SAN FRANCISCO
PLANNING DEPARTMENT

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

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

Executive Summary
Conditional Use Authorization
HEARING DATE: OCTOBER 4, 2018

Record No.:	2016-015056CUA
Project Address:	1101 GREEN STREET
Zoning:	RH-3(Residential-House, Three Family)) Zoning District 40-X Height and Bulk District
Block/Lot:	0125/026-089
Project Sponsor:	Laura Meiner Sure Site Consulting Group for Sirius XM 1500 Eckington PL NE Washington, DC 20002
Property Owner:	Jones Family 2000 Revocable Trust 88 King St #721 San Francisco, CA 94107
Staff Contact:	Ashley Woods – (415) 575-9178 *Ashley.Woods@sfgov.org*

PROJECT DESCRIPTION

The Project includes installation of (1) new panel antenna; (1) new VSAT dish; (1) new RX dish; and (1) new cabinet on an equipment platform. The proposed antenna will be painted to match existing penthouse.

REQUIRED COMMISSION ACTION

In order for the Project to proceed, the Commission must grant a Conditional Use Authorization pursuant to Sections 209.1 and 303(c) of the Planning Code for a new installation of a wireless telecommunications facility in the RH-3 zoning district.

ISSUES AND OTHER CONSIDERATIONS

- **Public Outreach and Comments.** The Project Sponsor held a community meeting on November 18, 2017 at 6:00 PM at Helen Wills Park, 1401 Broadway, San Francisco 94109. One member of the community attended the meeting. As of October 1, 2018, the Department has not received any correspondence regarding 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 minimally visible due to placement on the rooftop of the Project site. The proposal would not significantly detract from views of the subject building or from views 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 – Maps and Context Photos
Exhibit E – Community Outreach Summary
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

SAN FRANCISCO
PLANNING DEPARTMENT

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

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

Planning Commission Draft Motion

HEARING DATE: OCTOBER 4, 2018

Record No.:	2016-015056CUA
Project Address:	1101 GREEN STREET
Zoning:	RH-3(Residential-House, Three Family)) Zoning District 40-X Height and Bulk District
Block/Lot:	0125/026-089
Project Sponsor:	Laura Meiner Sure Site Consulting Group for Sirius XM 1500 Eckington PL NE Washington, DC 20002
Property Owner:	Jones Family 2000 Revocable Trust 88 King St #721 San Francisco, CA 94107
Staff Contact:	Ashley Woods – (415) 575-9178 *Ashley.Woods@sfgov.org*

ADOPTING FINDINGS RELATING TO A CONDITIONAL USE AUTHORIZATION PURSUANT TO PLANNING CODE SECTION 209.1 AND 303(c), TO INSTALL A SIRIUS XM SATELLITE RADIO FACILITY. SIRIUS XM PROPOSES TO INSTALL (1) NEW PANEL ANTENNA; INSTALL (1) NEW VSAT DISH; INSTALL (1) NEW RX DISH; AND INSTALL (1) NEW CABINET ON AN EQUIPMENT PLATFORM. THE PROPOSED ANTENNA WILL BE PAINTED TO MATCH THE EXISTING PENTHOUSE. THE SUBJECT PROPERTY IS LOCATED AT 1101 GREEN STREET, LOTS 026-089 IN ASSESSOR'S BLOCK 0125, WITHIN THE RH-3 (RESIDENTIAL-HOUSE, THREE FAMILY) ZONING DISTRICT AND 40-X HEIGHT AND BULK DISTRICT, AND ADOPTING FINDINGS UNDER THE CALIFORNIA ENVIRONMENTAL QUALITY ACT.

PREAMBLE

On February 1, 2018, Laura Meiners of Sure Site Consulting Group for Sirius XM (hereinafter "Project Sponsor") filed Application No. 2016-015056CUA (hereinafter "Application") with the Planning Department (hereinafter "Department") for a Conditional Use Authorization to construct a new unmanned Sirius XM satellite radio facility (hereinafter "Project") at 1101 Green Street, Block 0125 Lots 026-089 (hereinafter "Project Site").

On October 4, 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. 2016-015056CUA.

On September 27, 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. 2016-015056PRJ 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. 2016-015056CUA, 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 (1) new panel antenna; (1) new VSAT dish; (1) new RX dish; and (1) new cabinet on an equipment platform. The proposed antenna will be painted to match existing penthouse.

3. **Site Description and Present Use.** The Project is located on an existing rooftop at 1101 Green Street. The Project Site contains one existing building: an approximately 20 story building, and measures 690 square feet. The use of the Project site is condominium.

4. **Surrounding Properties and Neighborhood.** The Project Site is located within the RH-3 Zoning District. The immediate context of the neighborhood is moderate residential with a mix of 2 to 14 dwelling units per parcel. The subject building is one of the tallest and most densely developed on the block. A small neighborhood commercial area is located nearby on Hyde Street. The project will not alter the exterior of the subject building.

5. **Public Outreach and Comments.** The Project Sponsor held a community meeting on November 18, 2017 at 6:00 PM at Helen Wills Park, 1401 Broadway, San Francisco 94109. One member of the community attended the meeting. As of October 1, 2018, the Department has not received any correspondence regarding 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 a Location Preference 7 d Site (Disfavored Sites – RH-3) according to the WTS Facilities Siting Guidelines, making it a desired location. There is an existing micro wireless installation for NextNav at the subject site, pursuant to BPA21203206443. However, micro sites approved as Accessory Use Determinations are not eligible for co-location status.

8. **Radio Waves Range.** The Project Sponsor has stated that the proposed wireless network is designed to address coverage needs in the area. The network will operate in the 2330 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 EBI Consulting, 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 Sirius XM transmitters at any nearby publicly accessible building or area would 0.3% of the FCC public exposure limit.

    There are 0 antennas existing operated by XM Satellite Radio installed at the roof top of the building at 1101 Green Street. 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. XM Satellite Radio proposes to install 1 new antenna and 2 dishes. The antennas and dishes are mounted at a height of 236 feet and 258.4 feet above the ground. The estimated ambient RF field from the proposed XM satellite Radio transmitters a t ground level is calculated to be .003 mW/sq. cm., which is 0.3% of the FCC public exposure limit. The three-dimensional perimeter of RF levels equal to the public exposure limit extends 12 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. Access to the rooftop is locked to prevent unauthorized access.

11. **Coverage and Capacity Verification.** The maps, data, and conclusion provided by Sirius XM to demonstrate the need for outdoor and indoor coverage and capacity have been determined by Pier Four Enterprises LLC, 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 209.1, 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 1101 Green 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 is situated so as to avoid intrusion into public vistas, and to insure harmony with the existing neighborhood character and promote public safety.

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 Sirius XM coverage within the Russian Hill 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 Sirius XM 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. 2016-015056CUA** subject to the following conditions attached hereto as "EXHIBIT A" in general conformance with plans on file, dated July 10, 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 October 4, 2018.

Jonas P. Ionin
Commission Secretary

AYES:

NAYS:

ABSENT:

ADOPTED: October 4, 2018

EXHIBIT A

AUTHORIZATION

This authorization is for a conditional use to allow a Wireless Telecommunications Facility (d.b.a. **Sirius XM**) located at 1101 Green Street, , Block 0125, and Lot 026-689] pursuant to Planning Code Sections 209.1 and 303(c) within the **RH -3** District and a **40-X** Height and Bulk District; in general conformance with plans, dated **July 10, 2018**, and stamped "EXHIBIT B" included in the docket for Record No. **2016-015056CUA**and subject to conditions of approval reviewed and approved by the Commission on **October 4, 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 **October 4, 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

10. **Future Site Modifications.** The Project Sponsor shall incorporate screening and minimize any negative visual impact that would result from any future facility modification after the original installation, given that the future facility modification includes the installation of additional antenna.
For information about compliance, contact the Case Planner, Planning Department at 415-558-6378, www.sf-planning.org

MONITORING - AFTER ENTITLEMENT

11. **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

12. **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

13. **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

14. **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

15. **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

16. **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 .

17. **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

18. **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

19. **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

20. **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

21. **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

22. **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

23. **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

24. **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

25. **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

EXHIBIT B

SHEET INDEX

NO.	DESCRIPTION
T-1	TITLE SHEET
T-2	GENERAL NOTES
PS-1 ~ PS-3	PHOTO SIMULATION
RF-1 ~ RF-6	RF COMPLIANCE REPORT
SS-1	TOPOGRAPHIC SURVEY
C-1	SITE PLAN
C-1A	EXISTING ROOF PLAN
C-1B	PROPOSED ROOF PLAN
C-2	ENLARGED PROPOSED EQUIPMENT LAYOUT
C-3	SITE ELEVATION
C-4	ANTENNA LAYOUTS
C-5	ANTENNA DETAILS
C-5A	SITE DETAILS
C-6	ANTENNA SCHEDULES
C-7	EQUIPMENT SPECS
C-7A	EQUIPMENT PLATFORM DETAILS
E-1	UTILITY PLAN AT ROOF LEVEL AND NOTES
E-1A	UTILITY PLAN AT 20TH FLOOR
E-2	FINAL SINGLE LINE DIAGRAM/PANEL SCHEDULE
E-3	GROUNDING DETAILS AND NOTES
E-4	SITE CONFIGURATIONS MATERIAL LIST
E-4A	SITE CONFIGURATIONS MATERIAL LIST
E-5	SITE CONFIGURATIONS MATERIAL LIST

3

DRIVING DIRECTIONS

FROM: SAN FRANCISCO INTERNATIONAL AIRPORT

DEPART SAN FRANCISCO INTERNATIONAL AIRPORT, TAKE RAMP (LEFT) ONTO US-101/BAYSHORE FWY, KEEP RIGHT ONTO I-80/JAMES LICK SKWY, AT EXIT 1, TURN RIGHT ONTO RAMP, BEAR LEFT (NORTH-WEST) ONTO 7TH ST, ROAD NAME CHANGES TO CHARLES J BRENHAM PL/7TH ST N, BEAR LEFT (WEST) ONTO MCALLISTER ST, THEN IMMEDIATELY TURN RIGHT (NORTH) ONTO LEAVENWORTH ST, ARRIVE AT SITE

Sirius XM™
SATELLITE RADIO

SITE NAME

GREEN STREET

SITE I.D.

SFX5015

SITE ADDRESS

1101 GREEN ST
SAN FRANCISCO, CA 94109

STRUCTURE TYPE

ROOFTOP

PROJECT SUMMARY

SITE NAME:	GREEN STREET
SITE NO:	SFX5015
SITE ADDRESS:	1101 GREEN ST SAN FRANCISCO, CA 94109
COUNTY:	SAN FRANCISCO
SITE COORDINATES LATITUDE: LONGITUDE: GROUND ELEVATION:	 37.7979693° (NAD 83) -122.4174693° (NAD 83) 300' (AMSL)
JURISDICTION: ZONING:	CITY OF SAN FRANCISCO DISTRICT: RH-3 HEIGHT/BULK DISTRICT: 40-X NEIGHBORHOOD: RUSSIAN HILL
APPLICANT:	SIRIUS XM 1500 ECKINGTON PL NE WASHINGTON, DC 20002 TEL: (202) 380-4157 FAX: (202) 380-4570
LANDLORD:	INDIVIDUALLY OWNED CONDOS BELLAIRE TOWER - 24 HOUR SECURITY DES 1101 GREEN STREET SAN FRANCISCO, CA 94109 (415) 673-4612 CAROLE GILANO (PROPERTY MANAGER) (415) 652-7298 gilanocay@aol.com
OCCUPANCY TYPE: CONSTRUCTION TYPE:	

2016 CALIFORNIA ADMINISTRATIVE CODE
2016 CALIFORNIA BUILDING CODE (IBC 2012)
2016 CALIFORNIA ELECTRICAL CODE (2011 NEC)
2016 CALIFORNIA MECHANICAL CODE (2012 UMC)
2016 CALIFORNIA ENERGY CODE
2016 CALIFORNIA FIRE CODE (2012 IFC)
2016 CALIFORNIA GREEN CODE
2016 CALIFORNIA REFERENCES STANDARDS CODE
CITY/COUNTY ZONING ORDINANCES

CERTIFICATION STATEMENT

I HEREBY CERTIFY THAT THESE DRAWING WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND CONTROL, AND TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODES.

VICINITY MAP

PROJECT TEAM

SURESITE
Infrastructure experts
Small cell leaders.

3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

PROJECT MANAGER/
SITE ACQUISITION

FULLERTON
ENGINEERING • DESIGN

1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

ENGINEER

CODE COMPLIANCE:

- HANDICAP ACCESS REQUIREMENTS ARE NOT REQUIRED
- FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION
- FACILITY HAS NO PLUMBING OR REFRIGERANTS
- THIS FACILITY SHALL MEET OR EXCEED ALL FAA AND FCC REGULATORY REQUIREMENTS

SCOPE OF WORK:

- INSTALL (1) NEW SIRIUS XM PANEL ANTENNA ON EXISTING PENTHOUSE
- INSTALL NEW SIRIUS XM VSAT DISH ON EXISTING PENTHOUSE
- INSTALL NEW SIRIUS XM RX DISH ON EXISTING PENTHOUSE
- INSTALL NEW SIRIUS XM CABINET AND EQUIPMENT PLATFORM ON EXISTING ROOFTOP
- ALL NEW MATERIAL SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR UNLESS NOTED OTHERWISE. CABINETS, ANTENNAS AND CABLES FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR

APPROVALS

CONST.		DATE
RF		DATE
OPS		DATE
LANDLORD		DATE

DRAWING SCALED TO 11"x17"

Sirius XM™
SATELLITE RADIO

SURESITE
Infrastructure experts
Small cell leaders.

3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON
ENGINEERING • DESIGN

1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
0	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	PK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

SITE NAME
GREEN STREET

SITE I.D.
SFX5015

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME
TITLE SHEET

SHEET NUMBER
T-1

PROJECT# 2015.0042.0022

GENERAL CONSTRUCTION NOTES:

1. THIS SET OF PLANS HAS BEEN PREPARED FOR THE PURPOSES OF MUNICIPAL AND AGENCY REVIEW AND APPROVAL.
2. THESE PLANS ARE INTENDED TO BE USED TO DIRECT THE PROPOSED LAYOUT. DRAWINGS SHOULD NOT BE SCALED UNLESS OTHERWISE NOTED. PLANS, ELEVATIONS AND DETAILS ARE INTENDED TO SHOW THE END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AND NOTIFY THE PROJECT MANAGER OF ANY DISCREPANCIES BEFORE STARTING ANY WORK.
4. ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS UNLESS OTHERWISE NOTED BY THE ENGINEER OF RECORD.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK PERFORMED AND MATERIALS INSTALLED TO BE IN STRICT CONFORMANCE, AS A MINIMUM STANDARD, WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES HAVING JURISDICTION. ELECTRICAL SYSTEMS SHALL BE INSTALLED IN CONFORMANCE WITH THE NATIONAL ELECTRICAL CODE, AND ALL OTHER LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES, AND WITH LOCAL UTILITY COMPANY SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.
6. THE CONTRACTOR SHALL KEEP CONTRACT AREA CLEAN, HAZARD FREE AND DISPOSE OF ALL DIRT, STUMPS, STONES, RUBBISH OR DEBRIS IN ACCORDANCE WITH ALL LOCAL AND ENVIRONMENTAL LAWS. NO MATERIALS OR EQUIPMENT SHALL BE PLACED ANYWHERE ON OR IN THE STRUCTURE WITHOUT MAKING ADEQUATE PROVISIONS TO PROTECT EXISTING PROPERTY. UPON COMPLETION, REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DURING CONSTRUCTION. REPAIR ALL EXISTING WALL SURFACES DAMAGED DURING CONSTRUCTION SUCH THAT THEY MATCH AND BLEND WITH ADJACENT SURFACES.
7. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE AND HAVE CONTROL OVER CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES.

WARRANTIES AND BONDS:

1. THE CONTRACTOR SHALL GUARANTEE ALL LABOR AND MATERIALS USED IN THIS PROJECT FOR A MINIMUM PERIOD OF ONE (1) YEAR COMMENCING FROM THE DATE OF FINAL ACCEPTANCE BY THE CLIENT. THE CONTRACTOR IS NOT REQUIRED TO GUARANTEE MATERIAL SUPPLIED BY THE OWNER.
2. FINAL DATE OF ACCEPTANCE IS DEEMED AS THE DATE THAT ALL REQUIRED STATE AND FEDERAL APPROVAL HAVE BEEN OBTAINED INCLUDING, BUT NOT LIMITED TO:
   A. FINAL INSPECTION– D14
   B. CERTIFICATE OF OCCUPANCY
3. ANY DEFICIENCIES THAT COME EVIDENT DURING THIS ONE (1) YEAR PERIOD SHALL BE CORRECTED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

DELIVERY, STORAGE AND HANDLING:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PROCEDURES AND SCHEDULING ASSOCIATED WITH HOISTING, STAGING, AND ERECTING OF MATERIALS AND EQUIPMENT TO AND/OR UPON THE SITE.
2. ALL ELEMENTS OF THE EXISTING SITE, I.E. STRUCTURES, SITE PLANTINGS, ETC. SHALL BE PROTECTED AS NECESSARY FROM SAID ACTIONS. THIS WORK MUST BE DONE IN A SAFE, SECURE NONDESTRUCTIVE MANNER FOR PROTECTING PERSONNEL AND PROPERTY.

SITE WORK GENERAL NOTES:

1. THIS SET OF PLANS HAS BEEN PREPARED FOR THE PURPOSES OF MUNICIPAL AND AGENCY REVIEW AND APPROVAL.
2. THESE PLANS ARE INTENDED TO BE USED TO DIRECT THE PROPOSED LAYOUT. DRAWINGS SHOULD NOT BE SCALED UNLESS OTHERWISE NOTED. PLANS, ELEVATIONS AND DETAILS ARE INTENDED TO SHOW THE END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AND NOTIFY THE PROJECT MANAGER OF ANY DISCREPANCIES BEFORE STARTING ANY WORK.
4. ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS UNLESS OTHERWISE NOTED BY THE ENGINEER OF RECORD.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK PERFORMED AND MATERIALS INSTALLED TO BE IN STRICT CONFORMANCE, AS A MINIMUM STANDARD, WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES HAVING JURISDICTION. ELECTRICAL SYSTEMS SHALL BE INSTALLED IN CONFORMANCE WITH THE NATIONAL ELECTRICAL CODE, AND ALL OTHER LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES, AND WITH LOCAL UTILITY COMPANY SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.
6. THE CONTRACTOR SHALL KEEP CONTRACT AREA CLEAN, HAZARD FREE AND DISPOSE OF ALL DIRT, STUMPS, STONES, RUBBISH OR DEBRIS IN ACCORDANCE WITH ALL LOCAL AND ENVIRONMENTAL LAWS. NO MATERIALS OR EQUIPMENT SHALL BE PLACED ANYWHERE ON OR IN THE STRUCTURE WITHOUT MAKING ADEQUATE PROVISIONS TO PROTECT EXISTING PROPERTY. UPON COMPLETION, REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DURING CONSTRUCTION. REPAIR ALL EXISTING WALL SURFACES DAMAGED DURING CONSTRUCTION SUCH THAT THEY MATCH AND BLEND WITH ADJACENT SURFACES.
7. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE AND HAVE CONTROL OVER CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES.
8. THE CONTRACTOR SHALL CALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.
9. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWING AND STIPULATED IN THE SPECIFICATION PROJECT SUMMARY.
10. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES, AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
11. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER FLOW AWAY FROM THE EQUIPMENT SHELTER AND TOWER AREAS.
12. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
13. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
14. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF ENGINEERING.
15. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE BUILDING OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, FERTILIZED AND SEEDED.
16. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
17. ALL BACK FILL SHALL BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY AS DETERMINED BY ASTM STANDARD TEST PROCEDURES.

CONSTRUCTION SPECIFICATIONS:

1. THE CONTRACTOR SHALL VISIT THE SITE OF THE PROPOSED WORK AND FULLY ACQUAINT THEMSELVES WITH THE CONDITIONS AS THEY EXIST IN ORDER THAT ANY RESTRICTIONS PERTAINING TO THE WORK ARE UNDERSTOOD. ALL AREAS AND DIMENSIONS ARE INDICATED ON THE DRAWINGS AS ACCURATELY AS POSSIBLE, BUT ALL CONDITIONS SHALL BE VERIFIED BY EACH CONTRACTOR AND/OR SUBCONTRACTOR AT THE SITE. THE FAILURE OF THE CONTRACTOR TO EXAMINE OR RECEIVE ANY FORM, INSTRUMENT OR DOCUMENT, OR TO VISIT THE SITE SHALL NOT RELIEVE THE CONTRACTOR FROM ANY OBLIGATION WITH RESPECT TO THEIR QUOTED PRICE. THE SUBMISSION OF A QUOTATION SHALL ACKNOWLEDGE THAT THE CONTRACTOR AND THEIR SUBCONTRACTORS HAVE FULLY EXAMINED THE SITE AND KNOW THE EXISTING CONDITIONS AND HAVE MADE PROVISIONS FOR OPERATING UNDER THE CONDITIONS AS THEY EXIST AT THE SITE AND HAVE INCLUDED ALL NECESSARY ITEMS.
2. THE GENERAL CONTRACTOR'S RESPONSIBILITIES SHALL INCLUDE, BUT NOT BE LIMITED TO, CONSTRUCTION OF THE EQUIPMENT FOUNDATION, INCLUDING ELECTRICAL SERVICE, TELEPHONE CONDUITS, GROUNDING SYSTEM AND COORDINATION WITH LOCAL UTILITY COMPANIES.
3. THE ANTENNA INSTALLERS RESPONSIBILITIES SHALL INCLUDE, BUT NOT BE LIMITED TO, CABLE TRAY INSTALLATION, ROUTING OF CABLES FROM RADIO EQUIPMENT TO ANTENNAS, ASSOCIATED HARDWARE FOR SECURING ANTENNA CABLES, ANTENNA MOUNTS, DETERMINING SUPPLIER OF ANTENNAS, GROUNDING OF ANTENNAS TO GROUNDING SYSTEM, INSTALLING ANTENNAS AND VERIFYING WITH RADIO FREQUENCY ENGINEERS, THE ALIGNMENT, LOCATION, AND PROPER ORIENTATION OF ANTENNAS.
4. THE CONTRACTORS SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE BUILDING LANDLORD IN ORDER TO AVOID CONFLICTS WITH CURRENT USE OF THE SITE.
5. THE OWNER MAY HAVE WORK PERFORMED UNDER SEPARATE CONTRACTS, CONCURRENTLY, WITH THE WORK OF THIS CONTRACT.
6. THE GENERAL CONTRACTOR SHALL PERMIT ACCESS TO THE PROJECT TO THESE CONTRACTORS TO PERFORM THEIR WORK.
7. CONTRACTOR SHALL CONFORM TO ALL APPLICABLE LOCAL, COUNTY, STATE, AND FEDERAL CODES, LAWS AND REQUIREMENTS, INCLUDING OSHA.
8. THE CONTRACTOR SHALL APPLY AND PAY FOR THE CONSTRUCTION PERMIT, CERTIFICATE OF OCCUPANCY AND ALL OTHER REQUIRED PERMITS OR LICENSES. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL INSPECTIONS.
9. CARE SHALL BE EXERCISED IN PROTECTING THE BUILDING OCCUPANTS DURING THE DEMOLITION AND CONSTRUCTION PERIODS OF THIS PROJECT. EVERY EFFORT SHALL BE MADE TO MAINTAIN A CLEAN OPERATION. DEBRIS SHALL NOT ACCUMULATE. ALL DEBRIS WILL BE DEPOSITED IN A SUITABLE CONTAINER ON A DAILY BASIS AND SHALL BE EMPTIED ON A REGULAR SCHEDULE. THE LOCATION OF THE CONTAINER SHALL BE COORDINATED WITH THE BUILDING MANAGER.
10. SAFETY PROCEDURES: ATTENTION IS DIRECTED TO FEDERAL, STATE, AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH STANDARDS. THE CONSTRUCTION COMPANY AWARDED THIS PROJECT SHALL ENSURE ALL WORKING SURROUNDINGS AND CONDITIONS ARE SANITARY AND ARE NOT HAZARDOUS OR DANGEROUS TO THE HEALTH OR SAFETY OF THE WORK CREWS OR BUILDING OCCUPANTS. PRECAUTION SHALL BE EXERCISED AT ALL TIMES FOR THE PROTECTION OF PERSONS AND PROPERTY. IT IS MANDATORY THAT THE SAFETY PROVISIONS OF APPLICABLE LOCAL LAWS, OSHA REGULATIONS AND BUILDING AND CONSTRUCTION CODES, BE OBSERVED FOR ALL CONTRACTORS AND ANTENNA RIGGERS.
11. THE GENERAL CONTRACTOR MUST COORDINATE ALL ROOF RELATED WORK WITH THE LANDLORD'S PRE–APPROVED ROOFER. THE GENERAL CONTRACTOR MUST CONFIRM THE COMPATIBILITY OF ALL MATERIALS AND ENSURE THAT ALL EXISTING ROOF WARRANTIES, IF ANY, REMAIN IN EFFECT.

