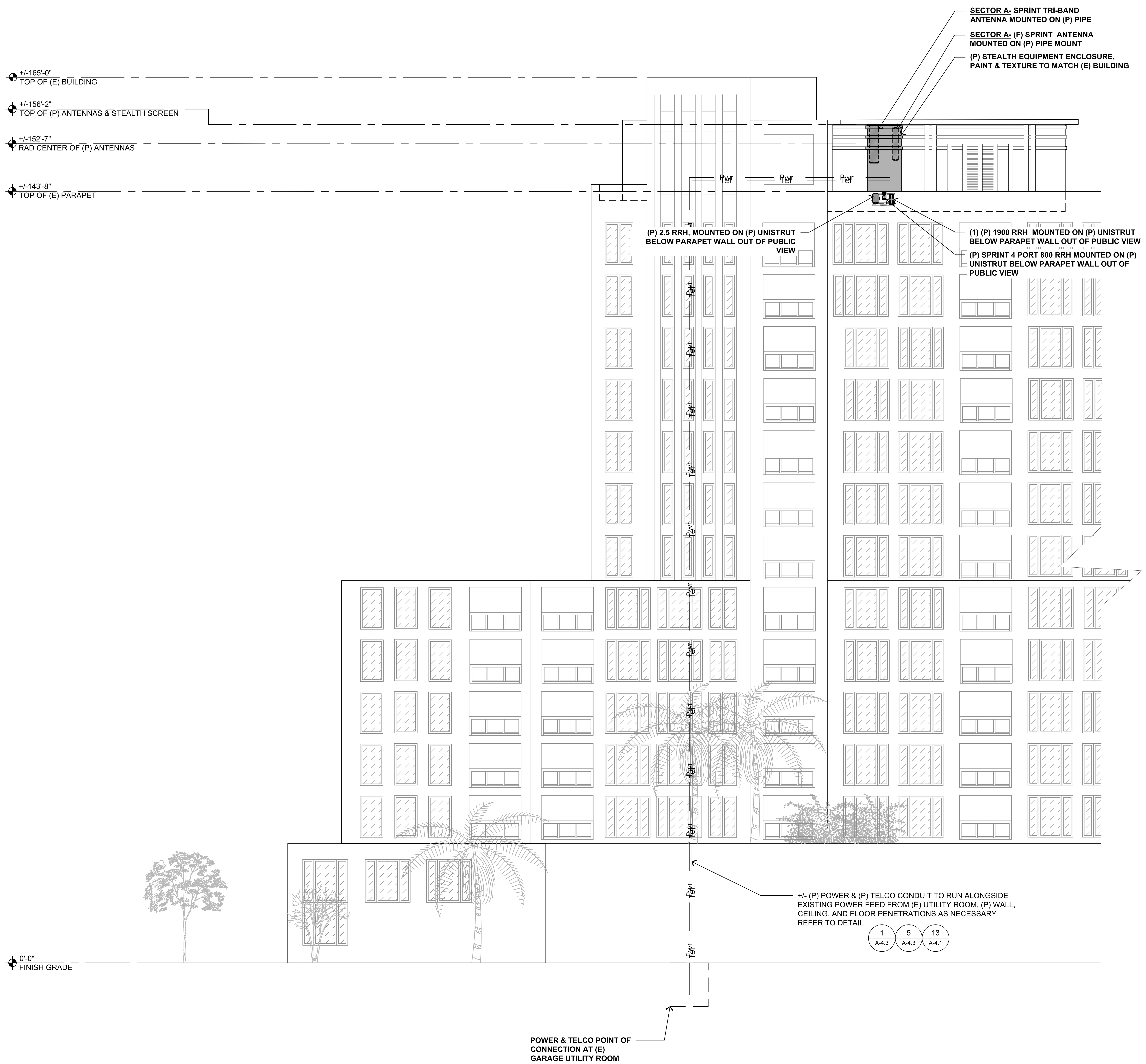
88 KING STREET
SAN FRANCISCO, CA 94107

SHEET TITLE

ELEVATIONS

SHEET NUMBER

A-3.1A



16' 8' 0 16' 32'

3/32"=1'-0"

17 PROPOSED NORTHEAST ELEVATION

3/32" = 1'-0"

Sprint

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San Ramon, CA 94583

PRECISION

1524 RAINBOW TROUT STREET
ROSEVILLE, CA 95747

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LICENSED ARCHITECT RICHARD SAMBUCETTI No. C11535 Ren. 09-30-19 STATE OF CALIFORNIA

SF25XC213-A

PIER 48 RELO

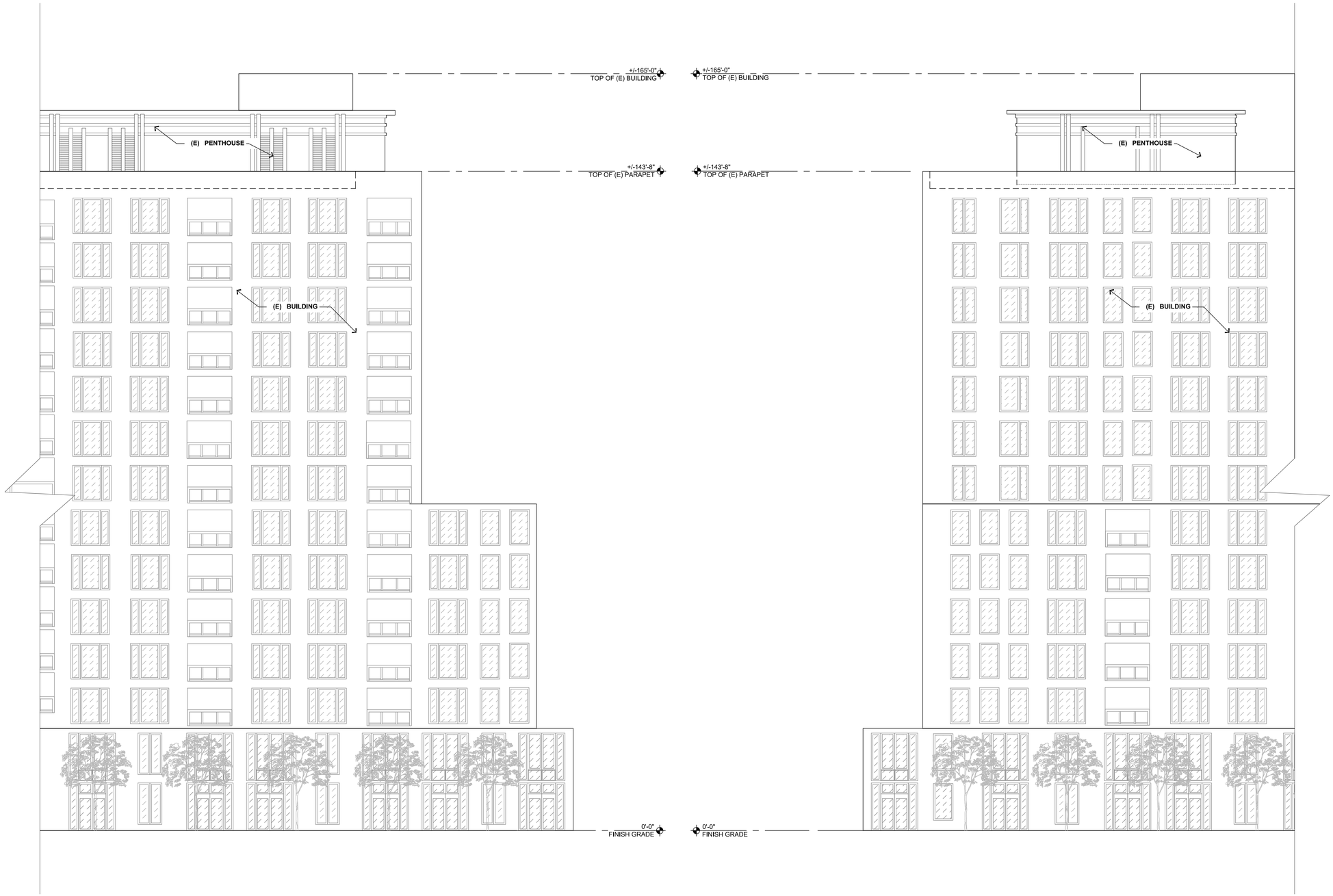
88 KING STREET
SAN FRANCISCO, CA 94107

SHEET TITLE

ELEVATIONS

SHEET NUMBER

A-3.1B



17 EXISTING SOUTHWEST ELEVATION
3/32" = 1'-0"

9 EXISTING SOUTHEAST ELEVATION
3/32" = 1'-0"

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No. C11535
Ren. 09-30-19
STATE OF CALIFORNIA

SF25XC213-A

PIER 48 RELO

88 KING STREET
SAN FRANCISCO, CA 94107

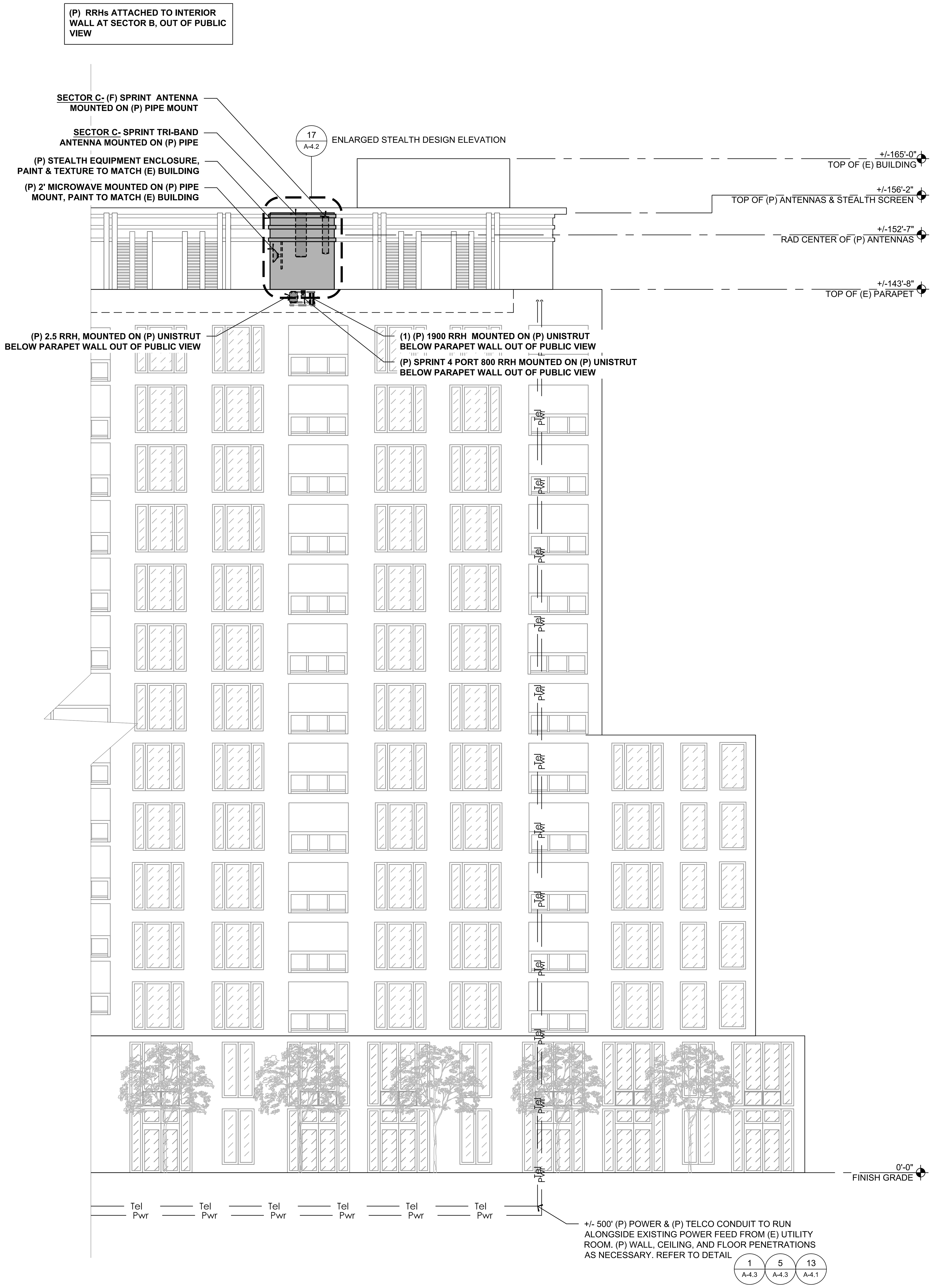
SHEET TITLE

ELEVATIONS

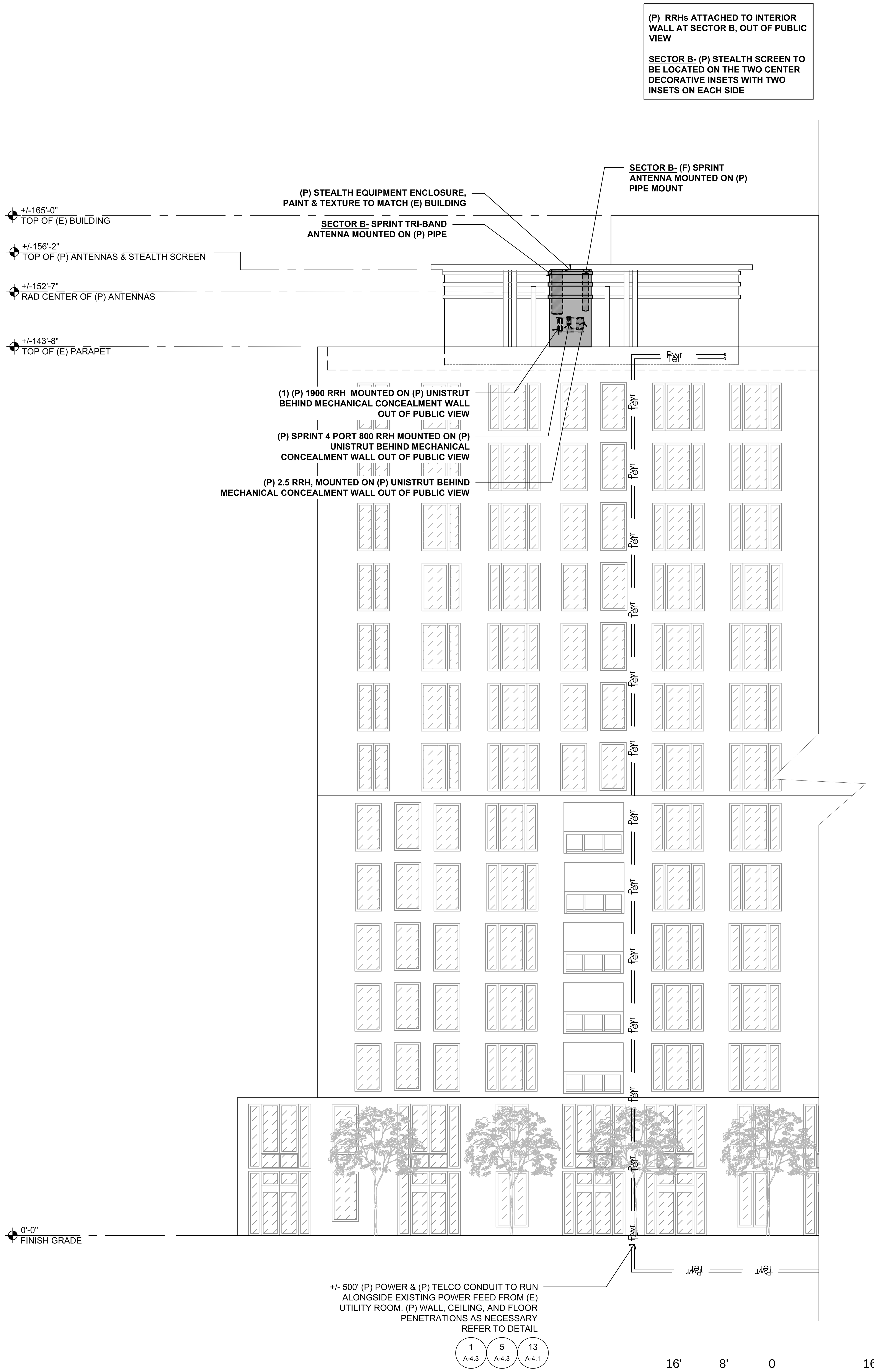
SHEET NUMBER

A-3.2A

Plot Date:10/15/2018 5:49:51 PM File Name:P:\2016\T-16503\Precision Site Development LLC-SF25XC213-A\11SF25XC213-Sheets\Building A\A-3.2A Elevations.dwg Plotted By:John McDonnell


(P) RRHs ATTACHED TO INTERIOR WALL AT SECTOR B, OUT OF PUBLIC VIEW
SECTOR C- (F) SPRINT ANTENNA MOUNTED ON (P) PIPE MOUNT
SECTOR C- SPRINT TRI-BAND ANTENNA MOUNTED ON (P) PIPE
(P) STEALTH EQUIPMENT ENCLOSURE, PAINT & TEXTURE TO MATCH (E) BUILDING
(P) 2' MICROWAVE MOUNTED ON (P) PIPE MOUNT, PAINT TO MATCH (E) BUILDING
17 A-4.2 ENLARGED STEALTH DESIGN ELEVATION
+/-165'-0" TOP OF (E) BUILDING
+/-156'-2" TOP OF (P) ANTENNAS & STEALTH SCREEN
+/-152'-7" RAD CENTER OF (P) ANTENNAS
+/-143'-8" TOP OF (E) PARAPET
(P) 2.5 RRH, MOUNTED ON (P) UNISTRUT BELOW PARAPET WALL OUT OF PUBLIC VIEW
(1) (P) 1900 RRH MOUNTED ON (P) UNISTRUT BELOW PARAPET WALL OUT OF PUBLIC VIEW
(P) SPRINT 4 PORT 800 RRH MOUNTED ON (P) UNISTRUT BELOW PARAPET WALL OUT OF PUBLIC VIEW
0'-0" FINISH GRADE
Tel Pwr
+/- 500' (P) POWER & (P) TELCO CONDUIT TO RUN ALONGSIDE EXISTING POWER FEED FROM (E) UTILITY ROOM. (P) WALL, CEILING, AND FLOOR PENETRATIONS AS NECESSARY. REFER TO DETAIL
1 A-4.3 5 A-4.3 13 A-4.1
16' 8' 0 16' 32'
3/32"=1'-0"

17 PROPOSED SOUTHWEST ELEVATION
3/32" = 1'-0"


(P) RRHs ATTACHED TO INTERIOR WALL AT SECTOR B, OUT OF PUBLIC VIEW
SECTOR B- (P) STEALTH SCREEN TO BE LOCATED ON THE TWO CENTER DECORATIVE INSETS WITH TWO INSETS ON EACH SIDE
SECTOR B- (F) SPRINT ANTENNA MOUNTED ON (P) PIPE MOUNT
(P) STEALTH EQUIPMENT ENCLOSURE, PAINT & TEXTURE TO MATCH (E) BUILDING
SECTOR B- SPRINT TRI-BAND ANTENNA MOUNTED ON (P) PIPE
+/-165'-0" TOP OF (E) BUILDING
+/-156'-2" TOP OF (P) ANTENNAS & STEALTH SCREEN
+/-152'-7" RAD CENTER OF (P) ANTENNAS
+/-143'-8" TOP OF (E) PARAPET
(1) (P) 1900 RRH MOUNTED ON (P) UNISTRUT BEHIND MECHANICAL CONCEALMENT WALL OUT OF PUBLIC VIEW
(P) SPRINT 4 PORT 800 RRH MOUNTED ON (P) UNISTRUT BEHIND MECHANICAL CONCEALMENT WALL OUT OF PUBLIC VIEW
(P) 2.5 RRH, MOUNTED ON (P) UNISTRUT BEHIND MECHANICAL CONCEALMENT WALL OUT OF PUBLIC VIEW
0'-0" FINISH GRADE
+/- 500' (P) POWER & (P) TELCO CONDUIT TO RUN ALONGSIDE EXISTING POWER FEED FROM (E) UTILITY ROOM. (P) WALL, CEILING, AND FLOOR PENETRATIONS AS NECESSARY REFER TO DETAIL
1 A-4.3 5 A-4.3 13 A-4.1
16' 8' 0 16' 32'
3/32"=1'-0"

9 PROPOSED SOUTHEAST ELEVATION
3/32" = 1'-0"

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San Ramon, CA 94583

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ROSEVILLE, CA 95747

Borges ARCHITECTURAL GROUP
borgesarch.com
1478 STONE POINT DRIVE, SUITE 350
ROSEVILLE CA 95661
916 782 7200 TEL
916 773 3037 FAX

PROJECT NO:	T-16503-41
DRAWN BY:	JVM
CHECKED BY:	MTD

REV	DATE	DESCRIPTION
2	10/15/18	100% PLAN CHECK
1	08/15/18	100% CD SUBMITTAL
0	07/18/18	90% CD SUBMITTAL

10/15/18

100% Plan Check

LICENSED ARCHITECT RICHARD SAMBUCETTI No. C11535 Ren. 09-30-19 STATE OF CALIFORNIA

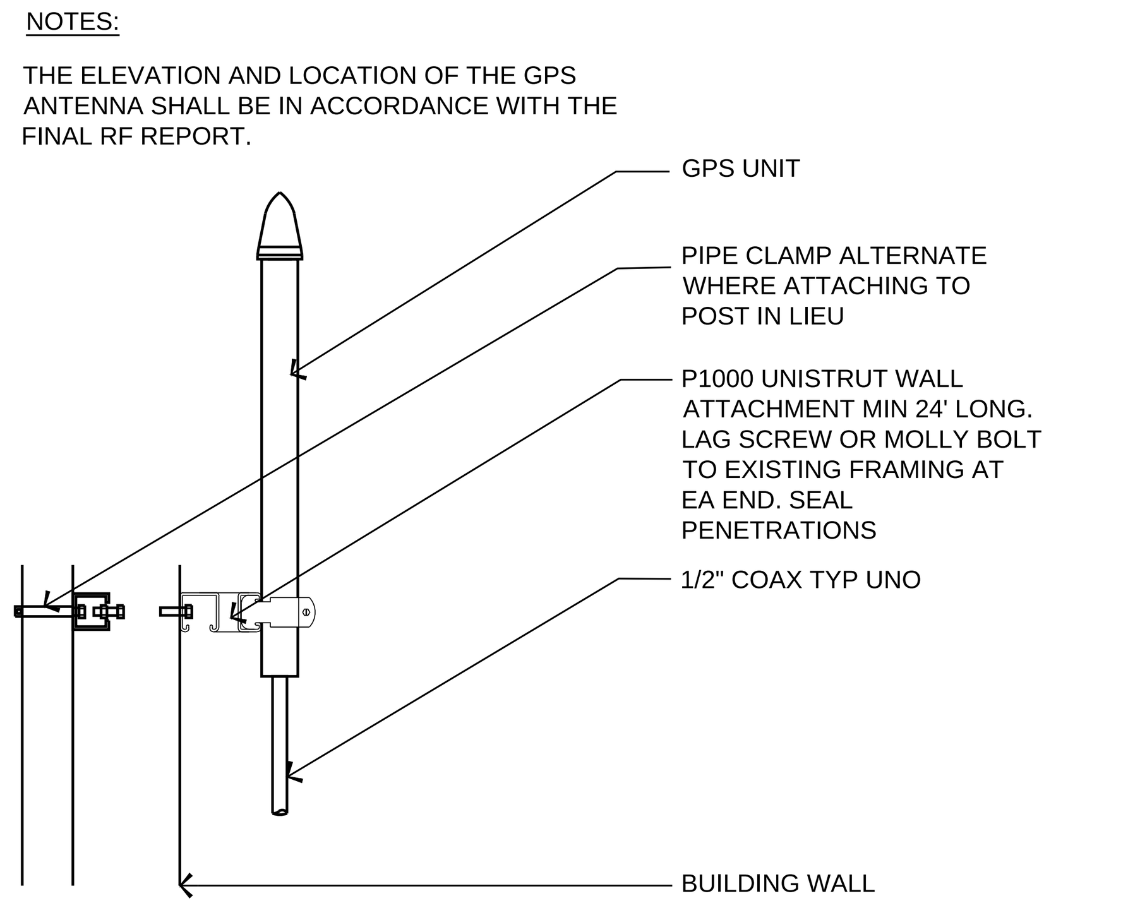
SF25XC213-A
PIER 48 RELO
88 KING STREET
SAN FRANCISCO, CA 94107

SHEET TITLE
ELEVATIONS

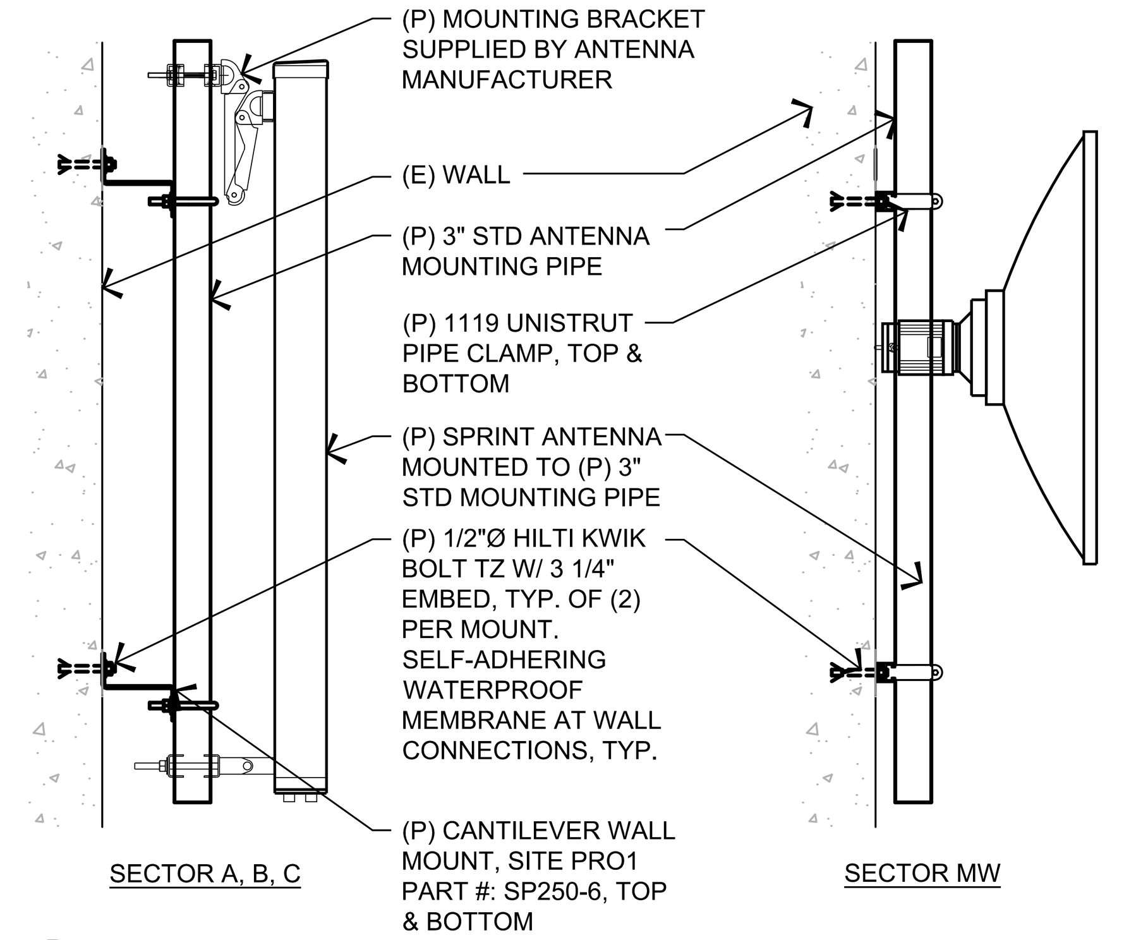
SHEET NUMBER
A-3.2B

NOTES:

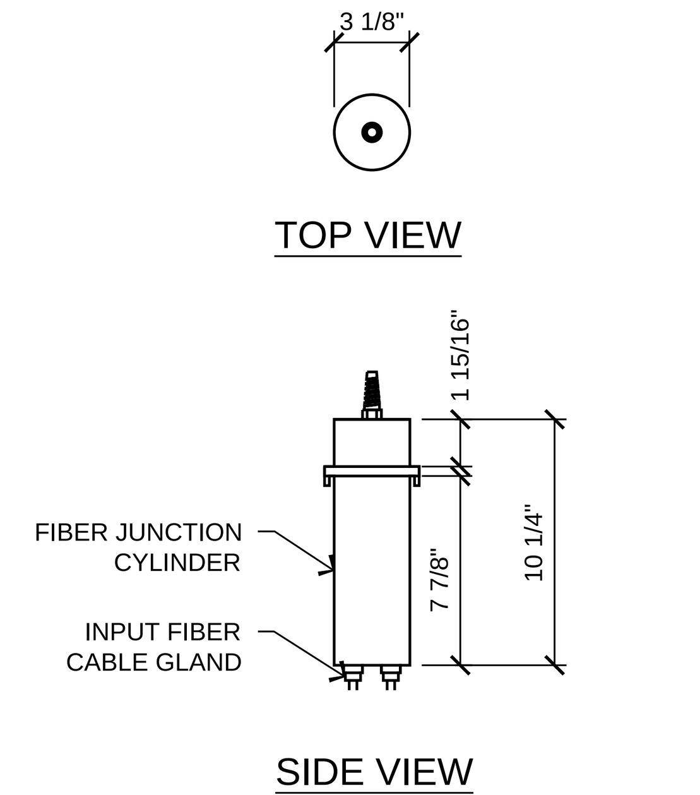
THE ELEVATION AND LOCATION OF THE GPS ANTENNA SHALL BE IN ACCORDANCE WITH THE FINAL RF REPORT.



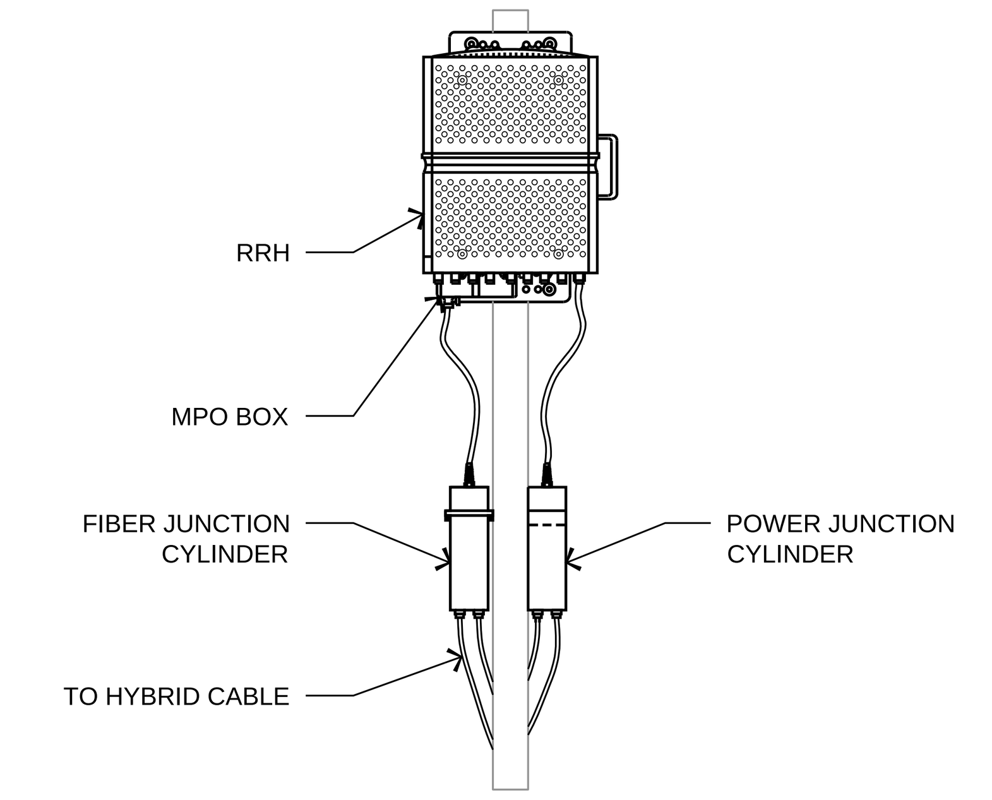
20 GPS MOUNT DETAIL
3/4" = 1'-0"



16 ANTENNA MOUNTING DETAIL
3/4" = 1'-0"



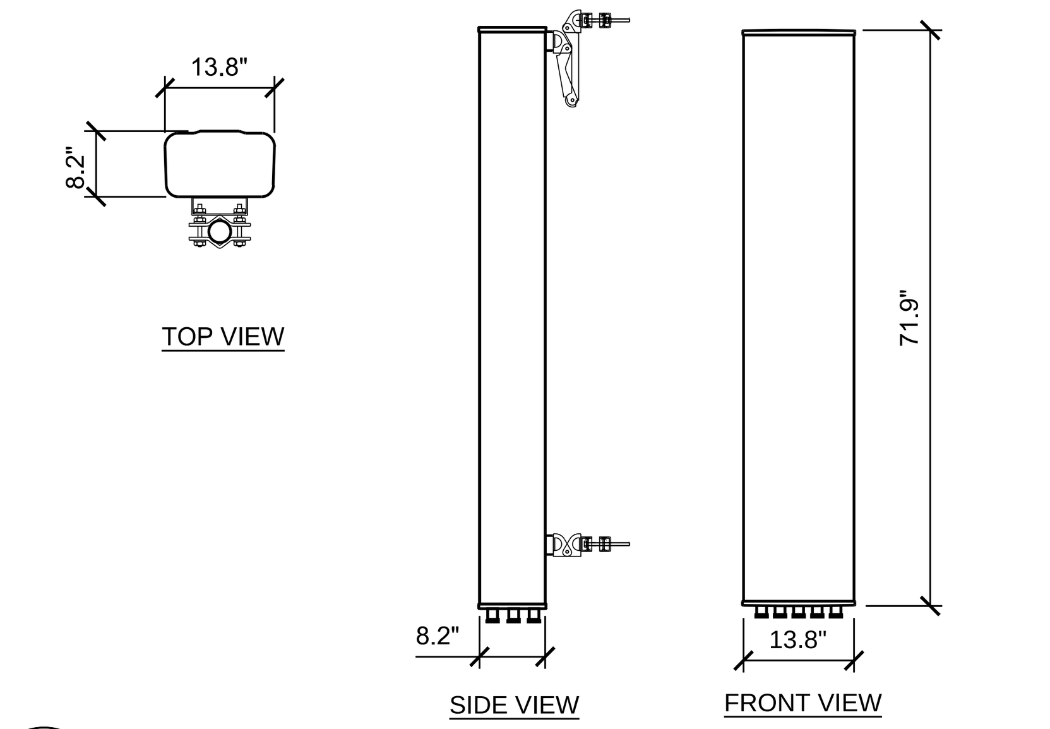
12 FIBER JUNCTION CYLINDER
1 1/2" = 1'-0"



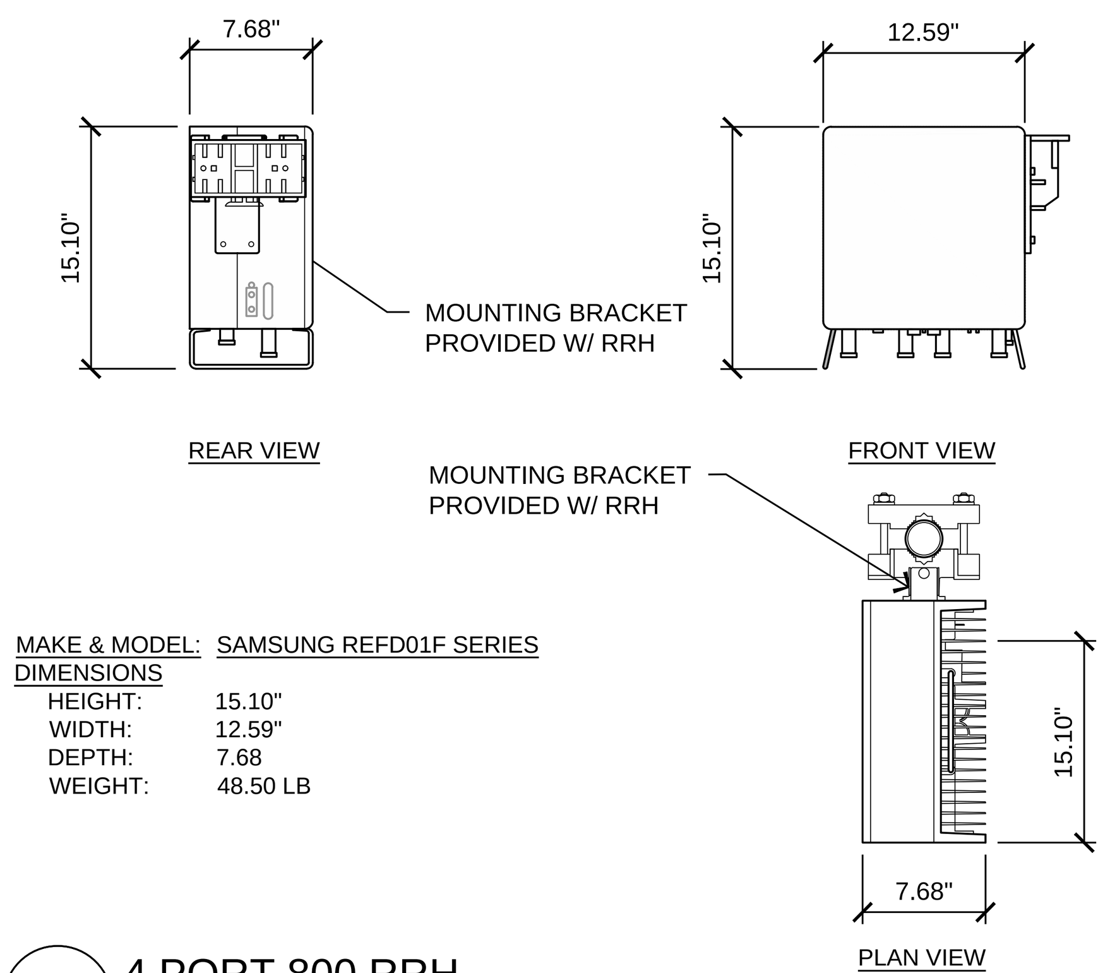
8 JUNCTION CYLINDER DETAIL
3/4" = 1'-0"

ANTENNA MAKE AND MODE

MANUFACTURER: COMMSCOPE
MODEL: DT465B-2XR
DIMENSIONS, HxWxD.in(min): 71.9" x 13.8"x8.2" (IN)
ANTENNA WEIGHT : 58.0 lbs
CONNECTIONS: 8x MINI DIN, 1 CALIBRATION PORT (N TYPE, FEMALE)

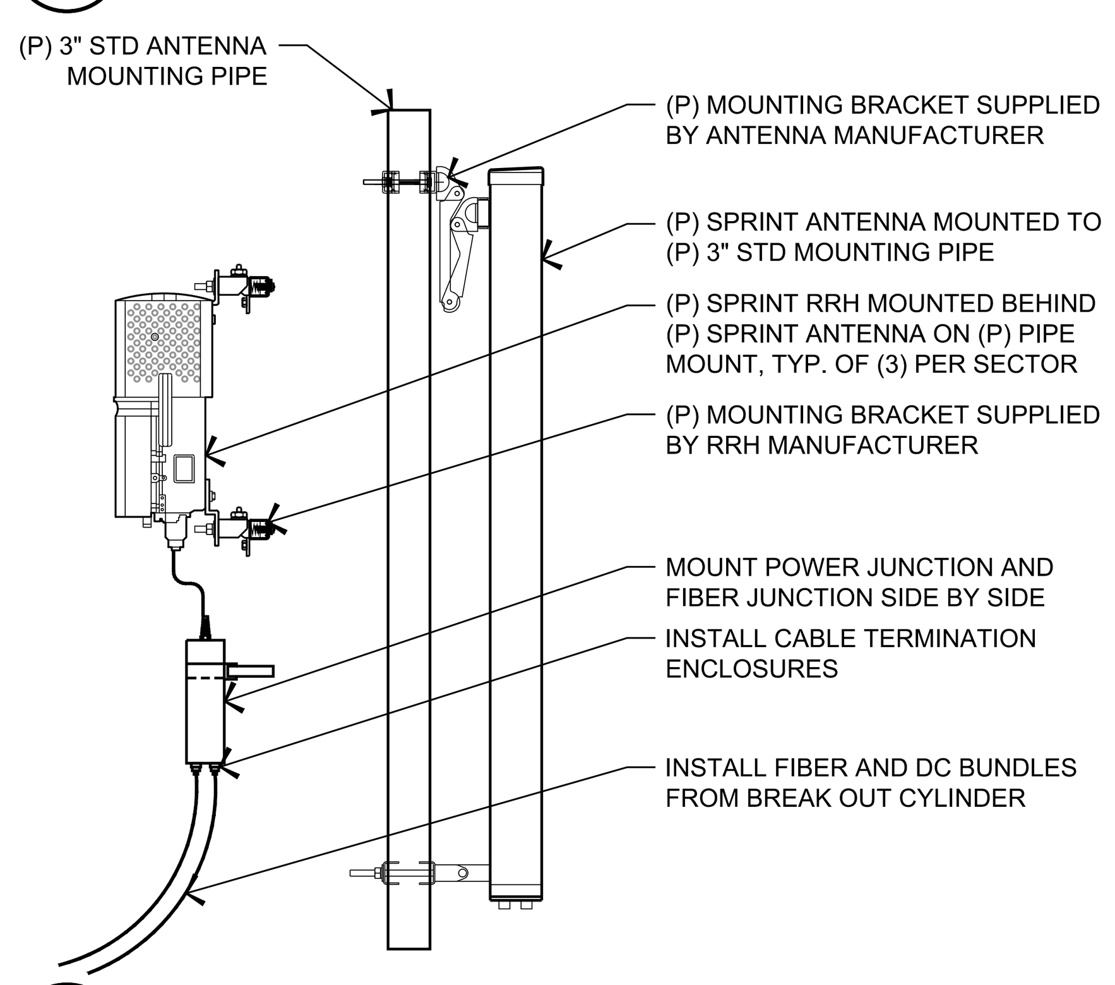


4 COMMSCOPE DT465B-2XR
1/2" = 1'-0"

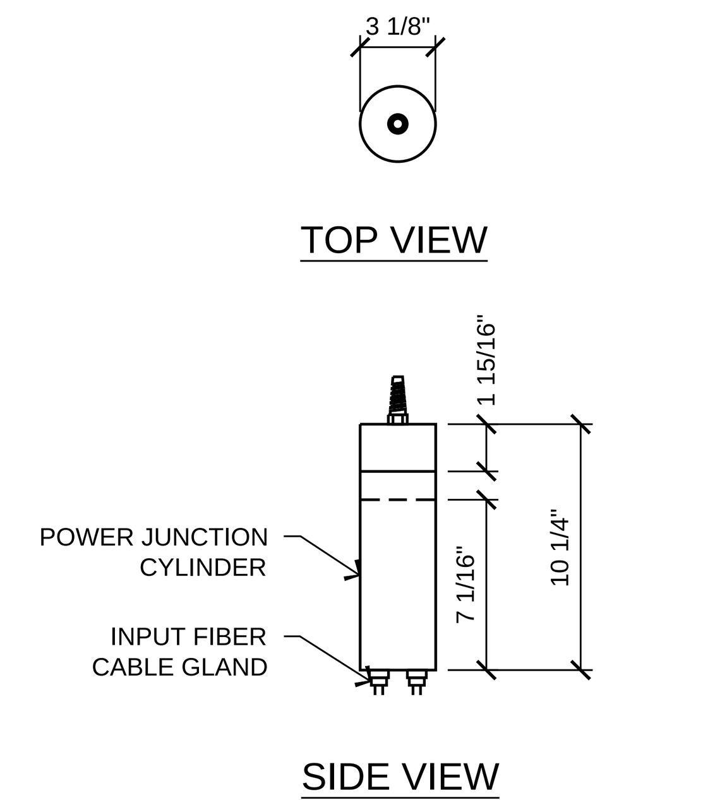


MAKE & MODEL: SAMSUNG REFD01F SERIES
DIMENSIONS
HEIGHT: 15.10"
WIDTH: 12.59"
DEPTH: 7.68
WEIGHT: 48.50 LB

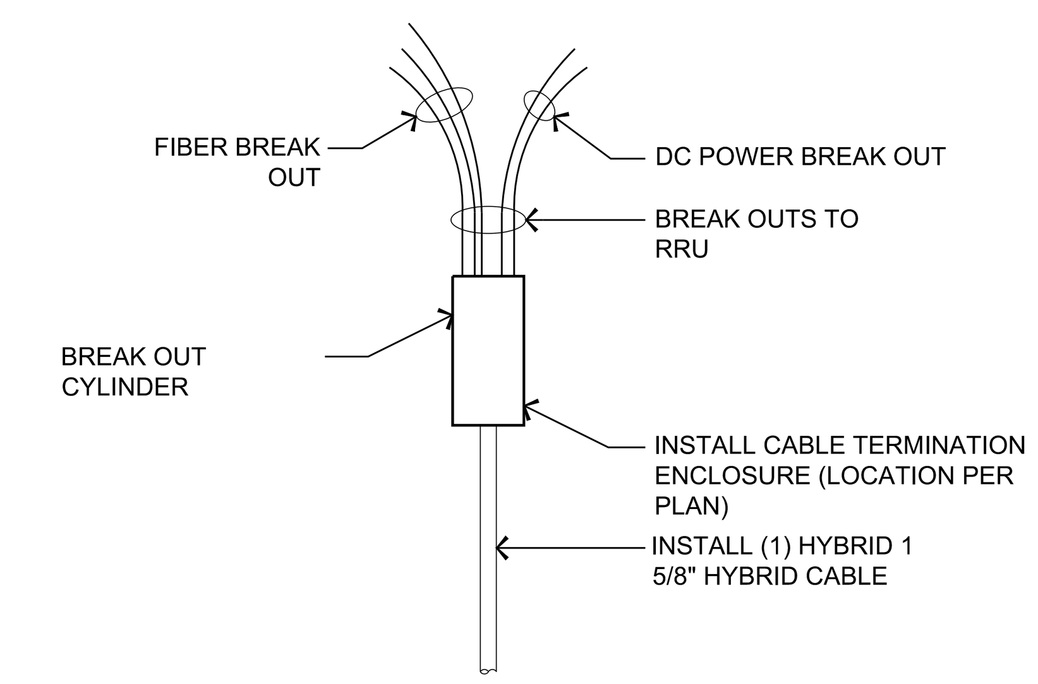
19 4 PORT 800 RRH
1" = 1'-0"



15 ANTENNA & RRU MOUNTING DETAIL
3/4" = 1'-0"

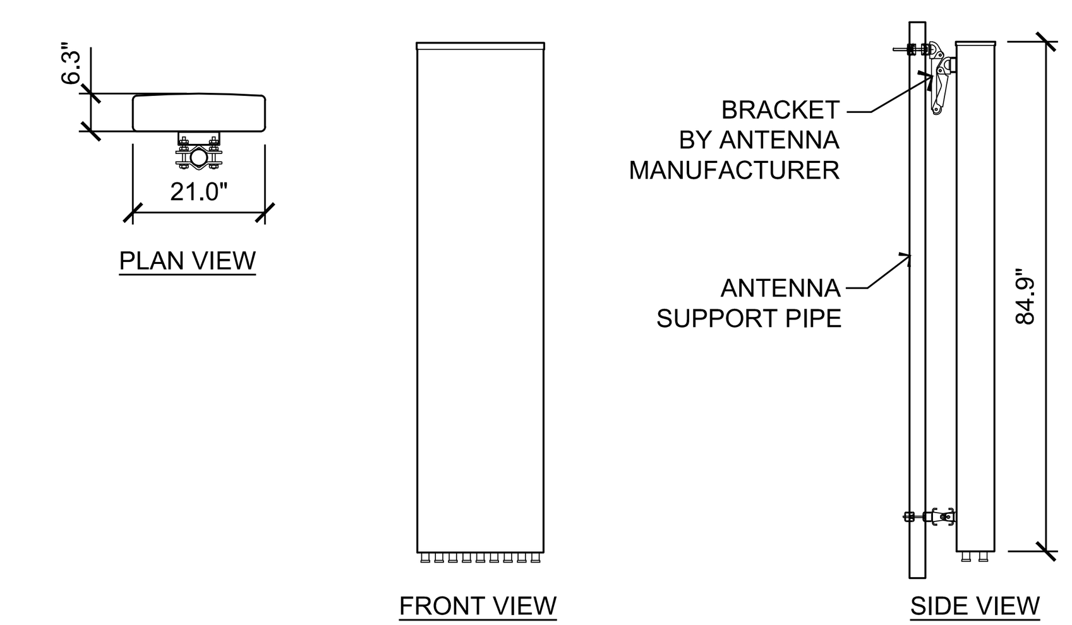


11 POWER JUNCTION CYLINDER
1 1/2" = 1'-0"

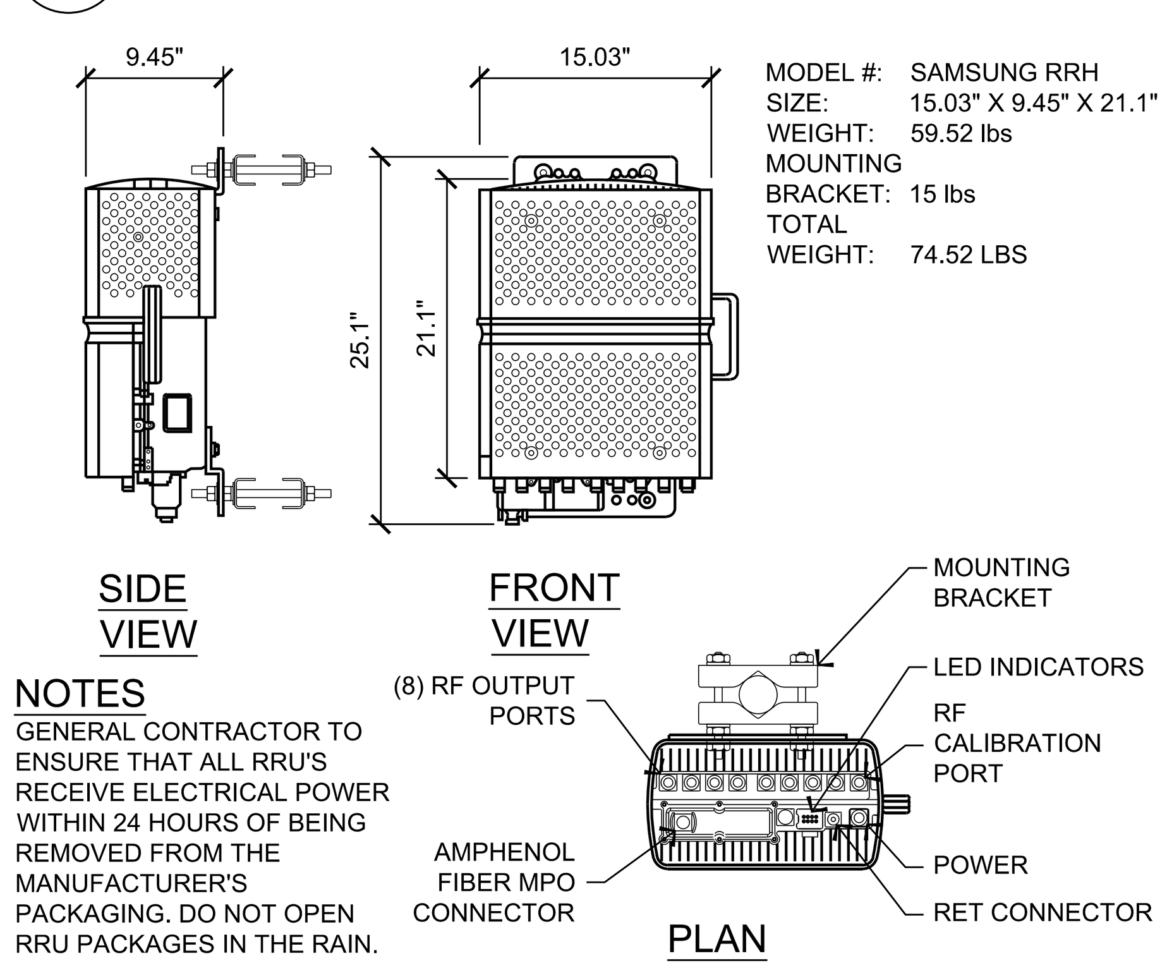


7 HYBRID BREAK OUT
6" = 1'-0"

MODEL: KMW ETCR-654L-12HS
HEIGHT: 2156mm (84.9")
WIDTH: 533mm (21.0")
DEPTH: 160mm (6.3")
WEIGHT: 38.5kg (84.9 lbs)
CONNECTOR: (8) 7/16" DIN (FEMALE), 8 x MINI DIN(FEMALE), 1 x N TYPE (CAL PORT, FEMALE) / BOTTOM



3 KMW ETCR-654L-12HS
3/8" = 1'-0"

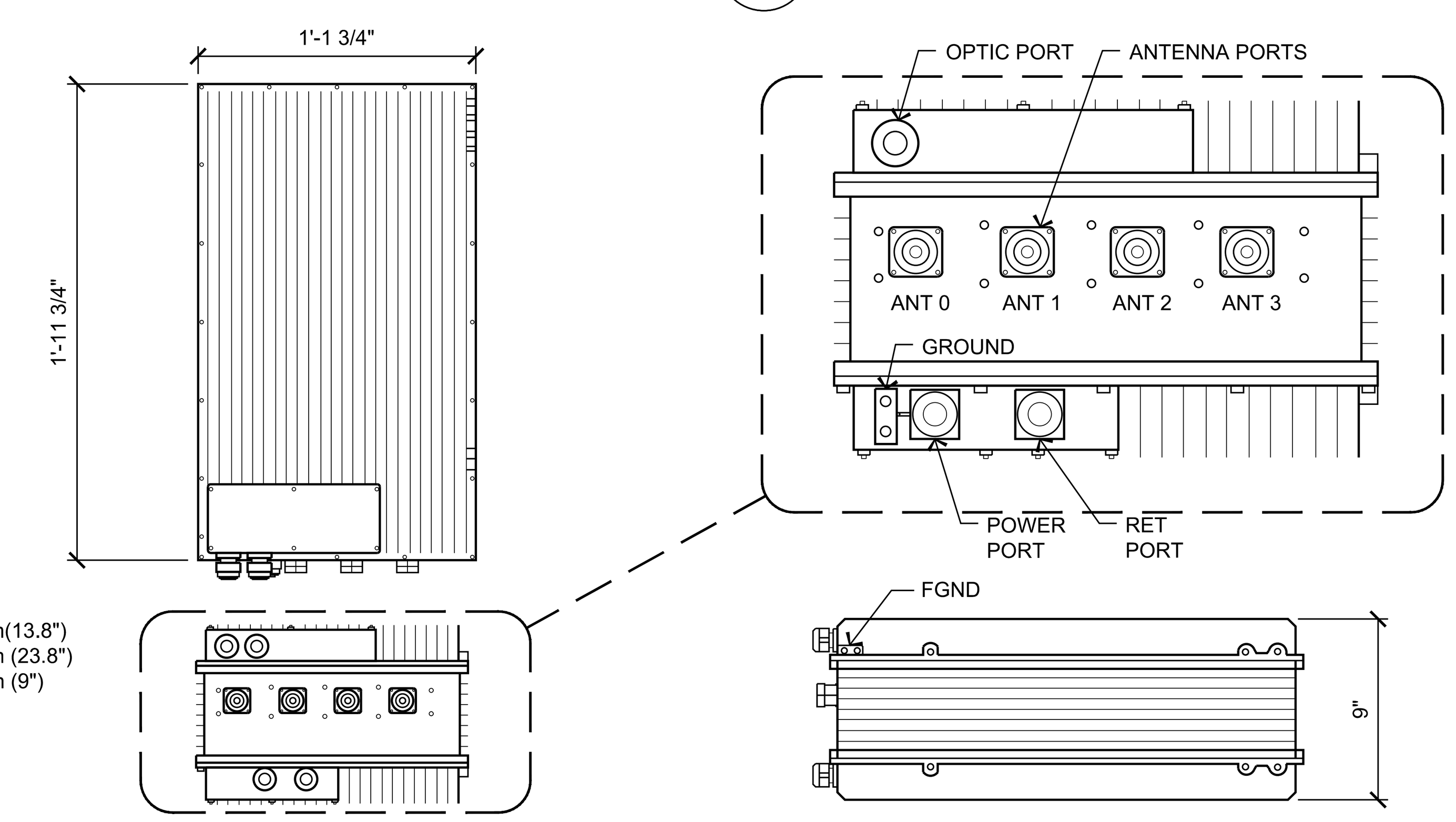


MODEL #: SAMSUNG RRH
SIZE: 15.03" X 9.45" X 21.1"
WEIGHT: 59.52 lbs
MOUNTING BRACKET: 15 lbs
TOTAL WEIGHT: 74.52 LBS

NOTES

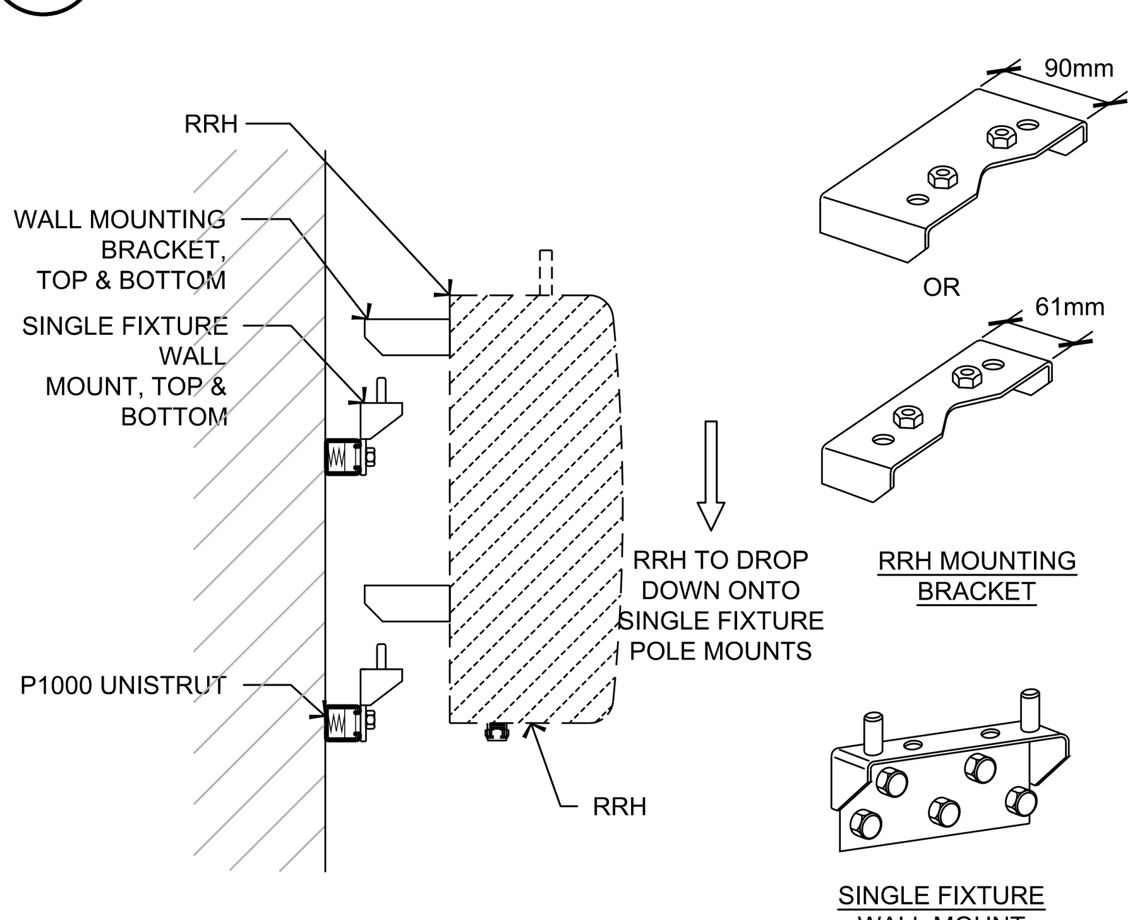
GENERAL CONTRACTOR TO ENSURE THAT ALL RRU'S RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING. DO NOT OPEN RRU PACKAGES IN THE RAIN.