Sirius XM SATELLITE RADIO

SURESITE
Infrastructure experts
Small cell leaders.
3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON ENGINEERING • DESIGN
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY: AG
APPROVED BY: MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
0	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

REGISTERED PROFESSIONAL ENGINEER
HENRY M. BELLAGAMBA
68925
CIVIL
STATE OF CALIFORNIA

SITE NAME
GREEN STREET

SITE I.D.
SFX5015

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME
GENERAL NOTES

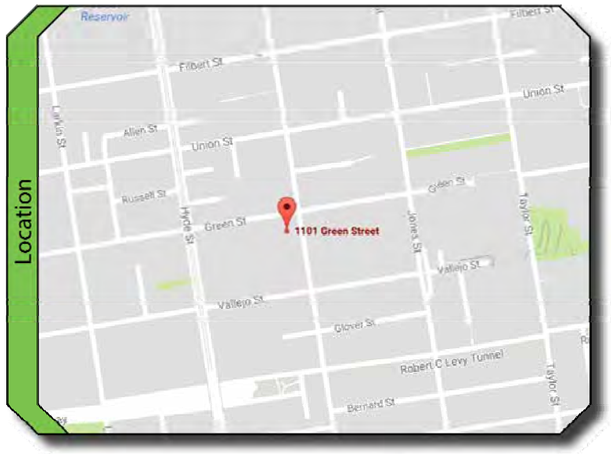
SHEET NUMBER
T–2

PROJECT# 2015.0042.0022

SFX501S GREEN STREET

1101 GREEN STREET
SAN FRANCISCO, CA

Location



Existing

View 1 of 3

Proposed

August 14, 2017

Prepared by: ZLN

PHOTO SIMULATION

SCALE: N.T.S. | 1

SURESITE
Infrastructure experts
Small cell leaders.
3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON ENGINEERING · DESIGN
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG		
APPROVED BY:	MB		
#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
0	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

FOR REFERENCE ONLY

SITE NAME
GREEN STREET

SITE I.D.
SFX501S

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

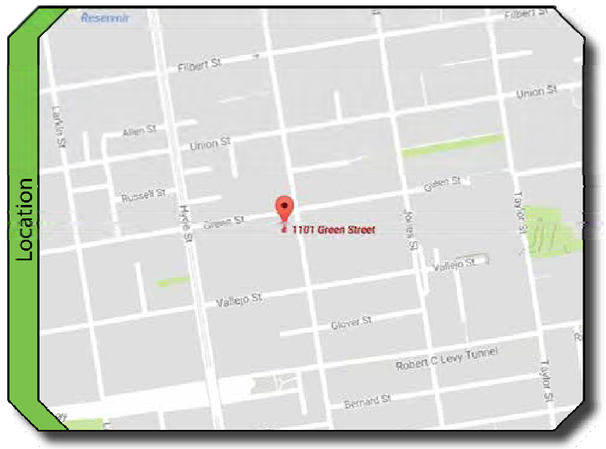
SHEET NAME
PHOTO SIMULATION

SHEET NUMBER
PS-1

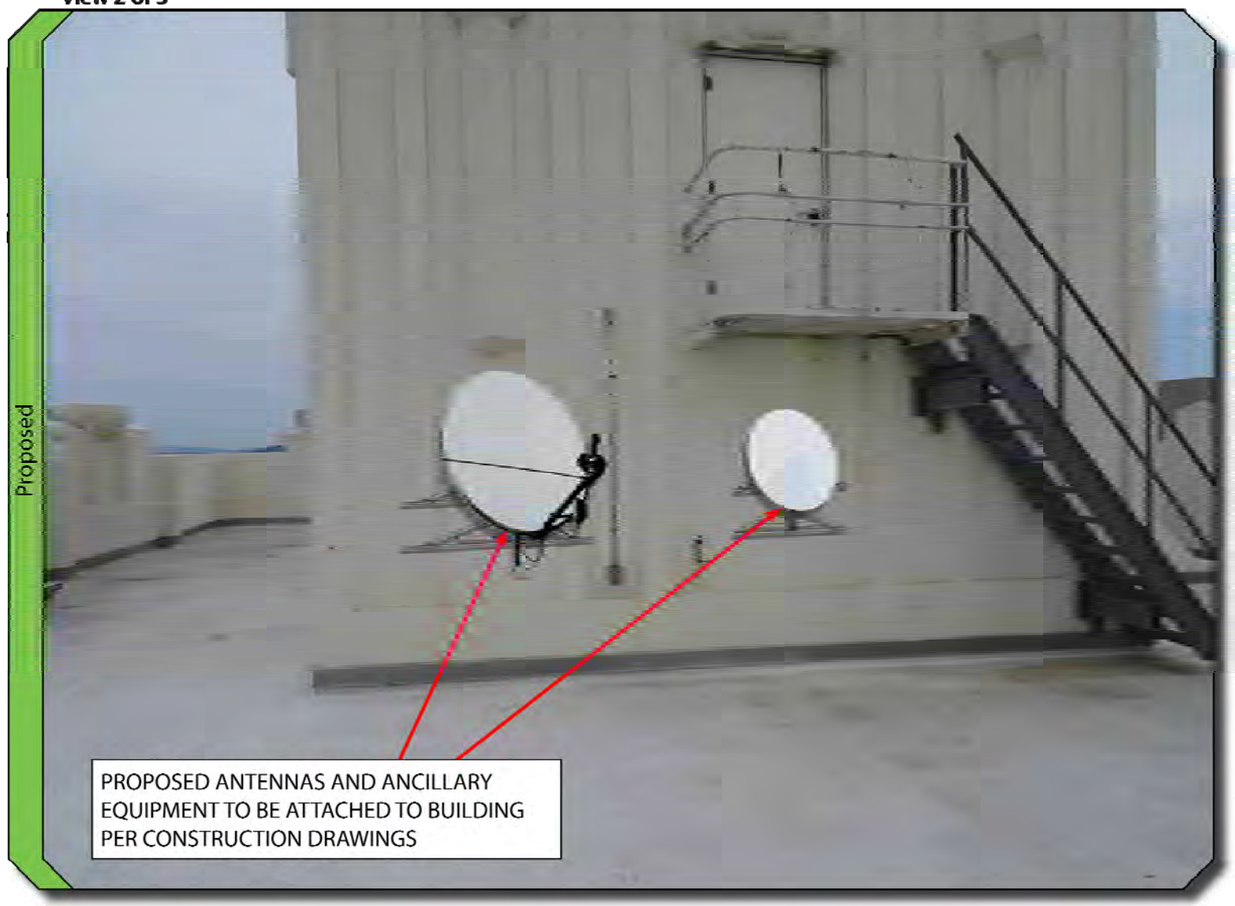
PROJECT# 2015.0042.0022

SFX501S GREEN STREET

1101 GREEN STREET
SAN FRANCISCO, CA



View 2 of 3



August 14, 2017

Prepared by: ZLN

PHOTO SIMULATION

SCALE: N.T.S. | 1

SiriusXM SATELLITE RADIO

SURESITE Infrastructure experts Small cell leaders.
3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON ENGINEERING • DESIGN
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
0	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	PK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

FOR REFERENCE ONLY

SITE NAME
GREEN STREET

SITE I.D.
SFX501S

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME
PHOTO SIMULATION

SHEET NUMBER
PS-2

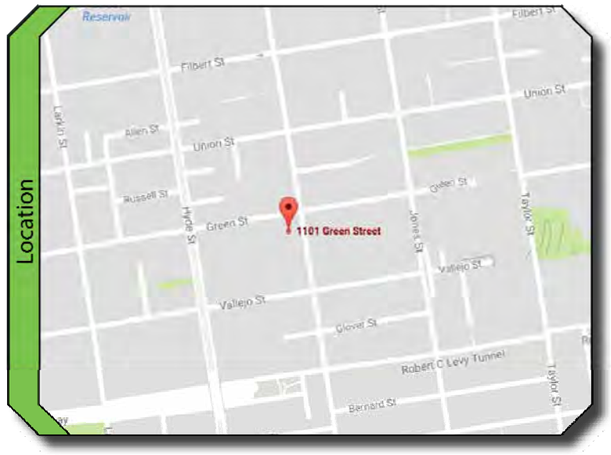
PROJECT# 2015.0042.0022

SFX501S GREEN STREET

1101 GREEN STREET
SAN FRANCISCO, CA

View 3 of 3

Location



Existing

Proposed

August 14, 2017

Prepared by: ZLN

PHOTO SIMULATION

SCALE: N.T.S. | 1

SURESITE
Infrastructure experts
Small cell leaders.
3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON
ENGINEERING • DESIGN
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
0	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

FOR REFERENCE ONLY

SITE NAME
GREEN STREET

SITE I.D.
SFX501S

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME
PHOTO SIMULATION

SHEET NUMBER
PS-3

PROJECT# 2015.0042.0022

Radio Frequency – Electromagnetic Energy (RF-EME) Compliance Report (NSB)

Sirius Proposed Facility

Site ID: SFX501 S
Green Street
1101 Green Street, San Francisco, California 94109

June 15, 2018

EBI Project Number:
6217003367

Status:	The proposed site will be compliant with the installation of the mitigation measures described in Attachment 1.
Remarks: See signage plan for mitigation measures to be installed upon upgrade/installation of the site to comply with FCC and Sirius standards.	

Prepared by:
EBI Consulting
environmental | engineering | due diligence

TABLE OF CONTENTS

1.0 Executive Summary

EnviroBusiness Inc. (dba EBI Consulting) has been contracted by Sirius to conduct radio frequency electromagnetic (RF-EME) monitoring and modeling for Sirius Site SFX501 S located at 1101 Green Street in San Francisco, California to determine RF-EME exposure levels from proposed Sirius wireless communications equipment at this site. As described in detail in Appendix B of this report, the Federal Communications Commission (FCC) has developed Maximum Permissible Exposure (MPE) Limits for general public exposures and occupational exposures. This report summarizes the results of RF-EME monitoring and modeling in relation to relevant FCC RF-EME compliance standards for limiting human exposure to RF-EME fields. EBI field personnel visited this site on January 00, 1900. This report contains a detailed summary of the RF EME analysis for the site.

This document addresses the compliance of Sirius's proposed transmitting facilities independently at the site.

The Maximum Emissions Value is 27.8000% of the FCC's general public limit (5.5600% of the FCC's occupational limit) at the main roof level. The proposed site is in compliance with Federal regulations regarding (radio frequency) RF Emissions.

Based on worst-case predictive modeling, there are no modeled exposures on any accessible main roof level-level walking/working surface related to Sirius's equipment in the area that exceed the FCC's occupational and/or general public exposure limits at this site.

Signage is recommended at the site as presented in Attachment 1. Posting of the signage brings the site into compliance with FCC rules and regulations.

2.0 MPE Calculations

Calculations were completed for the proposed Sirius Wireless antenna rooftop facility located at 1101 Green Street in San Francisco, California using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Because of the short wavelength of PCS services, the antennas require line-of-site paths for good propagation, and are typically installed a distance above ground level. Antennas are constructed to concentrate energy towards the horizon, with as little energy as possible scattered towards the ground or the sky. This design, combined with the low power of PCS facilities, generally results in no possibility for exposure to approach Maximum Permissible Exposure (MPE) levels, with the exception of in areas in the immediate vicinity of the antennas.

In accordance with Sirius's RF Exposure policy, EBI performed theoretical modeling using RoofView® software to estimate the worst-case power density at the site rooftop-level resulting from operation of the antennas.

For this report, EBI utilized antenna and power data provided by Sirius and compared the resultant worst-case MPE levels to the FCC's occupational/controlled exposure limits outlined in OET Bulletin 65. EBI has performed theoretical worst case modeling using RoofView® to estimate the maximum potential power density from each antenna based on worst-case assumptions for the number of antennas and power. All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration.

The assumptions used in the modeling are based upon information collected during the site survey and information provided by Sirius in the supplied drawings and known configuration values information gathered from other sources to approximate each additional carrier's contribution.

The data for all Sirius antennas used in this analysis is shown in Section 4.0. Actual antenna gains for each antenna were used per manufacturer's specifications. All calculations were done with respect to uncontrolled and general public threshold limits.

3.0 Site and Vicinity Survey

EBI performed a rooftop and ground level RF-EME survey on June 15, 2018. The antenna inventory (based upon the site survey) and site photos taken from rooftop and ground level are presented in Appendices A and B, respectively.

Monitoring was performed using a Narda NBM-550 Electromagnetic Radiation Survey Meter, Serial #F-0360 with a Narda EA5091-shaped probe with a frequency range of 300kHz-50 GHz. The meter was last calibrated on June 23, 2017. This meter was programmed to measure the total power density for all electromagnetic radiation within the 300kHz-50GHz frequency range and report the power density as a percent of the FCC's controlled MPE. During this survey, no spatially averaged readings above 0.7282% of the FCC's occupational MPE (3.6410% of the general public MPE) were encountered on any rooftop surface. This maximum spatially averaged reading was measured at roof level on the northeast portion of the rooftop, as shown in the monitoring site plan in Appendix E. In addition, no spatially averaged readings greater than 0.8665% of the FCC's uncontrolled or general public MPE were encountered at

ground level. A site plan depicting monitoring locations and measurements of power density can be found in Appendix E. Appendix F contains notes from the site survey.

Access to this site is accomplished via a stairwell penthouse located on the main roof. The roof access door is unlocked, but you must give pre-approval to access rooftop from building management.

At the time of the site survey, it was noted that there was a yellow "Guidelines" sign, and yellow "Caution" sign, and blue "Notice" sign on the roof access door. A blue "Notice" and yellow "Guidelines" signs are located on the existing equipment door. Blue "Notice" sign posted on the penthouse access door.

This analysis report contains both theoretical modeling calculations as well as actual onsite Power Density measurements. The theoretical modeling calculations will typically show a worst case scenario as it is typically modeled after the largest channel grouping and power level possible at the site. Onsite Monitoring will give a snapshot of the composite RF field levels at the time the survey was completed. Due to this, there is a possibility that large differences may be seen between the modeled RF conditions and those observed in the field. Additionally, this becomes a multiplier effect if multiple carriers are modeled at maximum powers.

4.0 Sirius Antenna Inventory

Sector	Antenna Number	Antenna Make	Antenna Model	Height (ft) Above Nearest Walking Surface	Azimuth (°)	Technology	Frequency Band	Power Per Channel (W)	Number of Channels	ERP (W)
Sirius Panel	1	Til-Tek	TA-2306-3-D4A-L	25.4	[illegible]	Sirius	2300	280	2	[illegible]
Sirius Dish	2	Pctel	1109	3	127	Sirius	RX only	RX only	RX only	N/A
Sirius Dish	3	Til-Tek	2300-LHCP	3	128	Sirius	RX only	RX only	RX only	N/A

Sirius Site Inventory and Power Values

Sirius XM SATELLITE RADIO

SURESITE
Infrastructure experts
Small cell leaders.

3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON
ENGINEERING · DESIGN

1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
0	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

FOR REFERENCE ONLY

SITE NAME
GREEN STREET

SITE I.D.
SFX501S

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME
RF-EME COMPLIANCE REPORT

SHEET NUMBER
RF-1

PROJECT# 2015.0042.0022

5.0 Summary and Conclusions

All calculations performed for this analysis yielded results that were within the allowable limits for exposure to RF Emissions. Based on predictive modeling, there are no modeled exposures on any accessible main roof level-level walking/working surface related to Sirius's equipment in the area that exceed the FCC's occupational and/or general public exposure limits at this site. Installation of mitigation measures will bring the proposed site into compliance.

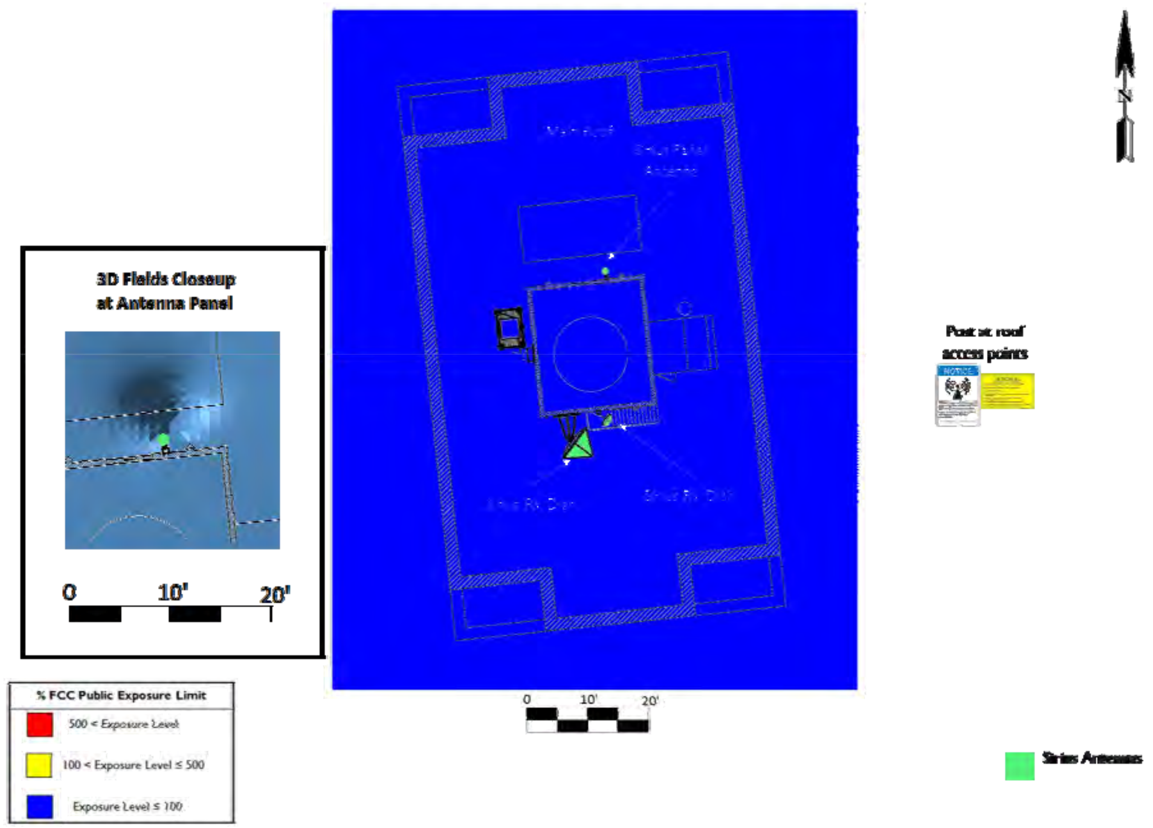
The anticipated maximum contribution from each sector of the proposed Sirius facility is 27.8000% of the allowable FCC established general public limit (5.5600% of the FCC occupational limit). This was determined through calculations along a radial from each sector taking full power values into account as well as actual vertical plane antenna gain values per the manufacturers supplied specifications for gain.

A site is considered out of compliance with FCC regulations if there are areas that exceed the FCC exposure limits and there are no RF hazard mitigation measures in place. Any carrier which has an installation that contributes more than 5% of the applicable MPE must participate in mitigating these RF hazards. For this facility, the composite values calculated were within the allowable 100% threshold standard per the federal government.

Based on the FCC criteria, there are no measured areas on any accessible rooftop and ground-level walking/working surface related to the existing site conditions that exceed the FCC's occupational and general public exposure limits at this site.

EBI's modeling indicates that there are no areas on the walking/working surfaces at the rooftop level in front of the Sirius antennas that may exceed the FCC standards for general population and/or occupational exposure. To reduce the risk of exposure and/or injury, EBI recommends that access to the rooftop or areas associated with the active antenna installation be restricted and secured where possible. In order to alert any workers potentially accessing the site, a blue Notice sign and a yellow Guidelines sign are recommended for installation at the access to the rooftop as depicted on the Signage Plan – Attachment I.

Attachment 1: MPE Analysis and Recommended Signage



Sign	Sign Count	Description	Posting Instructions
	1	**Blue Notice Sign** Used to notify individuals they are entering an area where the power density emitted from transmitting antennas may exceed the FCC's MPE limit for the general public or occupational exposures.	Securely post at all access points to the site in a manner conspicuous to all individuals entering thereon.
	1	**Guidelines** Informational sign used to notify workers that there are active antennas installed and provide guidelines for working in RF environments.	Securely post at all access points to the site in a manner conspicuous to all individuals entering thereon.
	N/A	**Yellow Caution Sign** Used to notify individuals that they are entering a hot spot where either the general public or occupational FCC's MPE limit is or could be exceeded.	Not required.
	N/A	**Red Warning Sign** Used to notify individuals that they are entering a hot zone where either the general public or occupational FCC's MPE limit has been exceeded.	Not required.
Notes:	**The proposed site will be compliant with the installation of the mitigation measures.** The actual number of access points may vary based on documentation provided and/or if a survey was conducted. Recommended signage locations are based on Sirius's guidance for the worst-case scenario in each sector. The actual signage installation is dependent on accessibility of the facility and antennas. Locations deemed inaccessible due to OSHA safety standards (proximity to unprotected roof edge or slope, etc.) will be compliant upon installation of recommended signage at the closest accessible point.		

Appendix A: Certifications

Reviewed and Approved by:

Michael McGuire
Electrical Engineer

Please note that EBI's scope of work is limited to an evaluation of the Radio Frequency – Electromagnetic Energy (RF-EME) field generated by the antennas and broadcast equipment noted in this report. The engineering and design of the building and related structures, as well as the impact of the antennas and broadcast equipment on the structural integrity of the building, are specifically excluded from EBI's scope of work.

Preparer Certification

I, Christopher Ignatius, state that:

- I am an employee of EnviroBusiness Inc. (d/b/a EBI Consulting), which provides RF-EME safety and compliance services to the wireless communications industry.
- I have successfully completed RF-EME safety training, and I am aware of the potential hazards from RF-EME and would be classified "occupational" under the FCC regulations.
- I am fully aware of and familiar with the Rules and Regulations of both the Federal Communications Commission (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation.
- I have been trained on RF-EME modeling using RoofView® modeling software.
- I have reviewed the data collected during the site survey and provided by the client and incorporated it into this Site Compliance Report such that the information contained in this report is true and accurate to the best of my knowledge.

Sirius XM
SATELLITE RADIO

SURESITE
Infrastructure experts
Small cell leaders.
3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON
ENGINEERING · DESIGN
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
Ø	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

FOR REFERENCE ONLY

SITE NAME
GREEN STREET

SITE I.D.
SFX5015

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME
RF-EME COMPLIANCE REPORT

SHEET NUMBER
RF-2

PROJECT# 2015.0042.0022

Appendix B: Federal Communications Commission (FCC) Requirements

All information used in this report was utilized as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm²). The number of μW/cm² calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter (μW/cm²). The general population exposure limit for the 700 and 800 MHz Bands is 467 μW/cm² and 567 μW/cm² respectively, and the general population exposure limit for the PCS and AWS bands is 1000 μW/cm². Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

A site is considered out of compliance with FCC regulations if there are areas that exceed the FCC exposure limits and there are no RF hazard mitigation measures in place. Any carrier which has an installation that contributes more than 5% of the applicable MPE must participate in mitigating these RF hazards.

Additional details can be found in FCC OET 65.

Appendix C: Antenna Inventory

Below is the Appendix C Table are the technical specifications of the antennas located at the site. Physical verification was made to assure technical specification accuracy. Antenna specifications presented herein are based on direct evidence from antenna or transmitter orders, information from the site manager or building manager, information from the licensee, educated estimates by the field technician or a combination of some or all of these sources. "N/A" (not available) is used if any of the following information was not obtainable or verifiable to an acceptable certainty.

Ant #	Type	Manufacturer/Model	Azimuth (°)	Height Above Nearest Walking Surface (feet)	Carrier
1	Microwave	N/A	330	30	N/A
2	Microwave	N/A	340	27	N/A
3	Microwave	N/A	80	30	N/A
4	Microwave	N/A	315	30	N/A
5	Microwave	N/A	280	30	N/A
6	Microwave	N/A	135	30	N/A
7	Microwave	N/A	135	30	N/A
8	Microwave	N/A	135	30	N/A
9	Microwave	N/A	80	30	N/A
10	Microwave	N/A	170	30	N/A
11	Microwave	N/A	170	30	N/A
12	Omni	N/A	Omni	30	N/A
13	Omni	N/A	Omni	30	N/A

Appendix D: Photographs

1. Site Overview

2. Parking Signage at Fair Roof Access Door

3. Fair Roof Access Door

4. General Rooftop Overview - North

5. General Rooftop Overview - North

6. General Rooftop Overview - East

Sirius XM SATELLITE RADIO

SURESITE Infrastructure experts Small cell leaders.
3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON ENGINEERING • DESIGN
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
0	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	PK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

FOR REFERENCE ONLY

SITE NAME
GREEN STREET

SITE I.D.
SFX50015

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME
RF-EME COMPLIANCE REPORT

SHEET NUMBER
RF-3

PROJECT# 2015.0042.0022

7. General Backup Overview - South

8. General Backup Overview - South

9. General Backup Overview - West

10. Penthouse Overview - North

11. Penthouse Overview - Northeast

12. Penthouse Overview - Southeast

EBI Consulting

13. Penthouse Overview - South

14. Penthouse Overview - West

15. Penthouse Overview - Northwest

16. Microwave and Omni Antennas on Northeast and Northwest side of Penthouse

17. Microwave and Omni Antennas on Northeast and Northwest side of Penthouse

18. Microwave and Omni Antennas on Northeast side of Penthouse

EBI Consulting

19. Microwave and Omni Antennas on Northeast side of Penthouse

20. Microwave Antennas on Northeast side of Penthouse

21. Microwave Antennas on Southeast side of Penthouse

22. Microwave Antennas on Southeast side of Penthouse

23. Microwave Antenna on Southeast side of Penthouse

24. Omni Antennas on Southwest side of Penthouse

EBI Consulting

25. Existing Ultimate Carrier Equipment Shelter

26. Existing Signage on Existing Ultimate Carrier Equipment Shelter

27. Area between Equipment Shelter and Penthouse

28. Stairway to Penthouse Access Door

29. Existing Signage at Penthouse Access Door

30. Microwave Antennas on Adjacent Building Northeast

EBI Consulting

31. Directional Photo - North

32. Directional Photo - Northeast

33. Directional Photo - East

34. Directional Photo - Southeast

35. Directional Photo - South

36. Directional Photo - Southwest

EBI Consulting

37. Directional Photo - West

38. Directional Photo - Northwest

EBI Consulting

Sirius XM
SATELLITE RADIO

SURESITE
Infrastructure experts
Small cell leaders.

3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON
ENGINEERING • DESIGN

1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
Ø	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

FOR REFERENCE ONLY

SITE NAME

GREEN STREET

SITE I.D.

SFX50015

SITE ADDRESS

1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME

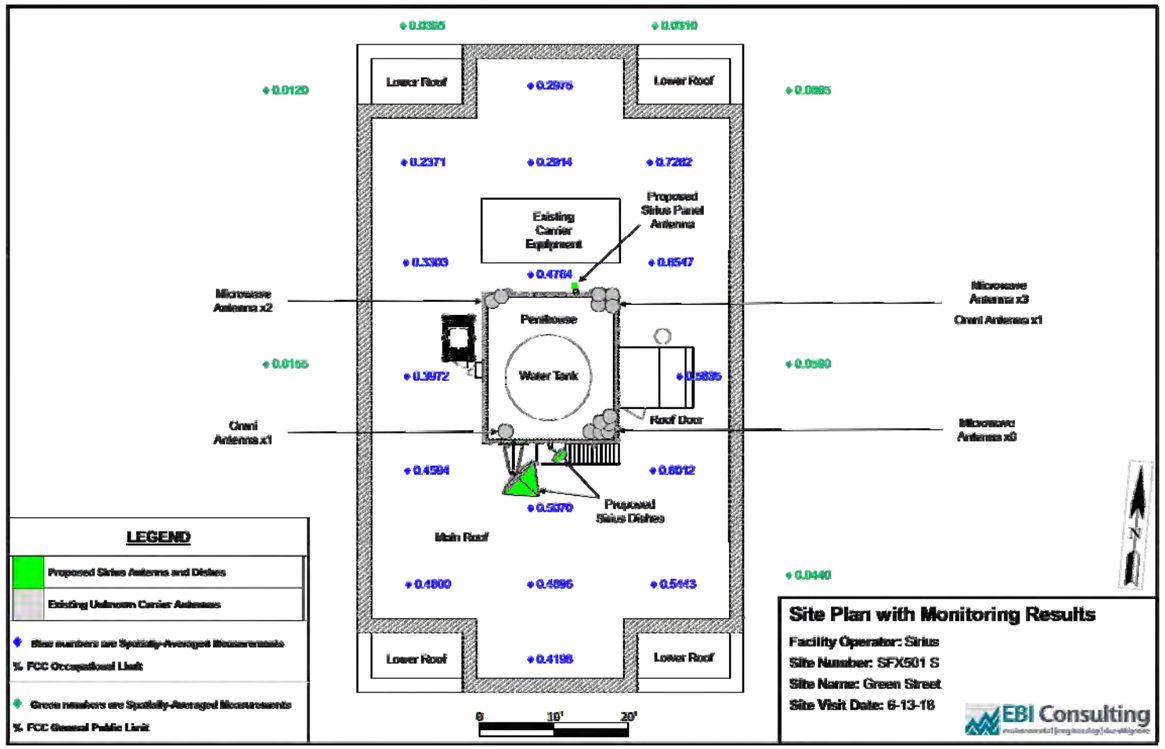
RF-EME COMPLIANCE REPORT

SHEET NUMBER

RF-4

PROJECT# 2015.0042.0022

Appendix E: Site Plan with Monitoring Locations



Appendix F: Site Survey Data

Surveyor Name	David Kolstead	Site Visit Date	June 13, 2018

Site Information

Green Street 1101 Green Street San Francisco, California 94109	Site Coordinates (NAD83): 37.797989; -122.417469

MONITOR INFORMATION		PROBE INFORMATION	
Monitor Model #	NMB-550	Probe Model #	EA5091
Monitor Serial #	F-0252	Probe Serial #	00207
Calibration Date	06/23/17	Calibration Date	06/28/17

CLIMATE INFORMATION

Temperature (°F)	70
Sunny / Overcast / Cloudy	Sunny
No Wind / Mild Breeze / Windy	No Wind
Rain / Drizzle / Fog / Snow	N/A
Other noteworthy weather factors that might influence readings	N/A

ACCESS INFORMATION

Type of facility	20 Story Residential Building
Property owner and contact information	Charlie Felcic Charlie@roomsbesweet.com
Who manages access? (e.g. security, landlord, no one)	Doorman
How is access managed? (locks, sign-in, etc.)	Pre-Approval
Ease of access, in general (e.g. ease of breaching any physical access controls)	The roof door is unlocked but you must get pre-approval for roof access by contacting Charlie Felcic

Sirius XM SATELLITE RADIO

SURESITE Infrastructure experts Small cell leaders.
3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON ENGINEERING • DESIGN
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
0	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	PK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

FOR REFERENCE ONLY

SITE NAME
GREEN STREET

SITE I.D.
SFX501S

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME
RF-EME COMPLIANCE REPORT

SHEET NUMBER
RF-5

PROJECT# 2015.0042.0022

Appendix G: Roofview Export

StartMapDefinition

Roof Max Y	Roof Max X	Map Max Y	Map Max X	Y Offset	X Offset	Number of rows/cols	
170	110	180	170	10	10	1	SUSTI SZ3 SUSTI-SZ/SZ7K

StartSettingsData

StartAntennaData It is advisable to provide an ID (ant 1) for all antennas

ID	Name	(MHz) Freq	Trans Power	Trans Count	Coax Len	Coax Type	Other Loss	Input Power	Calc Power	Mfg	Model	(ft) X	(ft) Y	(ft) Z	Type	(ft) Aper	dBd Gain	BWdth Pt Dir	Uptime Profile	ON flag
Sirius Panel	Sirius	2330	300	2	0	0	1		367.7385	Tel-Tek	TA-2304-DAB-L	50	58	22.5						ON

StartSymbolData

Sym	Map Marker Roof X	Roof Y	Map Label Description (notes for this table only)	
Sym	5	35	AC Unit	Sample symbols
Sym	34	5	Roof Access	
Sym	45	5	AC Unit	
Sym	45	30	Ladder	

EBI Consulting
environmental | engineering | due diligence

San Francisco Planning Department Wireless Telecommunications

Services Facility Siting Checklist for Sirius Site: SFX5015

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

There are eleven (11) microwave and two (2) omni antennas existing on the rooftop located at 1101 Green Street, San Francisco, CA 94109. These antennas belong to other carriers at the site that could not be identified during the site survey. See appendix F for the location of the existing antennas.

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

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

3. Provide a narrative description of the proposed work for this project. The description should be consistent with scope of work for the final installation drawings.

This project involves the addition of one (1) proposed Sirius XM Panel antenna, one (1) Sirius XM HX dish, and one (1) Sirius XM VSAT dish on an existing rooftop located at 1101 Green Street in San Francisco, California.

4. Provide an inventory of the make and model of antennas or transmitting equipment being installed or removed. The antenna inventory should also include the proposed installation height above the nearest walking/working surface as well as the height above ground level. Also include the orientations of the antennas.

Existing and Proposed Antennas

Carrier	Antenna Number	Type	Antenna Make	Antenna Model	Height (ft) Above Nearest Walking Surface	Height (ft) Above Ground	Azimuth	Antenna Status (existing or proposed)
Sirius	1	Panel	Tel-Tek	TA-2304-2-DAB-L	25.4	258.4	340	Proposed
Sirius	2	Dish	Hoshin	1185	3	236	127	Proposed
Sirius	3	Dish	Tel-Tek	1324 LKXP	3	236	128	Proposed

EBI Consulting
environmental | engineering | due diligence

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. Please include a description of any assumptions made when doing the calculations.

At the nearest walking/working surfaces to the existing antennas, the maximum power density is 0.0170 mW/cm2, which is 3.641 percent of the FCC's general public limit (0.7282 percent of the FCC's occupational limit). Values based on collected field measurements.

At ground level, the maximum power density generated by the existing antennas on-site is 0.0003 mW/cm2, which is 0.0133 percent of the FCC's general public limit (0.0665 percent of the FCC's occupational limit). Values based on collected field measurements.

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 the frequency band width (i.e. PCS, AWS, Cellular, etc...)

Effective Radiated Power (ERP) per Frequency and Sector		
Antenna	**Frequency (MHz)**	**ERP (Watts)**
Panel	2330	3864
HX	N/A	N/A
VSAT	N/A	N/A

7. Based on the antenna orientation, describe the maximum cumulative predicted radio frequency energy level for any nearby publicly accessible building or area. Include the address of the building or structure and the maximum predicted amount of radio frequency energy both as a percent of the FCC standard and in mW/cm2. Include a description of any assumptions made when doing these calculations.

The nearest publicly accessible area is ground/street level (approx. 260 ft). At ground level, the maximum power density generated by all antennas for this proposed site is 0.003 mW/cm2, which is 0.3000 percent of the FCC's general public limit (0.0600 percent of the FCC's occupational limit).

EBI Consulting
environmental | engineering | due diligence

8. Report the estimated cumulative radio frequency fields for the proposed site at ground level. State the percentage of the FCC standard utilized and power density exposure level in mW/cm2.

At ground level, the maximum power density generated by all antennas for this proposed site is 0.003 mW/cm2, which is 0.3000 percent of the FCC's general public limit (0.0600 percent of the FCC's occupational limit).

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. Indicate if this will include any walking/working surfaces or if it extends only into free space.

Based on worst-case modeling at antenna face level there are modeled exceedances of the general public and occupational limits. It is predicted that there will be an occupational exceedance in front of the Sirius panel antenna within 6 feet and a general public exceedance within 12 feet. These exceedances are into free space and do not impact any walking working/surface at this site.

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. At a minimum, signs should be provided in English, Spanish and Chinese.

Access to the rooftop of the site is locked. To reduce the risk of exposure and/or injury, EBI recommends that access to the rooftop or areas associated with the active antenna installation continue to be restricted and secured where possible. In order to alert any workers potentially accessing the site, a blue Notice sign and a yellow Guidelines sign are recommended for installation at the access to the rooftop.

11. Statement on who produced this report and qualifications. Report must be signed off by a licensed engineer expert in the field of radio frequency emissions. Typically, this is a licensed electrical engineer. The engineer must be licensed in the State of California.

Please see report for this information.

Sirius XM SATELLITE RADIO

SURESITE Infrastructure experts. Small cell leaders.
3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON ENGINEERING · DESIGN
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY: AG
APPROVED BY: MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
0	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

FOR REFERENCE ONLY

SITE NAME
GREEN STREET

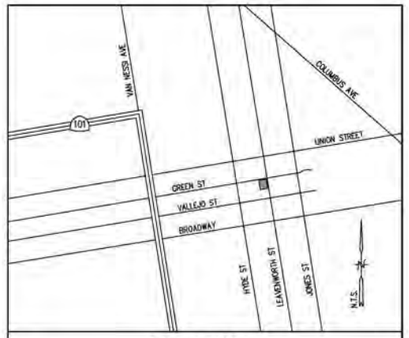
SITE I.D.
SFX5015

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME
RF-EME COMPLIANCE REPORT

SHEET NUMBER
RF-6

PROJECT# 2015.0042.0022



Vicinity Map

Title Report

THIS SURVEY WAS COMPLETED WITHOUT THE BENEFIT OF A TITLE REPORT.

PREPARED BY:
ORDER NO.:
DATED:

Legal Description (PER DEED NO. 7509-0180-255285)

CONDOMINIUM UNIR NO. 202, LOT NO. 26, AS SHOWN UPON THE CONDOMINIUM MAP AND DIAGRAMMATIC FLOOR PLAN ENTITLED "1101 GREEN STREET, A CONDOMINIUM", WHICH WAS FILED FOR RECORD ON JUNE 14 1978, IN CONDOMINIUM MAP BOOK 9, AT PAGES 35 THROUGH 47, INCLUSIVE, IN THE OFFICE OF THE RECORDER OF THE CUTY AND COUNTY OF SAN FRANCISCO, SATATE OF CALIFORNIA, GRANT AND RESERVARTION OF EASEMENT", RECORDED ON JULY 12, 1978, IN BOOK C604; PAGES 363 THROUGH 395, INCLUSIVE, OF OFFCIAL RECORDS OD THE CITY AND COUNTY OF SAN FRANCISCO, STATE OF CALIFORNIA, HEREINAFTER CALLED, "THE DECLARATION"

TOGETHER WITH A PERPETUAL EASEMENT FOR INGRESS AND EGRESS, LIGHT AND AIR OVER AND ACROSS THE FOLLOWING PROPERTY:

BEGINNING AT A POINT ON THE SOUTHERLY LINE OF GREEN STREET, DISTANT THEREON 60 FEET WESTERLY FROM THE WESTERLY LINE OF LEAVENWORTH STREET; RUNNING THENCE WESTERLY ALONG SAID LINE OF GREEN STREET 6 FEET; THENCE AT A RIGHT ANGLE SOUTHERLY 87 FEET AND 6 INCHES; THECE AT A RIGHT ANGLE EASTERLY 6 FEET; THENCE AT A RIGHT ANGLE NORTHERLY 87 FEET AND 6 INCHES TO THE POINT OF BEGINNING.

BEING A PART OF 50 VARA BLOCK NO. 269

Assessor's Parcel No.

0125-026

Easements

NOT AVAILABLE

Access Easement/Lease Area

TO BE DETERMINED

Geographic Coordinates

1983 DATUM: LATITUDE 37° 47' 53.70" N LONGITUDE 122° 25' 02.66" W
ELEVATION = 289.0 FEET ABOVE MEAN SEA LEVEL

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

Basis of Bearings

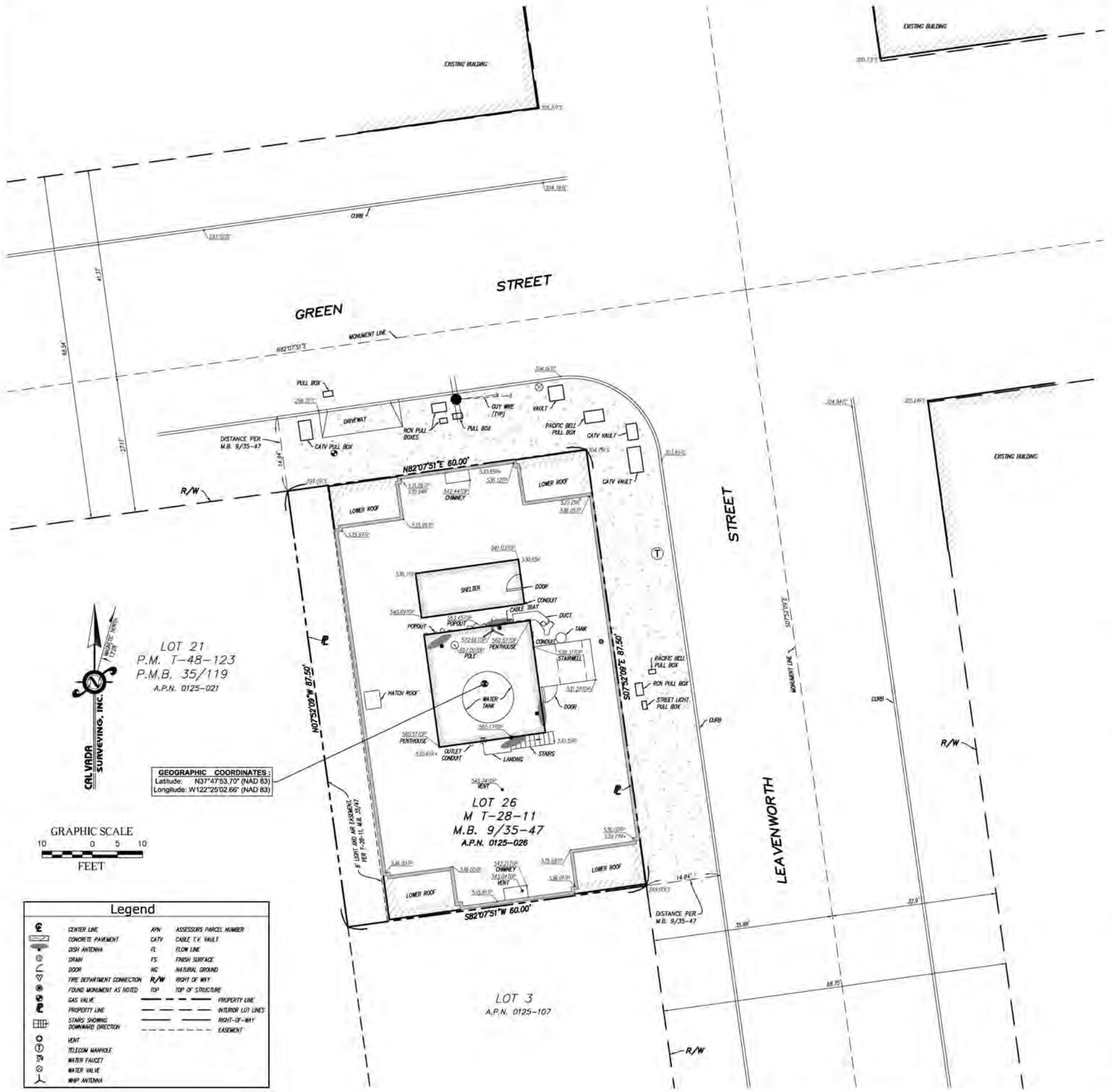
THE BASIS OF BEARINGS FOR THIS SURVEY IS THE CALIFORNIA COORDINATES SYSTEM (CCS 83), ZONE 5, 1983 DATUM, DEFINED BY SECTIONS 8801 TO 8819 OF THE CALIFORNIA PUBLIC RESOURCES CODE.

Bench Mark

THE CALIFORNIA SPATIAL REFERENCE CENTER C.O.R.S "1998", ELEVATION = 37.0 FEET (NAVD 88).

Date of Survey

MAY 28, 2018.



Legend

	CENTER LINE	APN	ASSESSORS PARCEL NUMBER
	CONCRETE PAVEMENT	CATV	CABLE T.V. VAULT
	DISH ANTENNA	FL	FLOW LINE
	DRAIN	FS	FINISH SURFACE
	DOOR	NG	NATURAL GROUND
	FIRE DEPARTMENT CONNECTION	R/W	RIGHT OF WAY
	FOUND MONUMENT AS NOTED	TOP	TOP OF STRUCTURE
	GAS VALVE		PROPERTY LINE
	PROPERTY LINE		INTERIOR LOT LINES
	STAIRS SHOWING DOWNWARD DIRECTION		RIGHT-OF-WAY
			EASEMENT
	VENT		
	TELECOM MANHOLE		
	WATER FAUCET		
	WATER VALVE		
	WHIP ANTENNA		

Sirius XM SATELLITE RADIO

PLANS PREPARED BY:

CAL VADA SURVEYING, INC.
411 Jenks Cir., Suite 205, Corona, CA 92880
Phone: 951-280-9960 Fax: 951-280-9746
Toll Free: 800-CALVADA www.calvada.com
JOB NO. 18676

CONSULTING GROUP:

PRECISION DESIGN & Drafting, INC.
Phone: (530) 823-6548 www.pdnd.com
11768 Atwood Rd, Suite 20 Auburn, CA 95603

NO.	DATE:	DESCRIPTION:	BY:
	06/05/18	SUBMITTAL	LM

SITE INFORMATION:

SFX501S
GREEN STREET

1101 GREEN STREET
SAN FRANCISCO, CA 94109
SAN FRANCISCO COUNTY

SEAL:

SHEET TITLE:

TOPOGRAPHIC SURVEY

SHEET NUMBER: **SS-1**

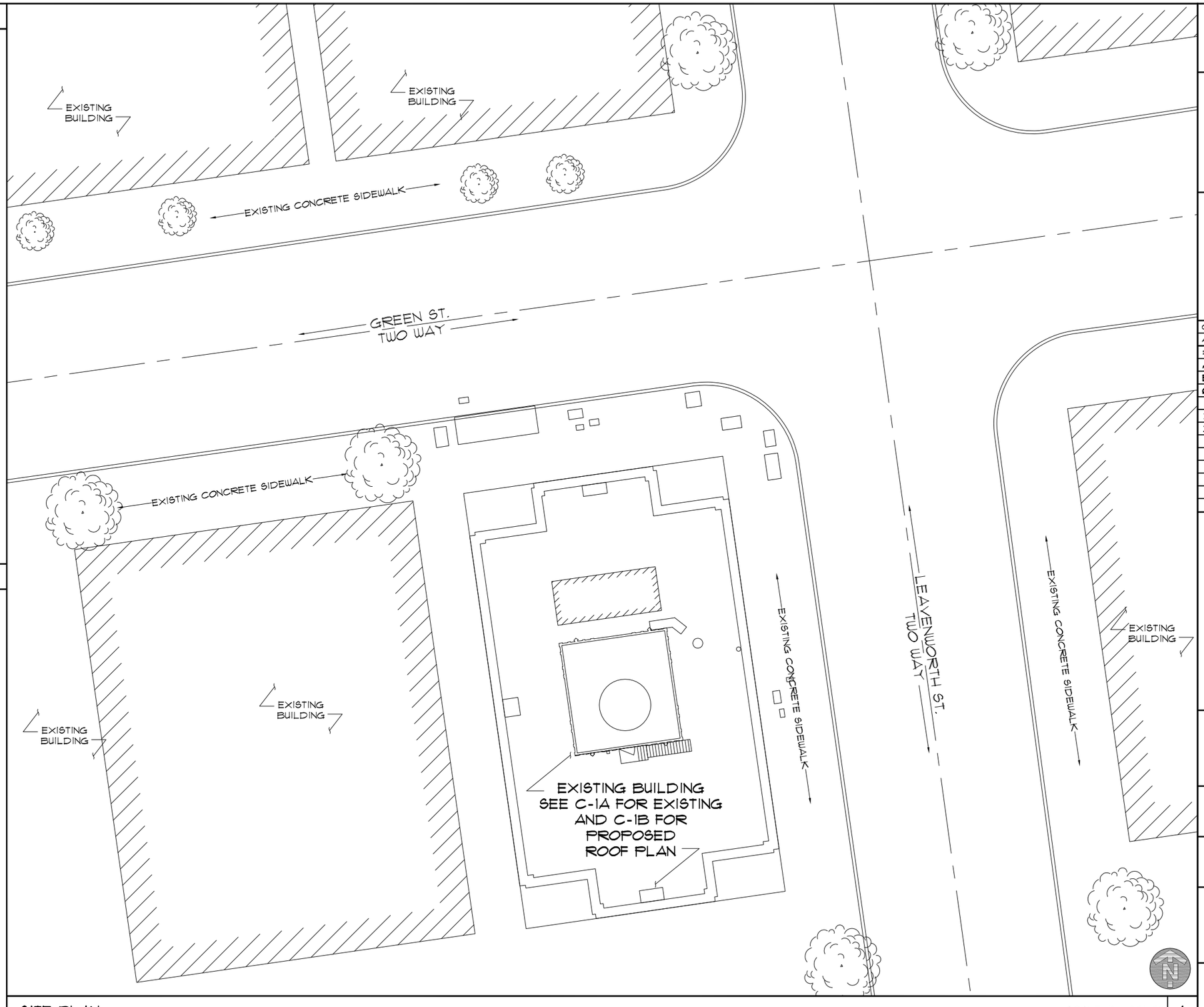
REV.: **0**

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AGL	ABOVE GRADE LEVEL
AMSL	ABOVE MEAN SEA LEVEL
APPROX	APPROXIMATE
AWG	AMERICAN WIRE GAUGE
BLDG	BUILDING
BTS	BASE TRANSMISSION STATION
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CND	CONDUIT
DWG	DRAWING
FT	FOOT(FEET)
EGB	EQUIPMENT GROUND BAR
ELEC	ELECTRICAL
EMT	ELECTRICAL METALLIC TUBING
ELEV	ELEVATION
EQUIP	EQUIPMENT
EXISTING	EXISTING
EXT	EXTERIOR
FND	FOUNDATION
GA	GAUGE
GALV	GALVANIZED
GPS	GLOBAL POSITIONING SYSTEM
GND	GROUND
LTE	LONG TERM EVOLUTION
MAX	MAXIMUM
MFR	MANUFACTURER
MGB	MASTER GROUND BAR
MIN	MINIMUM
NTS	NOT TO SCALE
O.C.	ON CENTER
OE/OT	OVERHEAD ELECTRIC/TELCO
RGS	RIGID GALVANIZED STEEL
IN	INCH(ES)
INT	INTERIOR
LB.(#)	POUND(S)
RRU	REMOTE RADIO UNIT
SF	SQUARE FOOT
STL	STEEL
TYP	TYPICAL
UE	UNDERGROUND ELECTRIC
UT	UNDERGROUND TELCO
UNO	UNLESS NOTED OTHERWISE
VIF	VERIFY IN FIELD
W/	WITH
XFMR	TRANSFORMER
℄	CENTERLINE
PL	PLATE

SYMBOLS

- ℄ CENTERLINE
- # REVISION
- WORK POINT
- UTILITY POLE
- BRICK
- COMPRESSED STONE
- CONCRETE
- EARTH
- GRAVEL
- MASONRY
- STEEL
- CENTERLINE
- PROPERTY LINE
- LEASE LINE
- EASEMENT LINE
- CHAIN LINK FENCE
- WOOD FENCE
- UE — BELOW GRADE ELECTRIC
- UT — BELOW GRADE TELEPHONE
- OE/OT — OVERHEAD ELECTRIC/TELEPHONE
- A / S-1 — A / A — SECTION REFERENCE



SITE PLAN

SCALE: 1" = 20'-0" | 1

Sirius XM SATELLITE RADIO

SURESITE
Infrastructure experts
Small cell leaders.
3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON
ENGINEERING • DESIGN
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
0	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

REGISTERED PROFESSIONAL ENGINEER
HENRY M. BELLAGAMBA
68925
CIVIL
STATE OF CALIFORNIA

SITE NAME
GREEN STREET

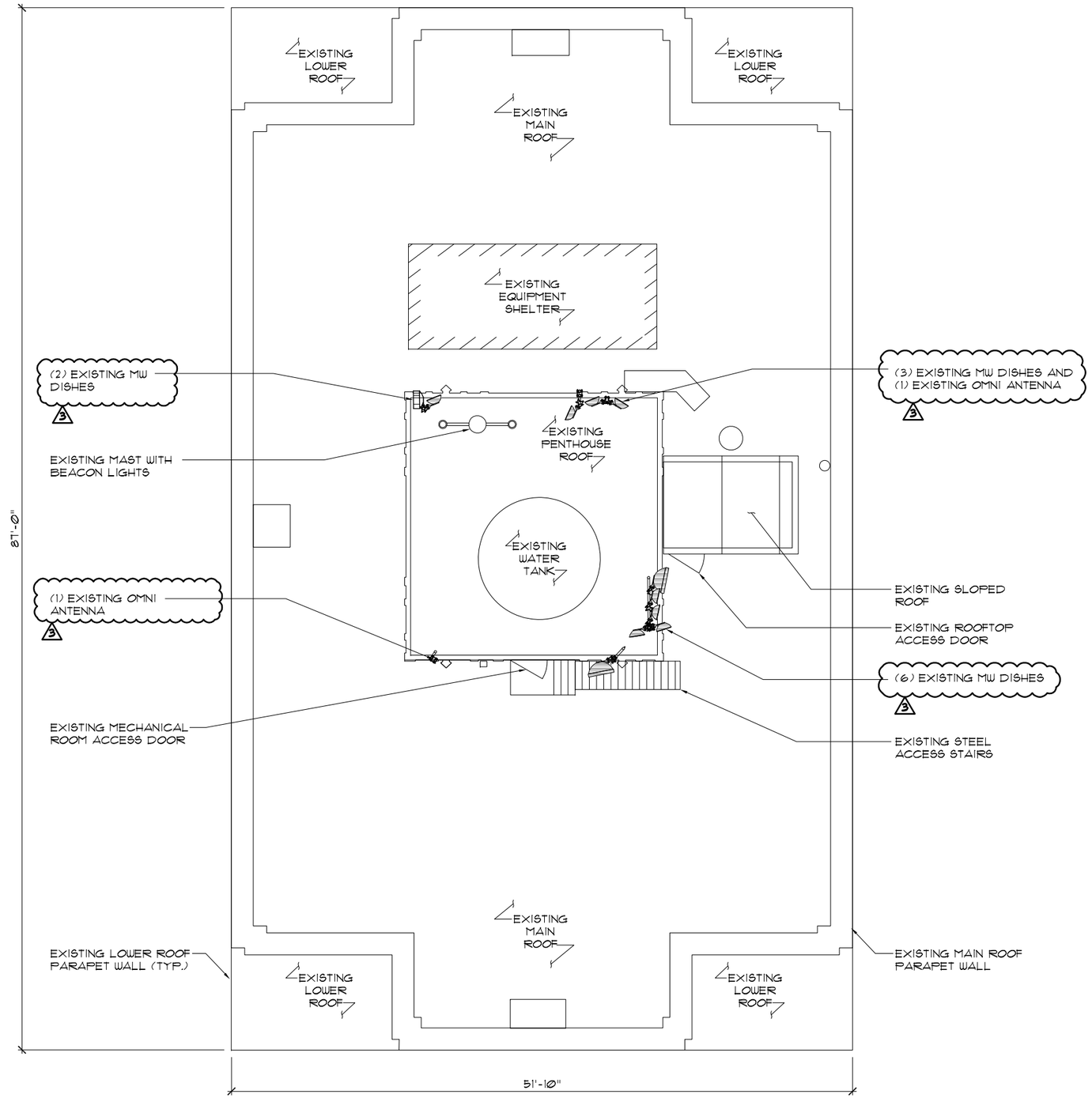
SITE I.D.
SFX5015

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME
SITE PLAN

SHEET NUMBER
C-1 (3)

PROJECT# 2015.0042.0022



ROOF PLAN

SCALE 1" = 10'-0" | 1

Sirius XM SATELLITE RADIO

SURESITE
Infrastructure experts
Small cell leaders.
3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON ENGINEERING • DESIGN
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
0	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

REGISTERED PROFESSIONAL ENGINEER
HENRY M. BELLAGAMBA
68925
CIVIL
STATE OF CALIFORNIA

SITE NAME
GREEN STREET

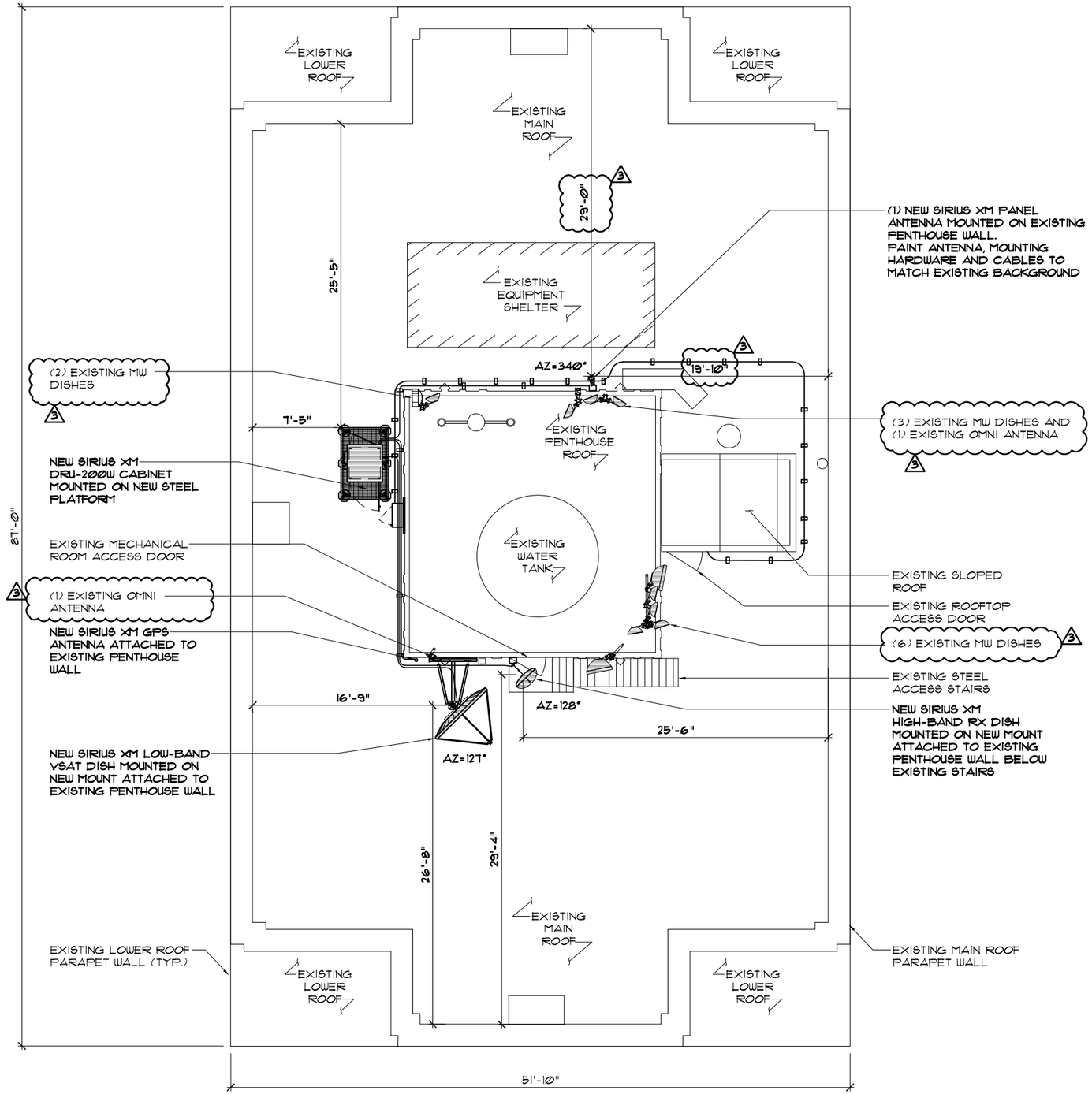
SITE I.D.
SFX5015

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME
EXISTING ROOF PLAN

SHEET NUMBER
C-1A

PROJECT# 2015.0042.0022



ROOF PLAN

SCALE 1" = 10'-0" | 1

Sirius XM SATELLITE RADIO

SURESITE Infrastructure experts Small cell leaders.
3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON ENGINEERING • DESIGN
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
0	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