18 2.5 RRUS
NOT TO SCALE



DIMENSIONS
HEIGHT: 350mm(13.8")
WIDTH: 605mm (23.8")
DEPTH: 228mm (9")
WEIGHT (w/ FILTER): 65lbs

14 1.9GHz RRU MECHANICAL SPECIFICATIONS
NOT TO SCALE



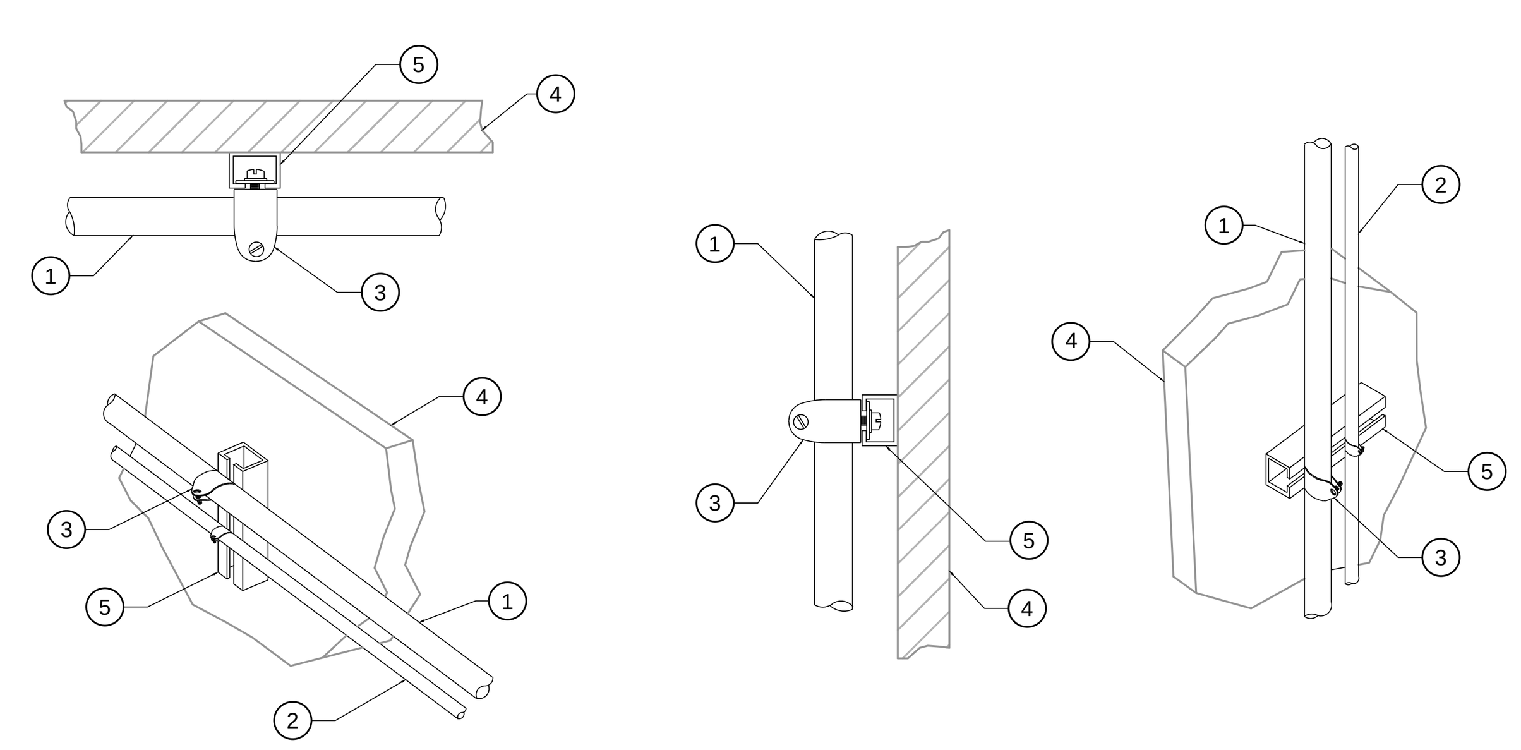
17 RRU MOUNTING DETAIL ON UNISTRUT
3/4" = 1'-0"

UNISTRUT MOUNTING CHART

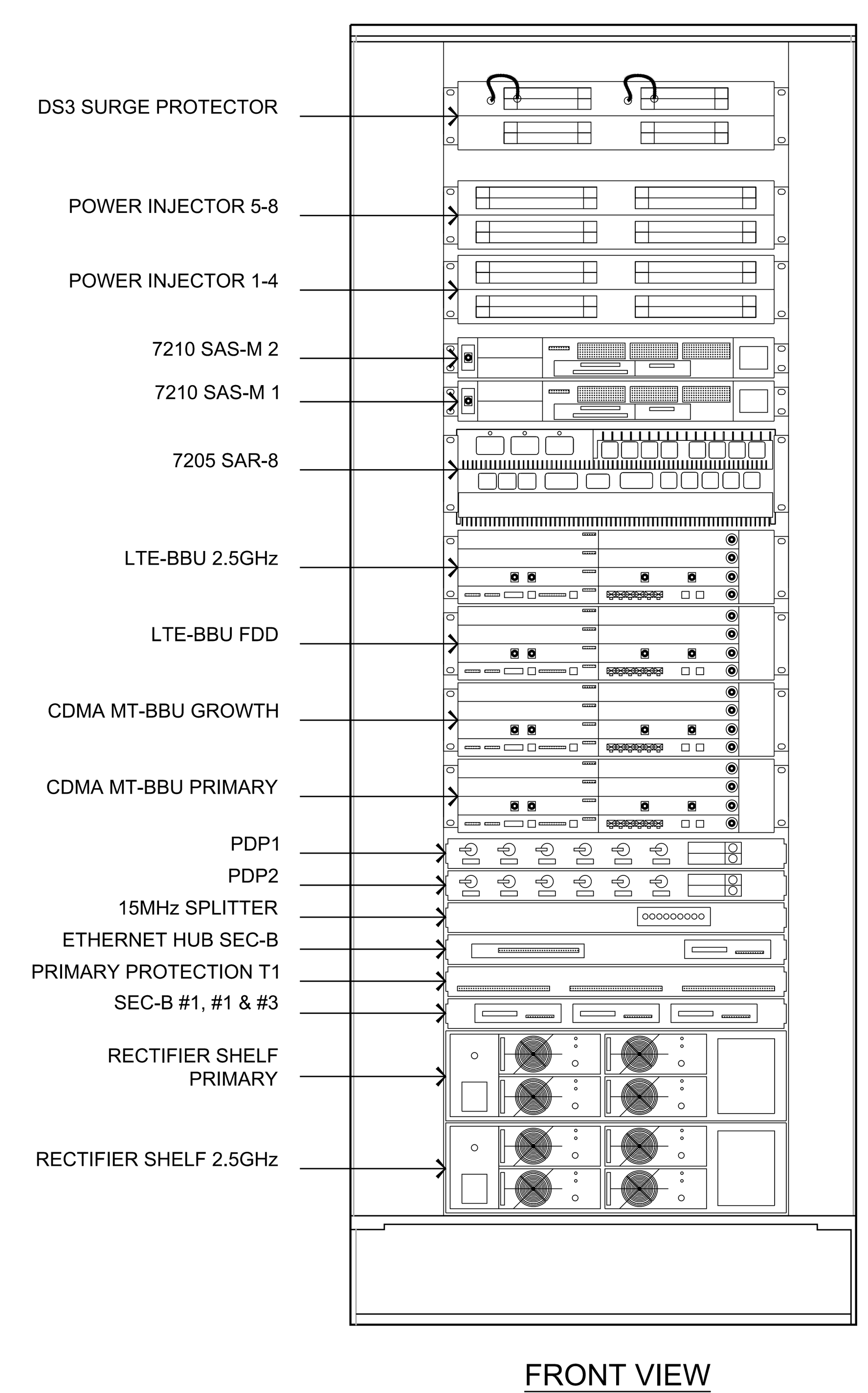
WALL CONSTRUCTION TYPE	USE
HOLLOW	3/8"ØTOGGLE BOLT
HOLLOW, AT STUD	3/8"Ø LAG SCREW
CONCRETE BLOCK (HOLLOW)	3/8"Ø HILTI HY-20 WITH SCREEN, MINIMUM EMBEDMENT 2-1/2"
CONCRETE (SOLID)	3/8"ØHILTI HY-150 WITH SCREEN, MINIMUM EMBEDMENT 2-1/2"

NOTE:
USE GALVANIZED HARDWARE FOR WALL MOUNT AND CONNECTION OF CHANNELS
SPACE UNITS @ 5'-0" O.C, LENGTH OF RUN

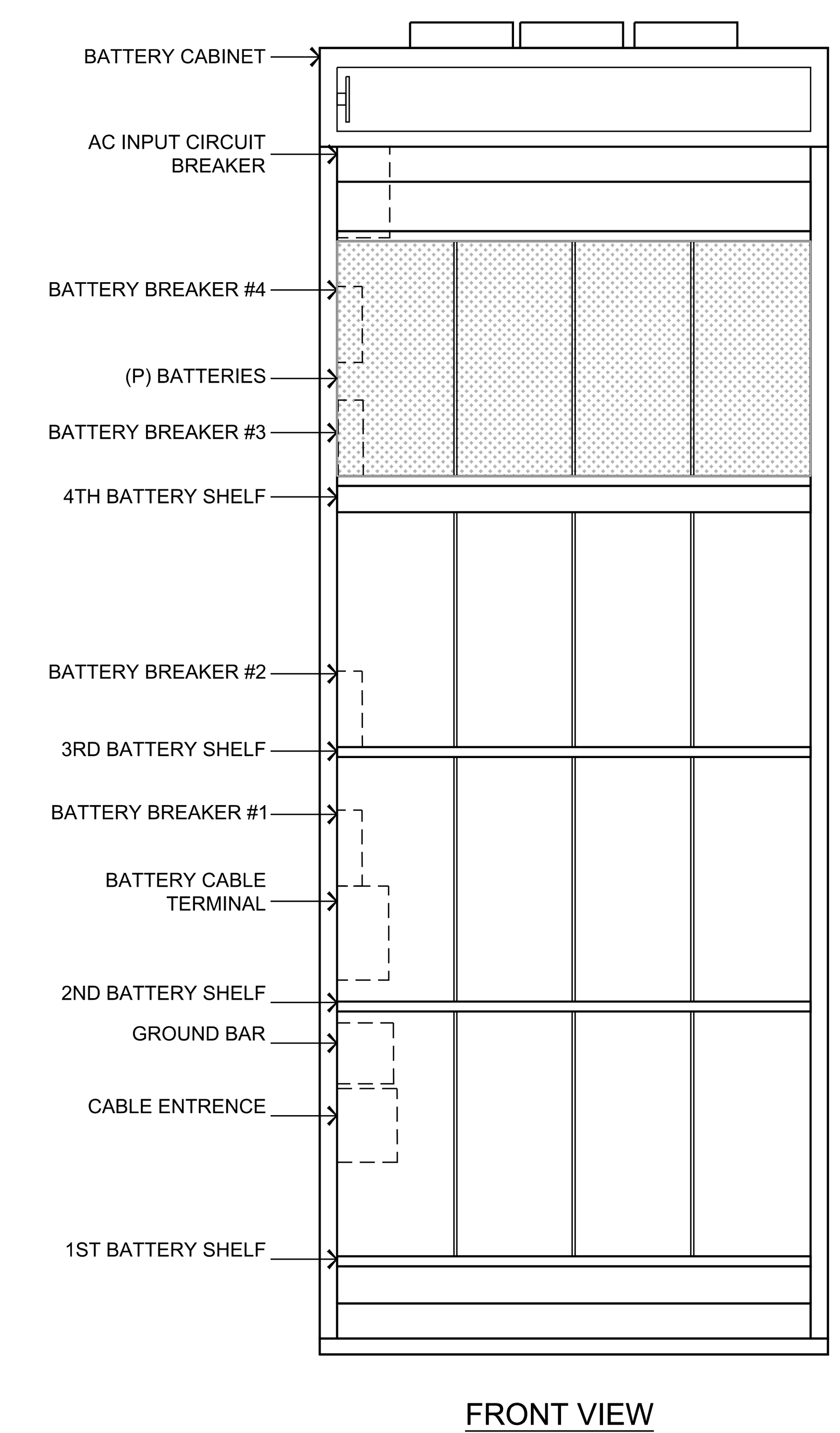
1. HYBRID CABLE OR CONDUIT FOR ELECTRIC/TELEPHONE OR FIBER
2. #2 AWG STRANDED INSULATED GROUNDING CONDUCTOR TO RUN ALONG HYBRID CABLE
3. FIMO OR BUTTERFLY CLAMP AS REQUIRED
4. EXISTING WALL/CEILING
5. VERTICAL "UNISTRUT" P1000 'T' SERIES LENGTH BASED ON NUMBER OF CONDUIT TO BE MOUNTED



13 VERTICAL CONDUIT AT WALL
NOT TO SCALE



5 MMBS WITH 2.5 EQUIPMENT
1 1/2" = 1'-0"



1 BATTERY BACKUP CABINET
1 1/2" = 1'-0"

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ARCHITECTURAL GROUP Borges
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PROJECT NO:	T-16503-41
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0	07/18/18	90% CD SUBMITTAL

10/15/18
100% Plan Check

LICENSED ARCHITECT
RICHARD SAMBUCETTI
No. C11535
Ren. 09-30-19
STATE OF CALIFORNIA

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

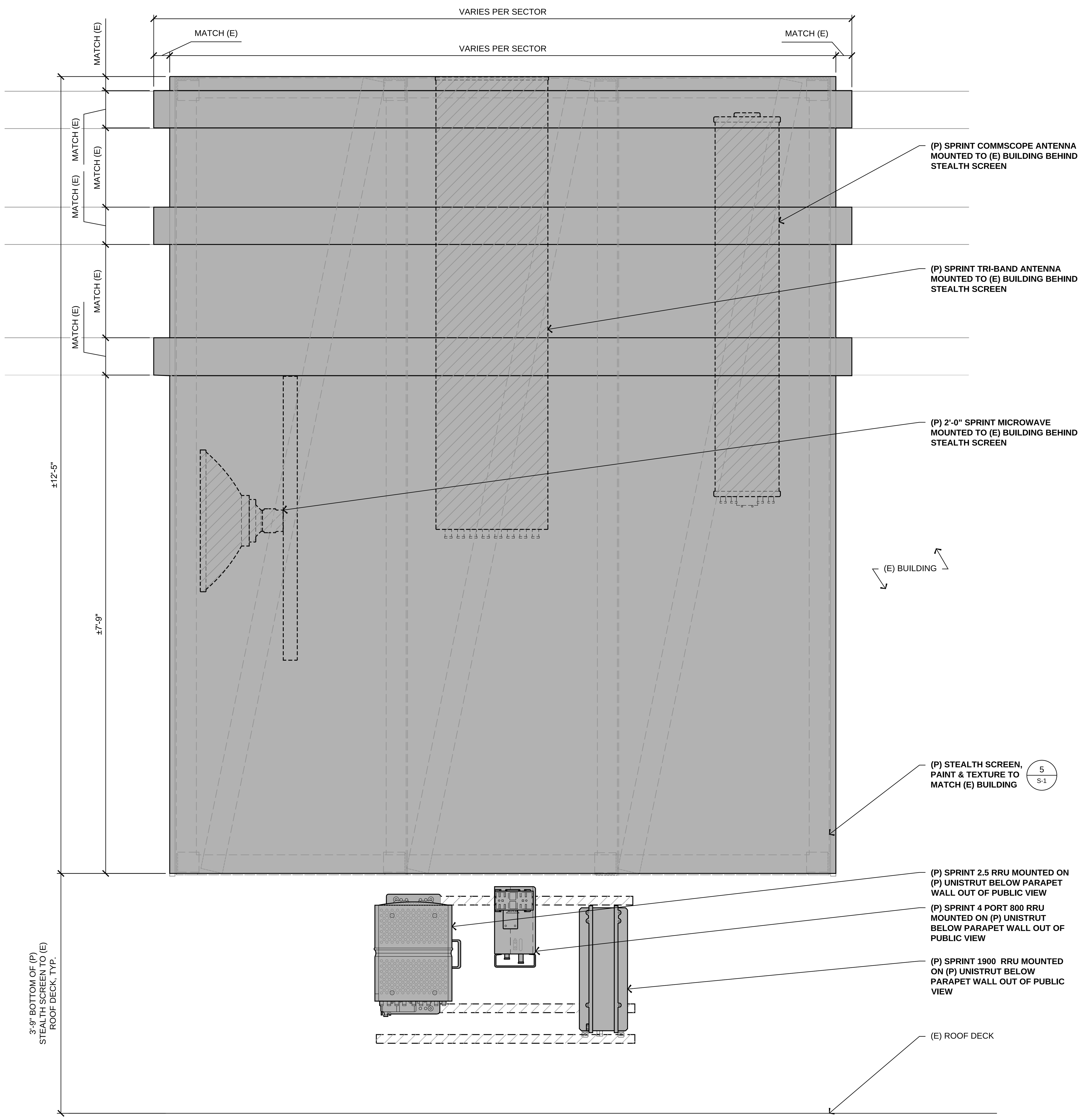
SF25XC213-A
PIER 48 RELO
88 KING STREET
SAN FRANCISCO, CA 94107

SHEET TITLE
EQUIPMENT DETAILS

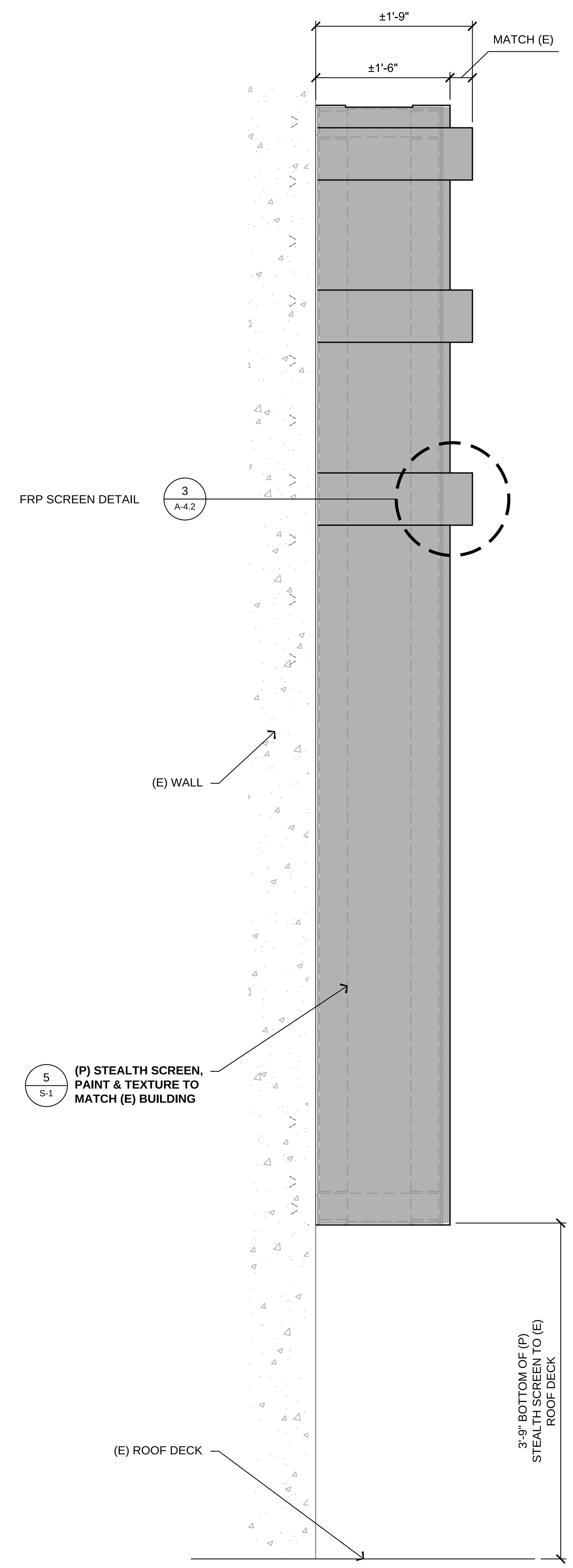
SHEET NUMBER
A-4.1

NOTE:

- FIELD VERIFY ALL DIMENSIONS
- STEALTH DESIGN TO MATCH EXISTING BUILDING DESIGN
- STEALTH COLOR AND TEXTURE TO MATCH EXISTING BUILDING



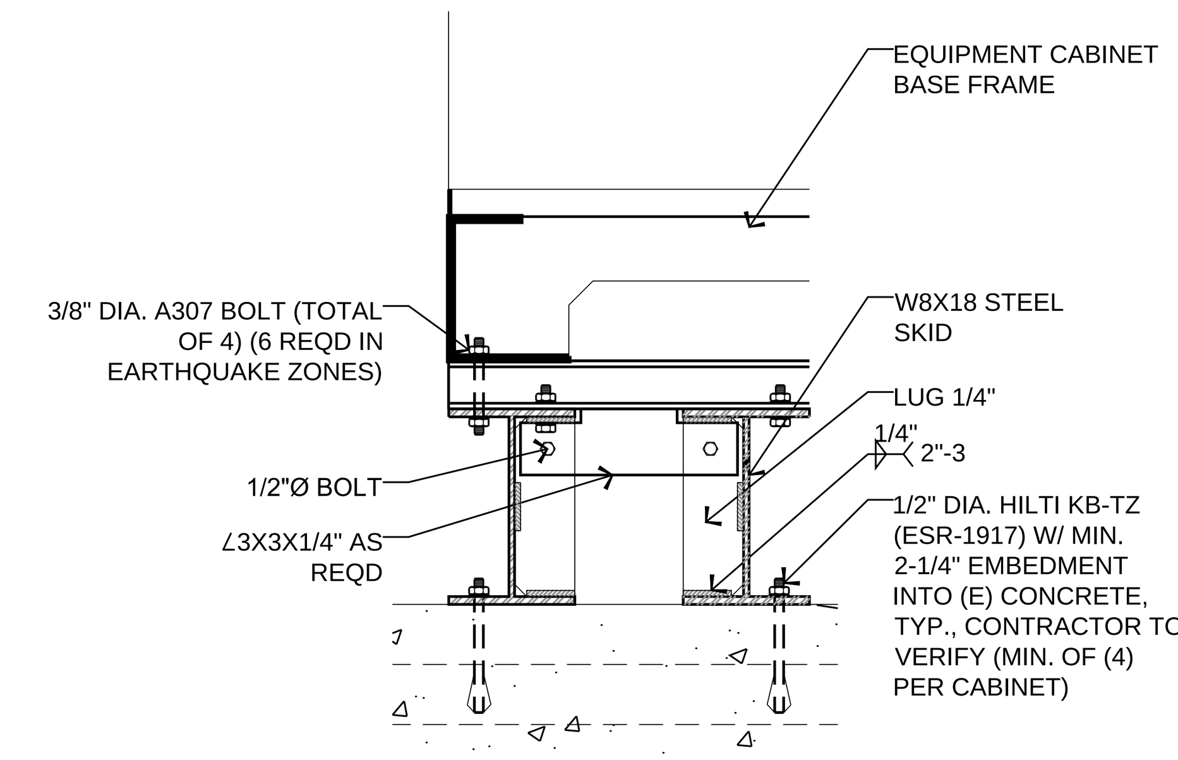
FRONT VIEW



SIDE VIEW

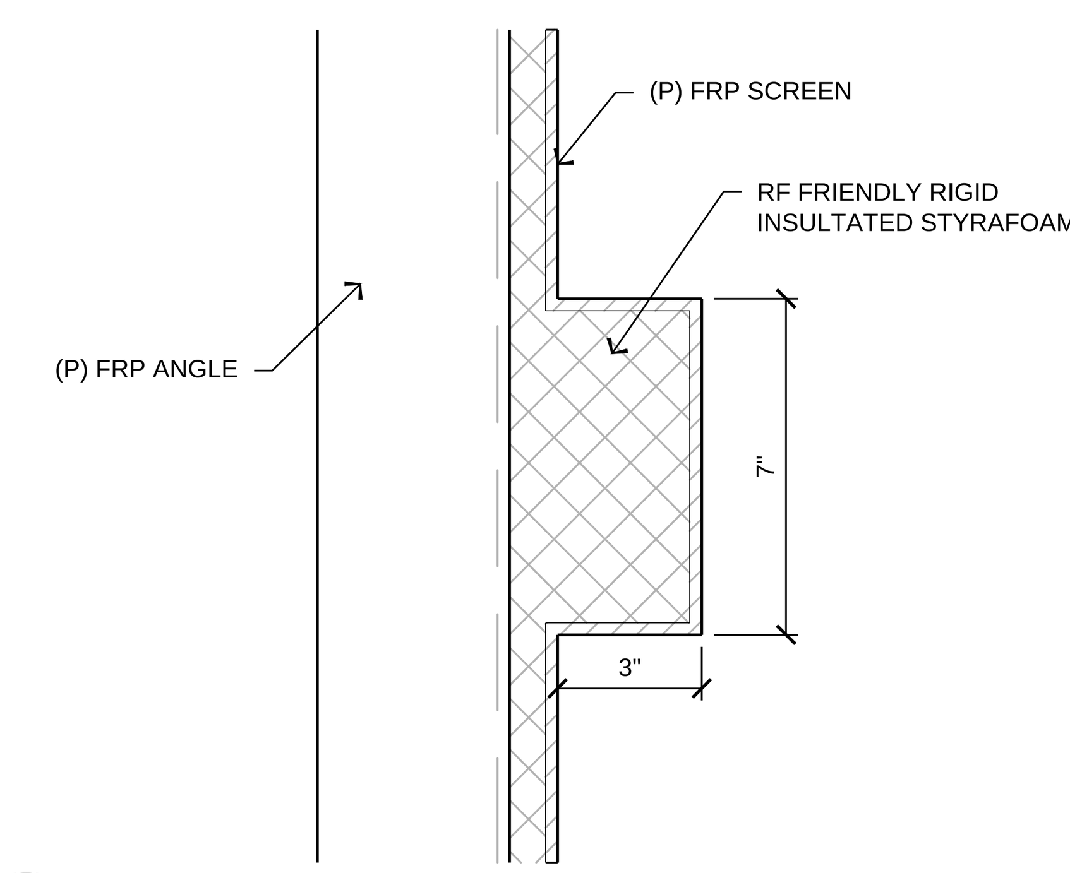
17 ENLARGED STEALTH DESIGN ELEVATION TYP. EACH SECTOR

1" = 1'-0"



4 STEEL SKID CONNECTION

1 1/2" = 1'-0"



3 FRP SCREEN DETAIL

3" = 1'-0"

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ROSEVILLE, CA 95747

ARCHITECTURAL GROUP Borges

borgesarch.com

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916 782 7200 TEL
916 773 3037 FAX

PROJECT NO:	T-16503-41
DRAWN BY:	JVM
CHECKED BY:	MTD

REV	DATE	DESCRIPTION
2	10/15/18	100% PLAN CHECK
1	08/15/18	100% CD SUBMITTAL
0	07/18/18	90% CD SUBMITTAL

10/15/18

100% Plan Check

LICENSED ARCHITECT RICHARD SAMBUCETTI No. C11535 Ren. 09-30-19 STATE OF CALIFORNIA

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PIER 48 RELO

88 KING STREET
SAN FRANCISCO, CA 94107

SHEET TITLE

DETAILS

SHEET NUMBER

A-4.2

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10/15/18

100% Plan Check

LICENSED ARCHITECT
RICHARD SAMBUCETTI
No. C11535
Exp. 09-30-19
STATE OF CALIFORNIA

SF25XC213-A

PIER 48 RELO

88 KING STREET
SAN FRANCISCO, CA 94107

SHEET TITLE

DETAILS

SHEET NUMBER

A-4.3

Plot Date:10/15/2018 5:50:43 PM File Name(F):2016\T-16503_Precision Site Development LLC\SF25XC213-41\SF25XC213Sheets\Building A\A-4.3 Details.dwg Plotted By:John McDonnell

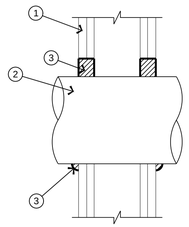
Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

System No. W-L-1297

F Ratings -- 1 and 2 Hr (See Item 1)
T Rating -- 0 Hr
L Rating at Ambient -- Less than 1 CFM/Sq Ft
L Rating at 400° F -- Less than 1 CFM/Sq Ft

Hilti Firestop Systems

WL 1297

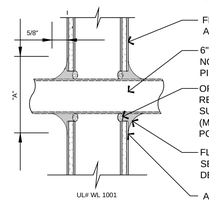


1. Wall Assembly -- The 1 or 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400 or V400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features.
   A. Studs -- Wall framing shall consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC.
   B. Gypsum Board* -- Nom 5/8 in. (16 mm) thick, 4 ft (1.22 m) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300, U400 or V400 Series Design in the Fire Resistance Directory. Max diam of opening is 32 in. (813 mm).
   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
2. Through Penetrant -- One metallic pipe, conduit or tubing installed concentrically or eccentrically within the firestop system. Pipe, conduit or tubing may be installed at an angle not greater than 45 degrees from perpendicular. Pipe, conduit or tube to be rigidly supported on both sides of wall assembly. The annular space between the pipe, conduit or tube and periphery of the opening shall be min 0 in (0 mm, point contact) to max 2 in. (51 mm) in 2 hr fire rated walls and min 0 in (0 mm, point contact) to max 1 in. (25 mm) in 1 hr fire rated walls. The following types and sizes of metallic pipes, conduit or tube may be used:
   A. Steel Pipe -- Nom 30 in. (762 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe.
   B. Iron Pipe -- Nom 30 in. (762 mm) diam (or smaller) cast or ductile iron pipe.
   C. Conduit -- Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing (EMT) or 6 in. diam steel conduit.
   D. Copper Tube -- Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tube.
   E. Copper Pipe -- Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.
3. Fill, Void or Cavity Material*-Sealant -- Min 5/8 in. (16 mm) or 1-1/4 in. (32 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall, for 1 hr and 2 hr fire rated wall assemblies, respectively. A min 1/2 in. (13 mm) diam bead of fill material shall be applied at the pipe/wall interface at the point contact location.
   HILTI CONSTRUCTION CHEMCIALS, DIV OF HILTI INC -- CP606 Flexible Firestop Sealant

*Bearing the UL Classification Mark

3 CONDUIT PENETRATION DETAIL
6" = 1'-0"

NOTE:
1. CONTRACTOR TO X-RAY PRIOR TO DRILLING OR CORING TO LOCATE (E) RE-BAR AND CONDUITS. DO NOT CUT RE-BAR OR CONDUITS. 2. CONTRACTOR TO INSURE WATER- TIGHTNESS AT ALL WALL AND FLOOR PENETRATIONS.



"A" = DIA. OF CROWN CROWN DIAMETER TO BE THE DIAMETER OF THE WALL OPENING PLUS 1"

FIRE-RATED GYPBD/STUD WALL ASSEMBLY

6" MAX. DIA. MTL. PIPE. PROVIDE NOM. 1" ANNULAR SPACE AROUND PIPE

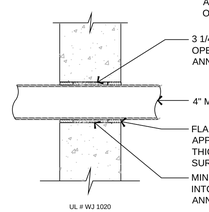
OPTIONAL FORMING MATERIAL - RECESSED 1/2" FROM THE SURFACE FOR FS900 MATERIAL (MINERAL WOOL, POLYSTYRENE,..ETC.)

FLAMESAFE IPC FS/FST900 SERIES COMPOUND APPLIED 1/2" DEEP INTO ANNULAR SPACE

ADD. MATERIAL ADDED TO FORM 5/8" CROWN AROUND CONDUIT AND LAPPING 1" BEYOND OPENING

UL# WL 1001

FRAMED WALL PENETRATION



3 1/4" MIN. CONC. WALL OR CMU. OPENING TO PROVIDE 3/4" MAX. ANNULAR SPACE AROUND PIPE

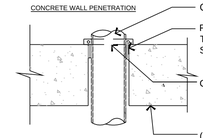
4" MAX. DIAM. METAL PIPE

FLAMESAFE IPC FSP1000 PUTTY APPLIED INTO THE OPENING - 1/2" THICKNESS AT EA. WALL SURFACE

MINERAL WOOL (4 PCF) PACKED INTO SPACE AND RECESSED 1/2" ANNULAR FROM WALL SURFACES

UL # WJ 1020

CONCRETE WALL PENETRATION



CONDUIT PER PLAN (4"Ø MAX.)

FLAMESAFE IPC FS900 MIN. 1/2" THK. FLUSH WITH FLOOR (UL SYSTEM CAJ1105) 3 HR. RATED

CONDUIT FLOOR CLAMP, TYP.

(E) CONCRETE FLOOR

CONCRETE FLOOR PENETRATION

3 CONDUIT PENETRATION DETAIL
1 1/2" = 1'-0"

Technical Data Sheet SC2-220BIPN

CompactLine Easy Antenna, Ultra High Performance, Single Polarized, 2 ft

Product Description

RFS CompactLine® and CompactLine® Easy Antennas are designed for short-haul microwave systems in all common frequency ranges from 6 GHz to 86 GHz. They are typically deployed in dense urban areas, metropolitan and suburban locations, aggregation points. They are especially optimized to integrated radios to reduce costs, installation complexity and time.

Antenna

Features/Benefits

- Sizes ranging from 0.3 m (1 ft) to 1.8 m (6 ft)
- Frequencies ranging from 5.925 GHz to 86 GHz with support for four wideband frequency ranges (5.925-7.125, 7.125-8.5 ,10.0-11.7, and 71.0-86.0 GHz) to reduce antenna requirements and simplify logistics
- Single (SB and SC) and dual-polarized (SBX and SCX) models with the ability to upgrade from single to dual polarization and change frequencies in the field
- Low-profile design to reduce transportation requirements, wind load and antenna weight
- Simplified mounting design to accelerate installation
- CompactLine EASY models are extra light and easy to transport, deploy and upgrade
- Hardcover radomes
- Tested and validated ultra-high (ETSI EN 302 217-4-2 Class 3, FCC Class A) electrical performance
- Support for winds up to 250 km/h (155 mph) and even 320 km/h (195 mph) for SB1/SBX1
- An optional sway bar for antennas 1 m (3 ft) and larger is available

Technical Features

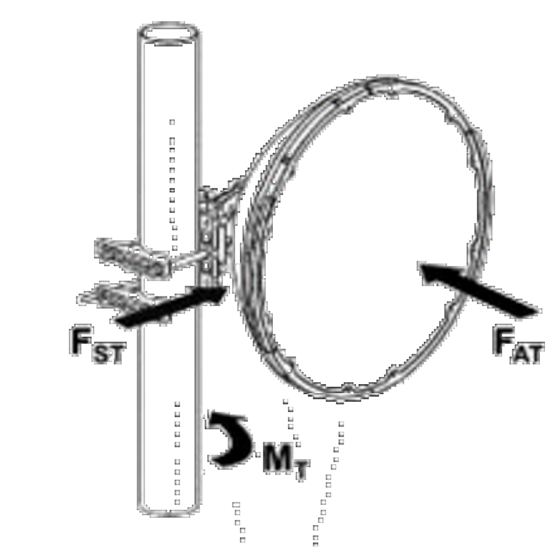
Product Type	Point to point antennas
Frequency, GHz	21.2 - 23.6
Diameter, ft (m)	2 (0.6)
Profile	CompactLineEasy
Reflector	1-part
Swaybar	0: (not applicable)
optional Swaybar	0: (not applicable)
Performance	Ultra High
Polarization	Single
Regulatory Compliance	ETSI EN 302217 Range 3 Class 3 , FCC Category A , SRSP 321.8 Part A
3dB beamwidth, (degrees)	1.5
Antenna Input	Customized
Low Band Gain, dBi	40.5
Mid Band Gain, dBi	41
High Band Gain, dBi	41.5
F/B Ratio, dB	66
XPD, dB	30
Max VSWR / R L, dB	1.29 (18)
Elevation Adjustment, degrees	± 20
Azimuth Adjustment, degrees	± 15
Polarization Adjustment, degrees	± 5
Radome	Rigid
Antenna color	White RAL 9010
Mounting Pipe Diameter minimum, mm (in)	48 (1.9)
Mounting Pipe Diameter maximum, mm (in)	114 (4.5)
Approximate Weight, kg (lb)	9 (20)
Survival Windspeed, km/h (mph)	252 (155)
Operational Windspeed, km/h (mph)	180 (112)

Technical Data Sheet SC2-220BIPN (Cont.)

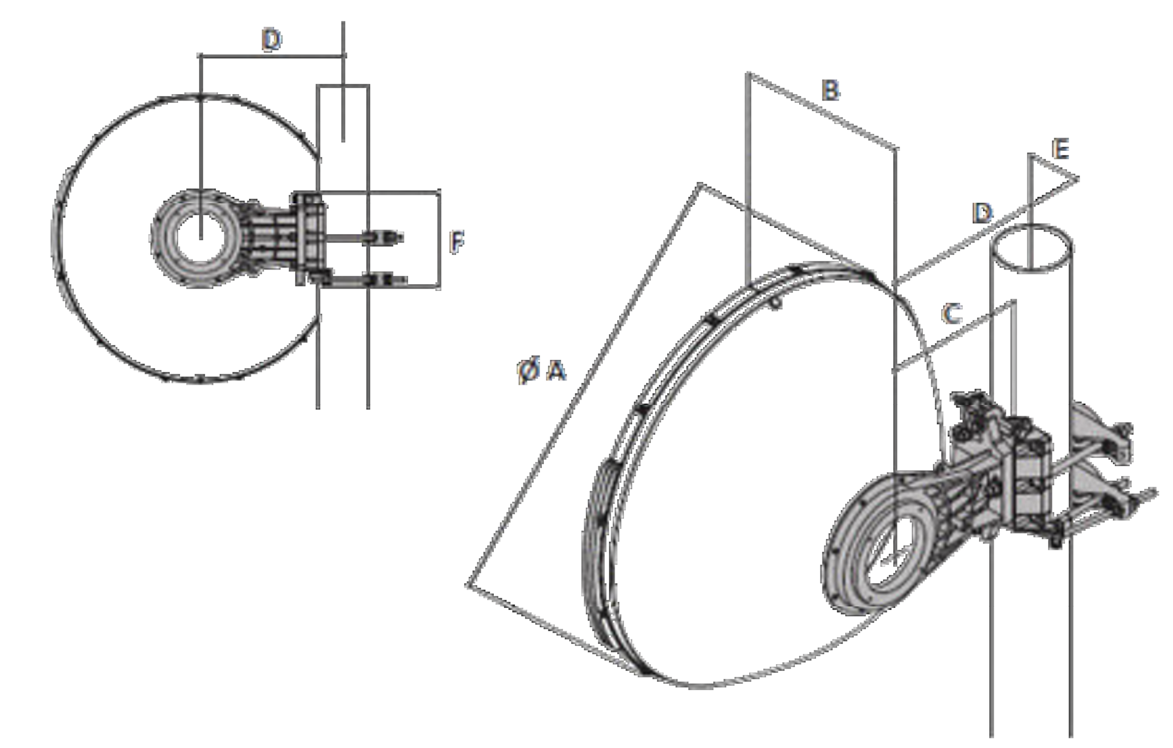
CompactLine Easy Antenna, Ultra High Performance, Single Polarized, 2 ft

All values @ Survival Wind Speed

F_{ST} Side force max, N (lb)	613 (138)
F_{AT} Fa Axial force max, N (lb)	1238 (276)
M Torque max., Nm (lb*ft)	420 (94)



Dimensions	mm (in)
ØA	670 (26.4)
B	296 (11.7)
C	238 (9.4)
D @ Mounting pipe Ø 219 (8.5):	not applicable
D @ Mounting pipe Ø 114 (4.5):	326 (12.8)
D @ Mounting pipe Ø 89 (3.5):	313.5 (12.3)
D @ Mounting pipe Ø 48 (1.9):	293 (11.5)
E	49 (1.9)
F	212 (8.3)
G	not applicable
H	not applicable



Notes

no notes

Documentation

RPE (IQ-Link format)
RPE (Pathloss format)
RPE (PDF format)

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ARCHITECTURAL GROUP Borges
borgesarch.com
1478 STONE POINT DRIVE, SUITE 350
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PROJECT NO:	T-16503-41
DRAWN BY:	JVM
CHECKED BY:	MTD

REV	DATE	DESCRIPTION
2	10/15/18	100% PLAN CHECK
1	08/15/18	100% CD SUBMITTAL
0	07/18/18	90% CD SUBMITTAL

10/15/18

100% Plan Check

No. C11535

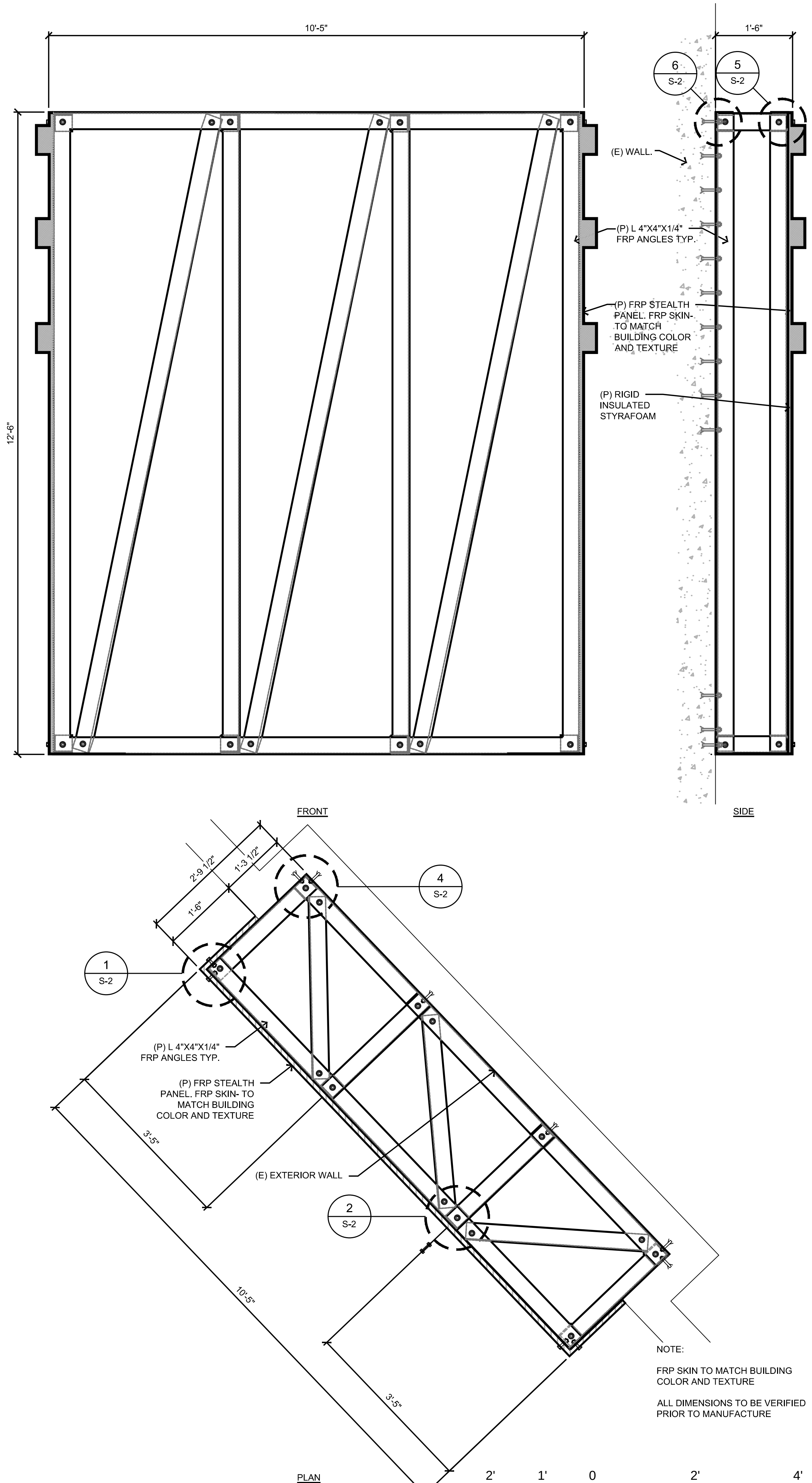
SF25XC213-A

PIER 48 RELO

88 KING STREET
SAN FRANCISCO, CA 94107

SHEET TITLE
MICROWAVE SPECIFICATIONS

SHEET NUMBER
A-5



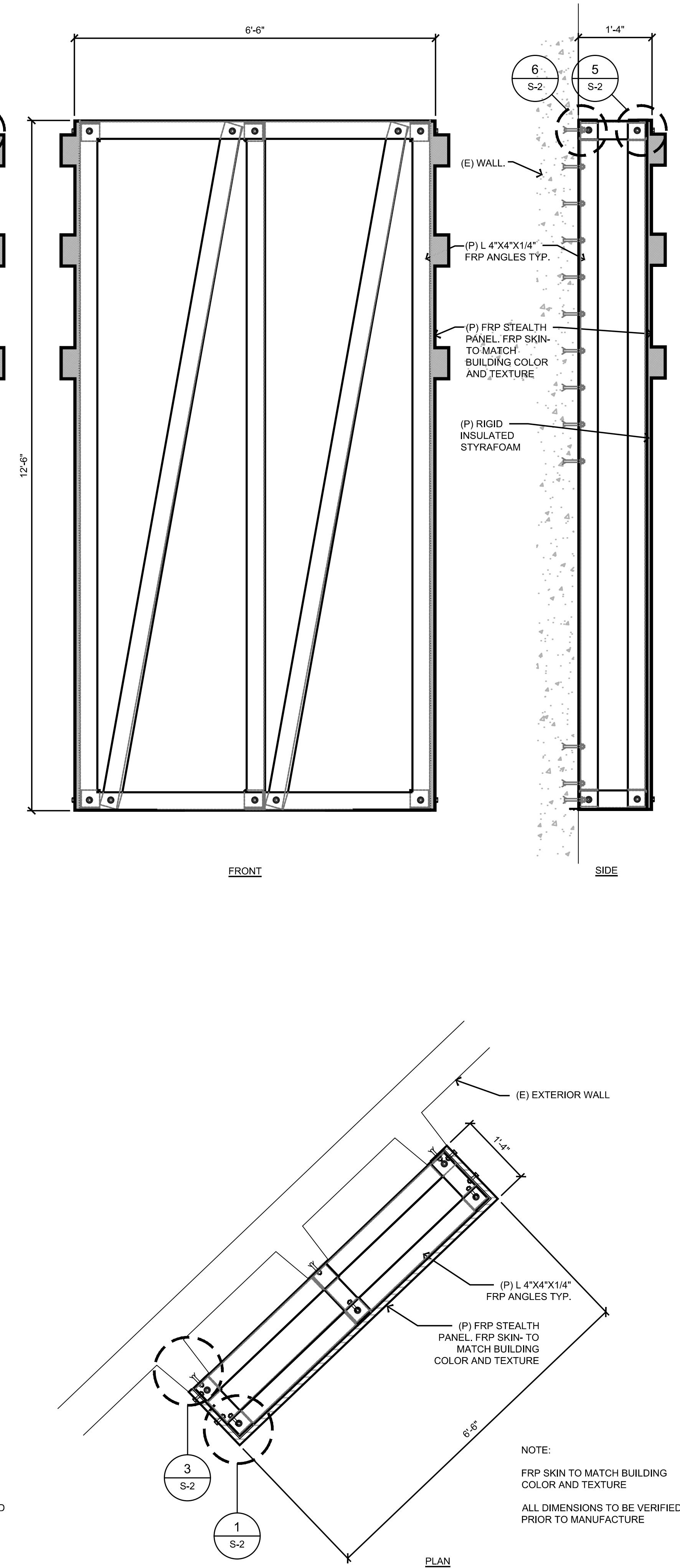
NOTE:

FRP SKIN TO MATCH BUILDING COLOR AND TEXTURE

ALL DIMENSIONS TO BE VERIFIED PRIOR TO MANUFACTURE

2' 1' 0 2' 4'
3/4"=1'-0"

17 STEALTH DETAIL- SECTOR C
3/4" = 1'-0"



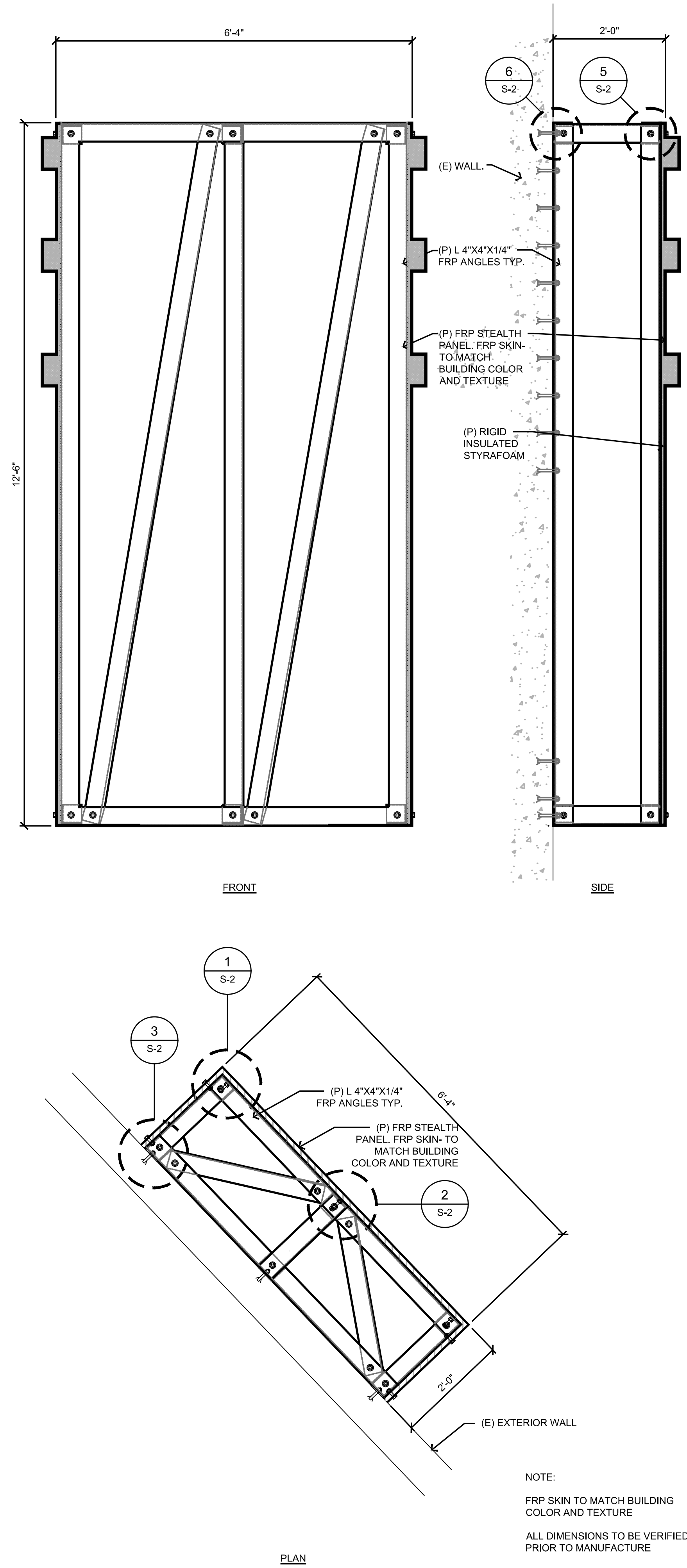
NOTE:

FRP SKIN TO MATCH BUILDING COLOR AND TEXTURE

ALL DIMENSIONS TO BE VERIFIED PRIOR TO MANUFACTURE

2' 1' 0 2' 4'
3/4"=1'-0"

9 STEALTH DETAIL- SECTOR B
3/4" = 1'-0"



NOTE:

FRP SKIN TO MATCH BUILDING COLOR AND TEXTURE

ALL DIMENSIONS TO BE VERIFIED PRIOR TO MANUFACTURE

2' 1' 0 2' 4'
3/4"=1'-0"

5 STEALTH DETAIL- SECTOR A
3/4" = 1'-0"

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10/15/18

100% Plan Check

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IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SF25XC213-A

PIER 48 RELO

88 KING STREET
SAN FRANCISCO, CA 94107

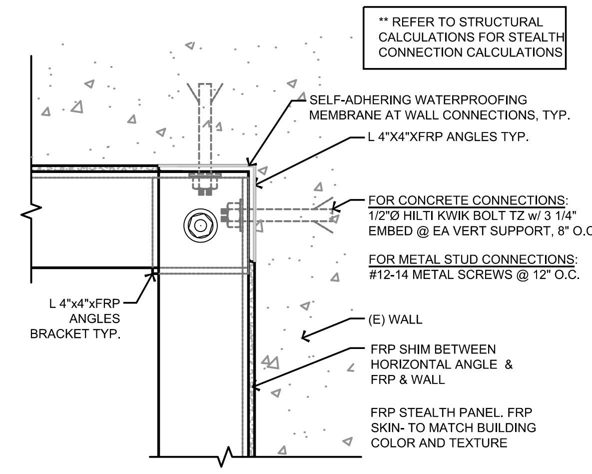
SHEET TITLE

STEALTH DESIGN

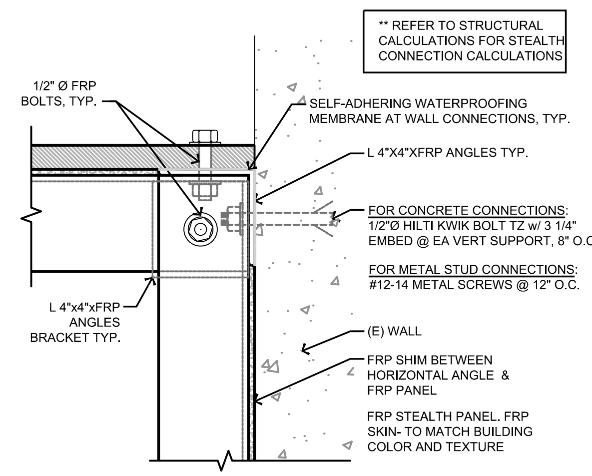
SHEET NUMBER

S-1

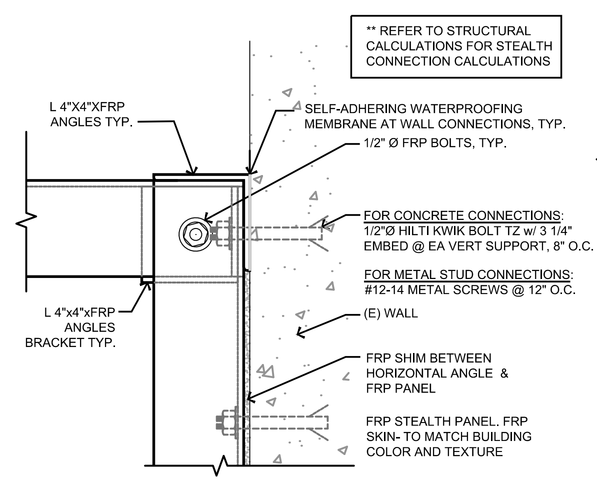
Plot Date:10/15/2018 5:51:03 PM File NameT:\2016\T-16503_Precision Site Development LLC\SF25XC213-41\SF25XC213\Sheets\Building A\S-1 Stealth design.dwg Plotted By:John McDonnell



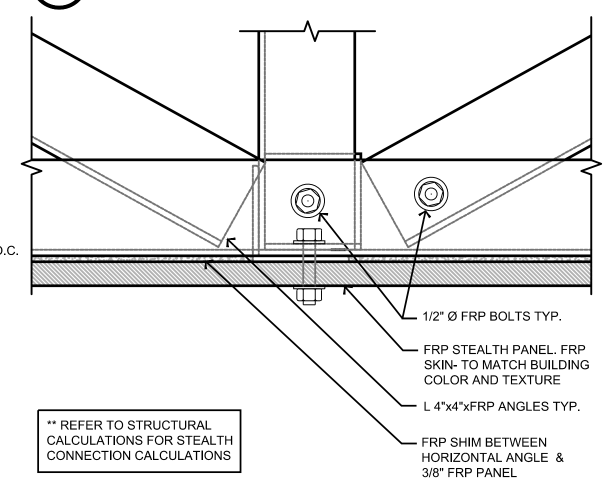
4 CORNER WALL CONNECTION- PLAN VIEW
3" = 1'-0"



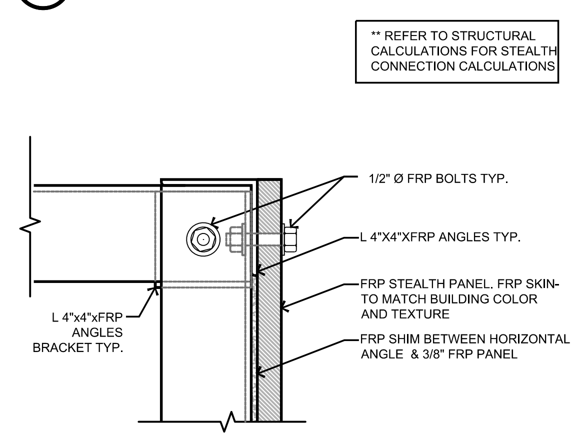
3 WALL CONNECTION- PLAN VIEW
3" = 1'-0"



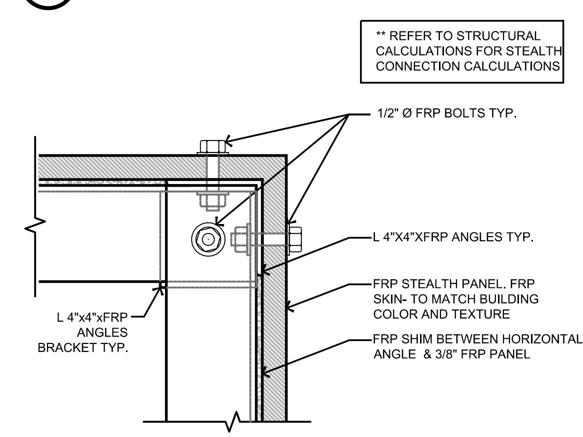
6 WALL CONNECTION- ELEVATION VIEW
3" = 1'-0"



2 MID SPAN WITH SUPPORT BRACE- PLAN VIEW
3" = 1'-0"



5 OUTSIDE TOP CORNER- ELEVATION VIEW
3" = 1'-0"



1 OUTSIDE CORNER- PLAN VIEW
3" = 1'-0"

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10/15/18

100% Plan Check

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PIER 48 RELO
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SHEET TITLE
STEALTH DETAILS

SHEET NUMBER
S-2

1. ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH CURRENT NATIONAL ELECTRICAL CODES AND ALL LOCAL AND STATE CODE, LAWS, AND ORDINANCES. PROVIDE ALL COMPONENTS AND WIRING SIZES AS REQUIRED TO MEET NEC STANDARDS.

2. CONTRACTOR SHALL COORDINATE WITH LOCAL POWER COMPANY FOR REQUIREMENTS OF POWER SERVICE LINE TO THE METER BASE. POWER SERVICE REQUIREMENT IS COMMERCIAL AC NOMINAL 120/208 VOLT OR 120/240 VOLT, SINGLE PHASE WITH 200 AMP RATING.

3. CONTRACTOR SHALL COORDINATE WITH LOCAL TELEPHONE COMPANY FOR REQUIREMENTS OF "T1" SERVICE LINE TO TERMINATE AT THE PPC CABINET.

4. CONTRACTOR SHALL FURNISH AND INSTALL ELECTRIC METER BASE AND 200A DISCONNECT SWITCH PER SITE PLAN AND DETAIL DRAWINGS. THE METER BASE SHOULD BE LOCATED IN A MANNER WHERE ACCESSIBLE BY THE LOCAL POWER COMPANY.

5. LOCAL POWER COMPANY SHALL PROVIDE 200 AMP ELECTRIC METER. CONTRACTOR SHALL COORDINATE INSTALLATION OF METER WITH LOCAL POWER COMPANY.

6. UNDERGROUND POWER AND TELCO SERVICE LINES SHALL BE ROUTED IN A COMMON TRENCH. ALL UNDERGROUND CONDUIT SHALL BE PVC SCHEDULE 40 AND CONDUIT EXPOSED ABOVE GROUND SHALL BE RIGID GALVANIZED STEEL UNLESS OTHERWISE INDICATED.

7. ALL TELCO CONDUIT LINES SHALL BE 4" SCH. 40 PVC CONDUIT UNLESS OTHERWISE INDICATED. THE TELCO CONDUIT FROM THE PPC SHALL BE ROUTED AND TERMINATED AT DESIGNATED TELCO DEMARCATION OR 2-FEET OUTSIDE FENCED AREA, NEAR UTILITY POLE (IN FENCED AREA), OR END CAP OFF AND PROVIDE MARKER STAKE PAINTED BRIGHT ORANGE WITH DESIGNATION FOR TELCO SERVICE.

8. CONDUITS INSTALLED AT PCS EQUIPMENT ENDS PRIOR TO THE EQUIPMENT INSTALLATION SHALL BE STUBBED AND CAPPED AT 6" ABOVE GRADE OR PLATFORM. IF SERVICE LINES CAN'T BE INSTALLED INITIALLY, PROVIDE NYLON PULL CORD IN CONDUITS.

9. THE SPRINT CABINET, INCLUDING 200 AMP LOAD PANEL AND TELCO PANEL, SHALL BE PROVIDED BY OWNER AND INSTALLED BY THE CONTRACTOR. CONTRACTOR IS TO INSTALL BREAKER(S) NOT PROVIDED BY MANUFACTURER. SEE PANEL SCHEDULE ON THIS SHEET FOR BREAKER REQUIREMENTS.

10. LOCATION OF ELECTRIC METER AND DISCONNECT SWITCH TO BE COORDINATED BY ELECTRICAL CONTRACTOR AND FIELD CONSTRUCTION MANAGER.

11. #2 WIRE TO BE UTILIZED IN ELECTRIC SERVICE RUNS EXCEEDING 100'.

12. CONTRACTOR SHALL INSPECT THE EXISTING CONDITIONS PRIOR TO SUBMITTING BID. ANY QUESTIONS ARISING DURING THE BID PERIOD IN REGARDS TO THE CONTRACTORS FUNCTIONS, THE SCOPE OF WORK, OR ANY OTHER ISSUE RELATED TO THIS PROJECT SHALL BE BROUGHT UP DURING THE BID PERIOD WITH THE PROJECT MANAGER FOR CLARIFICATION, NOT AFTER THE CONTRACT HAS BEEN AWARDED.

13. LOCATION OF EQUIPMENT, CONDUIT AND DEVICES SHOWN ON THE DRAWINGS ARE APPROXIMATE AND SHALL BE COORDINATED WITH FIELD CONDITIONS PRIOR TO ROUGH-IN.

14. THE CONDUIT RUNS AS SHOWN ON THE PLANS ARE APPROXIMATE. EXACT LOCATION AND ROUTING SHALL BE PER EXISTING FIELD CONDITIONS.

15. PROVIDE PULL BOXES AND JUNCTION BOXES WHERE SHOWN OR REQUIRED BY NEC.

16. ALL CONDUITS SHALL BE MET WITH BENDS MADE IN ACCORDANCE WITH NEC TABLE 346-10. NO RIGHT ANGLE DEVICE OTHER THAN STANDARD CONDUIT ELBOWS WITH 12" MINIMUM INSIDE SWEEPS FOR ALL CONDUITS 2" OR LARGER.

17. ALL CONDUIT TERMINATIONS SHALL BE PROVIDED WITH PLASTIC THROAT INSULATING GROUNDING BUSHINGS.

18. ALL WIRE SHALL BE TYPE THWN, SOLID, ANNEALED COPPER UP TO SIZE #10 AWG (#8 AND LARGER SHALL BE CONCENTRIC STRANDED) 75 DEGREE C, (167 DEGREES F), 98% CONDUCTIVITY, MINIMUM #12.

19. ALL WIRES SHALL BE TAGGED AT ALL PULL BOXES, J-BOXES, EQUIPMENT BOXES AND CABINETS WITH APPROVED PLASTIC TAGS, ACTION CRAFT, BRADY, OR APPROVED EQUAL.

20. ALL NEW MATERIAL SHALL HAVE A U.L. LABEL.

21. CONDUIT ROUGH-IN SHALL BE COORDINATED WITH THE MECHANICAL EQUIPMENT TO AVOID LOCATION TO CONFLICTS. VERIFY WITH MECHANICAL CONTRACTOR AND COMPLY AS REQUIRED.

22. ALL PANEL DIRECTORIES SHALL BE TYPEWRITTEN NOT HAND WRITTEN.

23. INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS PER THE SPECIFICATIONS AND NEC. THE EQUIPMENT GROUNDING CONDUCTORS SHALL BE BONDED AT ALL JUNCTION BOXES, PULL BOXES, AND ALL DISCONNECT SWITCHES, STARTERS, AND EQUIPMENT CABINETS.

24. THE CONTRACTOR SHALL PREPARE AS-BUILT DRAWINGS, DOCUMENT ANY AND ALL WIRING AND EQUIPMENT CONDITIONS AND CHANGES WHILE COMPLETING THIS CONTRACT. SUBMIT AT SUBSTANTIAL COMPLETION.

25. ALL DISCONNECT SWITCHES AND OTHER CONTROLLING DEVICES SHALL BE PROVIDED WITH ENGRAVED PHENOLIC NAMEPLATES INDICATING EQUIPMENT CONTROLLED, BRANCH CIRCUITS INSTALLED ON, AND PANEL FIELD LOCATIONS FED FROM (NO EXCEPTIONS.)

26. ALL ELECTRICAL DEVICES AND INSTALLATIONS OF THE DEVICES SHALL COMPLY WITH (ADA) AMERICANS WITH DISABILITIES ACT AS ADOPTED BY THE APPLICABLE STATE.

27. PROVIDE CORE DRILLING AS NECESSARY FOR PENETRATIONS OR RISERS THROUGH BUILDING. DO NOT PENETRATE STRUCTURAL MEMBERS WITHOUT CONSTRUCTION MANAGERS APPROVAL. SLEEVES AND/OR PENETRATIONS IN FIRE RATED CONSTRUCTION SHALL BE PACKED WITH FIRE RATED MATERIAL WHICH SHALL MAINTAIN THE FIRE RATING OF THE WALL OR STRUCTURE. FILL FOR FLOOR PENETRATIONS SHALL PREVENT PASSAGE OF WATER, SMOKE, FIRE AND FUMES. ALL MATERIAL SHALL BE UL APPROVED FOR THIS PURPOSE.

28. ELECTRICAL CHARACTERISTICS OF ALL EQUIPMENT (NEW AND EXISTING) SHALL BE FIELD VERIFIED WITH THE OWNER'S REPRESENTATIVE AND EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN OF CONDUIT AND WIRE. ALL EQUIPMENT SHALL BE PROPERLY CONNECTED ACCORDING TO THE NAMEPLATE DATA FURNISHED ON THE EQUIPMENT (THE DESIGN OF THESE PLANS ARE BASED UPON BEST AVAILABLE INFORMATION AT THE TIME OF DESIGN AND SOME EQUIPMENT CHARACTERISTICS MAY VARY FROM DESIGN AS SHOWN ON THESE DRAWINGS).

29. LOCATION OF ALL OUTLET, BOXES, ETC., AND THE TYPE OF CONNECTION (PLUG OR DIRECT) SHALL BE CONFIRMED WITH THE OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN.

ELECTRICAL PANEL SCHEDULE

(P) SPRINT PANEL

VOLTAGE: 120/240 V, 1 PHASE, 3 WIRE | MOUNTING: SURFACE | ENCLOSURE: NEMA 3R
BUS: 200 AMPS | TYPE: 100/2 TRANSFER DEVICE | AIC RATING: 22,000

LOAD	KVA	CB	NO	NO	CB	KVA	LOAD
BBU CABINET	0.80	15	1	13	60	0.00	SURGE
		2	2	14	2		
SPACE	0.00		3	15	100	17.50	MMBS CABINET
SPACE	0.00		4	16	2		
SPACE	0.00		5	17	20	0.18	GFI
FAN	0.12	10	1 6	18	1	0.00	SPACE
			7	19			
			8	20			
			9	21			
			10	22			
			11	23			
			12	24			

CONNECTED LOAD	18.60
25% LIGHTING	
25% LARGEST MOTOR	0.00
TOTAL CONNECTED LOAD	18.60

CONNECTED LOAD: 77.50 AMPERES

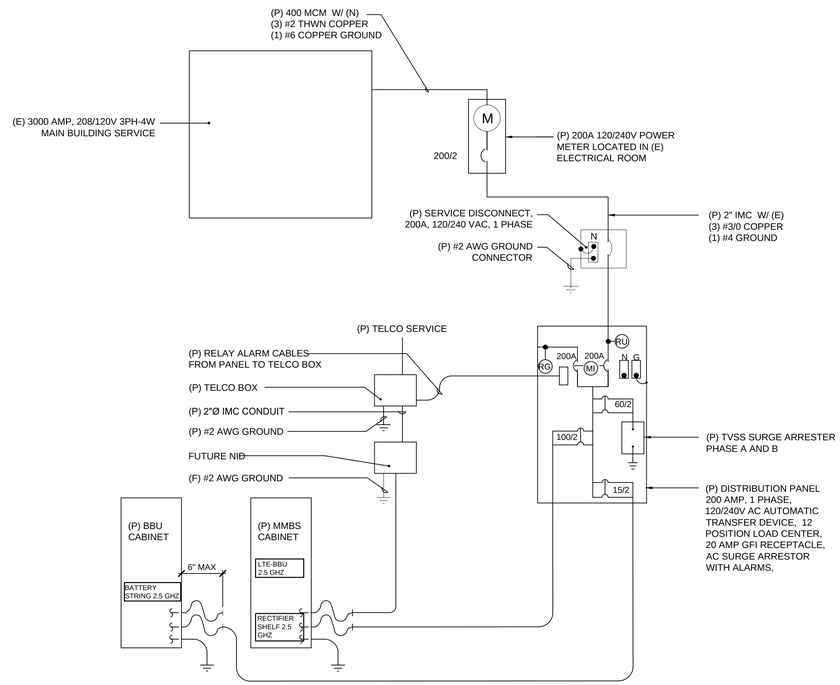
NOTE:

1. CONDUIT ROUTING IS DIAGRAMMATICALLY SHOWN ON PLANS AND ARE ONLY APPROXIMATIONS. THE EXACT LOCATION AND ROUTING SHALL BE FIELD VERIFIED.