REGISTERED PROFESSIONAL ENGINEER
HENRY M. BELLAGAMBA
68925
CIVIL
STATE OF CALIFORNIA

SITE NAME
GREEN STREET

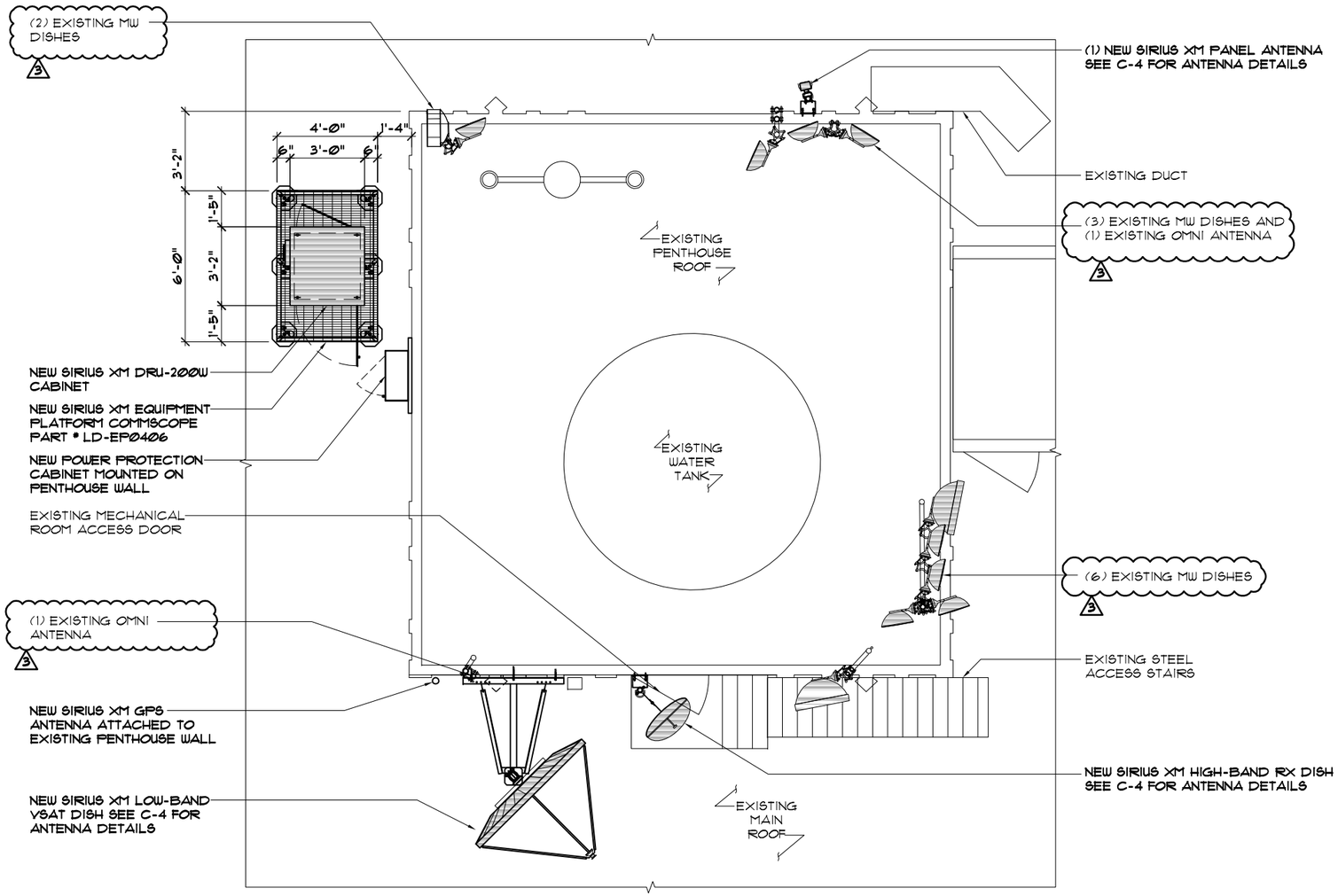
SITE I.D.
SFX5015

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME
PROPOSED ROOF PLAN

SHEET NUMBER
C-1B

PROJECT# 2015.0042.0022



EQUIPMENT LAYOUT

SCALE: 3/16" = 1'-Ø" | 1

Sirius XM SATELLITE RADIO

SURESITE
Infrastructure experts
Small cell leaders.

3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON ENGINEERING • DESIGN

1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
Ø	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

REGISTERED PROFESSIONAL ENGINEER
HENRY M. BELLAGAMBA
68925
CIVIL
STATE OF CALIFORNIA

SITE NAME
GREEN STREET

SITE I.D.
SFX5Ø15

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME
ENLARGED PROPOSED EQUIPMENT LAYOUT

SHEET NUMBER
C-2

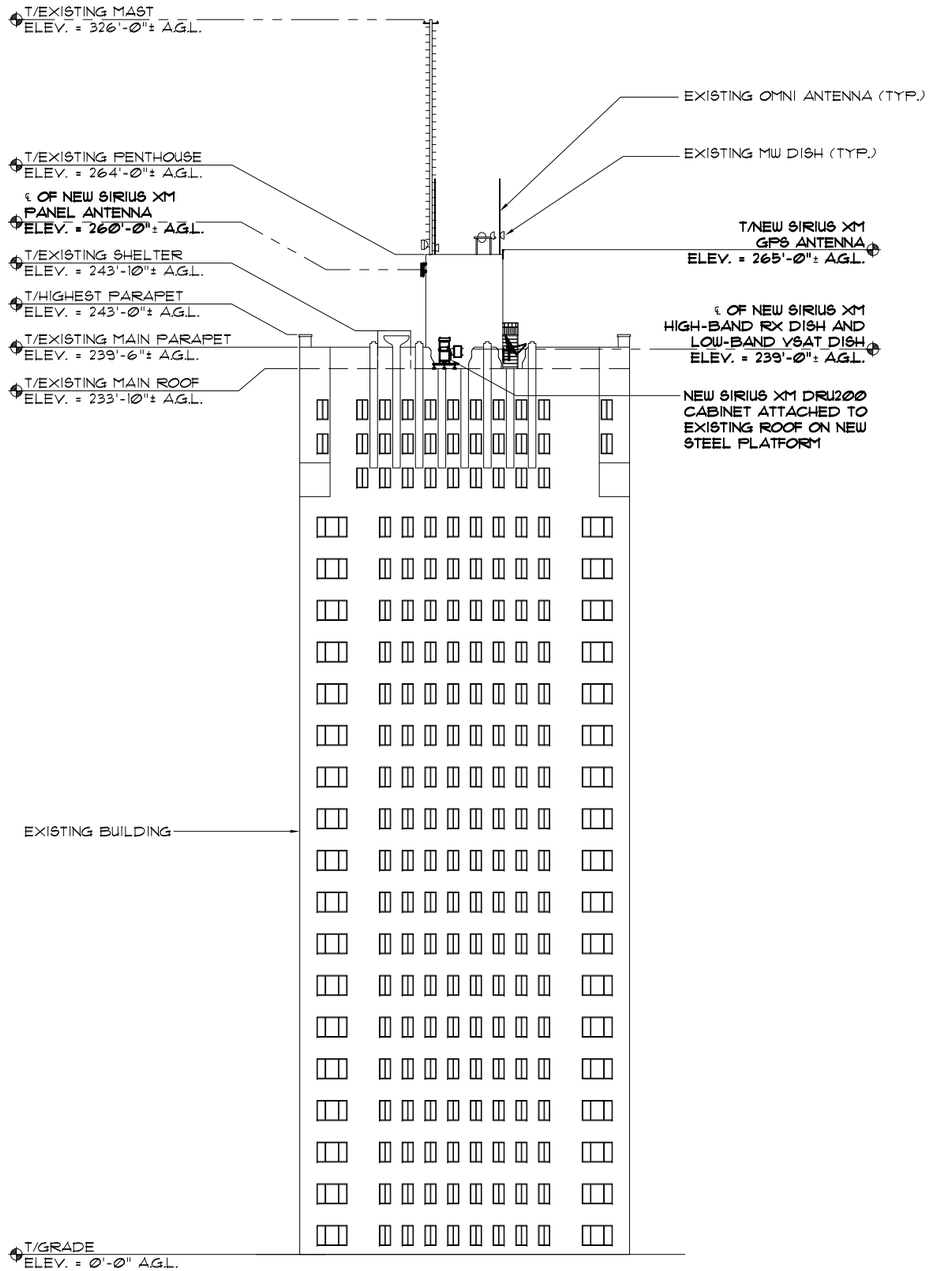
PROJECT# 2015.0042.0022

ANTENNA NOTES:

1. THE SIZE, HEIGHT, AND DIRECTION OF THE ANTENNA SHALL BE ADJUSTED TO MEET SYSTEM REQUIREMENTS.
2. CONTRACTOR SHALL VERIFY HEIGHT OF ANTENNA WITH SIRIUS XM REPRESENTATIVE.
3. ALL ANTENNA AZIMUTH TO BE FROM TRUE NORTH.

STRUCTURAL NOTES:

STRUCTURAL CALCULATION PREPARED BY FULLERTON ENGINEERING CONSULTANTS. CONTRACTOR TO COORDINATE WITH SIRIUS XM REPRESENTATIVE TO OBTAIN A COPY.



WEST SITE ELEVATION

SCALE: N.T.S.

1

Sirius XM SATELLITE RADIO

SURESITE
Infrastructure experts
Small cell leaders.
3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON
ENGINEERING • DESIGN
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
0	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

REGISTERED PROFESSIONAL ENGINEER
HENRY M. BELLAGAMBA
68925
CIVIL
STATE OF CALIFORNIA

SITE NAME
GREEN STREET

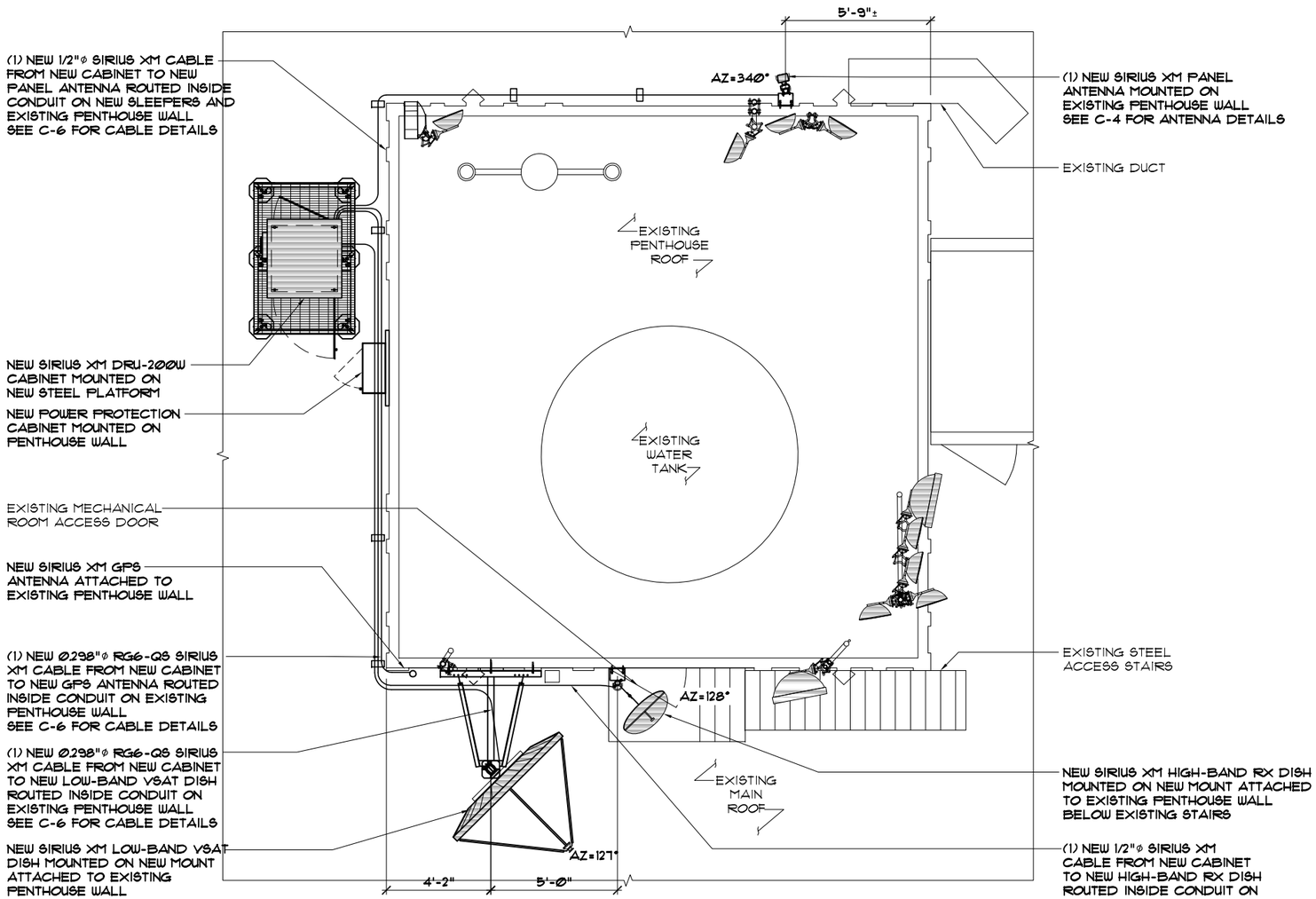
SITE I.D.
SFX5015

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME
SITE ELEVATION

SHEET NUMBER
C-3

PROJECT# 2015.0042.0022



ANTENNA LAYOUT

SCALE: 3/16" = 1'-Ø" | 1

Sirius XM SATELLITE RADIO

SURESITE
Infrastructure experts
Small cell leaders.

3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON ENGINEERING • DESIGN

1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
Ø	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

REGISTERED PROFESSIONAL ENGINEER
HENRY M. BELLAGAMBA
68925
CIVIL
STATE OF CALIFORNIA

SITE NAME
GREEN STREET

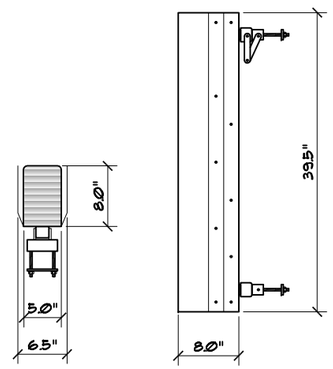
SITE I.D.
SFX5Ø15

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME
ANTENNA LAYOUTS

SHEET NUMBER
C-4

PROJECT# 2015.0042.0022

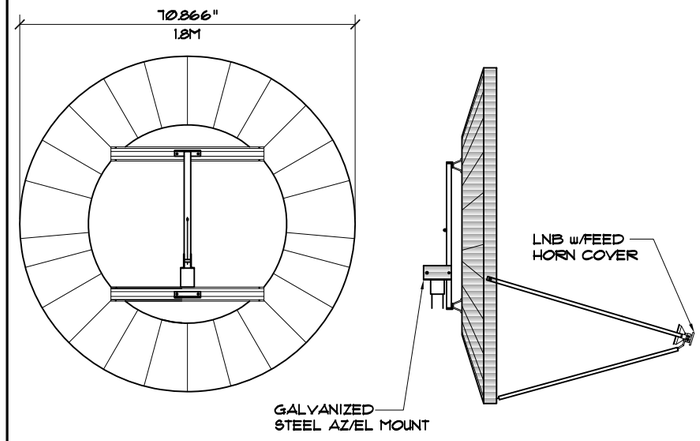


PLAN VIEW SIDE VIEW

TIL-TEK
TA-2304-2-DAB-L-120

FREQUENCY RANGE	2320-2345 MHz
ANTENNA WITH CLAMPS	8 lb

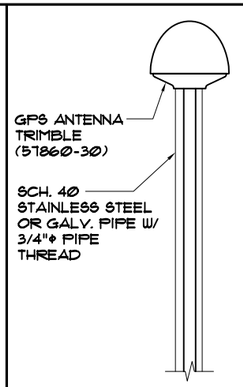
ANTENNA SPEC SCALE: N.T.S. 1



REAR VIEW SIDE VIEW

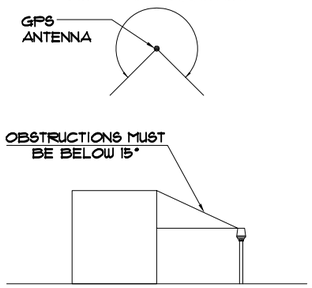
MANUFACTURER:	PRODELIN CORP
MODEL#:	1183
WEIGHT:	±160 LBS

VSAT SPEC SCALE: N.T.S. 2



GPS MINIMUM SKY VIEW REQUIREMENTS

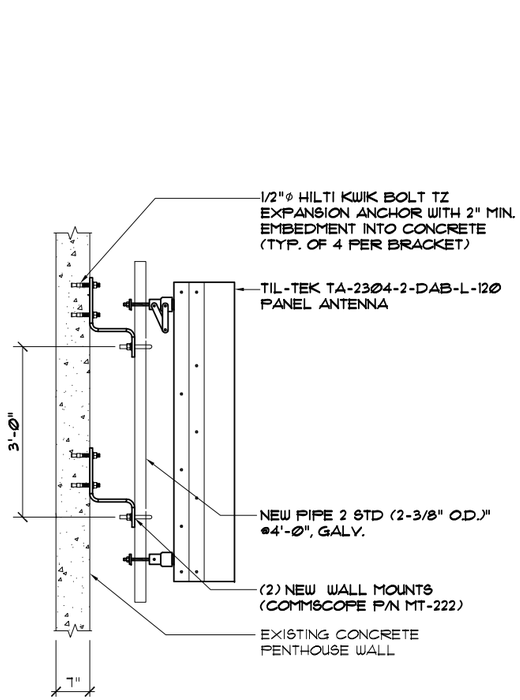
MINIMUM OF 75% OR 270° IN ANY DIRECTION



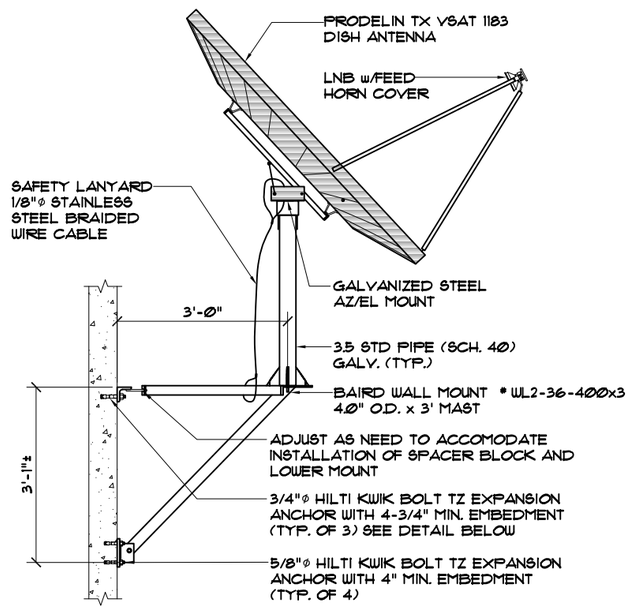
NOTES:

1. THE ELEVATION AND LOCATION OF THE GPS ANTENNA SHALL BE IN ACCORDANCE WITH THE FINAL RF REPORT.
2. THE GPS ANTENNA MOUNT IS DESIGNED TO FASTEN TO A Ø5" STD. GALV. STEEL OR STAINLESS STEEL PIPE WITH 3/4"ϕ PIPE THREAD AT ANTENNA MOUNT.
3. CONTRACTOR TO VERIFY THAT GPS MOUNT IS INSTALLED AND PLUMBED CORRECTLY
4. DO NOT SWEEP TEST GPS ANTENNA.

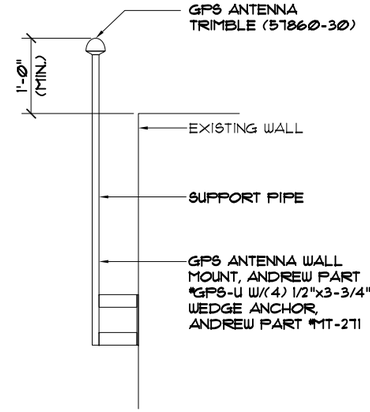
GPS SPEC SCALE: N.T.S. 3



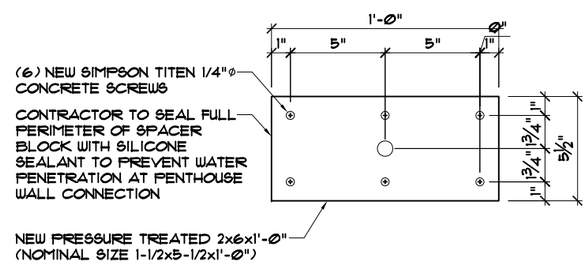
ANTENNA MOUNTING DETAIL SCALE: N.T.S. 4



VSAT MOUNTING DETAIL SCALE: N.T.S. 5



GPS MOUNTING DETAIL SCALE: N.T.S. 6



SPACER BLOCK SCALE: N.T.S. 7

Sirius XM SATELLITE RADIO

SURESITE
Infrastructure experts
Small cell leaders.
3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON ENGINEERING • DESIGN
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
0	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

REGISTERED PROFESSIONAL ENGINEER
HENRY M. BELLAGAMBA
68925
CIVIL
STATE OF CALIFORNIA

SITE NAME
GREEN STREET

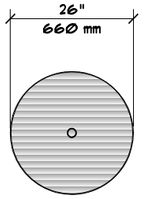
SITE I.D.
SFX501S

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

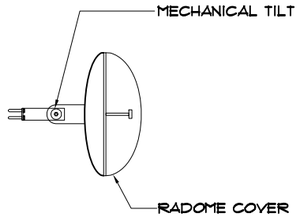
SHEET NAME
ANTENNA DETAILS

SHEET NUMBER
C-5

PROJECT# 2015.0042.0022



REAR VIEW

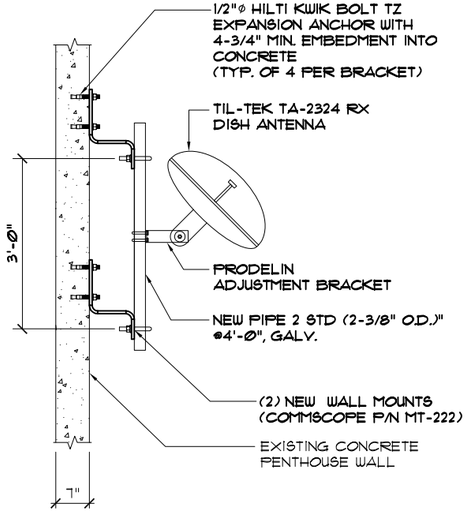


SIDE VIEW

MANUFACTURER:	TIL-TEK
MODEL#:	TA-2324-LHCP
WEIGHT:	±26 LBS

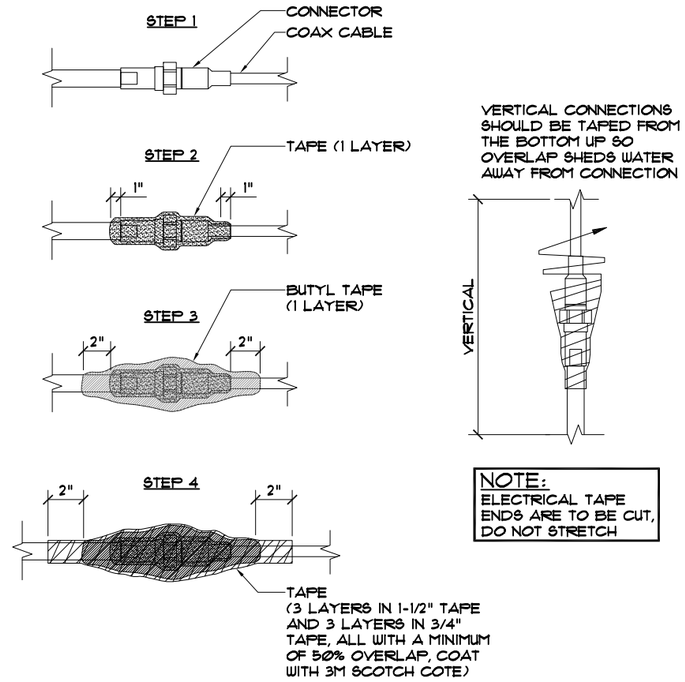
RX DISH SPECS

SCALE: N.T.S. | 1



ANTENNA MOUNTING DETAIL

SCALE: N.T.S. | 2



WEATHERPROOFING DETAIL

SCALE: N.T.S. | 3

1. COAX MAINLINE FOR TX & RX ANTENNAS WILL BE LABELED AT THE TOP AND BOTTOM WITHIN 12" OF THE CONNECTORS.
2. FOR COAX MAIN LINE CABLE CONNECTS TO A POWER SPLITTER, LABEL MUST ALSO BE PLACED ON THE JUMPER CABLE 12" FROM THE ANTENNA CONNECTOR.
3. ANY COAX MAKING A WALL PENETRATION WILL BE LABELED ON EACH SIDE OF THE PENETRATION.
4. LOW BAND DIVERSITY IS NOT INSTALLED IN ALL THE SITES, ONLY THE CORE SITE FOR THE MARKET.
5. ALL COLOR CODED TAPE SHOULD BE 1-1/2" IN WIDTH.
6. ANTENNA LINE COLORS WILL BE AS FOLLOWS:
   A. LB-RED (R)
   B. HB-BLUE (B)
   C. GPS-WHITE (W)
   D. VSAT-YELLOW (Y)
   E. RX DISH-GREEN (G)
   F. DIVERSITY-ORANGE (O)

SECTOR 1 — LOW BAND/HIGH BAND COMBINE

RECEIVE ANTENNA

VSAT DISH

XM RX DISH

GPS ANTENNA

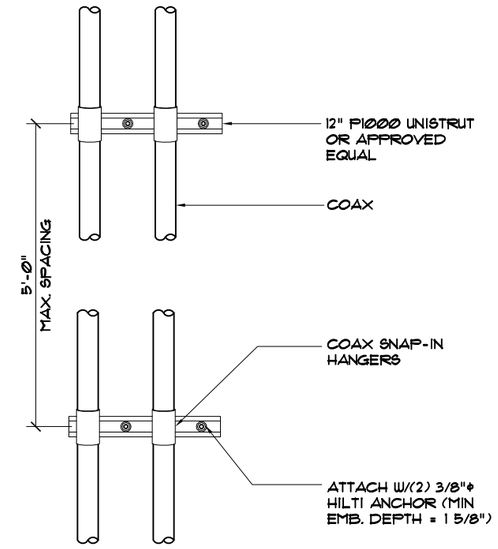
TYPICAL COLOR CODING

SCALE: N.T.S. | 4

NOT USED

SCALE: N.T.S. | 5

CAN BE MOUNTED ON WALL HORIZONTAL OR VERTICAL



CABLE ROUTING DETAIL

SCALE: N.T.S. | 6

Sirius XM SATELLITE RADIO

SURESITE Infrastructure experts Small cell leaders.
3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON ENGINEERING • DESIGN
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
Ø	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