2. ALL ELECTRICAL EQUIPMENT AND CONTROLLING DEVICES SHALL BE PROVIDED WITH LAMI COLD NAMEPLATES, INDICATING THE CIRCUITS ORIGINATION AND ALL EQUIPMENT TERMINATIONS

3. CONTRACTOR SHALL SUPPLY BREAKERS, CONDUITS AND CIRCUIT CONDUCTORS, AS REQUIRED FOR A COMPLETED SYSTEM AND SHALL BE IN COMPLIANCE WITH MANUFACTURER SPECIFICATIONS.

PANEL SCHEDULE
NOT TO SCALE



13 ONE LINE DIAGRAM AND PANEL SCHEDULE
1" = 1'-0"

ABBREVIATIONS

BCW	BARE COPPER WIRE
C	CONDUIT
CEC	CALIFORNIA ELECTRICAL CODE
(E)	EXISTING
EG	EQUIPMENT GROUND
FACP	FIRE ALARM CONTROL PANEL
G	GROUND FAULT CIRCUIT INTERRUPTER
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
LFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT
MCM	MILLION CIRCULAR MILLS
MP&S	SEE MECHANICAL PLANS & SPECIFICATIONS
(N)	NEW
NEC	NATIONAL ELECTRICAL CODE - NFPA 70
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NL	NIGHT LIGHT - FIXTURE TO BE UNSWITCHED
PFB	PROVISION FOR FUTURE BREAKER
PVC	POLYVINYL CHLORIDE CONDUIT
(R)	RELOCATE AS INDICATED
(RV)	REMOVE - RESTORE CONTINUITY TO REMAINING DEVICES.
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
WP	WEATHERPROOF
GFCI	GROUND FAULT CIRCUIT INTERRUPTER

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10/15/18

100% Plan Check

LICENSED ARCHITECT RICHARD SAMBORSETTI No. C11535 Exp. 09-30-19 STATE OF CALIFORNIA

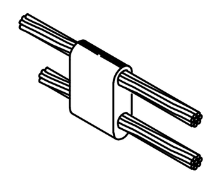
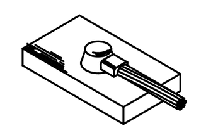
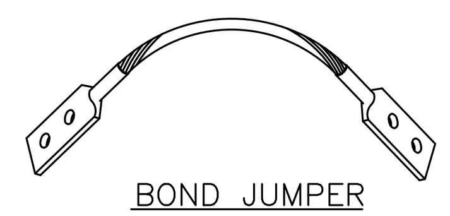
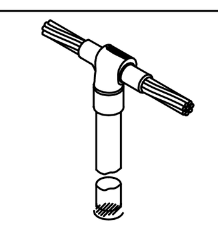
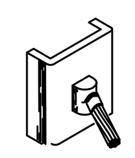
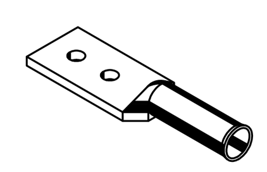
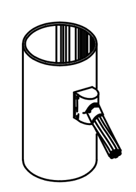
SF25XC213-A

PIER 48 RELO

88 KING STREET
SAN FRANCISCO, CA 94107

SHEET TITLE
SINGLE LINE DIAGRAM & POWER PANEL SCHEDULE

SHEET NUMBER
E-1

CADWELD CONNECTIONS OR APPROVED EQUAL		BURNDY CONNECTIONS OR APPROVED EQUAL
 PARALLEL HORIZONTAL CONDUCTORS PARALLEL THROUGH CONNECTION OF HORIZONTAL CABLES TYPE PT	 HORIZONTAL STEEL SURFACE TO FLAT STEEL SURFACE OR HORIZONTAL PIPE TYPE HS	 BOND JUMPER FIELD FABRICATED GREEN STRANDED INSULATED TYPE 2-YA-2
 THROUGH CABLE TO GROUND ROD THROUGH CABLE TO TOP OF GROUND ROD TYPE GT	 VERTICAL STEEL SURFACE CABLE DOWN AT 45° TO VERTICAL STEEL SURFACE INCLUDING PIPE TYPE VS	 COPPER LUGS TWO HOLE - LONG BARREL LENGTH TYPE YA-2
 VERTICAL PIPE CABLE DOWN AT 45° TO RANGE OF VERTICAL PIPES TYPE VS		

TYPICAL CADWELD TYPE CONNECTIONS

NO SCALE

GROUNDING NOTES

1 ALL ELECTRICAL AND GROUNDING AT THE CELL SITE SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 780 (LATEST EDITION), AND MANUFACTURER SPECIFICATION.

2 IF THE AC PANEL IN THE POWER CABINET IS WIRED AS SERVICE ENTRANCE, THE AC SERVICE GROUND CONDUCTOR SHALL BE CONNECTED TO GROUND ELECTRODE SYSTEM. WHEN THE AC PANEL IN THE POWER CABINET IS CONSIDERED A SUB-PANEL, THE GROUND WIRE SHALL BE INSTALLED IN THE AC POWER CONDUIT. THE INSTALLATION SHALL BE PER LOCAL AND NATIONAL ELECTRIC CODE (NFPA-70).

3 EXOTHERMIC WELDING IS RECOMMENDED FOR GROUNDING CONNECTION WHERE PRACTICAL. OTHERWISE, THE CONNECTION SHALL BE MADE USING COMPRESSION TYPE-2 HOLES. LONG BARREL LUGS OR DOUBLE CRIMP CLAMP "C" CLAMP. THE COPPER CABLES SHALL BE COATED WITH ANTIOXIDANT (COPPER SHIELD) BEFORE MAKING THE CONNECTIONS. THE MANUFACTURER'S TORQUING RECOMMENDATIONS ON THE BOLT ASSEMBLY TO SECURE CONNECTIONS SHALL BE FOLLOWED.

4 THE ANTENNA CABLES SHALL BE GROUNDED AT THE TOP AND BOTTOM OF THE VERTICAL RUN FOR LIGHTING PROTECTION. THE ANTENNA CABLE SHIELD SHALL BE BONDED TO A COPPER GROUND BUSS AT THE LOWER MOST POINT OF A VERTICAL RUN JUST BEFORE IT BEGINS TO BEND TOWARD THE HORIZONTAL PLANE. WIRE RUNS TO GROUND SHALL BE KEPT AS STRAIGHT AND SHORT AS POSSIBLE. ANTENNA CABLE SHIELD SHALL BE GROUNDED JUST BEFORE ENTERING THE CELL CABINET. ANY ANTENNA CABLES OVER 200 FEET IN LENGTH SHALL ALSO BE EQUIPPED WITH ADDITIONAL GROUNDING AT MID-POINT.

5 ALL GROUNDING CONDUCTORS INSIDE THE BUILDING SHALL BE RUN IN CONDUIT RACEWAY SYSTEM, AND SHALL BE INSTALLED AS STRAIGHT AS PRACTICAL WITH MINOR BENDS TO AVOID OBSTRUCTIONS. THE BENDING RADIUS OF ANY #2 GROUNDING CONDUCTOR IS 8". PVC RACEWAY MAY BE FLEXIBLE OR RIGID PER THE FIELD CONDITIONS. GROUNDING CONDUCTORS SHALL NOT MAKE CONTACT WITH ANY METALLIC CONDUITS, SURFACES OR EQUIPMENT.

6 PROVIDE PVC SLEEVES WHERE GROUNDING CONDUCTORS PASS THROUGH THE BUILDING WALLS AND /OR CEILINGS.

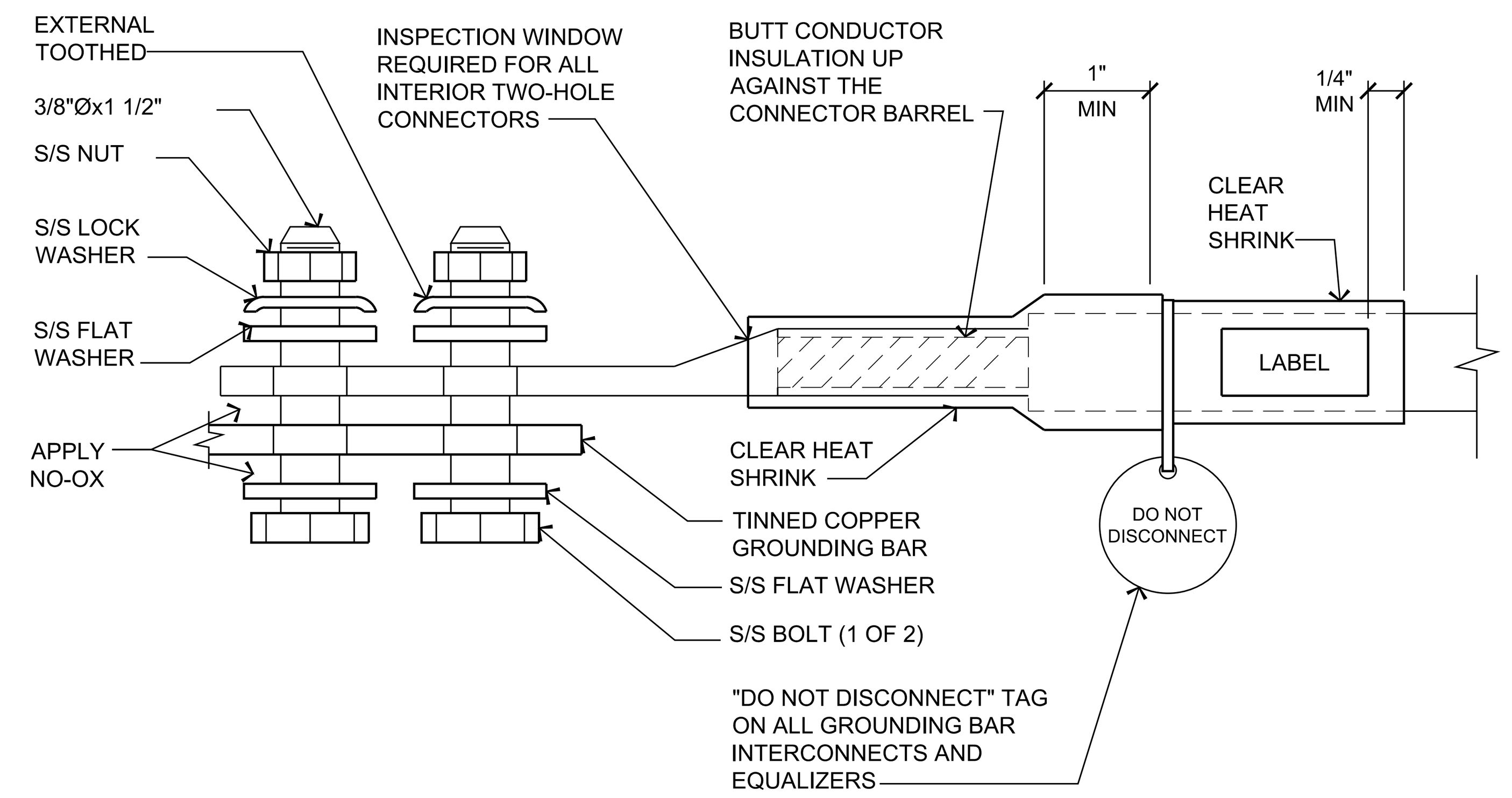
7. INSTALL GROUND BUSHINGS ON ALL METALLIC CONDUITS AND BOND TO THE EQUIPMENT GROUND BUSS IN THE PANEL BOARD.

8 GROUND ANTENNA BASES, FRAMES, CABLE RACKS AND OTHER METALLIC COMPONENTS WITH #2 GROUNDING CONDUCTORS AND CONNECT TO INSULATED SURFACE MOUNTED GROUND BARS. CONNECTION DETAILS SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS FOR GROUNDING.

9. ALL PROPOSED GROUNDING CONDUCTORS SHALL BE ROUTED AND CONNECTED TO THE MAIN GROUND BAR OR EXISTING GROUND RING.

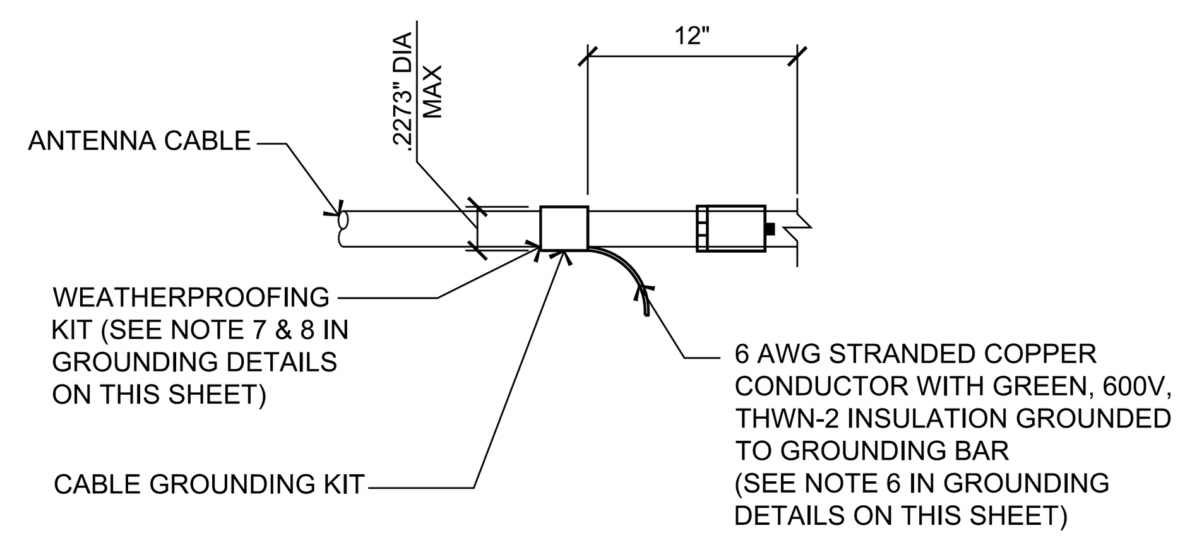
GROUNDING LEGEND

— - —	EXISTING GROUND RING
●	CADWELD CONNECTION (EXOTHERMIC WELD)
▲	MECHANICAL CONNECTION
⊗	GROUND ROD



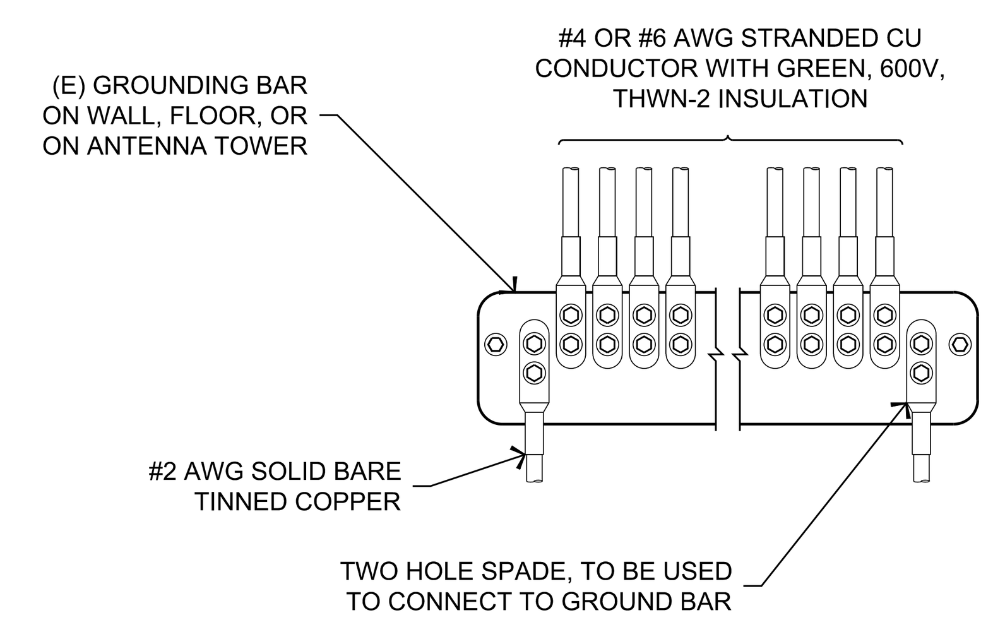
12 TWO HOLE LUG

NOT TO SCALE



11 CONNECTION OF GROUNDING KIT TO ANTENNA CABLE

NOT TO SCALE



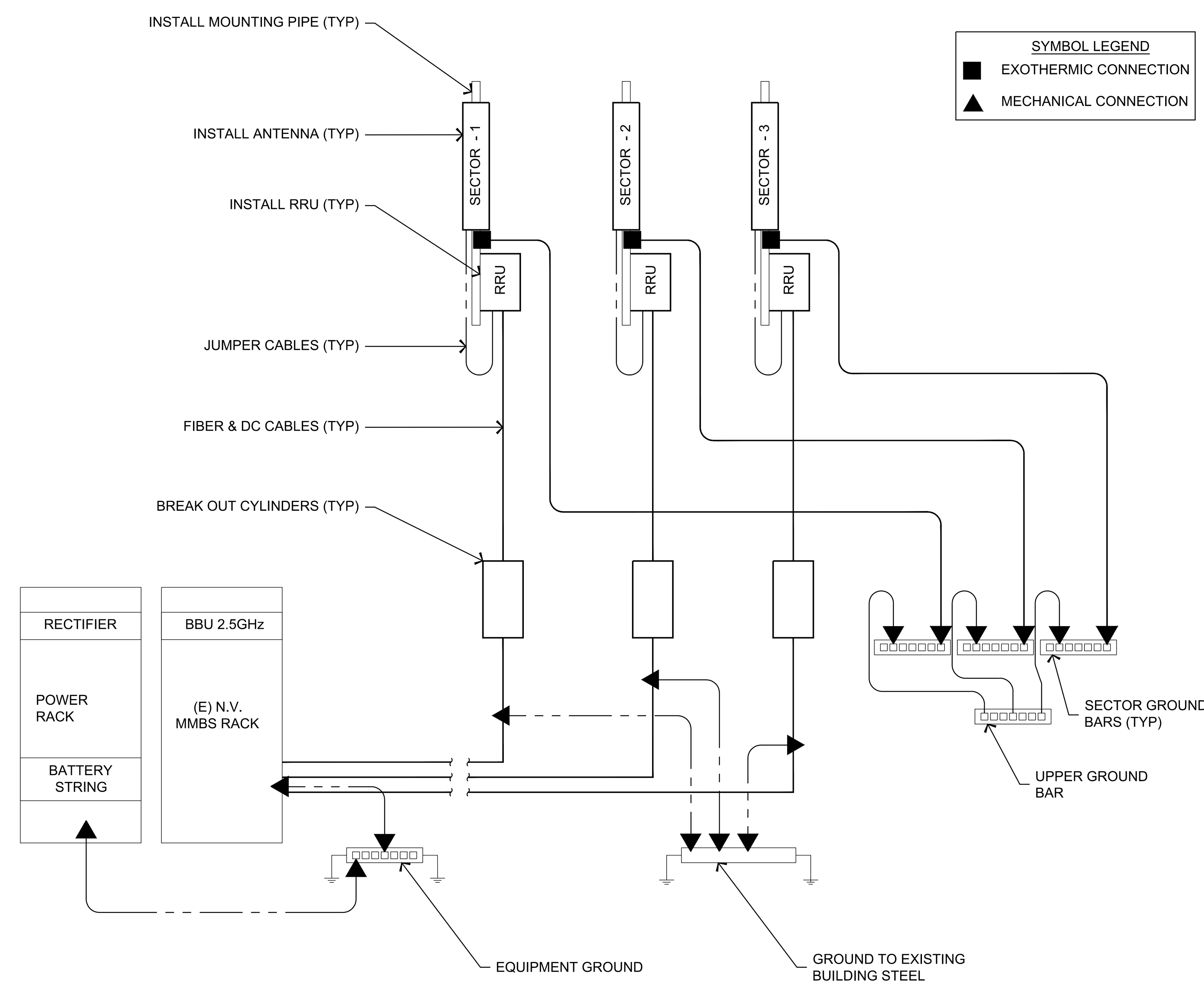
NOTES

1. APPLY NO-OX TO LUG AND BAR CONTACT SURFACE. DO NOT COAT INLINE LUG.

2. IF STOLEN GROUND BARS ARE ENCOUNTERED, CONTACT SPRINT CM FOR REPLACEMENT THREADED ROD KIT.

10 GROUNDING CONDUCTOR TO GROUNDING BAR

3/8" = 1'-0"



6 GROUNDING RISER DIAGRAM

1/2" = 1'-0"

1. COMPRESSION CONNECTIONS (2), 2 AWG BARE TINNED SOLID COPPER CONDUCTORS TO GROUNDING BAR. ROUTE CONDUCTORS TO BURIED GROUNDING RING AND PROVIDE PARALLEL EXOTHERMIC WELD.
2. EC SHALL USE PERMANENT MARKER TO DRAW THE LINES BETWEEN EACH SECTION AND LABEL EACH SECTION ("P", "A", "N", "I") WITH 1" HIGH LETTERS.
3. ALL HARDWARE 18-8 STAINLESS STEEL, INCLUDING LOCK WASHERS, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING. ALL HARDWARE SHALL BE STAINLESS STEEL 3/8 INCH DIAMETER OR LARGER.
4. FOR GROUND BOND TO STEEL ONLY: INSERT A CADMIUM FLAT WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
5. NUT & WASHER SHALL BE PLACED ON THE FRONT SIDE OF THE GROUNDING BAR AND BOLTED ON THE BACK SIDE. INSTALL BLACK HEAT-SHRINKING TUBE, 600 VOLT INSULATION, ON ALL GROUNDING TERMINATIONS. THE INTENT IS TO WEATHERPROOF THE COMPRESSION CONNECTION.
6. NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATION, AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED.
7. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
8. WEATHERPROOFING SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
9. GROUND RESISTANCE NOT TO EXCEED 10 OHMS.
10. WHEN THE SCOPE OF WORK REQUIRES THE ADDITION OF A GROUNDING BAR TO AN EXISTING TOWER, THE SUBCONTRACTOR SHALL OBTAIN APPROVAL FROM THE TOWER OWNER PRIOR TO MOUNTING THE GROUNDING BAR TO THE TOWER.
11. EXTEND TWO (2) 2 AWG TINNED CU CONDUCTOR FROM BURIED GROUNDING RING AND CONNECT TO THE PROPOSED TOWER. FOLLOW MANUFACTURERS RECOMMENDATIONS FOR GROUNDING CONNECTIONS TO THE TOWER. (APPLICABLE TO NEW TOWERS ONLY.)
12. NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATION, AND CONNECTION ORIENTATION. THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ADDITIONAL GROUNDING BARS AS REQUIRED, PROVIDING 50% SPARE CONNECTION POINTS.

5 GROUNDING NOTES

NOT TO SCALE

Sprint
12657 Alcosta Blvd., Suite 300
San Ramon, CA 94583

PRECISION
1524 RAINBOW TROUT STREET
ROSEVILLE, CA 95747

ARCHITECTURAL GROUP Borges
borgesarch.com
1478 STONE POINT DRIVE, SUITE 350
ROSEVILLE CA 95661
916 782 7200 TEL
916 773 3037 FAX

PROJECT NO:	T-16503-41
DRAWN BY:	JVM
CHECKED BY:	MTD

REV	DATE	DESCRIPTION
2	10/15/18	100% PLAN CHECK
1	08/15/18	100% CD SUBMITTAL
0	07/18/18	90% CD SUBMITTAL

10/15/18

100% Plan Check

LICENSED ARCHITECT RICHARD SAMBUCETTI No. C11535 Ren. 09-30-19 STATE OF CALIFORNIA

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SF25XC213-A

PIER 48 RELO

88 KING STREET
SAN FRANCISCO, CA 94107

SHEET TITLE

GROUNDING NOTES & DETAILS

SHEET NUMBER

G-1

Precision Site Development
1524 Rainbow Trout Street, Roseville CA 95747
Contact: Jeremy Jordan
jeremy@precisionsd.com (916) 918 9322

PRECISION SITE DEVELOPMENT

Sprint - SF25XC213
88 King Street,
San Francisco, CA

View of front of building from King St.

Photo simulations based on photographs taken December 12, 2017

Precision Site Development
1524 Rainbow Trout Street, Roseville CA 95747
Contact: Jeremy Jordan
jeremy@precisionsd.com (916) 918 9322

PRECISION SITE DEVELOPMENT

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PRECISION SITE DEVELOPMENT

Sprint - SF25XC213
88 King Street,
San Francisco, CA

Partial view of building from Embarcadero

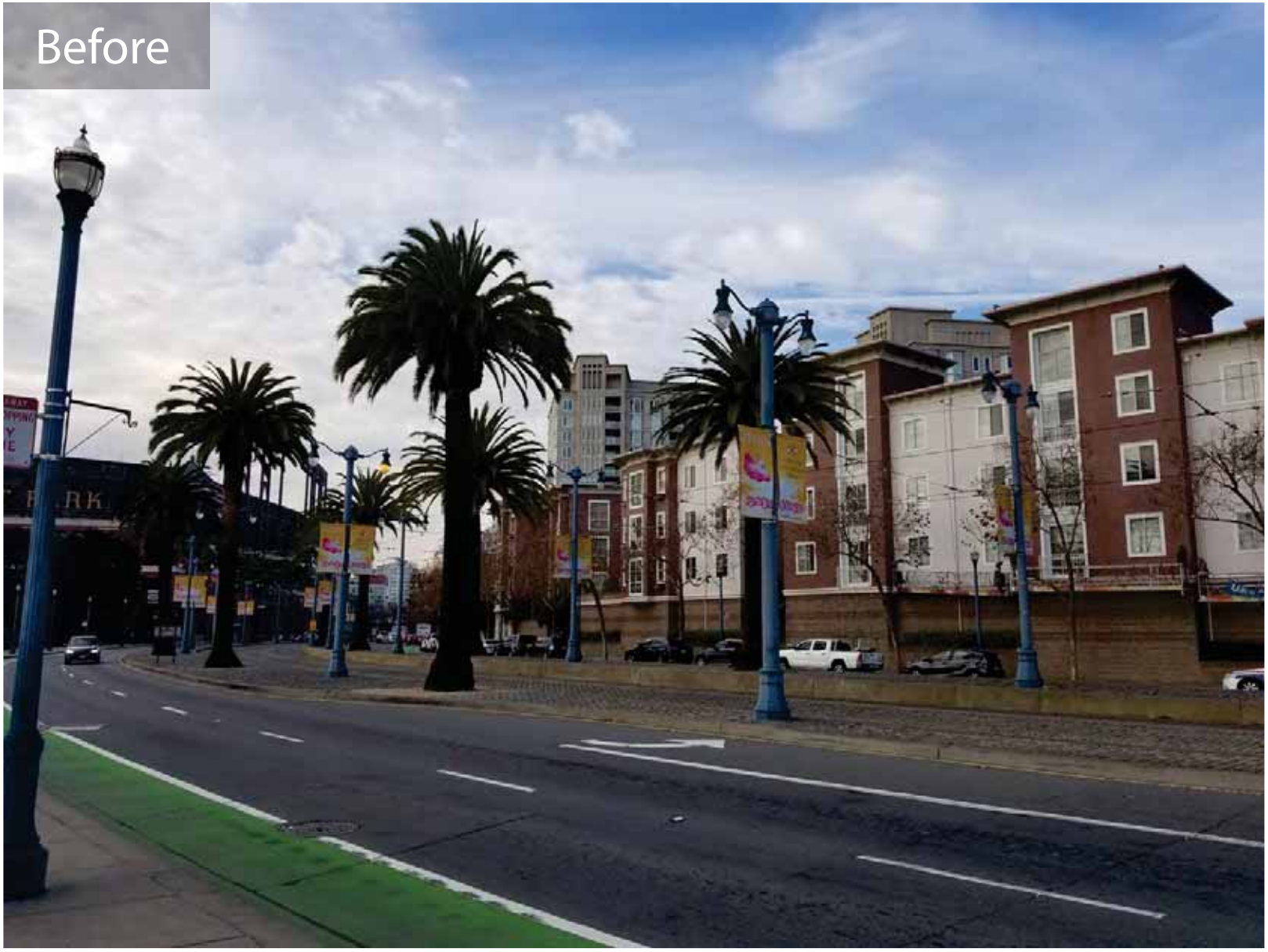

Photo simulations based on photographs taken December 12, 2017

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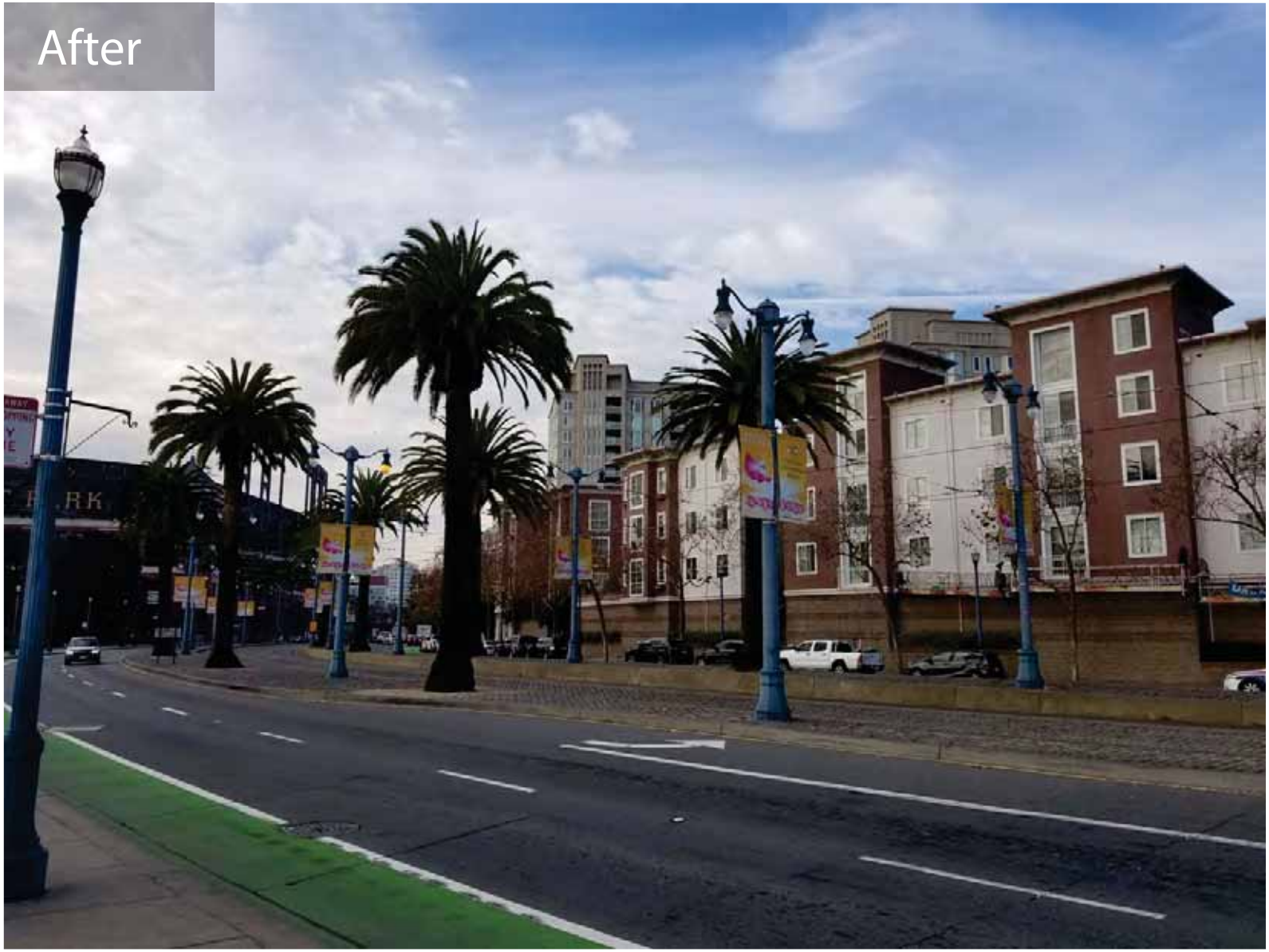
Partial view of building from Embarcadero



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Partial view of building from King Street

Photo simulations based on photographs taken December 12, 2017

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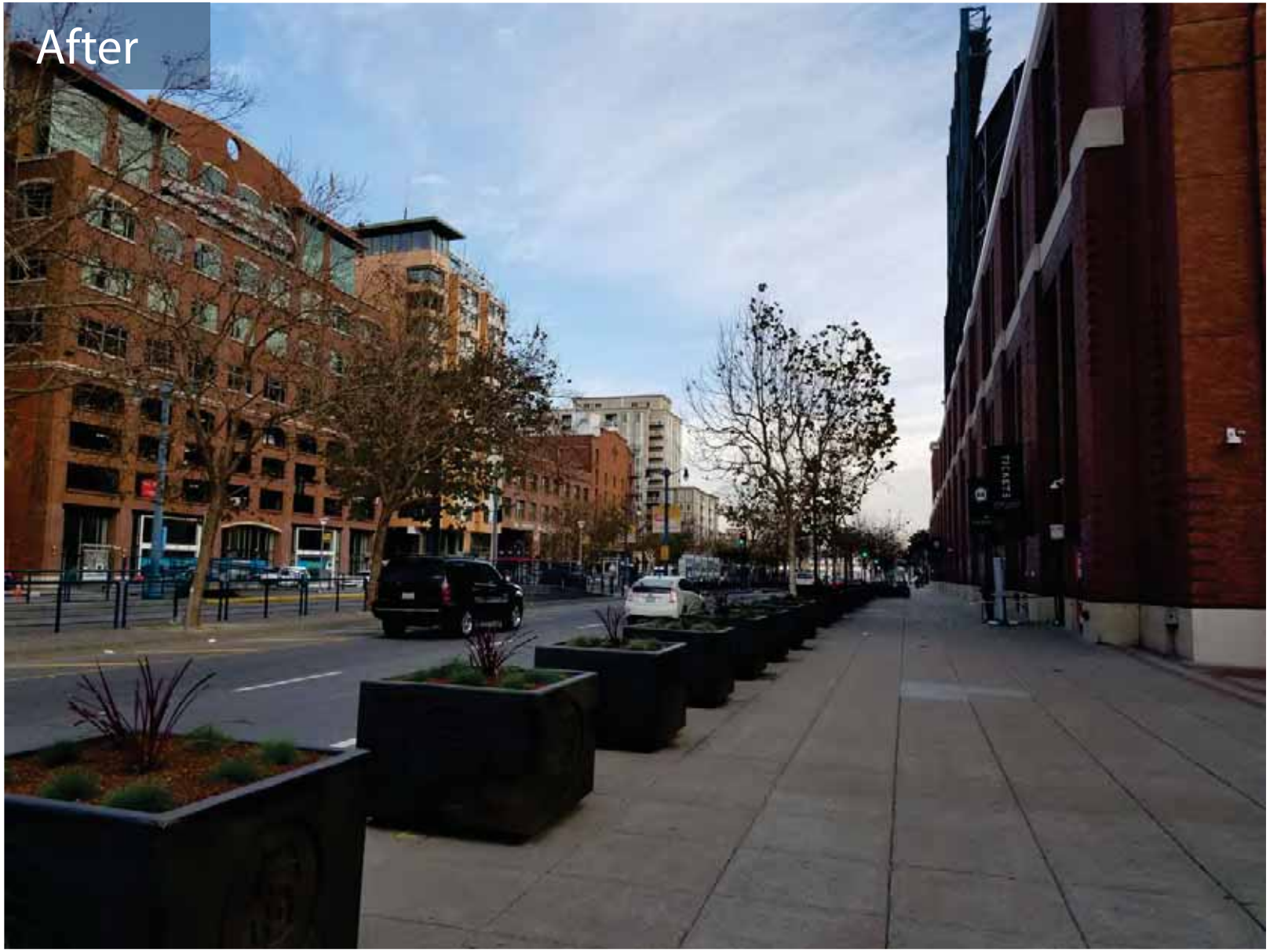


Photo simulations based on photographs taken December 12, 2017

SAN FRANCISCO
PLANNING DEPARTMENT

CEQA Categorical Exemption Determination

PROPERTY INFORMATION/PROJECT DESCRIPTION

Project Address		**Block/Lot(s)**
88 KING ST		3793005
Case No.		**Permit No.**
2018-008389PRJ		
■ **Addition/ Alteration**	☐ **Demolition (requires HRE for Category B Building)**	☐ **New Construction**

Project description for Planning Department approval.

88 King Street - Sprint Wireless Facility New Site Build: Project proposal is to install (2) (P) and (2) (F) equipment cabinets on (P) steel skid platform inside Penthouse equipment room. Install PPC cabinet, disconnect, Telco cabinet and ciena cabinet with UAM within equipment lease area. Install (2) panel antennas per sector, (6) total, (4) RRHs, (12) total below parapet for sector A or inside rooftop mechanical wall at sectors B and C. Install (1) microwave antenna flush mounted to wall, (1) GPS antenna mounted inside screen wall. Install stealth screen at sectors A, B & C, paint and texture to match existing building.

STEP 1: EXEMPTION CLASS

Note: If neither class applies, an *Environmental Evaluation Application* is required.	
■	**Class 1 - Existing Facilities.** Interior and exterior alterations; additions under 10,000 sq. ft.
☐	**Class 3 - New Construction.** Up to three new single-family residences or six dwelling units in one building; commercial/office structures; utility extensions; change of use under 10,000 sq. ft. if principally permitted or with a CU.
☐	**Class 32 - In-Fill Development.** New Construction of seven or more units or additions greater than 10,000 sq. ft. and meets the conditions described below: (a) The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations. (b) The proposed development occurs within city limits on a project site of no more than 5 acres substantially surrounded by urban uses. (c) The project site has no value as habitat for endangered rare or threatened species. (d) Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality. (e) The site can be adequately served by all required utilities and public services. **FOR ENVIRONMENTAL PLANNING USE ONLY**
☐	**Class ____**

STEP 2: CEQA IMPACTS

TO BE COMPLETED BY PROJECT PLANNER

If any box is checked below, an *Environmental Evaluation Application* is required.	
☐	**Air Quality:** Would the project add new sensitive receptors (specifically, schools, day care facilities, hospitals, residential dwellings, and senior-care facilities within an Air Pollution Exposure Zone? Does the project have the potential to emit substantial pollutant concentrations (e.g., backup diesel generators, heavy industry, diesel trucks, etc.)? (*refer to EP _ArcMap > CEQA Catex Determination Layers > Air Pollution Exposure Zone)*
☐	**Hazardous Materials:** If the project site is located on the Maher map or is suspected of containing hazardous materials (based on a previous use such as gas station, auto repair, dry cleaners, or heavy manufacturing, or a site with underground storage tanks): Would the project involve 50 cubic yards or more of soil disturbance - or a change of use from industrial to residential? If yes, this box must be checked and the project applicant must submit an Environmental Application with a Phase I Environmental Site Assessment. *Exceptions: do not check box if the applicant presents documentation of enrollment in the San Francisco Department of Public Health (DPH) Maher program, a DPH waiver from the Maher program, or other documentation from Environmental Planning staff that hazardous material effects would be less than significant (refer to EP_ArcMap > Maher layer).*
☐	**Transportation:** Does the project create six (6) or more net new parking spaces or residential units? Does the project have the potential to adversely affect transit, pedestrian and/or bicycle safety (hazards) or the adequacy of nearby transit, pedestrian and/or bicycle facilities?
☐	**Archeological Resources:** Would the project result in soil disturbance/modification greater than two (2) feet below grade in an archeological sensitive area or eight (8) feet in a non-archeological sensitive area? (*refer to EP_ArcMap > CEQA Catex Determination Layers > Archeological Sensitive Area)*
☐	**Subdivision/Lot Line Adjustment:** Does the project site involve a subdivision or lot line adjustment on a lot with a slope average of 20% or more? (*refer to EP_ArcMap > CEQA Catex Determination Layers > Topography*)
☐	**Slope = or > 20%:** Does the project involve any of the following: (1) square footage expansion greater than 1,000 sq. ft. outside of the existing building footprint, (2) excavation of 50 cubic yards or more of soil, (3) new construction? (*refer to EP_ArcMap > CEQA Catex Determination Layers > Topography*) **If box is checked, a geotechnical report is required.**
☐	**Seismic: Landslide Zone:** Does the project involve any of the following: (1) square footage expansion greater than 1,000 sq. ft. outside of the existing building footprint, (2) excavation of 50 cubic yards or more of soil, (3) new construction? *(refer to EP_ArcMap > CEQA Catex Determination Layers > Seismic Hazard Zones)* **If box is checked, a geotechnical report is required.**
☐	**Seismic: Liquefaction Zone:** Does the project involve any of the following: (1) square footage expansion greater than 1,000 sq. ft. outside of the existing building footprint, (2) excavation of 50 cubic yards or more of soil, (3) new construction? *(refer to EP_ArcMap > CEQA Catex Determination Layers > Seismic Hazard Zones)* **If box is checked, a geotechnical report will likely be required.**
If no boxes are checked above, GO TO STEP 3. If one or more boxes are checked above, an *Environmental Evaluation Application* is required, unless reviewed by an Environmental Planner.	
Comments and Planner Signature (*optional*): Ashley Lindsay	

STEP 3: PROPERTY STATUS - HISTORIC RESOURCE

TO BE COMPLETED BY PROJECT PLANNER

PROPERTY IS ONE OF THE FOLLOWING: *(refer to Parcel Information Map)*	
☐	**Category A:** Known Historical Resource. **GO TO STEP 5.**
☐	**Category B:** Potential Historical Resource (over 45 years of age). **GO TO STEP 4.**
■	**Category C:** Not a Historical Resource or Not Age Eligible (under 45 years of age). **GO TO STEP 6.**

STEP 4: PROPOSED WORK CHECKLIST

TO BE COMPLETED BY PROJECT PLANNER

Check all that apply to the project.	
☐	1. **Change of use and new construction.** Tenant improvements not included.
☐	2. **Regular maintenance or repair** to correct or repair deterioration, decay, or damage to building.
☐	3. **Window replacement** that meets the Department's *Window Replacement Standards*. Does not include storefront window alterations.
☐	4. **Garage work.** A new opening that meets the *Guidelines for Adding Garages and Curb Cuts*, and/or replacement of a garage door in an existing opening that meets the Residential Design Guidelines.
☐	5. **Deck, terrace construction, or fences** not visible from any immediately adjacent public right-of-way.
☐	6. **Mechanical equipment installation** that is not visible from any immediately adjacent public right-of-way.
☐	7. **Dormer installation** that meets the requirements for exemption from public notification under *Zoning Administrator Bulletin No. 3: Dormer Windows*.
☐	8. **Addition(s)** that are not visible from any immediately adjacent public right-of-way for 150 feet in each direction; does not extend vertically beyond the floor level of the top story of the structure or is only a single story in height; does not have a footprint that is more than 50% larger than that of the original building; and does not cause the removal of architectural significant roofing features.
Note: Project Planner must check box below before proceeding.	
☐	Project is not listed. **GO TO STEP 5.**
☐	Project **does not conform** to the scopes of work. **GO TO STEP 5**.
☐	Project involves **four or more** work descriptions. **GO TO STEP 5.**
☐	Project involves **less than four** work descriptions. **GO TO STEP 6.**

STEP 5: CEQA IMPACTS - ADVANCED HISTORICAL REVIEW

TO BE COMPLETED BY PROJECT PLANNER

Check all that apply to the project.	
☐	1. Project involves a **known historical resource (CEQA Category A)** as determined by Step 3 and conforms entirely to proposed work checklist in Step 4.
☐	2. **Interior alterations to publicly accessible spaces**.
☐	3. **Window replacement** of original/historic windows that are not "in-kind" but are consistent with existing historic character.
☐	4. **Façade/storefront alterations** that do not remove, alter, or obscure character-defining features.
☐	5. **Raising the building** in a manner that does not remove, alter, or obscure character-defining features.
☐	6. **Restoration** based upon documented evidence of a building's historic condition, such as historic photographs, plans, physical evidence, or similar buildings.

☐	7. **Addition(s)**, including mechanical equipment that are minimally visible from a public right-of-way and meet the *Secretary of the Interior's Standards for Rehabilitation*.
☐	8. **Other work consistent** with the *Secretary of the Interior Standards for the Treatment of Historic Properties* (*specify or add comments*):
☐	9. **Other work** that would not materially impair a historic district (specify or add comments): *(Requires approval by Senior Preservation Planner/Preservation Coordinator)*
☐	10. **Reclassification of property status**. *(Requires approval by Senior Preservation Planner/Preservation* ☐ Reclassify to Category A ☐ Reclassify to Category C a. Per HRER dated *(attach HRER)* b. Other *(specify)*:
Note: If ANY box in STEP 5 above is checked, a Preservation Planner MUST check one box below.	
☐	**Further environmental review required.** Based on the information provided, the project requires an *Environmental Evaluation Application* to be submitted. **GO TO STEP 6.**
☐	**Project can proceed with categorical exemption review**. The project has been reviewed by the Preservation Planner and can proceed with categorical exemption review. **GO TO STEP 6.**
Comments (*optional*):	
Preservation Planner Signature:	

STEP 6: CATEGORICAL EXEMPTION DETERMINATION

TO BE COMPLETED BY PROJECT PLANNER

☐	**Further environmental review required.** Proposed project does not meet scopes of work in either *(check all that apply)*: ☐ Step 2 - CEQA Impacts ☐ Step 5 - Advanced Historical Review **STOP! Must file an *Environmental Evaluation Application.***	
■	**No further environmental review is required. The project is categorically exempt under CEQA. There are no unusual circumstances that would result in a reasonable possibility of a significant effect.**	
	Project Approval Action: Commission Hearing If Discretionary Review before the Planning Commission is requested, the Discretionary Review hearing is the Approval Action for the project.	**Signature:** Ashley Lindsay 11/19/2018
	Once signed or stamped and dated, this document constitutes a categorical exemption pursuant to CEQA Guidelines and Chapter 31of the Administrative Code. In accordance with Chapter 31 of the San Francisco Administrative Code, an appeal of an exemption determination can only be filed within 30 days of the project receiving the first approval action. Please note that other approval actions may be required for the project. Please contact the assigned planner for these approvals.	

STEP 7: MODIFICATION OF A CEQA EXEMPT PROJECT

TO BE COMPLETED BY PROJECT PLANNER

In accordance with Chapter 31 of the San Francisco Administrative Code, when a California Environmental Quality Act (CEQA) exempt project changes after the Approval Action and requires a subsequent approval, the Environmental Review Officer (or his or her designee) must determine whether the proposed change constitutes a substantial modification of that project. This checklist shall be used to determine whether the proposed changes to the approved project would constitute a "substantial modification" and, therefore, be subject to additional environmental review pursuant to CEQA.

PROPERTY INFORMATION/PROJECT DESCRIPTION

Project Address (If different than front page)		Block/Lot(s) (If different than front page)
88 KING ST		3793/005
Case No.	Previous Building Permit No.	New Building Permit No.
2018-008389PRJ		
Plans Dated	Previous Approval Action	New Approval Action
	Commission Hearing	
Modified Project Description:		

DETERMINATION IF PROJECT CONSTITUTES SUBSTANTIAL MODIFICATION

Compared to the approved project, would the modified project:	
☐	Result in expansion of the building envelope, as defined in the Planning Code;
☐	Result in the change of use that would require public notice under Planning Code Sections 311 or 312;
☐	Result in demolition as defined under Planning Code Section 317 or 19005(f)?
☐	Is any information being presented that was not known and could not have been known at the time of the original determination, that shows the originally approved project may no longer qualify for the exemption?
If at least one of the above boxes is checked, further environmental review is required.	

DETERMINATION OF NO SUBSTANTIAL MODIFICATION

☐	The proposed modification would not result in any of the above changes.

If this box is checked, the proposed modifications are categorically exempt under CEQA, in accordance with prior project approval and no additional environmental review is required. This determination shall be posted on the Planning Department website and office and mailed to the applicant, City approving entities, and anyone requesting written notice.

Planner Name:	**Date:**

COMMUNITY OUTREACH MEETING ON A WIRELESS COMMUNICATION FACILITY PROPOSED IN YOUR NEIGHBORHOOD

To: Neighbors within 500 feet of 88 King St., San Francisco, CA 94107

Meeting Information

Date: Wednesday, May 16, 2018
Time: 6 p.m. -7:00 p.m.
Where: Potrero library
Branch Meeting Room
1616 20th St.
San Francisco, CA 94107

Applicant Sprint c/o Precision Site Development

Precision Site Development
1524 Rainbow Trout Rd.
Roseville, CA 95747

Sprint Site Information

Address: 88 King St.,
San Francisco, CA 94107
APN: 3793-005
Zoning: SB-DTR

Contact Information

Jeremy Jordan (916) 918-9322
1524 Rainbow Trout Rd. Roseville, CA 95747
Jeremy@PrecisionSD.com
This is not a Library Sponsored Program

Sprint has applied for zoning approval to install a rooftop wireless facility located at 88 King St., San Francisco. This site will replace an existing site that will be closing down. Continuing coverage at this location is vital to the Sprint network and local emergency services and will also improve service for Sprint customers with significantly improved call quality and faster data rates for both uploading and downloading. The proposed facility will enhance Sprints network by closing gaps in coverage and adding more spectrum, resulting in faster and more reliable data streaming.

You are invited to attend an informational community meeting on Wednesday, May 16th from 6:00 - 7:00 p.m. at the Potrero Library in the Branch Meeting Room. This project will be scheduled for a Planning Commission public hearing after the neighborhood meeting. Architectural plans and photo simulations will be available for your review at the meeting.

If you are unable to attend the meeting and would like to request information, please contact Jeremy Jordan at (916) 918-9322 or Jeremy@PrecisionSD.com

If you have any questions about the zoning process, you may contact CPC Wireless Team with the San Francisco Planning Department at cpcwireless@sfgov.org

NOTE: If you require an interpreter to be present at the meeting, please contact our office at (916) 918-9322 or Jeremy@PrecisionSD.com no later than May 7th and we will make every effort to provide you with an interpreter.

REUNIÓN DE DIFUSIÓN COMUNITARIA SOBRE LA INSTALACIÓN DE COMUNICACIÓN INALÁMBRICA PROPUESTA EN SU VECINDARIO

Para: Los vecinos que vivan a una distancia de menos de 500 pies de 88 King St., San Francisco, CA 94107

Información de la reunión

Fecha: Miér, 16 de mayo de 2018
Hora: 6 p.m. -7:00 p.m.
Dónde: Biblioteca de Potrero
Sala de Juntas de la Sucursal
1616 20th St.
San Francisco, CA 94107

Solicitante Sprint c/o Precision Site Development

Precision Site Development
1524 Rainbow Trout Rd.
Roseville, CA 95747

Información del sitio de Sprint

Dirección: 88 King St.,
San Francisco, CA 94107
APN: 3793-005
Zonificación: SB-DTR

Información de contacto

Jeremy Jordan (916) 918-9322
1524 Rainbow Trout Rd. Roseville, CA 95747
Jeremy@PrecisionSD.com
Este no es un programa patrocinado por la Biblioteca

Sprint solicitó la aprobación de zonificación para poner una instalación de comunicación inalámbrica en el techo, en 88 King St., San Francisco. Esta instalación reemplazará a la existente, que cerrará próximamente. La continuidad de la cobertura en este sitio es crucial para la red de Sprint y para los servicios locales de emergencia, y también mejorará el servicio para los clientes de Sprint, al mejorar significativamente la calidad de las llamadas y la velocidad de transferencia de datos, tanto de subida como de bajada. La instalación propuesta mejorará la red de Sprint al disminuir la brecha de cobertura y añadir un mayor espectro, lo cual resultará en una transferencia de datos más rápida y confiable.

Se le invita a que asista a la reunión comunitaria informativa el miércoles 16 de mayo, de 6:00 a 7:00 p.m. en la Biblioteca de Potrero, en la Sala de Juntas de la Sucursal. Este proyecto se programará para una audiencia pública de la Comisión de Planificación después de la reunión del vecindario. En la reunión habrá disponibles planos arquitectónicos y simulaciones fotográficas para que usted las estudie.

Si no puede asistir a la reunión y desea solicitar información, por favor comuníquese con Jeremy Jordan al (916) 918-9322 o Jeremy@PrecisionSD.com

Si tiene alguna pregunta sobre el proceso de zonificación, puede comunicarse con el Equipo Inalámbrico de CPC en el Departamento de Planificación de San Francisco en cpcwireless@sfgov.org

NOTA: Si requiere de un intérprete para la reunión, por favor comuníquese con nuestra oficina al (916) 918-9322 o Jeremy@PrecisionSD.com a más tardar el 7 de mayo, y haremos lo posible para conseguirle un intérprete.

提議在您的社區設立無線通信設施的社區宣傳會議
致: 88 King St., San Francisco, CA 94107 的 500 英尺範圍之內的居民

會議信息

日期: 2018 年 5 月 16 日，星期三
時間: 下午 6 點至下午 7 點
地址: Potrero 圖書館
分館會議室
1616 20th St.
San Francisco, CA 94107

申請者 Sprint c/o Precision Site Development

Precision Site Development
1524 Rainbow Trout Rd.
Roseville, CA 95747

Sprint 地點信息

地址: 88 King St.,
San Francisco, CA 94107
物業編號(APN): 3793-005
區域劃分: SB-DTR

聯繫信息

Jeremy Jordan (916) 918-9322
1524 Rainbow Trout Rd. Roseville, CA 95747
Jeremy@PrecisionSD.com

這不是圖書館贊助的計劃

Sprint 已申請區域劃分許可證，以便在三藩市的 88 King St.安裝屋頂無線設施。該地點將取代即將關閉的現有地點。繼續為該地點提供覆蓋服務對於 Sprint 網絡和本地緊急服務至關重要，其將改善 Sprint 為客戶提供的服務，顯著改進通話質量及提高上傳和下載數據的速度。提議的設施將通過縮小覆蓋範圍差距及增加更多頻譜來增強 Sprint 網絡，從而實現更快、更可靠的數據流。

誠邀您來參加 5 月 16 日星期三下午 6 點到 7 點的社區信息會議，地點在 Potrero 圖書館分館會議室。在社區會議舉行之後，將對該項目安排一個規劃委員會的公眾聽證會。會議上將有建築計劃和模擬圖片供您審查。

如果您無法出席會議並希望索取信息，請致電(916) 918-9322 或電郵至 Jeremy@PrecisionSD.com 與 Jeremy Jordan 聯繫。

如果您對區域劃分過程有任何疑問，可以電郵至 cpcwireless@sfgov.org 與三藩市規劃部門 (San Francisco Planning Department)的 CPC 無線小組聯繫。

注意: 如果您在會議上需要口譯員，請在 5 月 7 日之前，致電 (916) 918-9322 或電郵至 Jeremy@PrecisionSD.com 與我們辦公室聯繫，我們將盡一切努力為您提供口譯員。

PULONG NG PAGLILINGKOD SA KOMUNIDAD TUNGKOL SA ISANG WIRELESS COMMUNICATION NA PASILIDAD NA NAPANUKALA SA INYONG KOMUNIDAD

Para sa: Mga Kapit-bahay sa loob ng 500 piye ng 88 King St., San Francisco, CA 94107

Impormasyon sa Pulong

Petsa: Miyerkules, Mayo 16, 2018
Oras: 6 p.m. -7:00 p.m.
Saan: Potrero library
Branch Meeting Room
1616 20th St.
San Francisco, CA 94107

Aplikante Sprint c/o Precision Site Development

Precision Site Development
1524 Rainbow Trout Rd.
Roseville, CA 95747

Impormasyon sa Sprint Site

Address: 88 King St.,
San Francisco, CA 94107
APN: 3793-005
Zoning: SB-DTR

Kontak na Information

Jeremy Jordan (916) 918-9322
1524 Rainbow Trout Rd. Roseville, CA 95747
Jeremy@PrecisionSD.com

Hindi ito isang Programa na Inisponsor ng Library

Ang Sprint ay nag-aplay para sa pag-aproba ng pagsosona upang mag-instila ng isang rooftop wireless facility na nasa 88 King St., San Francisco. Ang site na ito ay papalit sa kasalukuyang site na magsasara na. Ang patuloy na sakop sa lugar na ito ay mahalaga sa network ng Sprint at lokal na mga serbisyo sa emerhensiya at magpapabuti rin sa serbisyo para sa mga kustomer ng Sprint na may makabuluhang pagpapabuti ng kalidad ng pagtawag at mas mabilis na mga data rate para sa parehong pag-upload at pag-download. Ang napanukalang pasilidad ay mapapahusay ang network ng Sprint sa pamamagitan ng pagpupunan ng mga puwang sa nasasakop at pagdaragdag ng mas maraming spectrum, na magreresulta sa mas mabilis at mas maaasahang pagdaloy ng mga datos (data streaming).

Inaanyayahan kayong dumalo sa pang-impormasyong pulong ng komunidad sa Miyerkules, Mayo 16 mula 6:00 - 7:00 p.m. sa Branch Meeting Room ng Potrero Library. Ang proyektong ito ay magtatakda ng iskedyul para sa isang pampublikong pagdinig ng Planning Commission pagkatapos ng pulong ng komunidad. Ang mga planong pang-arkitektura at mga photo simulation ay maaaring makuha sa oras ng pulong para sa inyong pagsusuri.

Kung hindi kayo maaaring dumalo sa pulong at nais ninyong humiling ng impormasyon, mangyari lamang na kontakin si Jeremy Jordan sa (916) 918-9322 o Jeremy@PrecisionSD.com

Kung mayroon kayong anumang katanungan tungkol sa proseso ng pagsosona, maaari ninyong kontakin ang CPC Wireless Team sa San Francisco Planning Department sa cpcwireless@sfgov.org

PAALALA: Kung kailangan ninyo ng isang interpreter na naroon sa pulong, mangyari lamang na kontakin ang aming tanggapan sa (916) 918-9322 o Jeremy@PrecisionSD.com nang hindi lalampas sa Mayo 7 at gagawin namin ang lahat ng pagsisikap na magkaroon kayo ng isang interpreter.

Sprint Proposed Cell Site
@ 88 King Street Community Meeting Summary Sheet

Meeting Information:

Date: Wednesday, May 16, 2018
Time: 6:00-7:00pm.
Where: Potrero Library
1616 20th St.
San Francisco, CA 94107

Sprint Representatives/Attendees:

- Jeremy Jordan - Precision Site Development
- Sean Prior - Precision Site Development
- Bill Hammett -Hammett & Edison RF Consultants
- Chris Cubansky - Sprint RF Engineer

Neighborhood Attendees

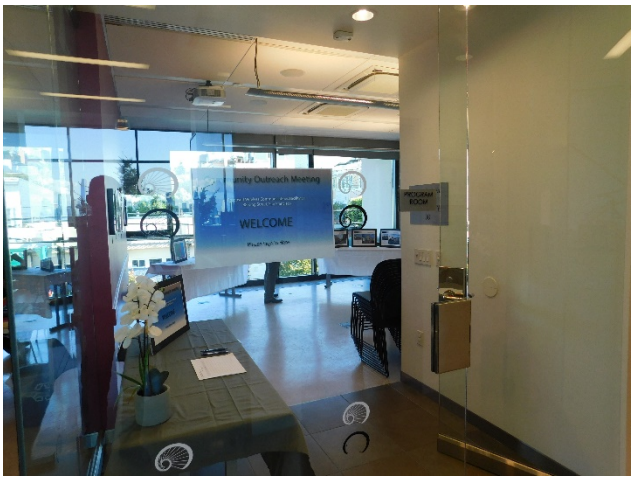
• No neighborhood attendees concerning Sprint's modification at 88 King St.

Meeting notes:

• N/A

Neighborhood Emails Received:

• No emails were received concerning Sprint's proposed cell site at 88 King St.
Neighborhood Phone Calls Received
• No phone calls were received concerning Sprint's proposed cell site at 88 King St.