REGISTERED PROFESSIONAL ENGINEER
HENRY M. BELLAGAMBA
68925
CIVIL
STATE OF CALIFORNIA

SITE NAME
GREEN STREET

SITE I.D.
SFX5015

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME
SITE DETAILS

SHEET NUMBER
C-5A

PROJECT# 2015.0042.0022

NEW ANTENNA CONFIGURATION

ANTENNA								CABLE			
ANTENNA NUMBER	NEW OR EXISTING	ANTENNA MANUFACTURER	ANTENNA TYPE	MODEL NUMBER	AZIMUTH (TN)	TILT (+ OR -)	¢ OF ANTENNA FROM GROUND LEVEL (FT)	NEW OR EXISTING	CABLE TYPE	CABLE SIZE (DIA. IN)	CABLE LENGTH (FT)
1	NEW	TIL-TEK	PANEL	TA-2304-2-DAB-L (120)	340°	4°	260'-0"±	NEW	LD4-50A	500"	65'
2	NEW	PRODELIN	VSAT DISH	1183 WITHOUT DEICING	127°	31°	239'-0"±	NEW	RG6-QS	298"	35'
3	NEW	TIL-TEK	RX DISH	TA-2324-LHCP	128°	32°	239'-0"±	NEW	LD4-50A	500"	40'
4	NEW	TRIMBLE	GPS	57860-30	N/A	N/A	265'-0"±	NEW	RG6-QS	298"	65'

NEW EQUIPMENT SCHEDULE

CABINET NUMBER	CABINET MANUFACTURER	CABINET TYPE	MODEL NUMBER	NOTES
1	UBS	REPEATER	DRU-200W	-

NEW POWER SCHEDULE

AMPERE	VOLTAGE	PHASE	NOTES
100 AMPS	120/240V	SINGLE	SUB METER FROM EXISTING AC PANEL ON THE 20TH FLOOR

Sirius XM SATELLITE RADIO

SURESITE
Infrastructure experts
Small cell leaders.
3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON
ENGINEERING • DESIGN
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
0	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

REGISTERED PROFESSIONAL ENGINEER
HENRY M. BELLAGAMBA
68925
CIVIL
STATE OF CALIFORNIA

SITE NAME
GREEN STREET

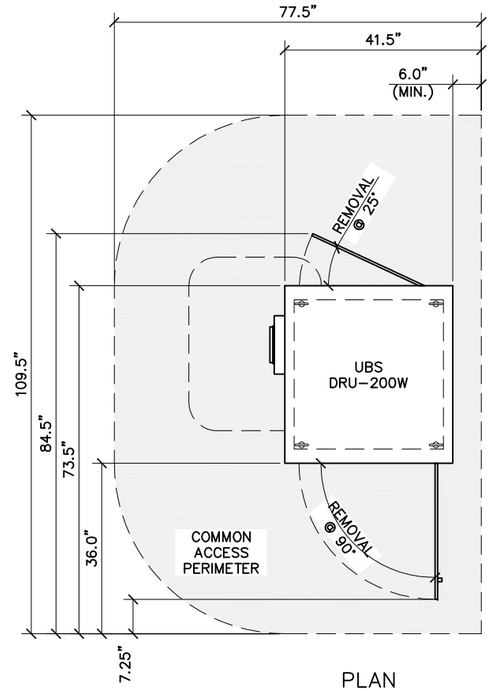
SITE I.D.
SFX501S

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

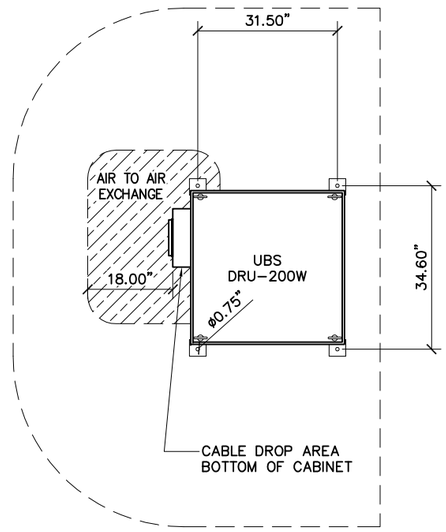
SHEET NAME
ANTENNA SCHEDULES

SHEET NUMBER
C-6

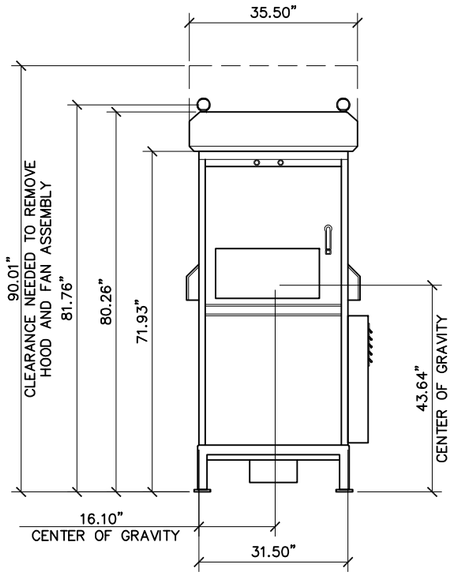
PROJECT# 2015.0042.0022



PLAN



BASE MOUNTING
HOLE LOCATION
(BOTTOM VIEW)



FRONT

UBS DRU-200W CABINET DETAIL

SCALE: 3/8" = 1'-0" | 1

Sirius XM SATELLITE RADIO

SURESITE
Infrastructure experts
Small cell leaders.
3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON
ENGINEERING • DESIGN
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
0	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

REGISTERED PROFESSIONAL ENGINEER
HENRY M. BELLAGAMBA
68925
CIVIL
STATE OF CALIFORNIA

SITE NAME
GREEN STREET

SITE I.D.
SFX5015

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

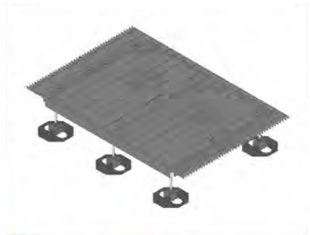
SHEET NAME
EQUIPMENT SPECS

SHEET NUMBER
C-7

PROJECT# 2015.0042.0022

Product Specifications

COMMSCOPE®



LD-EP0406

Light Duty Equipment Platform, 4 ft x 6 ft, with six light duty legs

Dimensions

Height	508.0 mm | 20.0 in
Length	1219.2 mm | 48.0 in
Weight	124.8 kg | 275.1 lb
Width	1828.8 mm | 72.0 in

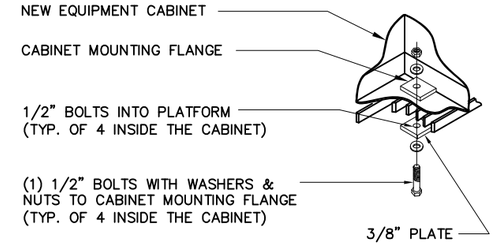
General Specifications

Product Type	Equipment platform system
Includes	Frame | Grating | Hardware | Legs
Legs, quantity	6
Material Type	Hot dip galvanized steel
Note	Contact 828-324-2200 or 1-800-982-1708 (toll free), or your local CommScope representative | Equipment platforms in additional sizes available.
Package Quantity	1

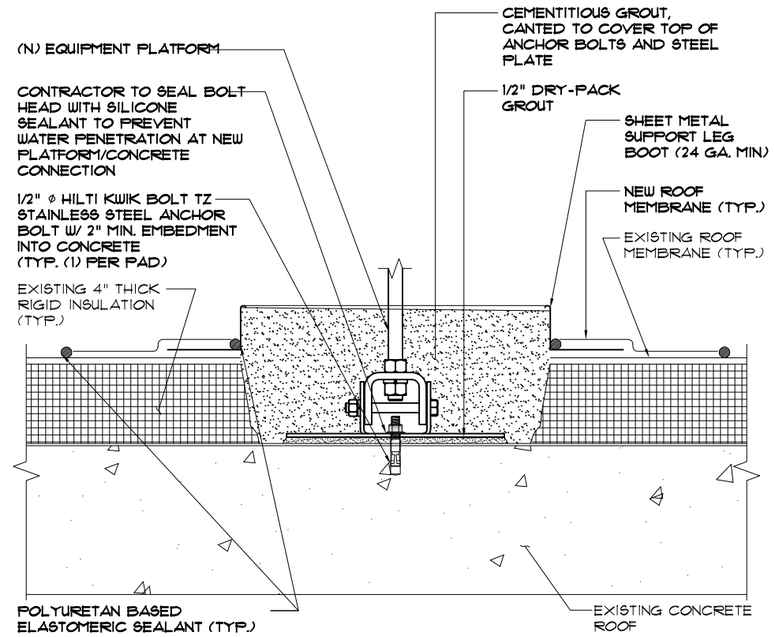
Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system

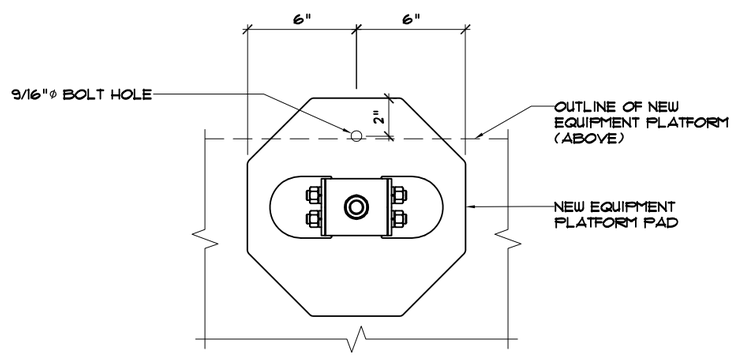
EQUIPMENT PLATFORM SPECS — SCALE: 3/8" = 1'-0" | 1



CABINET MOUNTING DETAIL — SCALE: N.T.S. | 2



PLATFORM ANCHORING DETAIL — SCALE: N.T.S. | 3



PLATFORM PAD MODIFICATION DETAIL (TYP.) — SCALE: N.T.S. | 4

Sirius XM SATELLITE RADIO

SURESITE Infrastructure experts Small cell leaders.
3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON ENGINEERING • DESIGN
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
Ø	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

REGISTERED PROFESSIONAL ENGINEER
HENRY M. BELLAGAMBA
68925
CIVIL
STATE OF CALIFORNIA

SITE NAME
GREEN STREET

SITE I.D.
SFX5015

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME
EQUIPMENT PLATFORM DETAILS

SHEET NUMBER
C-7A

PROJECT# 2015.0042.0022

SERVICE EQUIPMENT NOTES:

1. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS
2. PATCH, REPAIR AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK

CONDUCTOR NOTES:

1. ALL CONDUCTORS SHALL BE COPPER
2. ALL WIRING SHALL BE COPPER WITH THHN/THWN DUAL RATED 600 VOLTS INSULATION
3. GROUNDING CONDUCTORS SHALL BE SOLID TINNED COPPER UNLESS OTHERWISE NOTED

CONDUIT NOTES:

1. SCH 80 PVC CONDUIT SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH EARTH, OR EXPOSED ABOVE GRADE
2. EMT SHALL BE USED ONLY FOR INTERIOR RUNS AND SHALL HAVE COMPRESSION TYPE FITTINGS
3. SEAL TIGHT, FLEXIBLE CONDUIT MAY BE USED WHERE CODE PERMITS. ALL CONDUIT SHALL HAVE FULL SIZE EQUIPMENT GROUND WIRE
4. SERVICE CONDUITS SHALL HAVE NO MORE THAN (3) – 90° BENDS IN ANY SINGLE RUN. THE CONTRACTOR SHALL PROVIDE PULL BOXES AS NEEDED WHERE CONDUIT REQUIREMENTS EXCEED THESE CONDITIONS
5. ALL CABLES, POWER AND/OR TELEPHONE AND/OR FIBER SYSTEM CONDUITS SHALL HAVE A MINIMUM 24" RADIUS SWEEPS TO EQUIPMENT, PULL BOXES, ETC., UNLESS OTHERWISE NOTED, OR AS REQUIRED BY UTILITY COMPANIES

NEW CABLE GROUNDING NOTES:

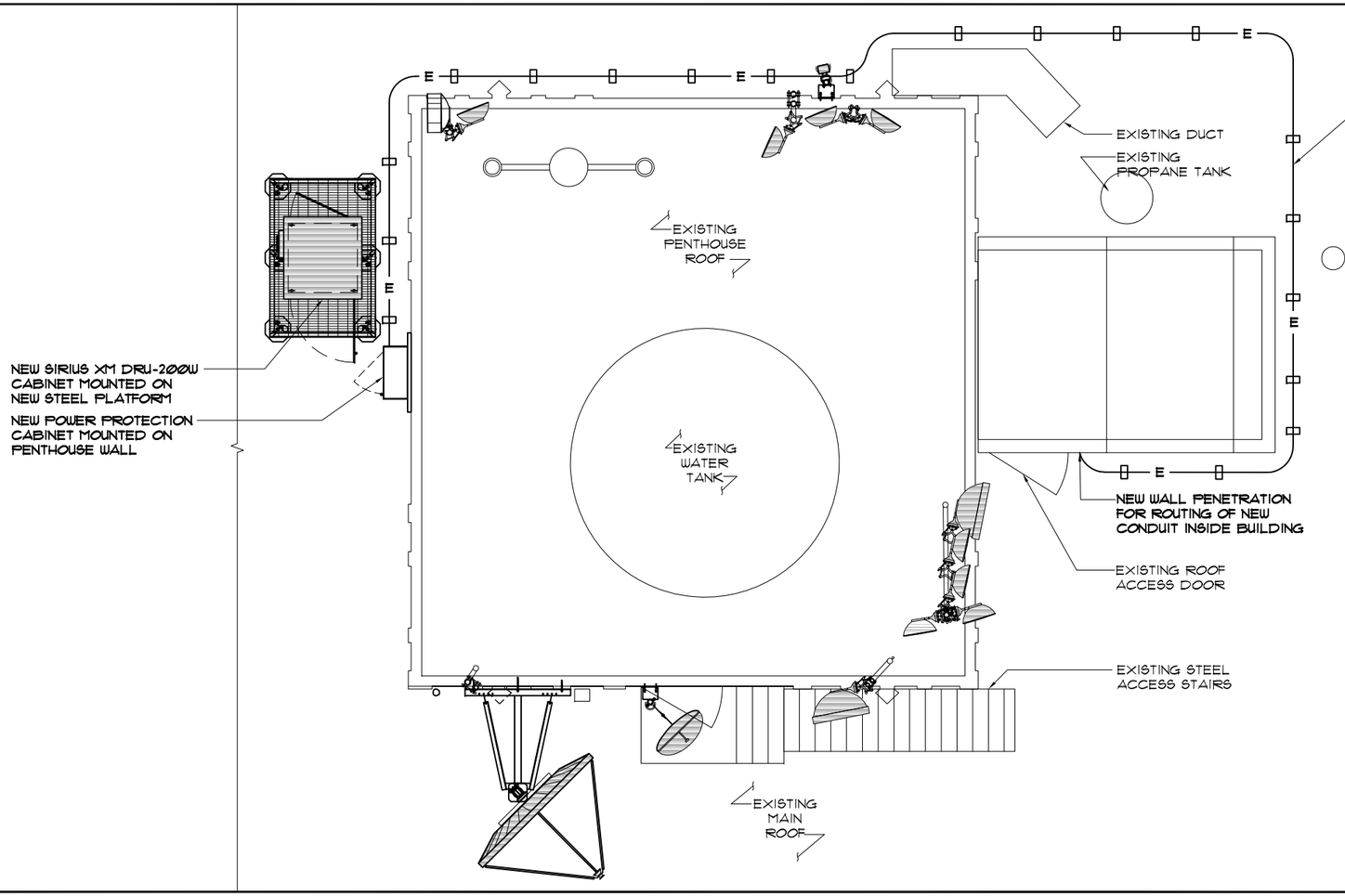
1. AVOID DISRUPTION OF EXISTING GROUNDING SYSTEM. REPAIR ANY DAMAGE TO THE SATISFACTION OF THE OWNER
2. CONTRACTOR SHALL CONNECT GROUND KITS TO THE EXISTING GROUND BARS AT THE TOP AND BASE OF TOWER
3. CONTRACTOR SHALL CONNECT GROUND KITS TO THE NEW GROUND BAR BEFORE ENTRY TO CABINET
4. NO BACK TO BACK LUGGING OF GROUNDS

GENERAL GROUNDING NOTES:

1. VERTICAL DROPS SHALL BE 20'–0" OF #2 AWG SOLID TINNED COPPER WIRE. CADWELD TO GROUND BAR
2. ALL BENDS MINIMUM 8" RADIUS
3. APPLY ANTI–OXIDATION COMPOUND TO ALL CONNECTIONS
4. BARE COPPER CONDUCTORS SHALL NOT BE IN CONTACT WITH ANY DISSIMILAR MATERIAL. PLACE ON STANDOFFS, IF NECESSARY TO ALLOW FOR PROPER INSTALLATION
5. SHARP BENDS IN GROUNDING CONDUCTORS SHALL BE AVOIDED. 90° BENDS SHALL NOT BE USED
6. ALL GROUNDING CONDUCTORS SHALL BE KEPT AS SHORT AS POSSIBLE. THE SHORTEST PRACTICAL ROUTE SHALL BE CHOSEN WITH THE LEAST AMOUNT OF BENDS AND SPLICES. USE THIS RULE AT ALL TIMES
7. ALL CONNECTIONS TO GROUND BARS SHALL BE WITH A 2–HOLE LUG UNLESS OTHERWISE SPECIFIED
8. WHEN GROUNDING MORE THAN ONE PIECE OF EQUIPMENT, DO NOT USE THE EQUIPMENT AS A GROUNDING CONDUCTOR. DOUBLE–STACKING OF LUGS SHALL BE USED TO GET FROM EQUIPMENT TO EQUIPMENT
9. REMOVE ALL PAINT BENEATH THE SURFACE OF GROUND LUGS

ELECTRICAL NOTES

SCALE: N.T.S. | 1



NEW 1"ø ELECTRICAL CONDUIT FROM NEW SIRIUS XM DISTRIBUTION PANEL TO EXISTING PANEL LOCATED ON 20TH FLOOR BELOW ROUTE CONDUIT ALONG ROOFTOP ON SLEEPERS
SEE E-1A FOR CONTINUATION

UTILITY PLAN @ ROOF

SCALE: 3/16" = 1'-0" | 3

Sirius XM SATELLITE RADIO

SURESITE Infrastructure experts Small cell leaders.
3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON ENGINEERING • DESIGN
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY: AG
APPROVED BY: MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
Ø	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

REGISTERED PROFESSIONAL ENGINEER
JASON E. PALMER
E 20363
ELECTRICAL
STATE OF CALIFORNIA

SITE NAME
GREEN STREET

SITE I.D.
SFX5015

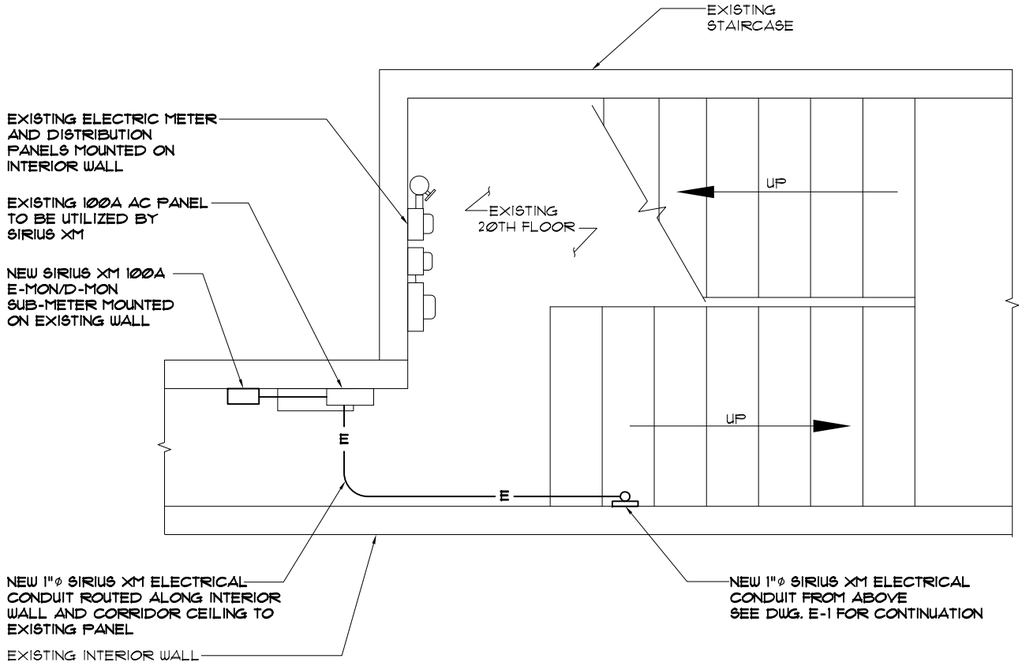
SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME
UTILITY PLAN @ ROOF

SHEET NUMBER
E-1

PROJECT# 2015.0042.0022

NOTE:
EXACT LOCATION OF SIRIUS XM ELECTRIC METER SHALL BE COORDINATED WITH LANDLORD



UTILITY PLAN @ 20TH FLOOR

SCALE: 3/8" = 1'-0" | 3

Sirius XM SATELLITE RADIO

SURESITE
Infrastructure experts
Small cell leaders.
3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON ENGINEERING • DESIGN
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
0	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

REGISTERED PROFESSIONAL ENGINEER
JASON E. PALMER
E 20363
ELECTRICAL
STATE OF CALIFORNIA

SITE NAME
GREEN STREET

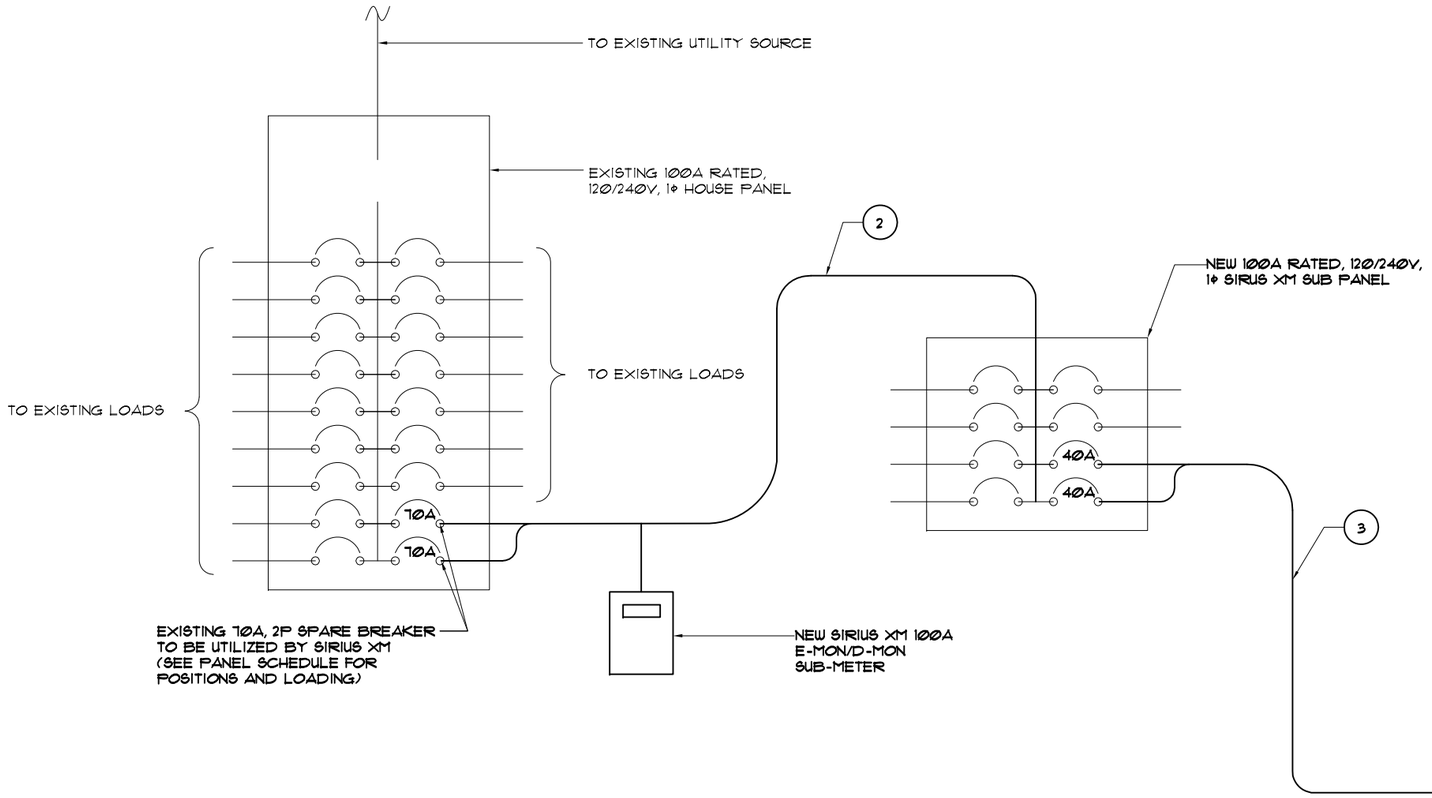
SITE I.D.
SFX5018

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME
UTILITY PLAN @ 20TH FLOOR

SHEET NUMBER
E-1A

PROJECT# 2015.0042.0022



CIRCUIT SCHEDULE			
NO	FROM	TO	CONFIGURATION
1	UTILITY SOURCE	LOAD CENTER	EXISTING
2	LOAD CENTER	SIRIUS XM SUB PANEL	BRANCH CIRCUIT W/(3) #8 AWG AND (1) #10 AWG FOR GND (75° RATED) IN 3/4" MIN. CONDUIT
3	SIRIUS XM SUB PANEL	DRU-200W	BRANCH CIRCUIT W/(3) #10 AWG AND (1) #10 AWG FOR GND (75° RATED) IN 3/4" MIN. CONDUIT

SINGLE LINE DIAGRAM — SCALE: N.T.S. — 1

SITE NUMBER:	SFX501S			MODEL NUMBER:	TBD			WIRE:	3						
VOLTAGE:	120/240			PHASE:	1			AIC:							
MAIN BREAKER:	40 AMP			BUSS RATING:	100 AMPS			GROUND BAR:							
MOUNT:	Surface														
ENCLOSURE TYPE:	Nema 3R														
PANEL STATUS:	Existing														

CKT	LOAD DESCRIPTION	BREAKER AMPS	BREAKER POLES	BREAKER STATUS	SERVICE LOAD VA	USAGE FACTOR	PHASE A VA	PHASE B VA	USAGE FACTOR	SERVICE LOAD VA	BREAKER STATUS	BREAKER POLES	BREAKER AMPS	LOAD DESCRIPTION	CKT
1	MAIN BREAKER	100	2	On			0		1.00		---	---	---		2
3								0	1.00		---	---	---		4
5	DRU-200W CABINET	70	2	On	2194	1.00	2194		1.00		---	---	---		6
7					2194	1.00		2194	1.00		---	---	---		8
							2194	2194	VA			TOTAL KVA	4.39		
												AMPS	18.28		

HOUSE PANEL SCHEDULE — SCALE: N.T.S. — 2

Sirius XM SATELLITE RADIO

SURESITE Infrastructure experts Small cell leaders.
3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON ENGINEERING • DESIGN
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
0	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

REGISTERED PROFESSIONAL ENGINEER — JASON E. PALMER — E 20363 — ELECTRICAL — STATE OF CALIFORNIA

SITE NAME
GREEN STREET

SITE I.D.
SFX501S

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME
FINAL SINGLE LINE DIAGRAM/ PANEL SCHED.

SHEET NUMBER
E-2

PROJECT# 2015.0042.0022

SERVICE EQUIPMENT NOTES:

1. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS.
2. PATCH, REPAIR AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.

CONDUCTOR NOTES:

1. ALL CONDUCTORS SHALL BE COPPER
2. ALL WIRING SHALL BE COPPER WITH THHN/THWN DUAL RATED 600 VOLTS INSULATION
3. GROUNDING CONDUCTORS SHALL BE SOLID TINNED COPPER UNLESS OTHERWISE NOTED.