No Attendees
05.16.2018
7:10pm

Neighborhood Meeting Comment Sheet

Potrero Library 1616 20th St. San Francisco, CA 94107

Wednesday, May 16, 2018 at 6:00-7:00pm

88 King St., San Francisco, CA 94107

Sprint # SF25XC213 – Pier 48 Relo

NAME	CONTACT INFORMATION	COMMENT

PRECISION SITE DEV.
1524 RAINBOW TROUT ST.
ROSEVILLE
CA 95747

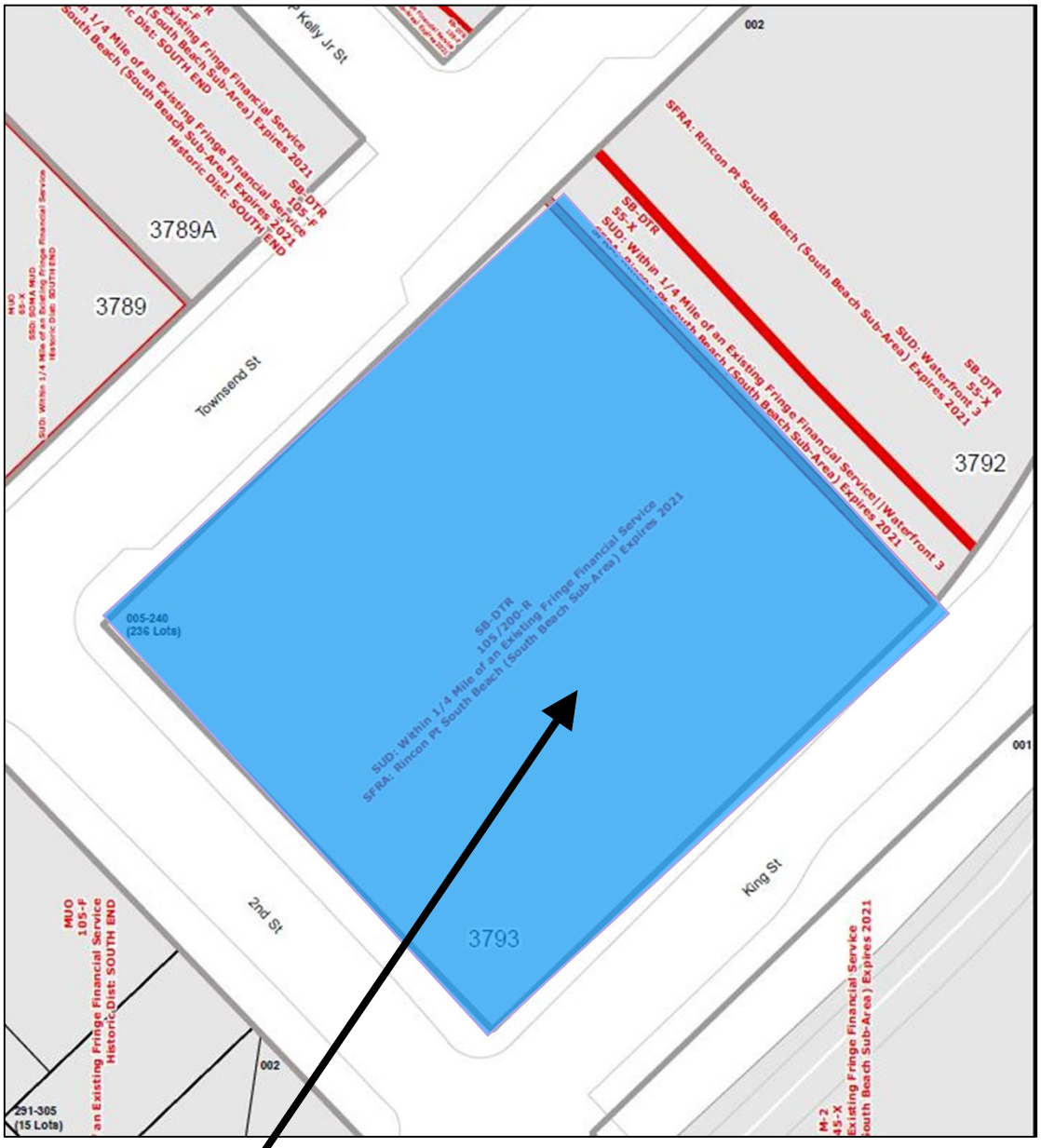
SACRAMENTO CA 957
02 MAY 2018 PM 6 L

3793/123
HARTIGAN
2312 CALIFORNIA ST
SAN FRANCISCO CA 94115

NIXIE 957 FE 1 0006/06/18
RETURN TO SENDER
ATTEMPTED - NOT KNOWN
UNABLE TO FORWARD
BC: 95747462924 *1741-07232-02-40

ANK
941957270E429

Block Book Map

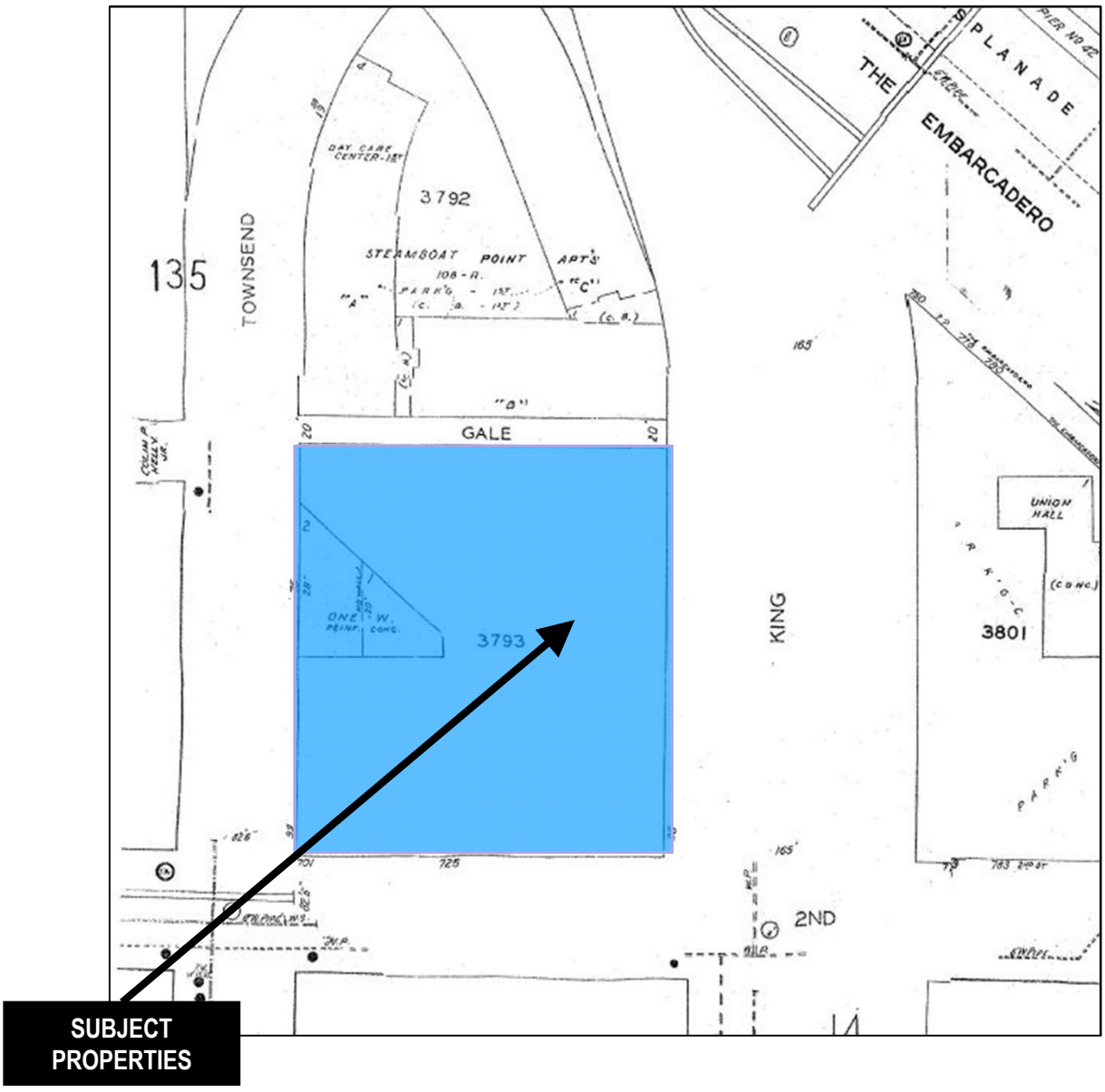


SUBJECT PROPERTIES

Case Number 2018-008389CUA
Sprint
Macro WTS Facility
88 King Street

SAN FRANCISCO
PLANNING DEPARTMENT

Sanborn Map*

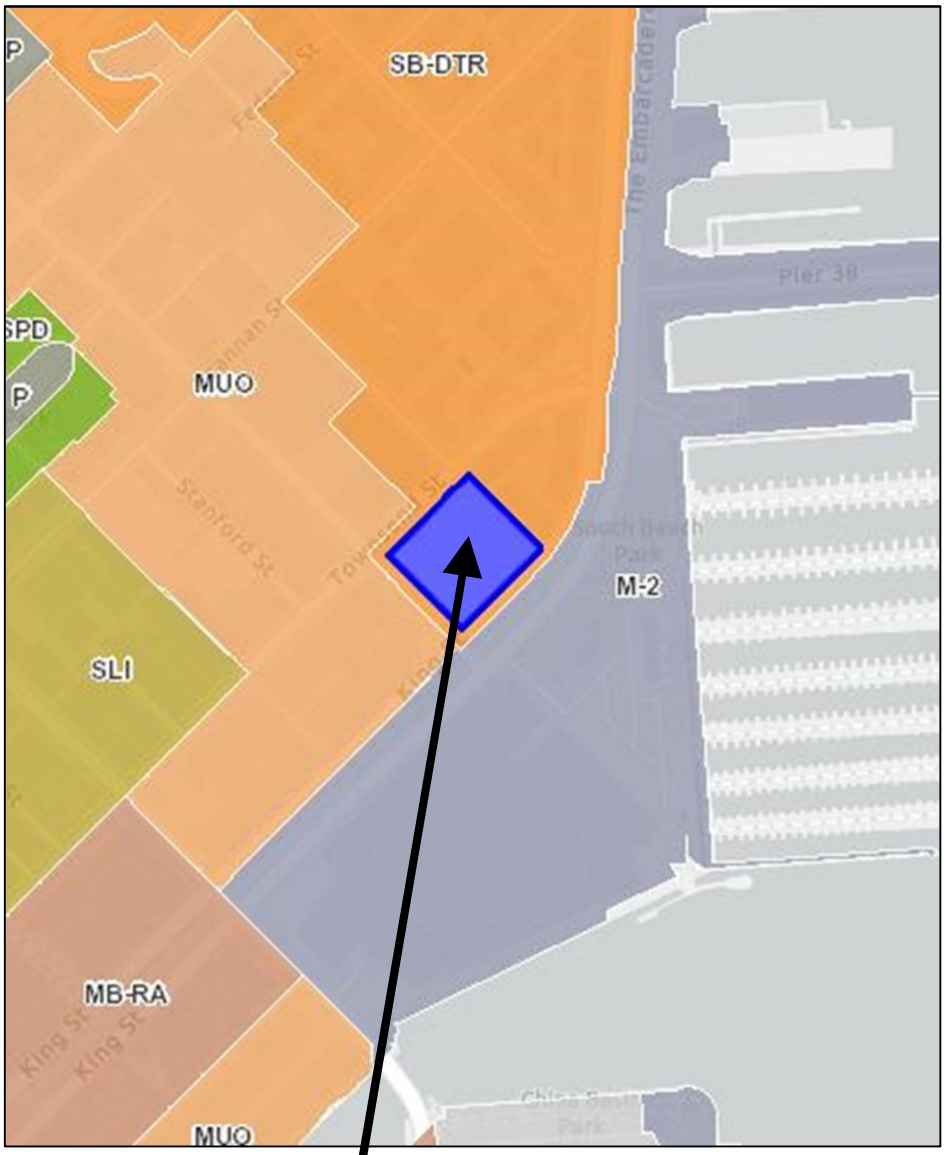


*The Sanborn Maps in San Francisco have not been updated since 1998, and this map may not accurately reflect existing conditions.

Case Number 2018-008389CUA
Sprint
Macro WTS Facility
88 King Street

SAN FRANCISCO
PLANNING DEPARTMENT

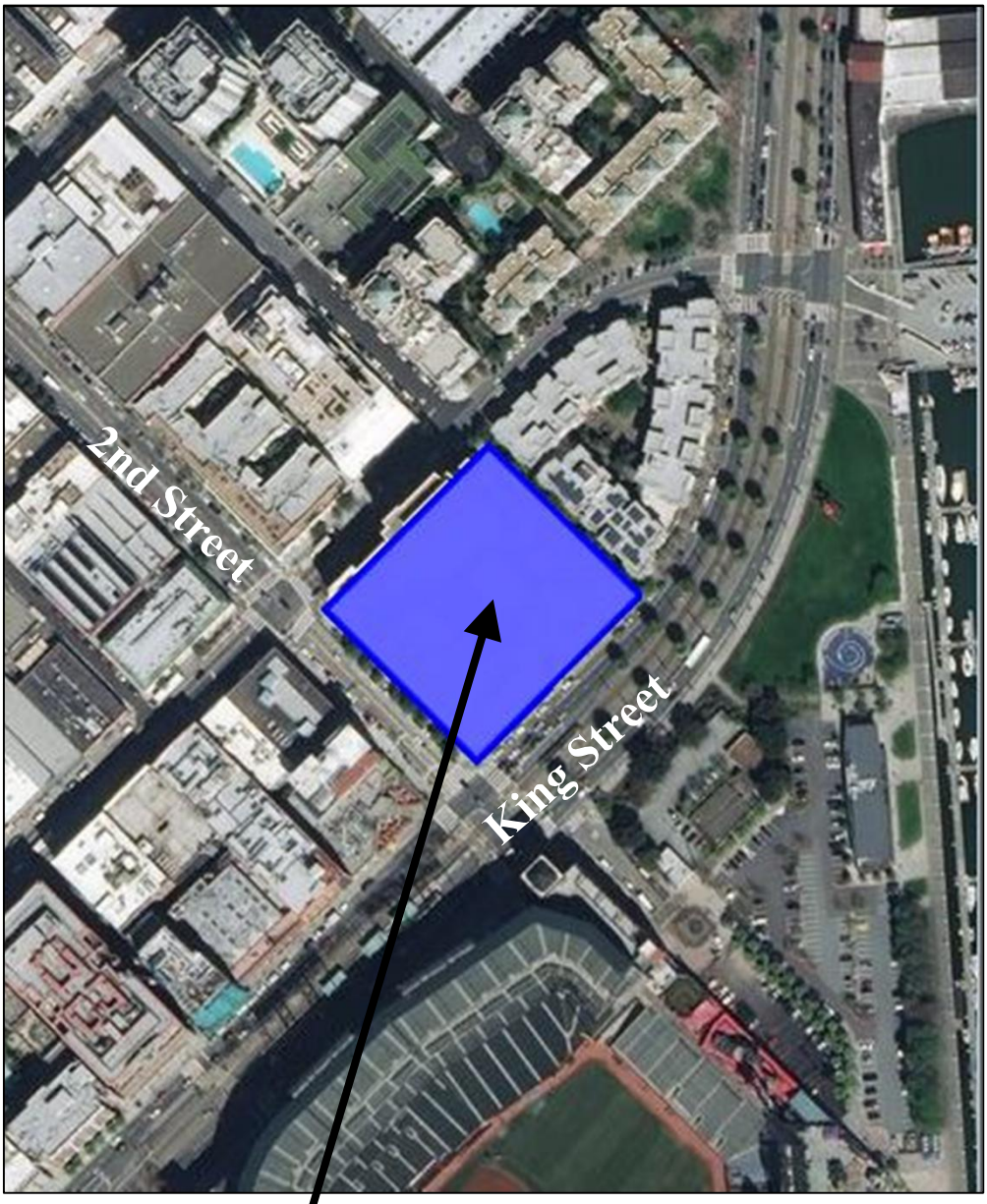
Zoning Map



Case Number 2018-008389CUA
Sprint
Macro WTS Facility
88 King Street

SAN FRANCISCO
PLANNING DEPARTMENT

Aerial Photo



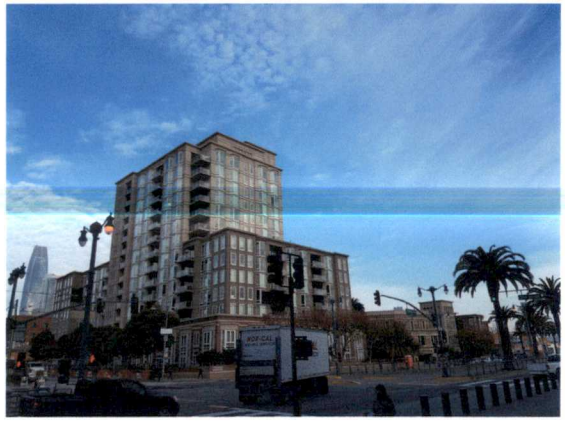
Case Number 2018-008389CUA
Sprint
Macro WTS Facility
88 King Street

SAN FRANCISCO
PLANNING DEPARTMENT

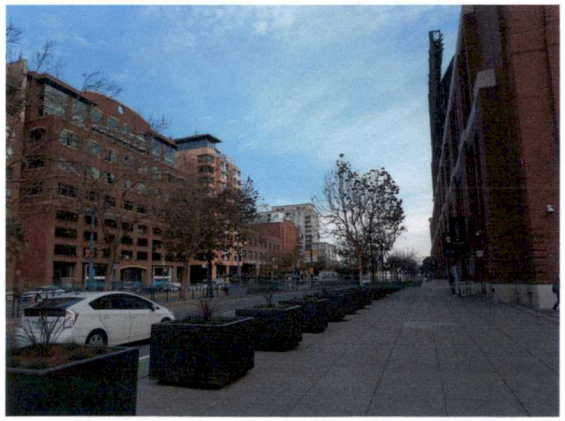
Precision Site Development
1524 Rainbow Trout Street, Roseville CA 95747
Contact: Jeremy Jordan
jeremy@precisionsd.com (916) 918 9322

PRECISION SITE DEVELOPMENT

Sprint - SF25XC213
88 King Street,
San Francisco, CA



88 King Street, site of the proposed stealth Wireless Telecommunications Facility; as seen in the context of the current streetscape, with neighboring facades and building heights.

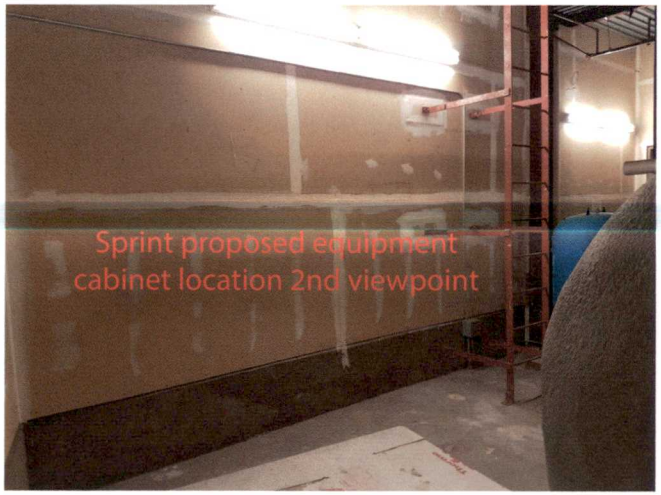


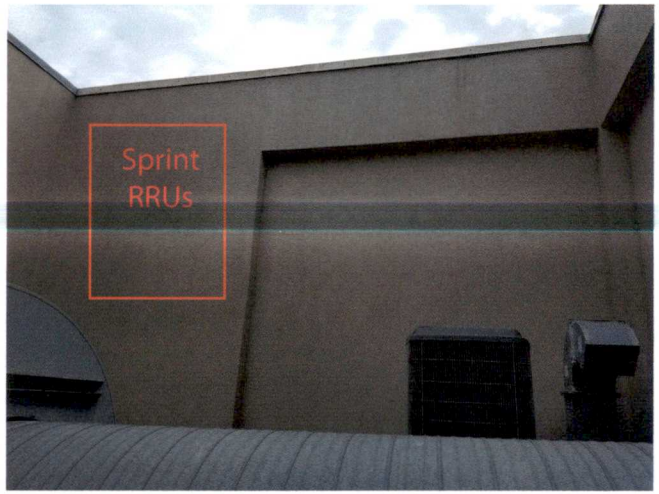
Photographs taken on December 12, 2017

Precision Site Development
1524 Rainbow Trout Street, Roseville CA 95747
Contact: Jeremy Jordan
jeremy@precisionsd.com (916) 918 9322

PRECISION SITE DEVELOPMENT

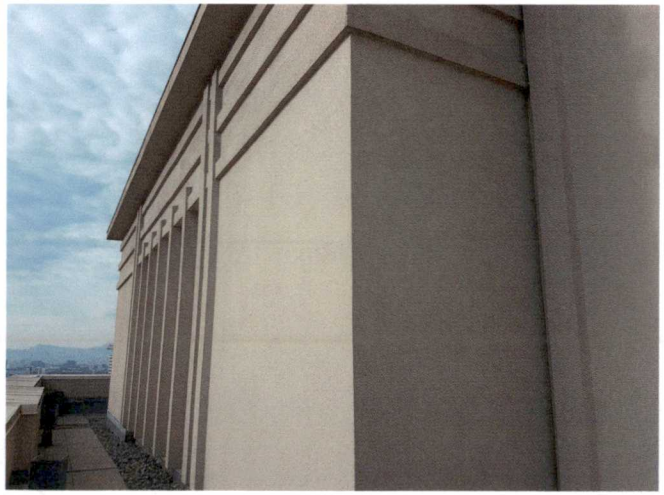
Sprint - SF25XC213
88 King Street,
San Francisco, CA





Above: Proposed indoor and screened equipment areas

Sector A- Antenna location



Sector B- Antenna location

Sector C- Antenna location

Photographs taken on December 12, 2017

Sprint • Proposed Base Station (Site No. SF25xc213)
88 King Street • San Francisco, California

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained by Sprint, a personal wireless telecommunications carrier, to evaluate the base station (Site No. SF25xc213) proposed to be located at 88 King Street in San Francisco, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

Executive Summary

Sprint proposes to install directional panel antennas above the roof of the 14-story building located at 88 King Street in San Francisco. The proposed operation will comply with the FCC guidelines limiting public exposure to RF energy.

Prevailing Exposure Standards

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

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

General Facility Requirements

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

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

Computer Modeling Method

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

Site and Facility Description

Based upon information provided by Sprint, including zoning drawings by Borges Architectural Group, Inc., dated January 25, 2018, it is proposed to install three KMW Model ETCR-654L12H6* directional panel antennas† on the side of the view screen wall around mechanical equipment above the roof of the southern of two 14-story residential towers located at 88 King Street in San Francisco. The antennas would employ 8° downtilt, would be mounted at an effective height of about 152½ feet above ground, 11 feet above the roof, and would be oriented toward 30°T, 160°T, and 225°T. The maximum effective radiated power in any direction would be 7,750 watts, representing simultaneous operation at 2,940 watts for BRS, 4,120 watts for PCS, and 690 watts for SMR service. Also proposed to be located on the side of the penthouse is one RFS Model SC2-220BIPN microwave "dish" antenna, mounted at an effective height of about 149½ feet above ground, 8 feet above the roof, for interconnection of this site with others in the Sprint network. There are reported no other wireless telecommunications base stations at the site.

Study Results

For a person anywhere at ground, the maximum RF exposure level due to the proposed Sprint operation, including the contribution of the microwave antenna, is calculated to be 0.0015 mW/cm^2, which is 0.17% of the applicable public exposure limit. The maximum calculated level for a person

* Manufacturer's data sheet attached to this report.

† The drawings show that mounting space is included next to the antennas for three "future" antennas, the make and model of which are not identified.

on the top floor of the subject building is 1.2% of the public exposure limit; the maximum calculated level for a person on the top floor of the northern tower is 7.8% of the public exposure limit. The maximum calculated level at any other building nearby‡ is 0.24% of the public exposure limit. It should be noted that these results include several "worst-case" assumptions and therefore are expected to overstate actual power density levels from the proposed operation.

Recommended Mitigation Measures

Due to their mounting location and height, the Sprint antennas would not be accessible to unauthorized persons, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. To prevent occupational exposures in excess of the FCC guidelines, it is recommended that appropriate RF safety training, to include review of personal monitor use and lockout/tagout procedures, be provided to all authorized personnel who have access to the roof, including employees and contractors of Sprint and of the property owner. No access within 6 feet directly in front of the Sprint antennas themselves, such as might occur during certain maintenance activities above the roof, should be allowed while the pertinent antennas are in operation, unless other measures can be demonstrated to ensure that occupational protection requirements are met. It is recommended that explanatory signs§ be posted at the roof access door and at the panel antennas, readily visible from any angle of approach to persons who might need to work within that distance. Operation of the microwave antenna is intrinsically compliant with the FCC exposure guidelines.

Conclusion

Based on the information and analysis above, it is the undersigned's professional opinion that operation of the base station proposed by Sprint at 88 King Street in San Francisco, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. 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. Training authorized personnel and posting explanatory signs are recommended to establish compliance with occupational exposure limits.

‡ Including the nine-story residential building located about 80 feet to the southwest, based on photographs from Google Maps.

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

Authorship

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

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

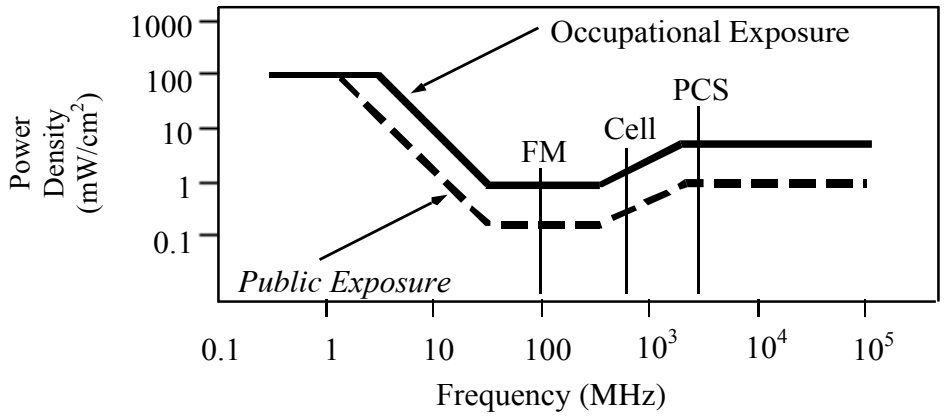
March 30, 2018

FCC Radio Frequency Protection Guide

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

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

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



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

RFR.CALC™ Calculation Methodology

Assessment by Calculation of Compliance with FCC Exposure Guidelines

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

Near Field.

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

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

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

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

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

Far Field.

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

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

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

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

817~869MHz, XX-pol., H68° / V8°, ET0~8°
1850~1995MHz, XX-pol., H58° / V5°, ET0~8°
2496~2690MHz, XXXX-pol., H73° / V5°, ET0~6°

AISG Antenna Interface Standards Group

● Electrical Specification

Product Number		ETCR-654L12H6		
Frequency Range		817~869MHz	1850~1995MHz	2496~2690MHz
3dB Beam-Width	Horizontal	68 ±5°	58 ±5°	73 ±5°
	Vertical	8° ±1°	5° ±1°	5° ±1°
Gain (dBi)		15.0 ±0.5	18.8 ±0.5	18.3 ±0.5
Electrical Down Tilt Range		0 ~ 8°	0 ~ 8°	0 ~ 6°
1st Upper Sidelobe Suppression		> 18dB (up to 15° EL)	> 18dB (up to 10° EL)	> 18dB (up to 10° EL)
Front-to-Back Ratio @180±15° (Total power)		> 24dB	> 28dB	> 28dB
Polarization Type		Dual, Slant ±45°	Dual, Slant ±45°	Dual, Slant ±45°
Cross –Polar Discrimination(XPD)	-3dB HBW	> 15dB	> 15dB	> 13dB
	±60°	> 10dB	> 10dB	> 7dB
Input Maximum CW Power		250W	250W	250W
Impedance		50Ω	50Ω	50Ω
VSWR		< 1.43 : 1	< 1.43 : 1	< 1.43 : 1
Port Isolation	Intra Array	>26dB	>28dB	>26dB
	Inter Array	>28dB, Co Pol.		>24dB, Co Pol.
	Inter Band	800MHz // 1900MHz : > 28dB 800MHz // 2600MHz : > 28dB 1900MHz // 2600MHz : > 28dB		
Passive Intermodulation, IM3 (@2x43dBm)		≤ -110dBm	≤ -110dBm	≤ -105dBm
Operation temperature		-40°C to +55°C		
Antenna Control Interface		Field Replaceable Internal RET, AISG2.0		

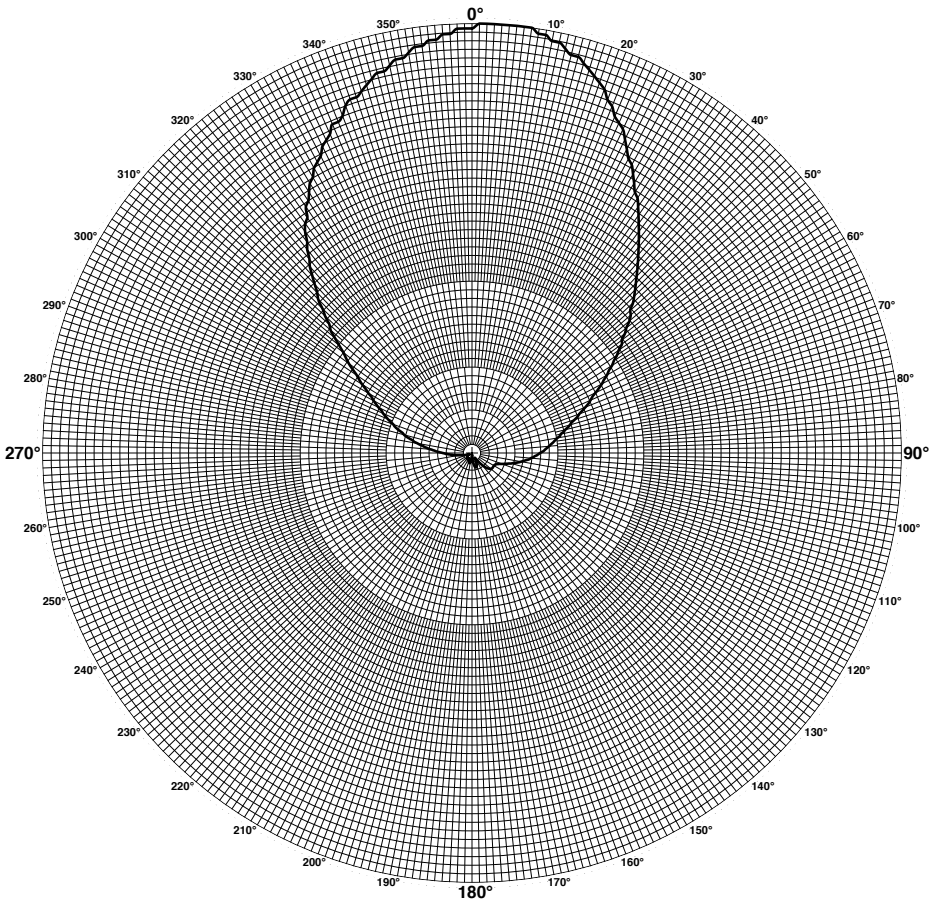
● Beamforming Specification

Cross Pole Configuration @2600MHz			0.65λ
Broadcasting beam	Gain, dBi		17.5
	Horizontal Beamwidth, deg.		65° ± 5°
Service beam	boresight	Gain, dBi	22.5 ±0.5
		Horizontal BW, deg.	20°

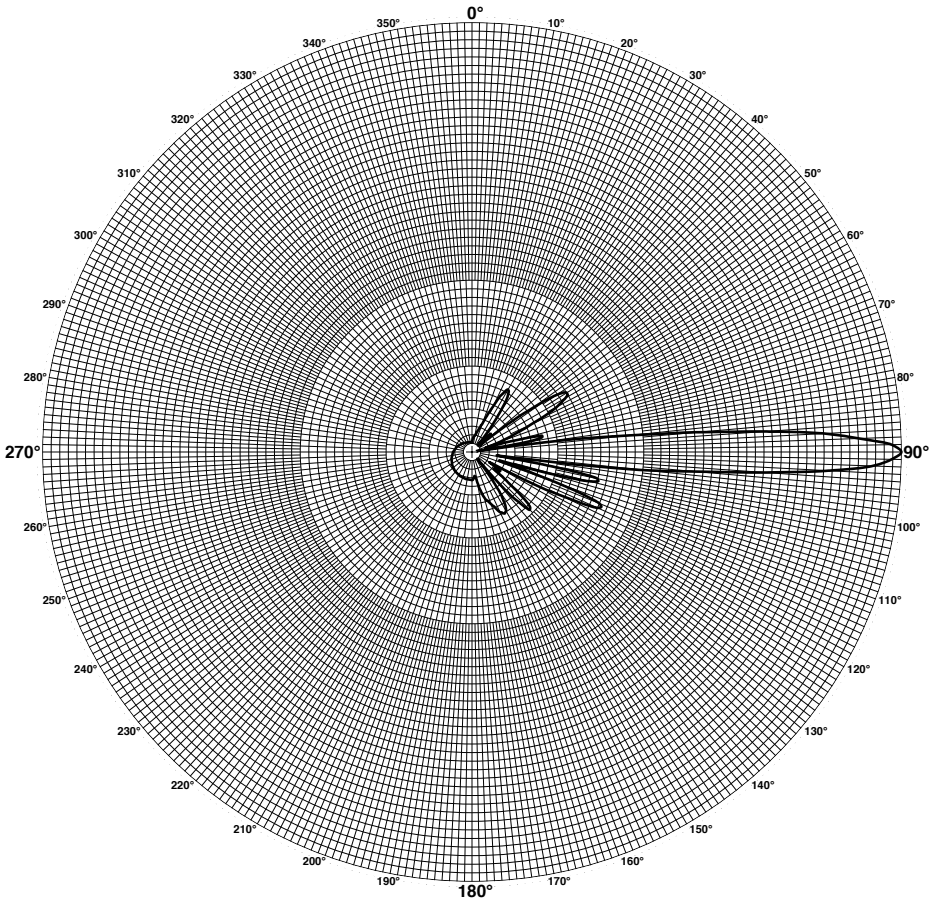
● Mechanical Specification

Dimension (Length x Width x Depth)	2156mm x 533mm x 160mm(84.9” x 21.0” x 6.3”)
Antenna Weight	38.5kg / 84.9lbs
Adjustable Clamp Weight	6.4kg / 14.1lbs
Fixed Clamp Weight	1.8kg / 4.0lbs
Max. Wind Speed	67m/s (150mph)
Wind Load (@100mph), Front / Side / Rear	1763 N /529 N /1763 N (397 lbf /119 lbf /397 lbf)
Connector (Type / Position)	8 x 7/16” DIN(Female), 8 x MINI DIN(Female), 1 x N type(Cal Port, Female) / Bottom

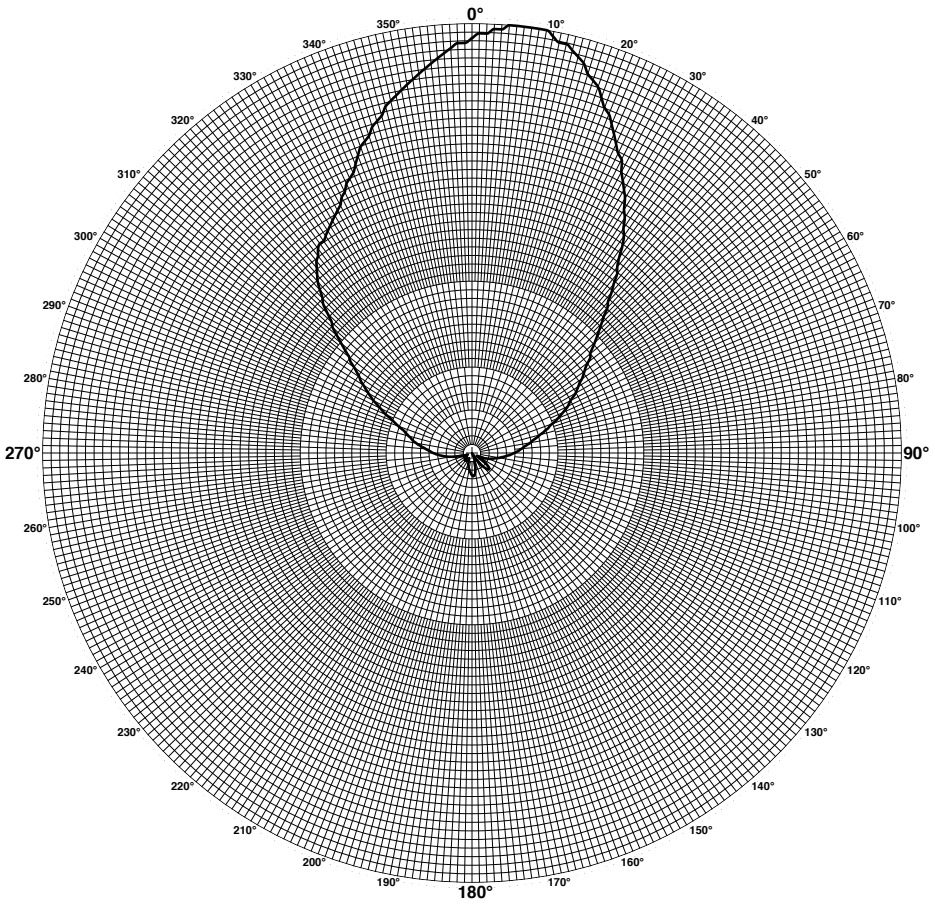
• Specifications are subject to change without notice. 5/5/16