CONDUIT NOTES:

1. SCH 80 PVC CONDUIT SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH EARTH, OR EXPOSED ABOVE GRADE
2. EMT SHALL BE USED ONLY FOR INTERIOR RUNS AND SHALL HAVE COMPRESSION TYPE FITTINGS
3. SEAL TIGHT, FLEXIBLE CONDUIT MAY BE USED WHERE CODE PERMITS. ALL CONDUIT SHALL HAVE FULL SIZE EQUIPMENT GROUND WIRE
4. SERVICE CONDUITS SHALL HAVE NO MORE THAN (3) – 90° BENDS IN ANY SINGLE RUN. THE CONTRACTOR SHALL PROVIDE PULL BOXES AS NEEDED WHERE CONDUIT REQUIREMENTS EXCEED THESE CONDITIONS
5. ALL CABLES, POWER AND/OR TELEPHONE AND/OR FIBER SYSTEM CONDUITS SHALL HAVE A MINIMUM 24" RADIUS SWEEPS TO EQUIPMENT, PULL BOXES, ETC., UNLESS OTHERWISE NOTED, OR AS REQUIRED BY UTILITY COMPANIES

NEW CABLE GROUNDING NOTES:

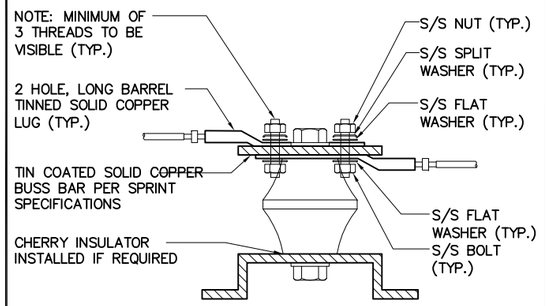
1. AVOID DISRUPTION OF EXISTING GROUNDING SYSTEM. REPAIR ANY DAMAGE TO THE SATISFACTION OF THE OWNER
2. CONTRACTOR SHALL CONNECT GROUND KITS TO THE EXISTING GROUND BARS AT THE TOP AND BASE OF TOWER
3. CONTRACTOR SHALL CONNECT GROUND KITS TO THE NEW GROUND BAR BEFORE ENTRY TO CABINET
4. NO BACK TO BACK LUGGING OF GROUNDS

GENERAL GROUNDING NOTES:

1. VERTICAL DROPS SHALL BE 20'–0" OF #2 AWG SOLID TINNED COPPER WIRE. CADWELD TO GROUND BAR.
2. ALL BENDS MINIMUM 8" RADIUS.
3. APPLY ANTI–OXIDATION COMPOUND TO ALL CONNECTIONS.
4. BARE COPPER CONDUCTORS SHALL NOT BE IN CONTACT WITH ANY DISSIMILIAR MATERIAL. PLACE ON STANDOFFS, IF NECESSARY TO ALLOW FOR PROPER INSTALLATION.
5. SHARP BENDS IN GROUNDING CONDUCTORS SHALL BE AVOIDED. 90° BENDS SHALL NOT BE USED.
6. ALL GROUNDING CONDUCTORS SHALL BE KEPT AS SHORT AS POSSIBLE. THE SHORTEST PRACTICAL ROUTE SHALL BE CHOSEN WITH THE LEAST AMOUNT OF BENDS AND SPLICES. USE THIS RULE AT ALL TIMES.
7. ALL CONNECTIONS TO GROUND BARS SHALL BE WITH A 2–HOLE LUG UNLESS OTHERWISE SPECIFIED.
8. WHEN GROUNDING MORE THAN ONE PIECE OF EQUIPMENT, DO NOT USE THE EQUIPMENT AS A GROUNDING CONDUCTOR. DOUBLE–STACKING OF LUGS SHALL BE USED TO GET FROM EQUIPMENT TO EQUIPMENT.
9. REMOVE ALL PAINT BENEATH THE SURFACE OF GROUND LUGS
10. GROUND SYSTEM TO BE TESTED TO 5 OHMS OR LESS

NOTES — SCALE: N.T.S. — 1

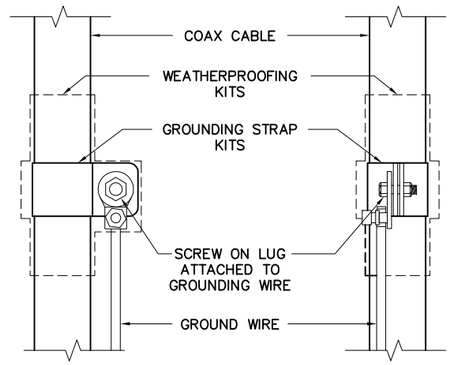
NOT USED — SCALE: N.T.S. — 2



NOTES:

1. ALL HARDWARE 18–8 STAINLESS STEEL INCLUDING SPLIT WASHERS.
2. COAT WIRE END WITH ANTI–OXIDATION COMPOUND PRIOR TO INSERTION INTO LUG BARREL AND CRIMPING.
3. APPLY ANTI–OXIDATION COMPOUND BETWEEN ALL LUGS AND BUSS BARS PRIOR TO MATING AND BOLTING.

GROUND LUG DETAIL — SCALE: N.T.S. — 3



NOTES:

- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
- THIS DETAILS IS TYPICAL FOR EACH CABLE WHERE IT IS SPECIFIED TO BE GROUNDED

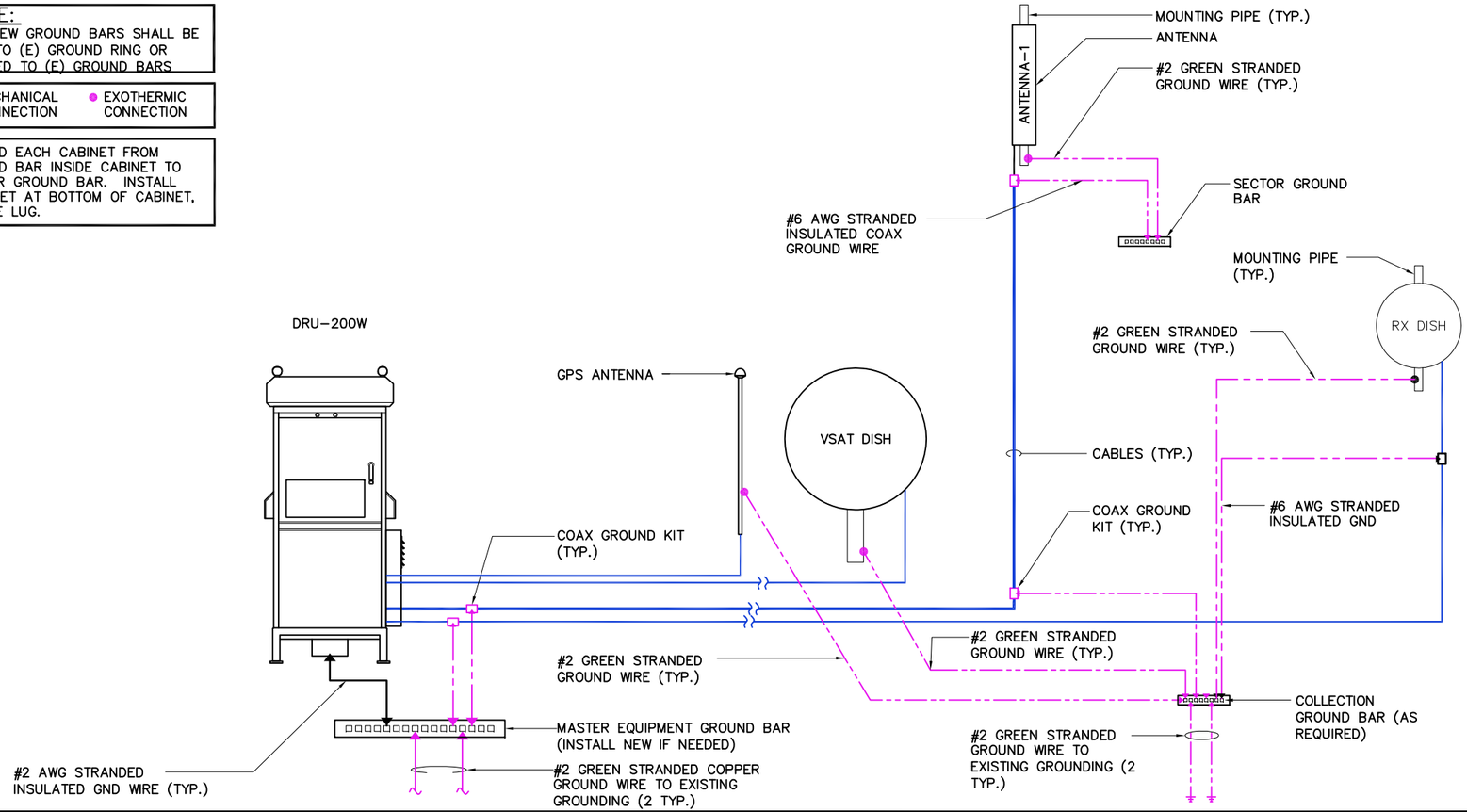
COAX GROUND KIT — SCALE: N.T.S. — 4

NOTE:

ALL NEW GROUND BARS SHALL BE TIED TO (E) GROUND RING OR BONDED TO (E) GROUND BARS

▲ MECHANICAL CONNECTION ● EXOTHERMIC CONNECTION

GROUND EACH CABINET FROM GROUND BAR INSIDE CABINET TO MASTER GROUND BAR. INSTALL GROMMET AT BOTTOM OF CABINET, 2 HOLE LUG.



FINAL SINGLE LINE GROUNDING DIAGRAM — SCALE: N.T.S. — 5

Sirius XM SATELLITE RADIO

SURESITE Infrastructure experts Small cell leaders.
3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON ENGINEERING • DESIGN
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
0	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

REGISTERED PROFESSIONAL ENGINEER — JASON E. PALMER — E 20363 — ELECTRICAL — STATE OF CALIFORNIA

SITE NAME
GREEN STREET

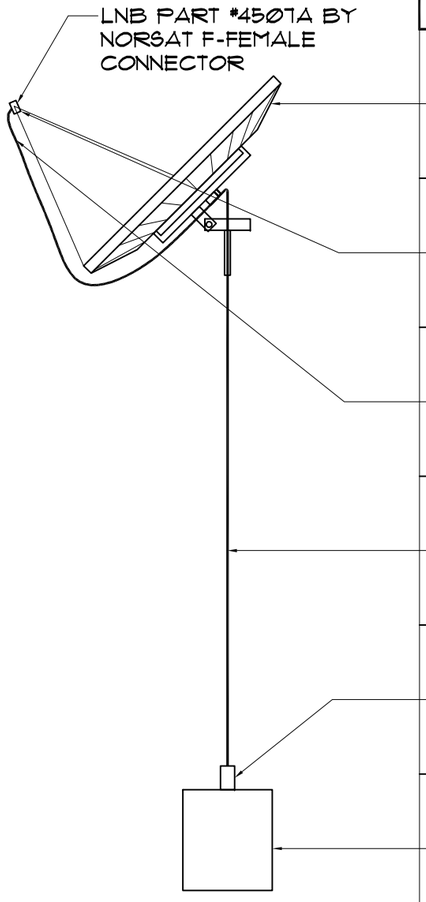
SITE I.D.
SFX5015

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME
GROUNDING DETAILS AND NOTES

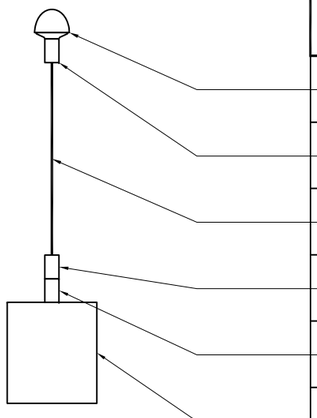
SHEET NUMBER
E-3

PROJECT# 2015.0042.0022



ITEM #	DESCRIPTION	SIZE	QUANTITY	LENGTH	MANUFACTURER	PART NUMBER	REMARKS	PROVIDED BY
1	VSAT DISH	70.866"	1 NEW	N/A	PRODELIN	1183 W/O DEICING	PRODELIN VSAT DISH ANTENNA	VENDOR
2	LNB	N/A	1 NEW	N/A	NORSAT	4507A	-	VENDOR
3	F-MALE CONNECTOR	N/A	1 NEW	N/A	THOMAS AND BETTS	SNSIP6QS	-	VENDOR
4	COAX CABLE	.298"	1 NEW	35'	BELDEN	RG6-QS	-	VENDOR
5	F-MALE CONNECTOR	N/A	1 NEW	N/A	THOMAS AND BETTS	SNSIP6QS		VENDOR
6	CABINET	N/A	1 NEW	N/A	UBS	DRU-200W	-	SIRIUS XM

VSAT ANTENNA CONFIGURATION — SCALE: N.T.S. — 1



ITEM #	DESCRIPTION	SIZE	QUANTITY	LENGTH	MANUFACTURER	PART NUMBER	REMARKS	PROVIDED BY
1	GPS ANTENNA	N/A	1 NEW	N/A	TRIMBLE	57860-30	-	SIRIUS XM
2	F CONNECTOR	N/A	1 NEW	N/A	THOMAS AND BETTS	SNSIP6QS	-	VENDOR
3	COAX CABLE	.298"	1 NEW	65'	BELDEN	RG6-QS	-	VENDOR
4	F CONNECTOR	N/A	1 NEW	N/A	THOMAS AND BETTS	SNSIP6QS	-	VENDOR
5	F TO N CONNECTOR	N/A	1 NEW	N/A	EMERSON	26-8020	-	SIRIUS XM
6	CABINET	N/A	1 NEW	N/A	UBS	DRU-200W	-	SIRIUS XM

GPS ANTENNA CONFIGURATION — SCALE: N.T.S. — 2

Sirius XM SATELLITE RADIO

SURESITE
Infrastructure experts
Small cell leaders.
3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON ENGINEERING • DESIGN
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
0	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

REGISTERED PROFESSIONAL ENGINEER
JASON E. PALMER
E 20363
ELECTRICAL
STATE OF CALIFORNIA

SITE NAME
GREEN STREET

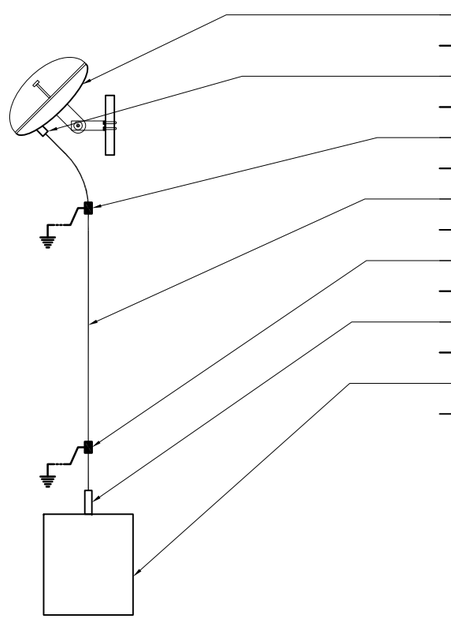
SITE I.D.
SFX501S

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME
SITE CONFIGURATIONS MATERIAL LIST

SHEET NUMBER
E-4

PROJECT# 2015.0042.0022



ITEM #	DESCRIPTION	SIZE	QUANTITY	LENGTH	MANUFACTURER	PART NUMBER	REMARKS	PROVIDED BY
1	HB RX DISH (2330–2345 MHz)	25.25"	1 NEW	N/A	TIL–TEK	TA–2324–LHCP	CIRCULAR POLARIZED SOLID PARABOLIC DISH ANTENNA	SIRIUS XM
2	7–16 DIN MALE CONNECTOR	N/A	1 NEW	N/A	ANDREW	L4TDM–PSA	ATTACH TO CABLE PRIOR TO INSTALLATION	VENDOR
3	GROUNDING KIT	N/A	1 NEW	N/A	ANDREW	SG12–06B2A	INCLUDES 59" #6 GROUND WIRE, INSTALL 1 KIT EVERY 100 FT. MIN.	VENDOR
4	COAXIAL CABLE	1/2"ø	1 NEW	50'	ANDREW	LDF4–50A	MINIMUM BEND RADIUS PER MANUFACTURER SPECS	VENDOR
5	GROUNDING KIT	N/A	1 NEW	N/A	ANDREW	SG12–06B2A	INCLUDES 59" #6 GROUND WIRE, INSTALL 1 KIT EVERY 100 FT. MIN.	VENDOR
6	N MALE CONNECTOR	N/A	1 NEW	N/A	ANDREW	L4TNM–PSA	–	VENDOR
7	CABINET	N/A	1 NEW	N/A	UBS	DRU-200W	–	SIRIUS XM

RX ANTENNA CONFIGURATION

SCALE: N.T.S.

Sirius XM SATELLITE RADIO

SURESITE
Infrastructure experts
Small cell leaders.

3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON ENGINEERING • DESIGN

1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
0	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

REGISTERED PROFESSIONAL ENGINEER
JASON E. PALMER
E 20363
ELECTRICAL
STATE OF CALIFORNIA

SITE NAME
GREEN STREET

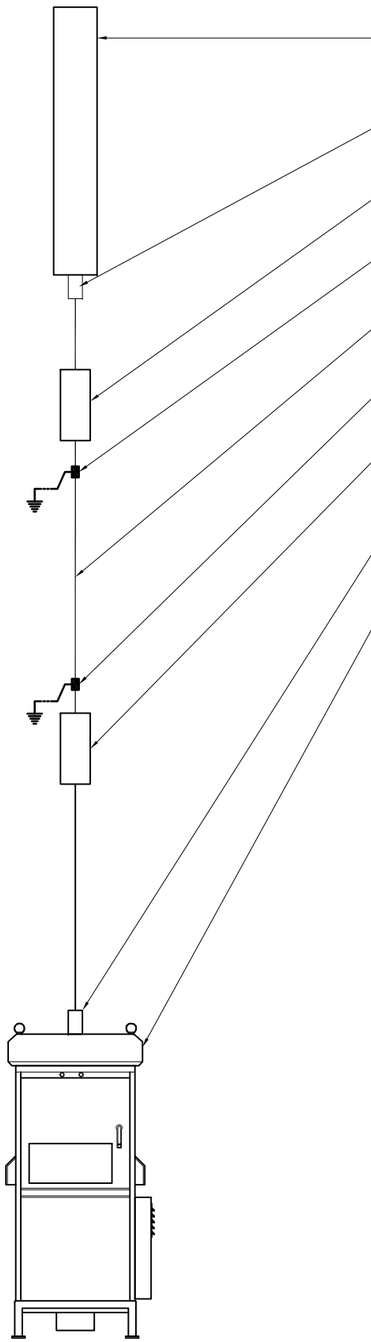
SITE I.D.
SFX5015

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME
SITE CONFIGURATIONS MATERIAL LIST

SHEET NUMBER
E-4A

PROJECT# 2015.0042.0022



ITEM #	DESCRIPTION	SIZE	QUANTITY	LENGTH	MANUFACTURER	PART NUMBER	REMARKS	PROVIDED BY
1	TRANSMIT ANTENNA	N/A	1 NEW	N/A	TILTEK	TA-2304-2-DAB-L	-	SIRIUS XM
2	7-16 DIN MALE CONNECTOR	N/A	1 NEW	N/A	ANDREW	L4TDM-PSA	ATTACH TO CABLE PRIOR TO INSTALLATION	VENDOR
3	WEATHERPROOFING	N/A	1 NEW	N/A	ANDREW	WS-LTL4	WEATHERPROOFING PER 3/C-5A	VENDOR
4	GROUNDING KIT	N/A	1 NEW	N/A	ANDREW	SGPL7-15B4	INCLUDES 59" ⅜ GROUND WIRE, INSTALL 1 KIT EVERY 100 FT. MIN.	VENDOR
5	COAXIAL CABLE	½"Ø	1 NEW	65'	ANDREW	LDF4-50A	MINIMUM BEND RADIUS PER MANUFACTURER SPECS	VENDOR
6	GROUNDING KIT	N/A	1 NEW	N/A	ANDREW	SGPL7-15B4	INCLUDES 59" ⅜ GROUND WIRE, INSTALL 1 KIT EVERY 100 FT. MIN.	VENDOR
7	WEATHERPROOFING	N/A	1 NEW	N/A	ANDREW	WS-LTL4	WEATHERPROOFING PER 3/C-5A	VENDOR
8	7/8" EIA CONNECTOR	N/A	1 NEW	N/A	ANDREW	L4E7B-PS	ATTACH TO CABLE PRIOR TO INSTALLATION	VENDOR
9	CABINET	N/A	1 NEW	N/A	UBS	DRU-200W	-	SIRIUS XM

FINAL ANTENNA CONFIGURATION

SCALE: N.T.S. | 1

Sirius XM SATELLITE RADIO

SURESITE
Infrastructure experts
Small cell leaders.
3659 GREEN RD STE. 214,
CLEVELAND, OH 44122
OFFICE: (216) 593-0400
FAX: (216) 593-0401

FULLERTON
ENGINEERING • DESIGN
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

CHECKED BY:	AG
APPROVED BY:	MB

#	DATE	DESCRIPTION	INT.
A	9/9/16	90% REVIEW	MC
B	9/20/16	REVISION	RD
0	9/26/16	FINAL	GT
1	1/11/18	REVISED FINAL	FK
2	3/9/18	REVISED FINAL	DZ
3	7/10/18	REVISED FINAL	ASG

REGISTERED PROFESSIONAL ENGINEER
JASON E. PALMER
E 20363
ELECTRICAL
STATE OF CALIFORNIA

SITE NAME
GREEN STREET

SITE I.D.
SFX50015

SITE ADDRESS
1101 GREEN ST
SAN FRANCISCO, CA 94109

SHEET NAME
SITE CONFIGURATIONS MATERIAL LIST

SHEET NUMBER
E-5

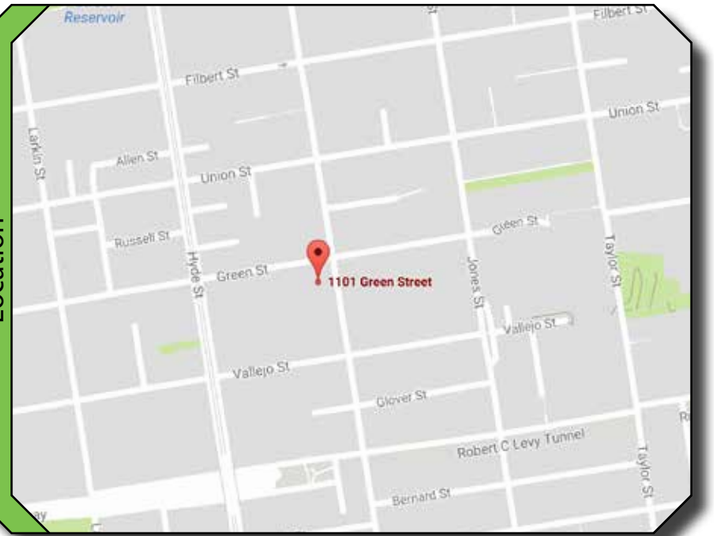
PROJECT# 2015.0042.0022

SFX501S GREEN STREET

1101 GREEN STREET
SAN FRANCISCO, CA

SURESITE
Infrastructure experts. Small cell leaders.

Location



Existing

View 1 of 3

Proposed

August 14, 2017

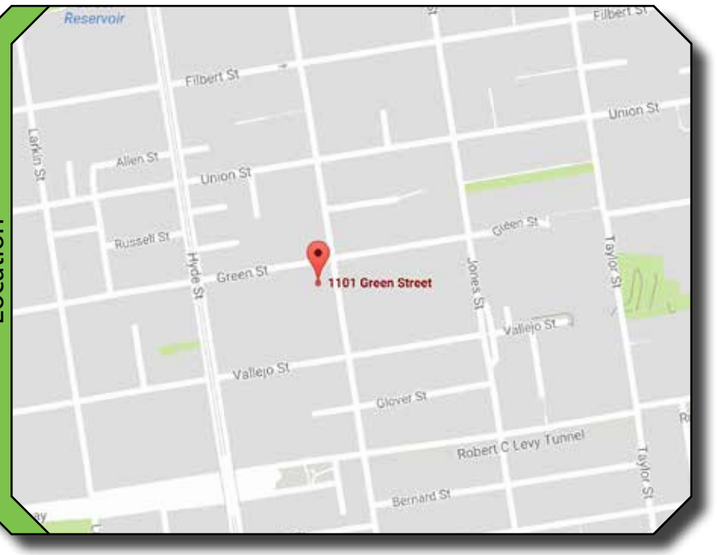
Prepared by: ZLN

SFX501S GREEN STREET

1101 GREEN STREET
SAN FRANCISCO, CA

SURESITE
Infrastructure experts. Small cell leaders.

Location



Existing

View 2 of 3

Proposed

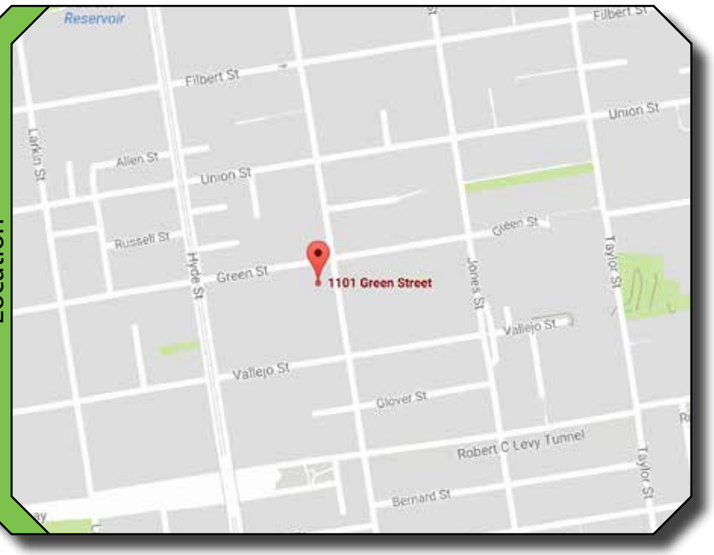
August 14, 2017

Prepared by: ZLN

SFX501S GREEN STREET

1101 GREEN STREET
SAN FRANCISCO, CA

Location



Existing

View 3 of 3

Proposed

August 14, 2017

Prepared by: ZLN

EXHIBIT C

SAN FRANCISCO
PLANNING DEPARTMENT

CEQA Categorical Exemption Determination

PROPERTY INFORMATION/PROJECT DESCRIPTION

Project Address		**Block/Lot(s)**
1101 GREEN ST		0125026
Case No.		**Permit No.**
2016-015056PRJ		
■ **Addition/ Alteration**	☐ **Demolition (requires HRE for Category B Building)**	☐ **New Construction**
Project description for Planning Department approval. INSTALL (N) SIRIUS XM PANEL ANTENNA ON (E) PENTHOUSE		

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: Building Permit If Discretionary Review before the Planning Commission is requested, the Discretionary Review hearing is the Approval Action for the project.	**Signature:** Ashley Lindsay 09/27/2018
	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)
1101 GREEN ST		0125/026
Case No.	Previous Building Permit No.	New Building Permit No.
2016-015056PRJ		
Plans Dated	Previous Approval Action	New Approval Action
	Building Permit	
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

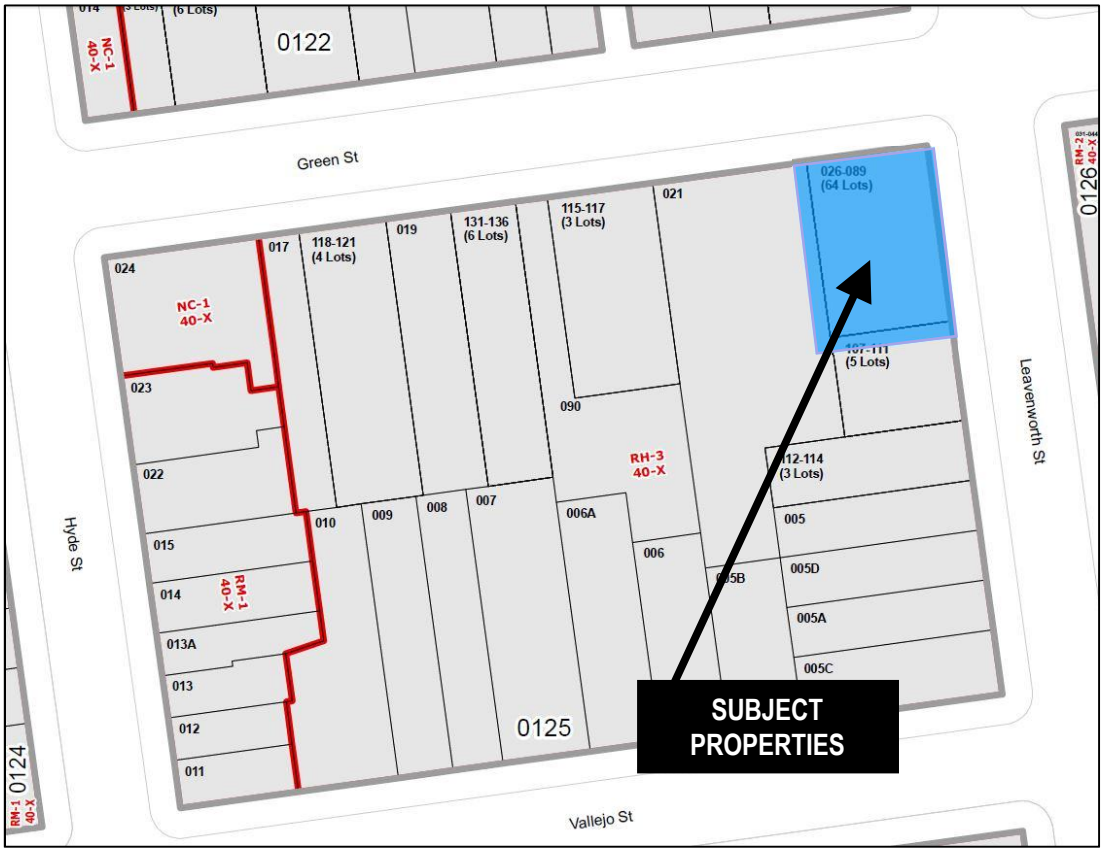
☐	The proposed modification would not result in any of the above changes.