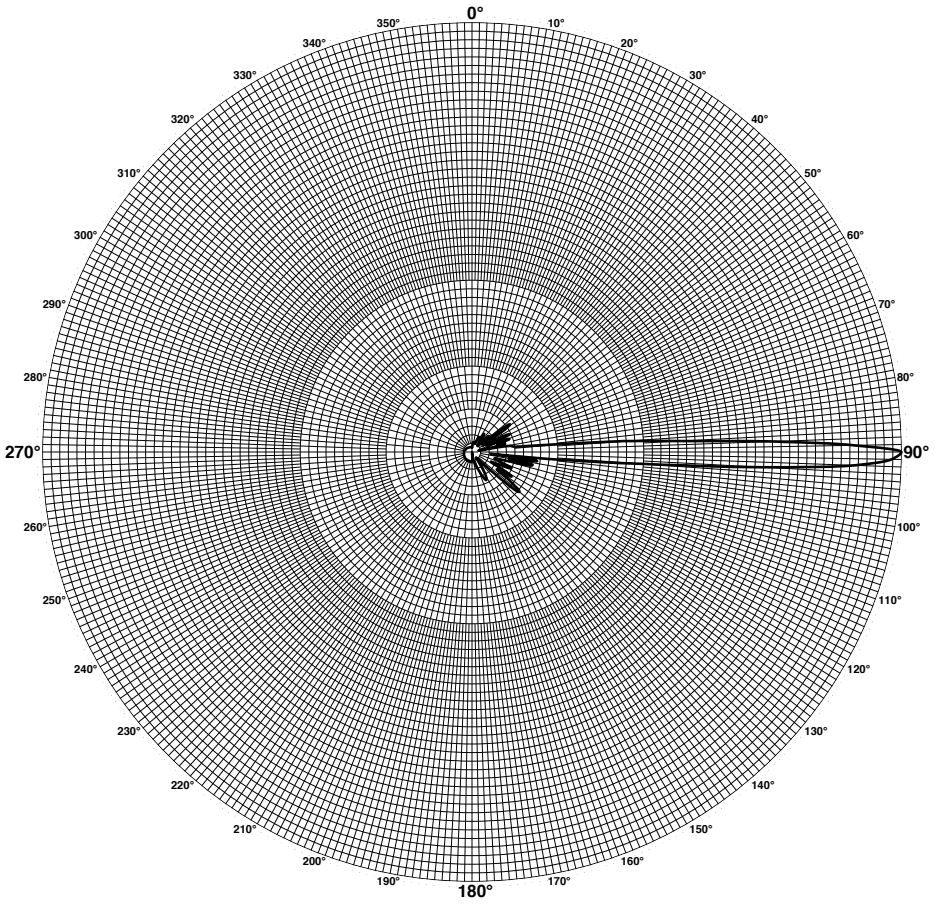
SMR Azimuth Pattern



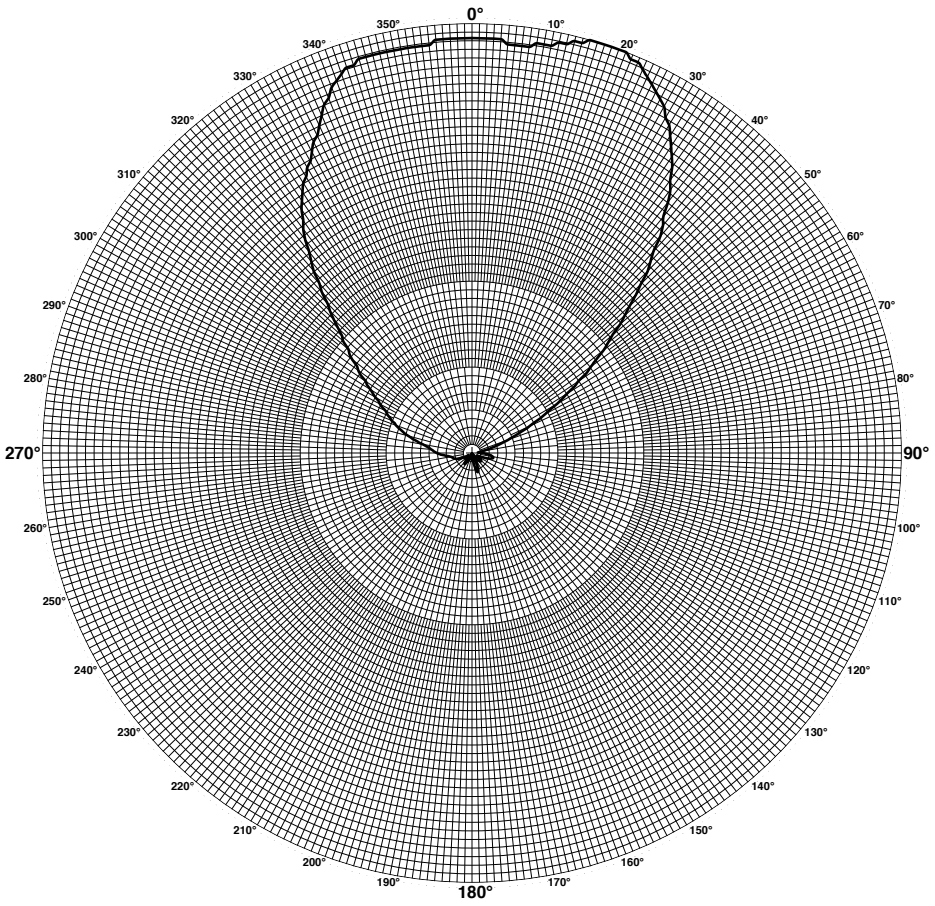
SMR Elevation Pattern



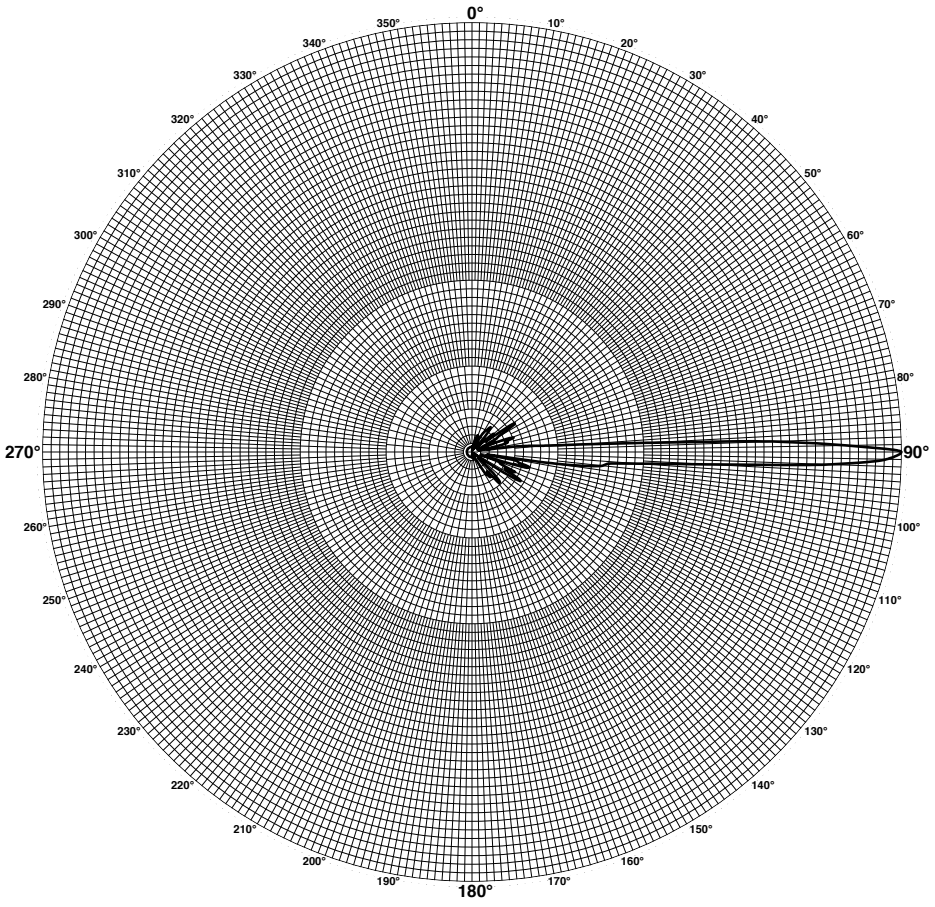
PCS Azimuth Pattern



PCS Elevation Pattern



BRS Azimuth Pattern



BRS Elevation Pattern

San Francisco City and County
Department of Public Health

Environmental Health Branch

Mark Farrell, *Mayor*
Barbara Garcia, *Director of Health*

Stephanie K.J. Cushing, MSPH, CHMM, REHS
Director of Environmental Health

Review of Cellular Antenna Site Proposals

Project Sponsor : *Sprint* **Planner:** *Elizabeth Watty*

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

Project Address/Location: *88 King St*

Site ID: *3049* **SiteNo.:** *SF25xc213* **Report Dated:** *3/8/2018*

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 Sitting 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, identity and total number of all operational radiating antennas installed at this site was provided. (WTS-FSG, Section 10.4.1, Section 11, 2b)

Number of Existing Antennas: **0**

X 2. A list of all radiating antennas located within 100 feet of the site which could contribute to the cumulative radio frequency energy at this location was provided. (WTS-FSG, Section 10.5.2)

◉ **Yes** ○ **No**

X 3. A narrative description of the proposed work for this project was provided. The description should be consistent with scope of work for the final installation drawings. (WTS-FSG, Section 10)

◉ **Yes** ○ **No**

X 4. An inventory of the make and model of antennas or transmitting equipment being installed or removed was provided. The antenna inventory included the proposed installation height above the nearest walking/working surface, the height above ground level and the orientations of the antennas. (WTS-FSG, Section 10.5.2)

◉ **Yes** ○ **No**

X 5. A description of the existing radio frequency energy environment at the nearest walking/working surface to the antennas and at ground level was provided. A description of any assumptions made when doing the calculations was also provided. (WTS-FSG, Section 10.4.1a, Section 10.4.1c, Section 10.5)

◉ **Yes** ○ **No**

X 6. The maximum effective radiated power per sector for the proposed installation was provided along with the frequency bands used by the antennas. (WTS-FSG, Section 10.1.2, Section 10.5.1)

Maximum Effective Radiated Power: **7750** Watts

X 7. Based on the antenna orientation, the maximum cumulative predicted radio frequency energy level for any nearby publicly accessible building or area was provided. (WTS-FSG, Section 10.4, Section 10.5.1)

Maximum percent of applicable FCC public standard at the nearest building or structure: **0.24** %

Distance to this nearby building or structure: **80** feet

X 8. The estimated maximum cumulative radio frequency fields for the proposed site at ground level. (WTS-FSG, Section 10.5)

Maximum RF Exposure: **0.0015** mW/cm^2 Maximum RF Exposure Percent: **0.17** %

X 9. The maximum distance (in feet) the three dimensional perimeter of the radio frequency energy level equal to the public and occupational exposure limit is calculated to extend from the face of the antennas was provided. Any potential walking/working surfaces exceeding regulatory standards were identified. (WTS-FSG, Section 10.9.2)

☑ Public Exclusion Area — Public Exclusion In Feet: **30**

☑ Occupational Exclusion Area — Occupational Exclusion In Feet: **6**

X 10. A description of whether or not the public has access to the antennas was provided. A description was also provided of any existing or proposed warning signs, barricades, barriers, rooftop stripping or other safety precautions for people nearing the equipment as may be required by any applicable FCC-adopted standards. All signs will be provided in English, Spanish and Chinese. (WTS-FSG, Section 9.5, Section 10.9.2)

◉ **Yes** ○ **No**

X 11. Statement regarding the engineer who produced the report and their qualifications was provided. The engineer is licensed in the State of California. (WTS-FSG, Section 11,8)

◉ **Yes** ○ **No**

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 0 antennas existing operated by Sprint installed on the roof top of the building at 88 King St. Existing RF levels at ground level were around 1% of the FCC public exposure limit. No other antennas were observed within 100 feet of this site. Sprint proposes to install 3 new antennas. The antennas are mounted at a height of 152.5 feet above the ground and 11 feet above the roof. The estimated ambient RF field from the proposed Sprint transmitters at ground level is calculated to be 0.0015 mW/sq cm., which is 0.17% of the FCC public exposure limit. The three dimensional perimeter of RF levels equal to the public exposure limit extends 30 feet and does not reach 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 6 feet of the front of the antennas while they are in operation. Due to the mounting locations and height, the antennas would not be accessible to unauthorized persons.

___ **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 Sponsor)

Dated: 6/27/2018

Signed: 

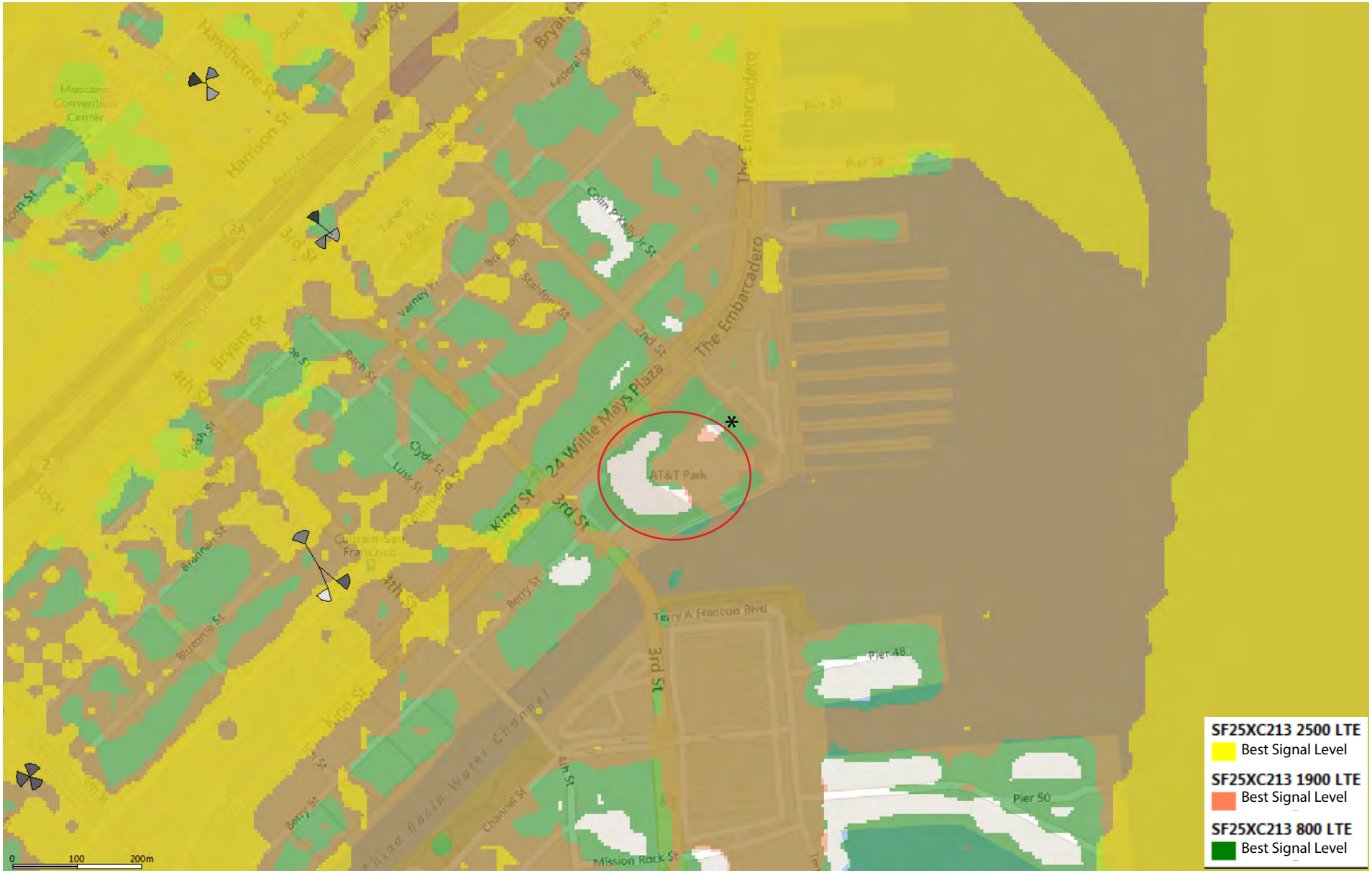
Arthur Duque
Environmental Health Management Section
San Francisco Dept. of Public Health
1390 Market St., Suite 210,
San Francisco, CA. 94102
(415) 252-3966

Precision Site Development
1524 Rainbow Trout Street, Roseville CA 95747
Contact: Jeremy Jordan
jeremy@precisionsd.com (916) 918 9322

Service Area Definition
Sprint: SF25XC213
88, King Street, San Francisco
Location of Proposed Wireless Communications Site

Precision Site Development
1524 Rainbow Trout Street, Roseville CA 95747
Contact: Jeremy Jordan
jeremy@precisionsd.com (916) 918 9322

Service Area Definition
Sprint: SF25XC212
Pier 48, San Francisco
Off Air Map



* Significant and important areas are left without any coverage including the AT&T Park stadium, which would be a vital coverage area especially for access and contact with Emergency Services and First Responders.

Precision Site Development
1524 Rainbow Trout Street, Roseville CA 95747
Contact: Jeremy Jordan
jeremy@precisionsd.com (916) 918 9322

Service Area Definition
Sprint: SF25XC212
Pier 48, San Francisco
Location of Wireless Communications Site to be Relocated

HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
BROADCAST & WIRELESS

WILLIAM F. HAMMETT, P.E.
RAJAT MATHUR, P.E.
ROBERT P. SMITH, JR.
ANDREA L. BRIGHT, P.E.
NEIL J. OLIJ, P.E.
BRIAN F. PALMER
AMELIA NGAI
MANAS REDDY
M. DANIEL RO

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

DANE E. ERICKSEN, P.E.
CONSULTANT

BY E-MAIL SEAN@PRECISIONSD.COM

October 15, 2018

Mr. Sean Prior
Precision Site Development LLC
1524 Rainbow Trout Street
Roseville, California 95747

Dear Sean:

As requested, we have conducted the review required by the City of San Francisco of the coverage maps that Sprint will submit as part of its application package for the base station proposed to be located at 88 King Street (Site No. SF25xc213). This is to fulfill the submittal requirements for Planning Department review.

Executive Summary

We concur with the maps, data, and conclusions provided by Sprint for this proposed site relocation.

Sprint presently has installed directional panel antennas above the roof of Pier 48. It is proposed to remove those antennas and to install three KMW Model ETCR-654L12H6 directional panel antennas* on the side of the view screen wall around mechanical equipment above the roof of the southern of two 14-story residential towers located at 88 King Street in San Francisco, about 1,800 feet northwest of the Sprint Pier 48 site. The antennas would employ 8° downtilt, would be mounted at an effective height of about 152½ feet above ground, 11 feet above the roof, and would be oriented toward 30°T, 160°T, and 225°T. The maximum effective radiated power in any direction would be 7,750 watts, representing simultaneous operation at 2,940 watts for BRS, 4,120 watts for PCS, and 690 watts for SMR service.

Sprint provided for review three coverage maps, attached for reference. The maps show Sprint's existing PCS (1950 MHz) LTE coverage in the area from the Pier 48 site, the coverage without the Pier 48 site, and the coverage with the relocated site at 88 King Street. The maps show five levels of coverage, which Sprint colors and defines as follows:

Green	Excellent Coverage
Yellow	Good Coverage
Blue	Fair Coverage
Red	Marginal Coverage
Black	Poor/No Coverage

* The drawings show that mounting space is included next to the antennas for three "future" antennas, the make and model of which are not identified.

We obtained information from Sprint on the software and the service thresholds that were used to generate its coverage maps. This carrier uses commercially available software to develop its coverage maps. The service thresholds that Sprint uses to estimate coverage are in line with industry standards, similar to the thresholds used by other wireless service providers.

As this proposal is simply the relocation of an existing site, measurements of the existing coverage in the area would not be relevant. We note that the map showing coverage without the Pier 48 site shows Marginal and Poor/No Coverage in the areas that the proposed relocation is intended to improve.

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

Sincerely yours,

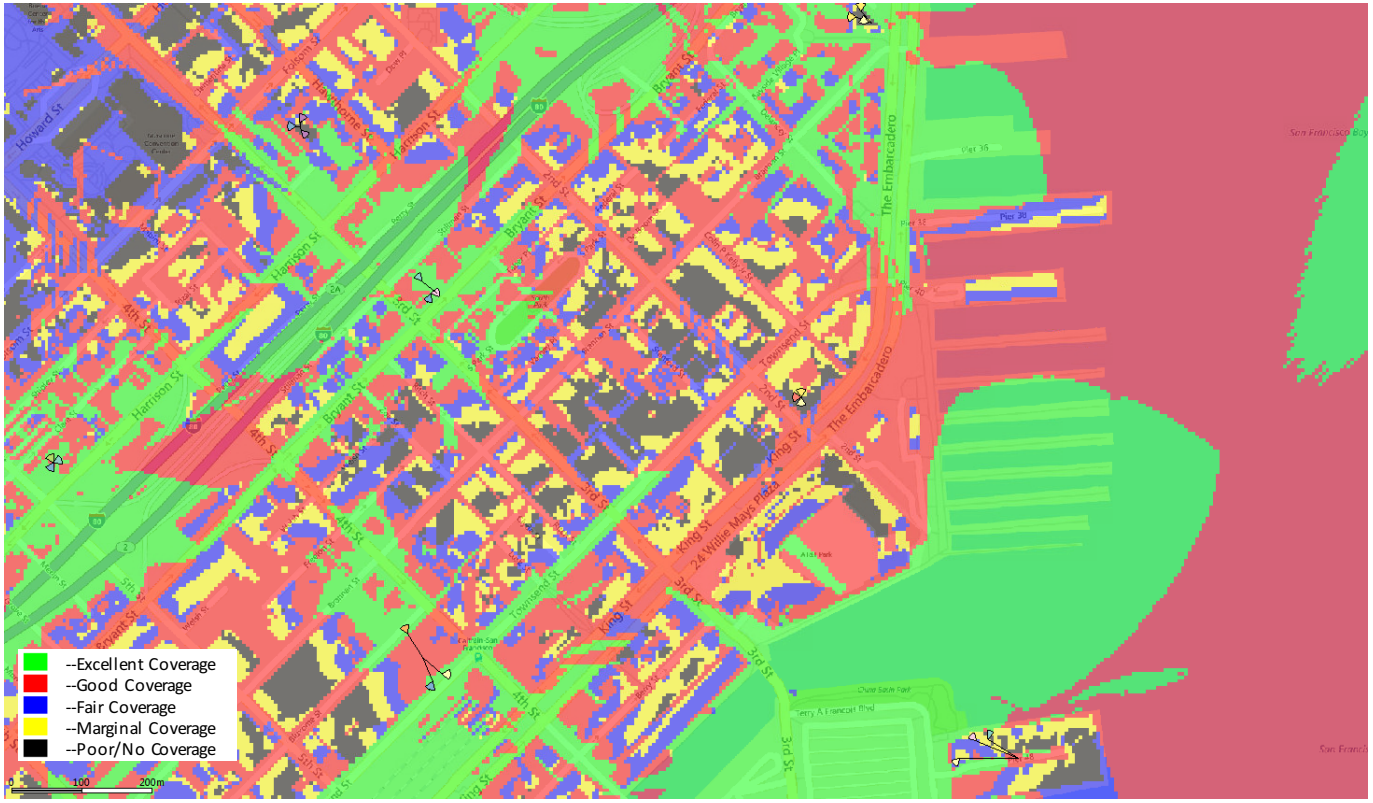
William F. Hammett, P.E.

lw

Enclosures

cc: Mr. Jeremy Jordan (w/encls) – BY E-MAIL JEREMY@PRECISIONSD.COM
Mr. Chris Cubanske (w/encls) – BY E-MAIL CHRIS.CUBANSKE@SPRINT.COM
Mr. Moises Palacios (w/encls) – BY E-MAIL MOISES.PALACIOS@SPRINT.COM

Existing Coverage



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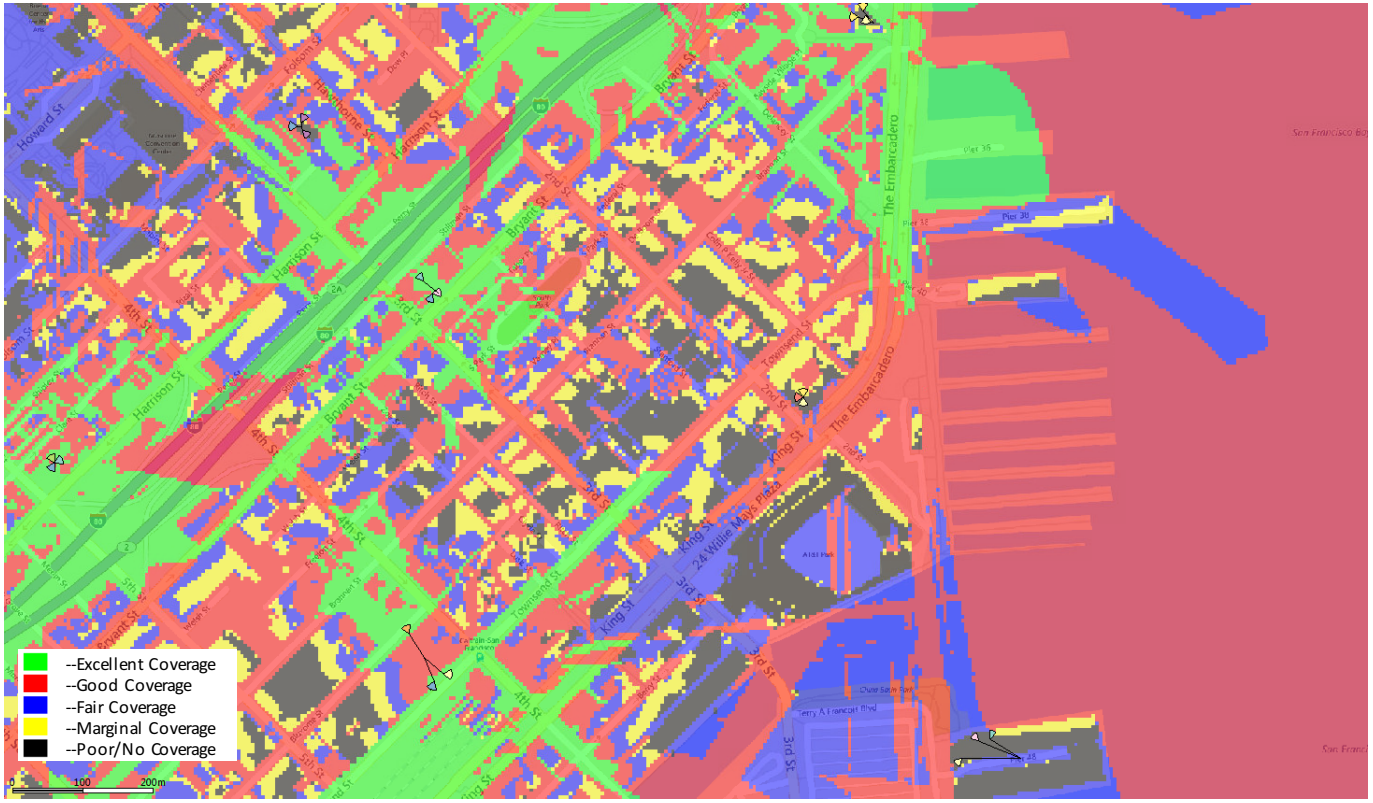
Coverage Without Pier 48 Relo (SF25XC213) & SF25XC212



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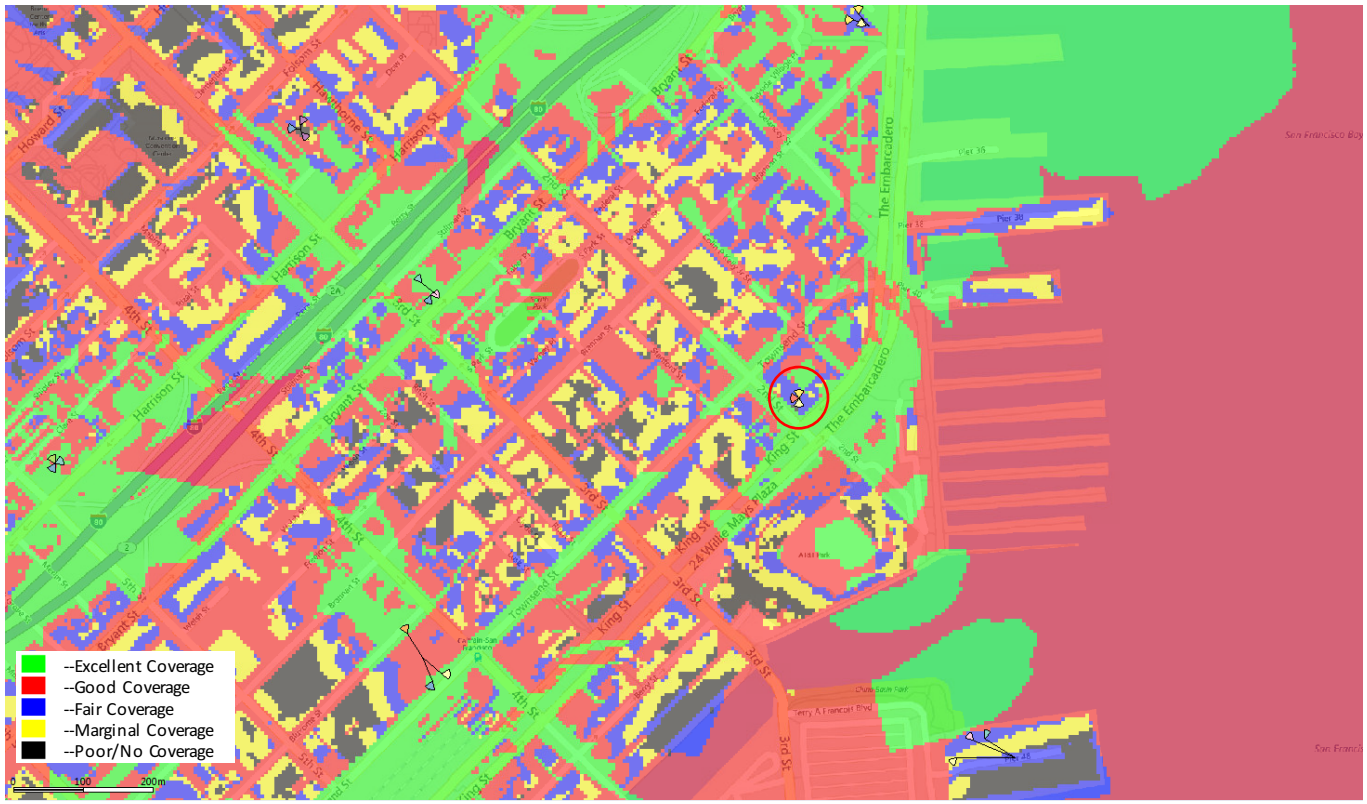
Coverage With Pier 48 Relo (SF25XC213)



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Version Date: 10/23/15

1524 Rainbow Trout St., Roseville, CA 95747
916-918-9322 • Office@PrecisionSD.com

FS25XC213
Location Preference

The Proposed antenna facility is considered a Preference 5 per section 8.1. Per the description in the WTS Facilities Guidelines it is a Preferred Location as it is in a SB-DTR District.

Sprint's existing antenna facility located on Pier 48 was originally installed in 2003. The surrounding sites have been designed and modified over the last 15 years to create the best possible service coverage in this area. Since the existing site is being decommissioned due to pending re-development at the subject property, we had to work within 1 block either direction up and down King Street in order to maintain coverage, and at the same time avoid interference with the surrounding sites by relocating too close. The new candidate also needed to have similar characteristics to the existing site as far as heights, location on the block, and even side of the street so as to maintain coverage and avoid interference.

Due to the proximity of other existing Sprint sites around this location, the proposed site at 88 King Street offers optimal replacement coverage for the existing site. The building is located within .6 miles (3168 feet) of the previous location. It will provide similar antenna heights.

Sprint looked into the possibility of modifying the existing sites around this location in order to eliminate the need for this relocation. However, all projected modifications left significant coverage degradation along King Street, Embarcadero and AT&T Park due to the height of the buildings along King Street. The building heights also projected more interference to the surrounding sites.

Please contact Jeremy Jordan @ (916) 918-9322 or Jeremy@PrecisionSD.com with any questions or for additional information