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:	**Signature or Stamp:**

EXHIBIT D

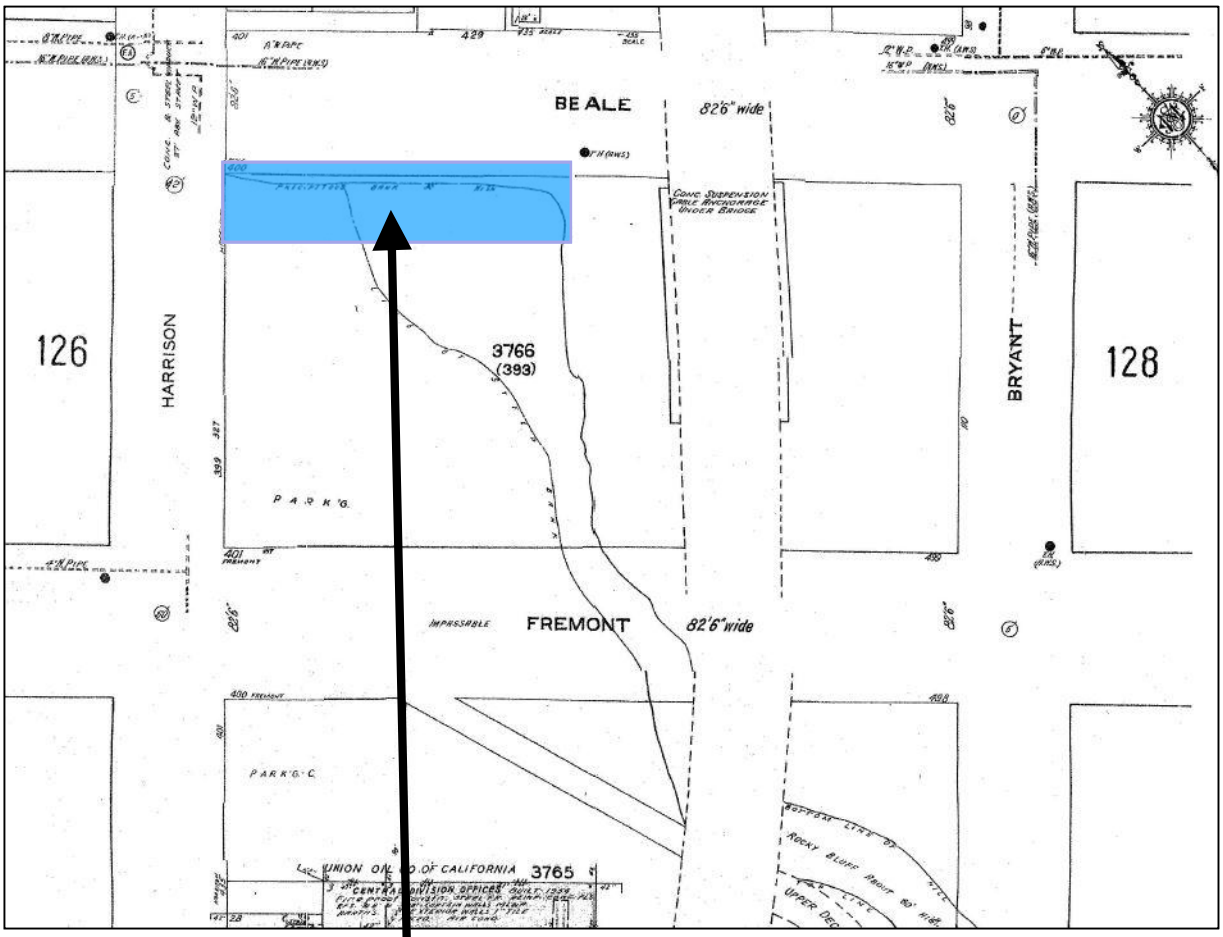
Block Book Map



SAN FRANCISCO
PLANNING DEPARTMENT

Case Number 2016-015056CUA
Sirius XM
WTS Facility
1101 Green Street

Sanborn Map*

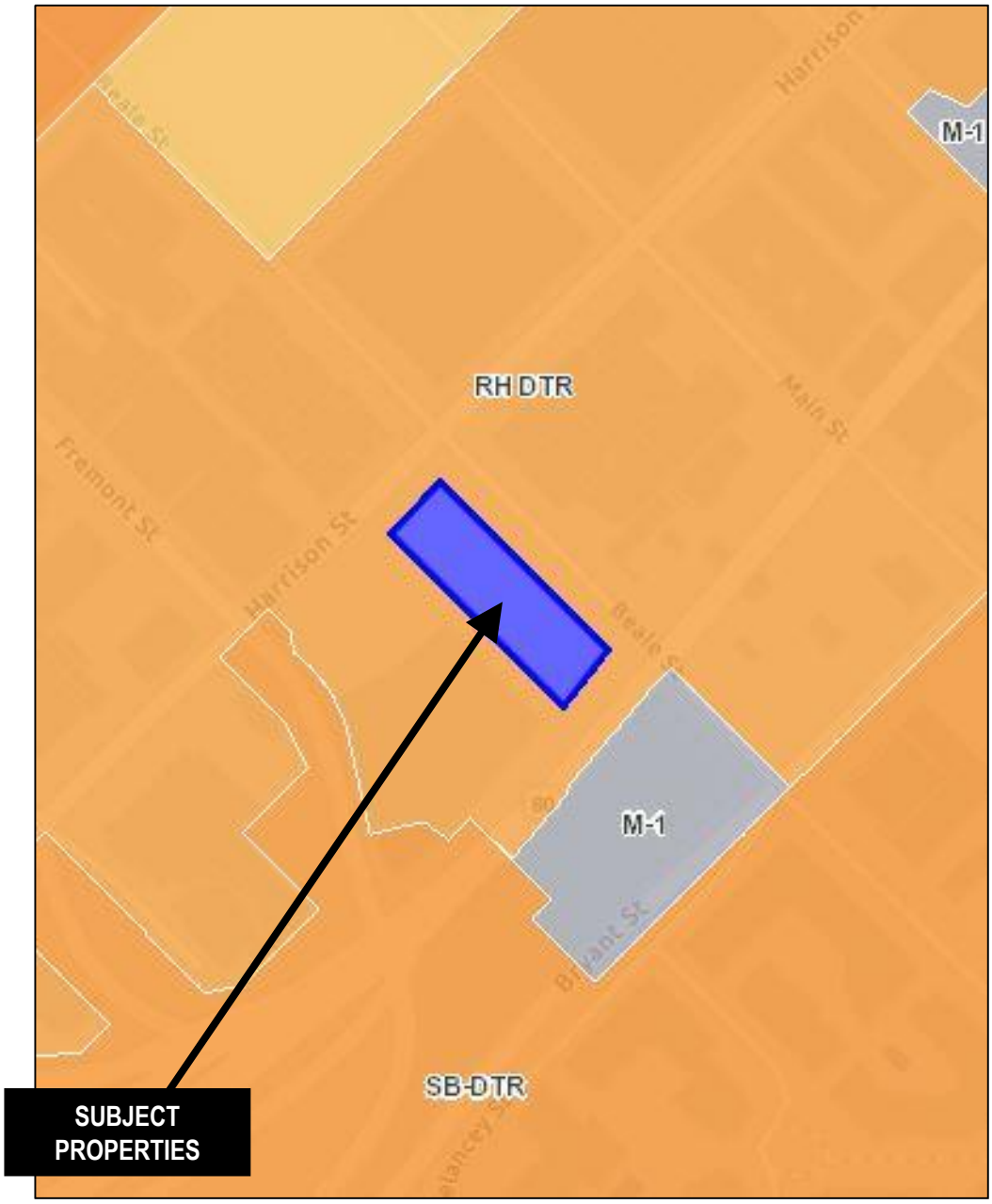


*The Sanborn Maps in San Francisco have not been updated since 1998, and this map may not accurately reflect existing conditions.

Case Number 2016-015056CUA
Sirius XM
WTS Facility
1101 Green Street

SAN FRANCISCO
PLANNING DEPARTMENT

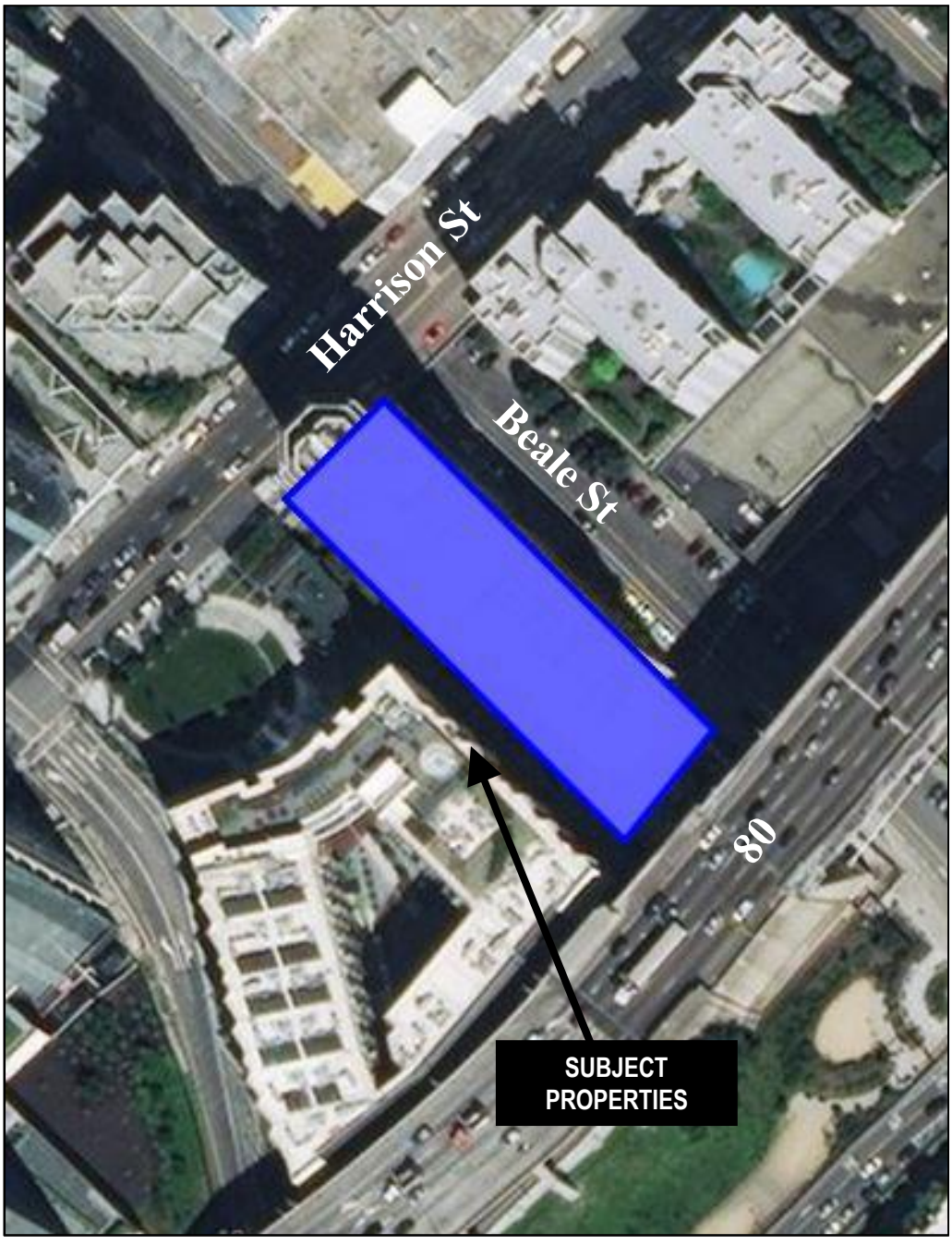
Zoning Map



SAN FRANCISCO
PLANNING DEPARTMENT

Case Number 2016-015056CUA
Sirius XM
WTS Facility
1101 Green Street

Aerial Photo



Case Number 2016-015056CUA
Sirius XM
WTS Facility
1101 Green Street

SAN FRANCISCO
PLANNING DEPARTMENT

EXHIBIT E

Affidavit of Conducting a Pre-Application Meeting, Sign-in Sheet and Issues/Responses submittal

I, Laura Meiners, do hereby declare as follows:

1. I have conducted a Pre-Application Meeting for the proposed new construction, alteration or other activity prior to submitting any entitlement (Building Permit, Variance, Conditional Use, etc.) in accordance with Planning Commission Pre-Application Policy.

2. The meeting was conducted at Helen Wills Park, 1401 Broadway, San Francisco (location/address) on 11/16/17 (date) from 6:00 pm to 7:00 pm (time).

3. I have included the mailing list, meeting invitation and postmarked letter, sign-in sheet, issue/response summary, and reduced plans with the entitlement Application. I understand that I am responsible for the accuracy of this information and that erroneous information may lead to suspension or revocation of the permit.

4. I have prepared these materials in good faith and to the best of my ability.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

EXECUTED ON THIS DAY, November 16, 2017 IN SAN FRANCISCO.

Laura Meiners

Signature

Laura Meiners

Name (type or print)

Agent for Sirius XM, Applicant

Relationship to Project (e.g. Owner, Agent)
(if Agent, give business name & profession)

1101 Green Street

Project Address

Date	From	Method of contact	Address	Email	Phone Number	Issue	Action Taken
11/6/2017	Jeane Struck and Jim Sinunu	Email	1835 Leavenworth Street	js@severson.com; jsinunu@sinunubruni.com	415-677-5508	They own the roof deck adjacent to the lower roof deck on Green Street, worried about visual impact	11/16 Emailed them the plans and photo sims to reassure them that we are on the upper roof level and there will be no visual impact
11/6/2017	Charlie Sykes (sp?)	Voice Mail		charlie@comsiteswest.com	530-414-4376	Wants to know more about the project	11/16 Returned the call to ask about specific issues - left a message 11/20 Received return call - Charlie is with ComSite, managing wireless facilities for 1101 Green Street
11/7/2017	Leslie DeTaillandier	Voice Mail	1752 Leavenworth	lesliedeta@gmail.com	415-776-7594	Wants a copy of the elevations/plans	11/16 Send her the plans via email. She attended the Community Meeting
11/17/2017	Gilda Schine	Voice Mail	1101 Green Street	gildon6@sbcglobal.net	415-928-2622	Wants more info about proposed project - is there anything going to be attached to the outside walls of the building?	11/20 Emailed her the plans and photo sims.

Pre-Application Meeting Sign-in Sheet

Meeting Date: November 16, 2017
Meeting Time: 6:00 pm
Meeting Address: Helen Wills Park, 1401 Broadway, San Francisco, CA 94109
Project Address: 1101 Green Street
Property Owner Name: Multiple Owners - Residential Condos
Project Sponsor/Representative: Sirius XM/ Laura Meiners. SureSite Consulting

Please print your name below, state your address and/or affiliation with a neighborhood group, and provide your phone number. Providing your name below does not represent support or opposition to the project; it is for documentation purposes only.

	NAME/ORGANIZATION	ADDRESS	PHONE #	EMAIL	SEND PLANS
1.	Leslie DeTaeye	1752 Leavenworth	415-776-7594		☐
2.					☐
3.					☐
4.					☐
5.					☐
6.					☐
7.					☐
8.					☐
9.					☐
10.					☐
11.					☐
12.					☐
13.					☐
14.					☐
15.					☐
16.					☐
17.					☐
18.					☐

Summary of discussion from the Pre-Application Meeting

Meeting Date: November 16, 2017
Meeting Time: 6:00 pm
Meeting Address: Helen Wills Park, 1401 Broadway, San Francisco, CA 94109
Project Address: 1101 Green Street
Property Owner Name: Multiple Owners - Residential Condos
Project Sponsor/Representative: Sirius XM/ Laura Meiners, SureSite Consulting

Please summarize the questions/comments and your response from the Pre-Application meeting in the space below. Please state if/how the project has been modified in response to any concerns.

Question/Concern #1 by (name of concerned neighbor/neighborhood group): Leslie DeTaillandier asked several questions about the nature of the installation, including amount of RF exposure, what Sirius XM is, and if we plan on coming back in the future and installing more antennas at this location.

Project Sponsor Response: Engineer Sokratis Papageorgiou explained the nature of Sirius XM and the proposed installation. He calculated the amount of RF exposure to be expected on the street (0.00000000000145 watts), and explained that unlike mobile phone carriers, their system is not based on capacity, only coverage. Since the signals can't pass through walls, only cities with tall buildings need these antennas. All other areas are served by satellite.

Question/Concern #2:

Project Sponsor Response:

Question/Concern #3:

Project Sponsor Response:

Question/Concern #4:

Project Sponsor Response:

NOTICE OF COMMUNITY OUTREACH MEETING ON A PROPOSED SATELLITE RADIO WIRELESS COMMUNICATION FACILITY IN YOUR NEIGHBORHOOD

To: Neighborhood Groups and Neighbors & Owners within 500' radius of 1101 Green Street.

Meeting Information
Date: Thursday, Nov 16, 2017
Time: 6:00 p.m.
Where: Helen Wills Park
1401 Broadway
San Francisco, CA 94109

Site Information
Address: 1101 Green Street
Block/Lot: 0125/026-089
Zoning: RH-3

Applicant
Sirius XM

Contact Information
Sirius XM Hotline, 216-342-9605
or email SXMSFXSD@sure-site.com

Sirius XM is proposing to construct a new satellite radio wireless communication facility at 1101 Green Street as needed by Sirius XM as part of its San Francisco satellite radio network. Sirius XM proposes to install equipment on the roof of the existing building. There will be no visual changes with this proposed project as the Sirius XM equipment will not be visible from street level view. Plans and photo simulations will be available for your review at the meeting. You are invited to attend an informational community meeting located at Helen Wills Park Clubhouse – The Garden Room at 1401 Broadway on Thursday, November 16, 2017, at 6:00 p.m. to learn more about the project.

If you have any questions regarding the proposal and are unable to attend the meeting, please contact the Sirius XM Hotline at 216-342-9605 or email SXMSFXSD@sure-site.com and a specialist will return your call. Please contact the San Francisco Planning Department at (415) 558-6378 if you have any questions regarding the planning process.

NOTE: If you require an interpreter to be present at the meeting, please contact our office at 216-342-9605 or email SXMSFXSD@sure-site.com no later than 5:00pm on Friday, November 10, 2017, and we will make every effort to provide you with an interpreter.

AVISO DE REUNIÓN DE ALCANCE COMUNITARIO SOBRE EL RADIO POR SATÉLITE PROPUESTA A UNA INSTALACIÓN DE COMUNICACIÓN INALÁMBRICA EN SU VECINDARIO

Para: Grupos del vecindario, vecinos y propietarios dentro de un radio de 500' en 1101 Green Street.

Información de la reunión
Fecha: Jueves, 16 de noviembre de 2017
Hora: 6:00 p.m.
Dónde: Helen Wills Park
1401 Broadway
San Francisco, CA 94109

Información del lugar
Dirección: 1101 Green Street
Cuadra/Lote: 0125/026-089
Zonificación: RH-3

Solicitante
Sirius XM

Información de contacto
Línea directa de Sirius XM, 216-342-9605
o SXMSFXSD@sure-site.com

Sirius XM propone construir una nueva de la instalación de comunicaciones inalámbricas en 1101 Green Street necesaria para Sirius XM como parte de su red de radio satelital en San Francisco. Sirius XM propone instalar equipos en el techo del edificio existente. No habrá cambios visuales con este proyecto propuesta, ya que las antenas de Sirius XM no será visible desde el nivel de calle. Habrá planos y fotos disponibles para que usted los revise en la reunión. Se lo invita a asistir a una reunión informativa de la comunidad que se realizará en Helen Wills Park Clubhouse – The Garden Room en 1401 Broadway el jueves, 16 de noviembre de 2017, a las 6:00 p.m., para obtener más información sobre el proyecto.

Si tiene preguntas relacionadas con la propuesta y no puede asistir a la reunión, por favor llame a la Línea Directa de Sirius XM, 216-342-9605 o email SXMSFXSD@sure-site.com, y un especialista le devolverá el llamado. Por favor, contáctese con el Departamento de Planificación de la Ciudad de San Francisco al (415) 558-6378 si tiene alguna pregunta relacionada con el proceso de planificación.

NOTA: Si necesita que un intérprete esté presente en la reunión, por favor, contáctese con nuestra oficina al 216-342-9605 o email SXMSFXSD@sure-site.com antes del viernes, 10 de noviembre de 2017 a las 5:00 p.m. y haremos todos lo posible para proporcionarle un intérprete.

ABISO NG OUTREACH NA PULONG NG PAGBABAGO SA BAGONG NA WIRELESS NA PASILIDAD NG KOMUNIKASYON SA INYONG KAPITBAHAYAN

Sa: Mga Pangkat ng Kapitbahayan at Mag-ari sa loob ng 500' radius ng 1101 Green Street.

Impormasyon sa Pulong
Petsa: Huwebes, Nobyembre 16, 2017
Oras: 6:00 p.m.
Saan: Helen Wills Park
1401 Broadway
San Francisco, CA 94109

Impormasyon sa Site
Address: 1101 Green Street
Block/Lot: 0125/026-089
Zoning: RH-3

Aplikante
Sirius XM

Impormasyon sa Pakikipag-ugnayan
Sirius XM Hotline
216-342-9605 o email
SXMSFXSD@sure-site.com

Pinapanukala ng Sirius XM upang bumuo ng isang bagong na wireless na pasilidad na pangkomunikasyon sa 1101 Green Street na kailangan ng Sirius XM bilang bahagi ng satellite radio network nito sa San Francisco. Pinapanukala ng Sirius XM na mag-install ng kagamitan sa bubong ng umiiral na gusali. Walang mga visual na pagbabago sa proyektong ito na iminumungkahi na ang Sirius XM na kagamitan ay hindi makikita mula sa pagtingin sa antas ng kalye. Ang mga plano at simulasyong litrato ay maaari niyong repasuhin sa pulong. Iniimbitahan kayong dumalo sa impormal na pulong ng komunidad sa Helen Wills Park Clubhouse – The Garden Room sa 1401 Broadway sa Huwebes, Nobyembre 16, ng 6:00 p.m.

Kung mayroon kayong anumang mga tanong tungkol sa panukala at hindi kayo makakadalo sa pulong, mangyaring makipag-ugnayan sa Sirius XM Hotline sa 216-342-9605 o email SXMSFXSD@sure-site.com at ang specialist ay tatawag sa iyo. Mangyaring makipag-ugnayan sa San Francisco Planning Department sa (415) 558-6378 kung may anumang mga tanong kayo patungkol sa proseso ng pagpaplano.

TANDAAN: Kung kailangan niyong mayroong tagapagsaling-wika sa pulong, mangyaring makipag-ugnayan sa aming tanggapan sa 216-342-9605 o email SXMSFXSD@sure-site.com nang hindi lalagpas sa 5:00pm sa Biyernes, Nobyembre 10, 2017, at gagawin namin lahat ng aming makakaya para bigyan kayo ng tagapagsaling-

社区推广会议通知：关于您所在地区新的卫星无线电无线通信设备的建议

致：绿色街 (Green Street) 1101号 500 英尺范围内的社区团体及邻居和业主。

会议信息
日期： 2017年11月16日星期四
时间： 下午 6 点
地点： Helen Wills 公园
（Helen Wills Park）
百老汇（Broadway）1401
利福尼亚州旧金山，
邮编：94109

场地信息
地址： 1101 Green Street
街段/区： 0125/026-089
区划：RH-3

申请人
Sirius XM

联系信息
Sirius XM 热线，216-342-9605
或电子邮件 SXMSFXSD@sure-site.com

Sirius XM 拟建的新设施目前位于绿色街道1101号的无线通信设备，作为旧金山无线网络的一部分，满足 Sirius XM 的需求。Sirius XM建议在现有建筑物的屋顶上安装设备。提出的这项修改，不会带来任何视觉上的变化，因为 Sirius XM 的天线会被完全屏蔽起来，是看不见的。 将在会上向您展示计划内容及模拟图片，供您审阅。我们邀请您参加将在旧金山 Helen Wills 公园（Helen Wills Park），花园客房 (The Garden Room) 百老汇（Broadway）1401 周四在那里2017年11月16日下午 6 点 借此机会了解更多关于该项目的信息。

您如有任何关于该提议的问题，但无法出席会议，请拨打 Sirius XM 热线：216-342-9605 或电子邮件 SXMSFXSD@sure-site.com，专家将回复您的消息。 如果您对该规划过程有任何问题，请拨打电话(415) 558-6378，联系旧金山市规划部。

注：如果您在会议期间需要一名口译人员在场，请于2017年11月10日星期一下午5点之前联系我们的办公室，联系电话216-342-9605 或电子邮件 SXMSFXSD@sure-site.com，我们将尽全力为您提供一名口译人员。

Sirius XM Radio Inc.
1221 Avenue of Americas
New York, New York, 10020

T: 222-584-5100
F: 212-584-5200
siriusxm.com

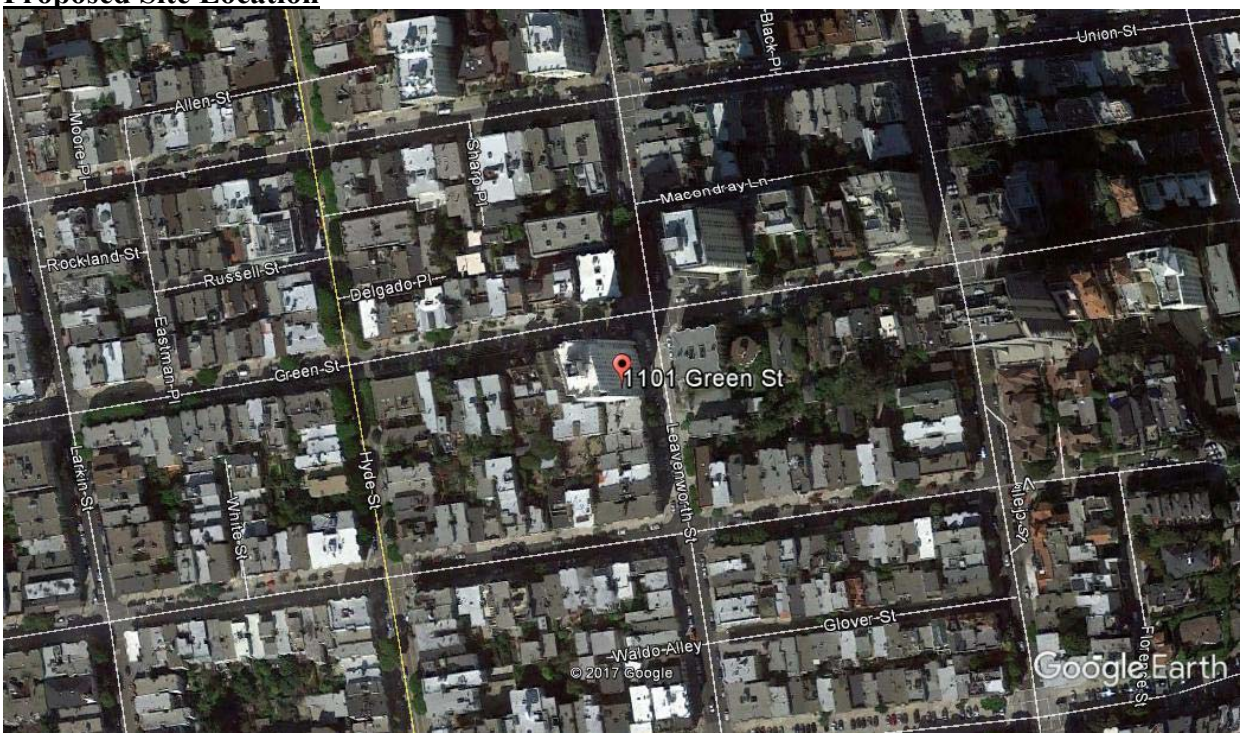
October 26, 2017

Sirius XM is working to improve satellite radio service in San Francisco!

Dear Neighbor:

Sirius XM ("SXM") is proposing to install state-of-the-art satellite radio equipment on the rooftop of the existing building at **1101 Green Street**. The equipment to be installed includes one (1) SXM panel antenna, one (1) GPS antenna, two (2) satellite dishes, and one (1) equipment cabinet. This equipment is designed as part of Sirius XM's nationwide effort to upgrade its repeater networks to provide comparable levels of service to subscribers on the Sirius and XM networks, despite those networks' significantly different and incompatible technologies.

Proposed Site Location



The installation requires only electric utilities and, once completed, may require, on average, one to two monthly maintenance visits by qualified company technicians. No water, sewer or other municipal services are required. Please also note that no permanent backup generator is included as part of the installation.

Sirius XM Radio Inc.
1221 Avenue of Americas
New York, New York, 10020

T: 222-584-5100
F: 212-584-5200
siriusxm.com

Company Information

In 2008, Sirius Satellite Radio and XM Satellite Radio merged to create Sirius XM. Sirius XM provides high quality digital radio to over 32 million subscribers and offers more than 140 channels to its subscribers across North America. Sirius XM broadcasts commercial free sports, news, weather, traffic, music and entertainment to automobile radios, computers, smart phones, and home/business radios.

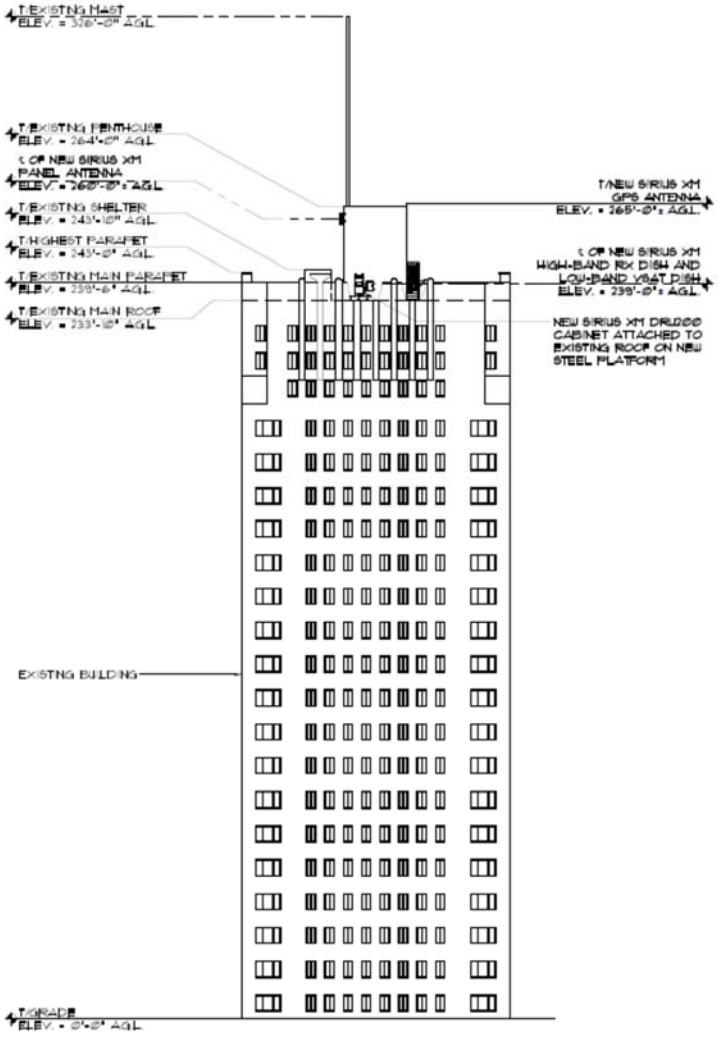
The Sirius XM network serves as a key source of information that can be critical to listeners in the event of a natural disaster or public safety emergency. Sirius XM participates in the Emergency Alert System, not only by transmitting national alerts to satellite radio subscribers on all channels, but also by partnering with the Federal Emergency Management Agency to provide a backup mechanism for distributing those alerts to other Primary Entry Point stations in the United States. Sirius XM also delivers timely news and weather information specific to major metropolitan markets on its Traffic and Weather channels and supplies the nation's truckers with updates on highway closures and weather.

During weather emergencies such as Hurricane Irma, Sirius XM took further steps to help those in the hurricane's path and their family and friends to monitor the progress and severity of the storm. Sirius XM replaced its Preview Channel with the Weather Channel Hurricane live coverage to supply live hurricane coverage to every Sirius XM receiver, including those not currently authorized to receive the Sirius XM service. Providing this service through the course of the storm offered millions of listeners across the country in-depth, expert coverage including evacuation and safety tips, and tips on how to deal with severe storms.

Photo Simulation of Proposed Equipment

Sirius XM Radio Inc.
1221 Avenue of Americas
New York, New York, 10020
T: 222-584-5100
F: 212-584-5200
siriusxm.com

Proposed Elevations



We look forward to meeting with the surrounding property owners and occupants at the meeting location and time presented in the enclosed Notice of Pre-Application Meeting to discuss this project in more detail.

Sincerely,

Laura Meiners, SureSite Consulting Group
Agent for Sirius XM
SXMSFXSD@sure-site.com
216-342-9605

EXHIBIT F

Radio Frequency – Electromagnetic Energy (RF-EME) Compliance Report (NSB)

Sirius Proposed Facility

Site ID: SFX501 S
Green Street
1101 Green Street, San Francisco, California 94109

June 15, 2018

EBI Project Number:
6217003367

Status:	**The proposed site will be compliant with the installation of the mitigation measures described in Attachment 1.**

Remarks: See signage plan for mitigation measures to be installed upon upgrade/installation of the site to comply with FCC and Sirius standards.

Prepared by:

EBI Consulting
environmental | engineering | due diligence

TABLE OF CONTENTS

1.0 Executive Summary

EnviroBusiness Inc. (dba EBI Consulting) has been contracted by Sirius to conduct radio frequency electromagnetic (RF-EME) monitoring and modeling for Sirius Site SFX501 S located at 1101 Green Street in San Francisco, California to determine RF-EME exposure levels from proposed Sirius wireless communications equipment at this site. As described in detail in Appendix B of this report, the Federal Communications Commission (FCC) has developed Maximum Permissible Exposure (MPE) Limits for general public exposures and occupational exposures. This report summarizes the results of RF-EME monitoring and modeling in relation to relevant FCC RF-EME compliance standards for limiting human exposure to RF-EME fields. EBI field personnel visited this site on January 00, 1900. This report contains a detailed summary of the RF EME analysis for the site.

This document addresses the compliance of Sirius's proposed transmitting facilities independently at the site.

The Maximum Emissions Value is 27.8000% of the FCC's general public limit (5.5600% of the FCC's occupational limit) at the main roof level. The proposed site is in compliance with Federal regulations regarding (radio frequency) RF Emissions.

Based on worst-case predictive modeling, there are no modeled exposures on any accessible main roof level-level walking/working surface related to Sirius's equipment in the area that exceed the FCC's occupational and/or general public exposure limits at this site.

Signage is recommended at the site as presented in Attachment 1. Posting of the signage brings the site into compliance with FCC rules and regulations.

2.0 MPE Calculations

Calculations were completed for the proposed Sirius Wireless antenna rooftop facility located at 1101 Green Street in San Francisco, California using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Because of the short wavelength of PCS services, the antennas require line-of-site paths for good propagation, and are typically installed a distance above ground level. Antennas are constructed to concentrate energy towards the horizon, with as little energy as possible scattered towards the ground or the sky. This design, combined with the low power of PCS facilities, generally results in no possibility for exposure to approach Maximum Permissible Exposure (MPE) levels, with the exception of in areas in the immediate vicinity of the antennas.

In accordance with Sirius's RF Exposure policy, EBI performed theoretical modeling using RoofView® software to estimate the worst-case power density at the site rooftop-level resulting from operation of the antennas.

For this report, EBI utilized antenna and power data provided by Sirius and compared the resultant worst-case MPE levels to the FCC's occupational/controlled exposure limits outlined in OET Bulletin 65. EBI has performed theoretical worst case modeling using RoofView® to estimate the maximum potential power density from each antenna based on worst-case assumptions for the number of antennas and power. All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration.

The assumptions used in the modeling are based upon information collected during the site survey and information provided by Sirius in the supplied drawings and known configuration values information gathered from other sources to approximate each additional carrier's contribution.

The data for all Sirius antennas used in this analysis is shown in Section 4.0. Actual antenna gains for each antenna were used per manufacturer's specifications. All calculations were done with respect to uncontrolled and general public threshold limits.

3.0 Site and Vicinity Survey

EBI performed a rooftop and ground level RF-EME survey on June 15, 2018. The antenna inventory (based upon the site survey) and site photos taken from rooftop and ground level are presented in Appendices A and B, respectively.

Monitoring was performed using a Narda NBM-550 Electromagnetic Radiation Survey Meter, Serial #F-0360 with a Narda EA5091-shaped probe with a frequency range of 300kHz-50 GHz. The meter was last calibrated on June 23, 2017. This meter was programmed to measure the total power density for all electromagnetic radiation within the 300kHz-50GHz frequency range and report the power density as a percent of the FCC's controlled MPE. During this survey, no spatially averaged readings above 0.7282% of the FCC's occupational MPE (3.6410% of the general public MPE) were encountered on any rooftop surface. This maximum spatially averaged reading was measured at roof level on the northeast portion of the rooftop, as shown in the monitoring site plan in Appendix E. In addition, no spatially averaged readings greater than 0.0665% of the FCC's uncontrolled or general public MPE were encountered at

ground level. A site plan depicting monitoring locations and measurements of power density can be found in Appendix E. Appendix F contains notes from the site survey.

Access to this site is accomplished via a stairwell penthouse located on the main roof. The roof access door is unlocked, but you must give pre-approval to access rooftop from building management.

At the time of the site survey, it was noted that there was a yellow "Guidelines" sign, and yellow "Caution" sign, and blue "Notice" sign on the roof access door. A blue "Notice" and yellow "Guidelines" signs are located on the existing equipment door. Blue "Notice" sign posted on the penthouse access door.

This analysis report contains both theoretical modeling calculations as well as actual onsite Power Density measurements. The theoretical modeling calculations will typically show a worst case scenario as it is typically modeled after the largest channel grouping and power level possible at the site. Onsite Monitoring will give a snapshot of the composite RF field levels at the time the survey was completed. Due to this, there is a possibility that large differences may be seen between the modeled RF conditions and those observed in the field. Additionally, this becomes a multiplier effect if multiple carriers are modeled at maximum powers.

4.0 Sirius Antenna Inventory

Sector	Antenna Number	Antenna Make	Antenna Model	Height (ft) Above Nearest Walking Surface	Azimuth (°)	Technology	Frequency Band	Power Per Channel (W)	Number of Channels	ERP (W)
Sirius Panel	1	Til-Tek	TA-2304-2-DAB-L	25.4	340	Sirius	2330	200	2	3864
Sirius Dish	2	Prodelin	1183	3	127	Sirius	RX only	RX only	RX only	N/A
Sirius Dish	3	Til-Tek	2324-LHCP	3	128	Sirius	RX only	RX only	RX only	N/A

Sirius Site Inventory and Power Values

5.0 Summary and Conclusions

All calculations performed for this analysis yielded results that were within the allowable limits for exposure to RF Emissions. Based on predictive modeling, there are no modeled exposures on any accessible main roof level-level walking/working surface related to Sirius's equipment in the area that exceed the FCC's occupational and/or general public exposure limits at this site. Installation of mitigation measures will bring the proposed site into compliance.

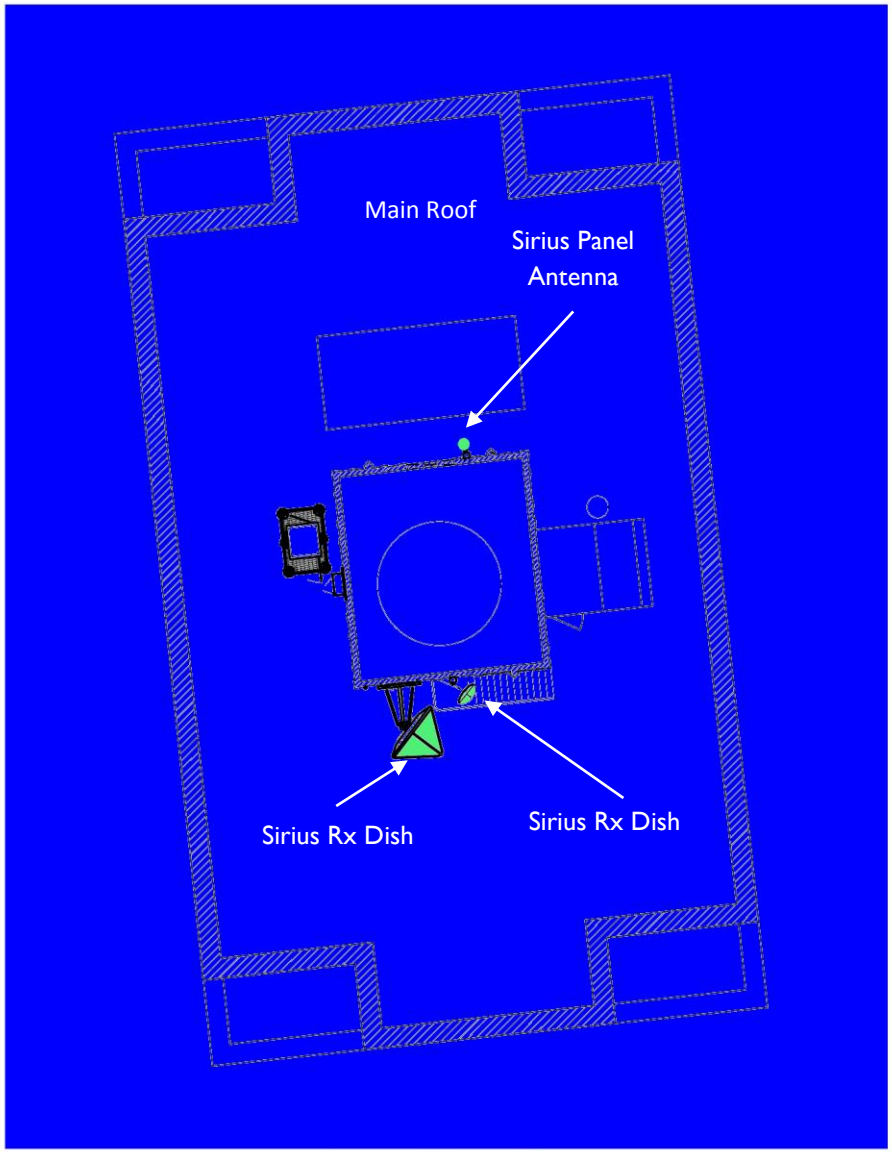
The anticipated maximum contribution from each sector of the proposed Sirius facility is 27.8000% of the allowable FCC established general public limit (5.5600% of the FCC occupational limit). This was determined through calculations along a radial from each sector taking full power values into account as well as actual vertical plane antenna gain values per the manufacturers supplied specifications for gain.

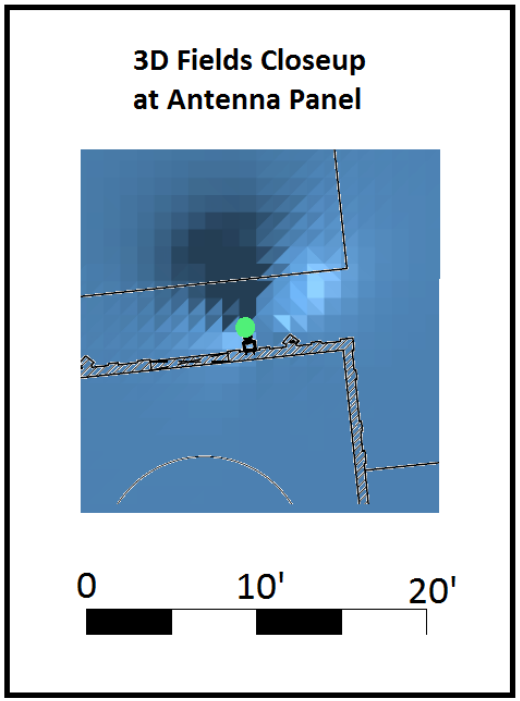
A site is considered out of compliance with FCC regulations if there are areas that exceed the FCC exposure limits and there are no RF hazard mitigation measures in place. Any carrier which has an installation that contributes more than 5% of the applicable MPE must participate in mitigating these RF hazards. For this facility, the composite values calculated were within the allowable 100% threshold standard per the federal government.

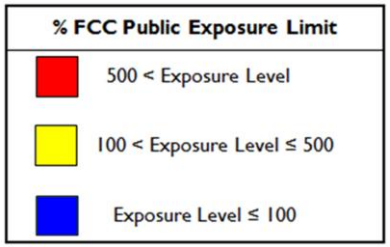
Based on the FCC criteria, there are no measured areas on any accessible rooftop and ground-level walking/working surface related to the existing site conditions that exceed the FCC's occupational and general public exposure limits at this site.

EBI's modeling indicates that there are no areas on the walking/working surfaces at the rooftop level in front of the Sirius antennas that may exceed the FCC standards for general population and/or occupational exposure. To reduce the risk of exposure and/or injury, EBI recommends that access to the rooftop or areas associated with the active antenna installation be restricted and secured where possible. In order to alert any workers potentially accessing the site, a blue Notice sign and a yellow Guidelines sign are recommended for installation at the access to the rooftop as depicted on the Signage Plan – Attachment 1.

Attachment 1: MPE Analysis and Recommended Signage







Post at roof access points

Sirius Antennas

Sign	Sign Count	Description	Posting Instructions
	1	**Blue Notice Sign** Used to notify individuals they are entering an area where the power density emitted from transmitting antennas may exceed the FCC's MPE limit for the general public or occupational exposures.	Securely post at all access points to the site in a manner conspicuous to all individuals entering thereon.
	1	**Guidelines** Informational sign used to notify workers that there are active antennas installed and provide guidelines for working in RF environments.	Securely post at all access points to the site in a manner conspicuous to all individuals entering thereon.
	N/A	**Yellow Caution Sign** Used to notify individuals that they are entering a hot spot where either the general public or occupational FCC's MPE limit is or could be exceeded.	Not required.
	N/A	**Red Warning Sign** Used to notify individuals that they are entering a hot zone where either the general public or occupational FCC's MPE limit has been exceeded.	Not required.
Notes:	**The proposed site will be compliant with the installation of the mitigation measures.** The actual number of access points may vary based on documentation provided and/or if a survey was conducted. Recommended signage locations are based on Sirius's guidance for the worst-case scenario in each sector. The actual signage installation is dependent on accessibility of the facility and antennas. Locations deemed inaccessible due to OSHA safety standards (proximity to unprotected roof edge or slope, etc.) will be compliant upon installation of recommended signage at the closest accessible point.		

Appendix A: Certifications

Reviewed and Approved by:

sealed 18jun2018

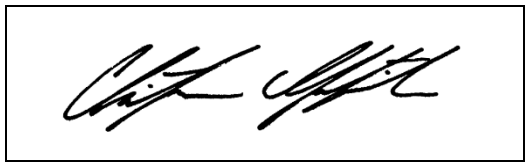
Michael McGuire
Electrical Engineer

Note that EBI's scope of work is limited to an evaluation of the Radio Frequency – Electromagnetic Energy (RF-EME) field generated by the antennas and broadcast equipment noted in this report. The engineering and design of the building and related structures, as well as the impact of the antennas and broadcast equipment on the structural integrity of the building, are specifically excluded from EBI's scope of work.

Preparer Certification

I, Christopher Ilgenfritz, state that:

- I am an employee of EnviroBusiness Inc. (d/b/a EBI Consulting), which provides RF-EME safety and compliance services to the wireless communications industry.
- I have successfully completed RF-EME safety training, and I am aware of the potential hazards from RF-EME and would be classified "occupational" under the FCC regulations.
- I am fully aware of and familiar with the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation.
- I have been trained on RF-EME modeling using RoofView® modeling software.
- I have reviewed the data collected during the site survey and provided by the client and incorporated it into this Site Compliance Report such that the information contained in this report is true and accurate to the best of my knowledge.



Appendix B: Federal Communications Commission (FCC) Requirements

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu W/cm^2$). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limit for the 700 and 800 MHz Bands is 467 $\mu W/cm^2$ and 567 $\mu W/cm^2$ respectively, and the general population exposure limit for the PCS and AWS bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

A site is considered out of compliance with FCC regulations if there are areas that exceed the FCC exposure limits and there are no RF hazard mitigation measures in place. Any carrier which has an installation that contributes more than 5% of the applicable MPE must participate in mitigating these RF hazards.

Additional details can be found in FCC OET 65.

Appendix C: Antenna Inventory

Below in the Appendix C Table are the technical specifications of the antennas located at the site. Physical verification was made to ensure technical specification accuracy. Antenna specifications presented herein are based on direct evidence from an antenna or transmitter cabinet, information from the site manager or building manager, information from the licensees, educated estimates by the field technician or a combination of some or all of these sources. "N/A" (not available) is used if any of the following information was not obtainable or verifiable to an acceptable certainty.

Ant #	Type	Manufacturer/Model	Azimuth (°)	Height Above Nearest Walking Surface (feet)	Carrier
1	Microwave	N/A	330	30	N/A
2	Microwave	N/A	345	30	N/A
3	Microwave	N/A	60	30	N/A
4	Microwave	N/A	345	30	N/A
5	Microwave	N/A	280	30	N/A
6	Microwave	N/A	135	30	N/A
7	Microwave	N/A	135	30	N/A
8	Microwave	N/A	135	30	N/A
9	Microwave	N/A	80	30	N/A
10	Microwave	N/A	170	30	N/A
11	Microwave	N/A	170	30	N/A
12	Omni	N/A	Omni	30	N/A
13	Omni	N/A	Omni	30	N/A

Appendix D: Photographs

1.	Site Overview

2.	Existing Signage at Main Roof Access Door

3.	Main Roof Access Door

4.	General Rooftop Overview - North

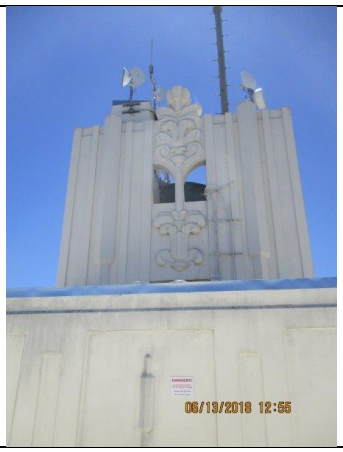
5.	General Rooftop Overview - North

6.	General Rooftop Overview - East

7.	General Rooftop Overview - South

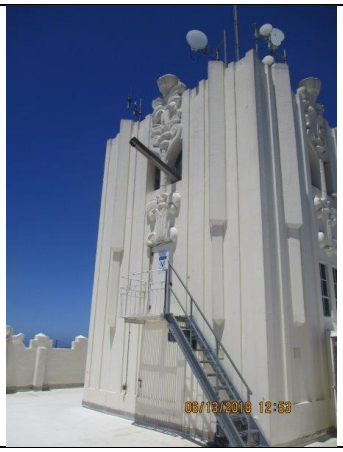
8.	General Rooftop Overview - South

9.	General Rooftop Overview - West

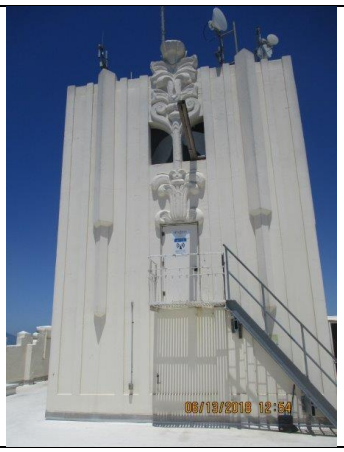


10.	Penthouse Overview - North

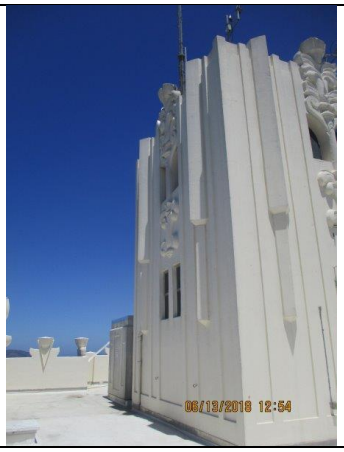
11.	Penthouse Overview - Northeast



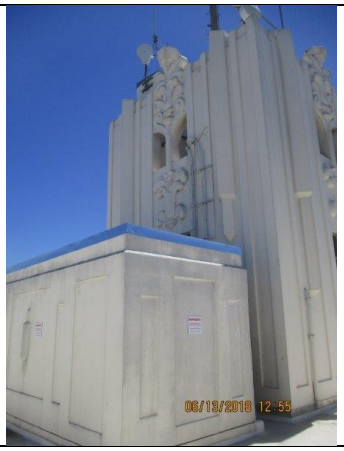
12.	Penthouse Overview - Southeast



13.	Penthouse Overview - South

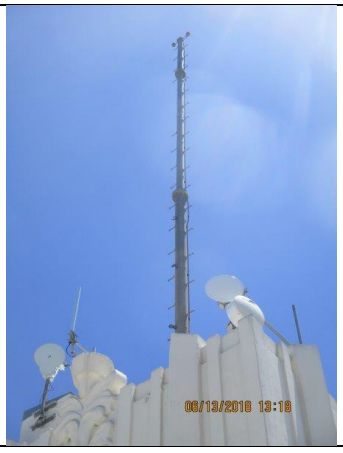


14.	Penthouse Overview - West

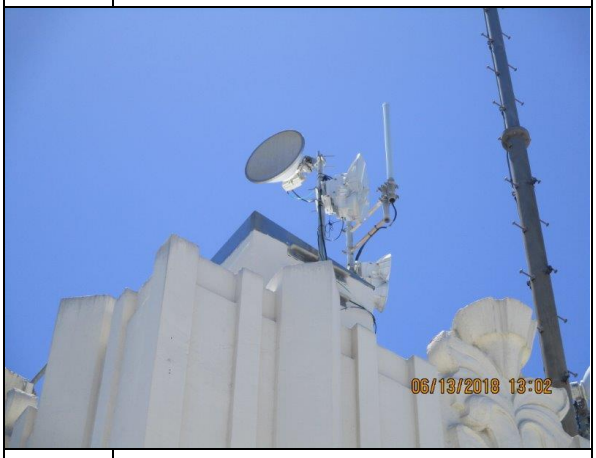


15.	Penthouse Overview - Northwest

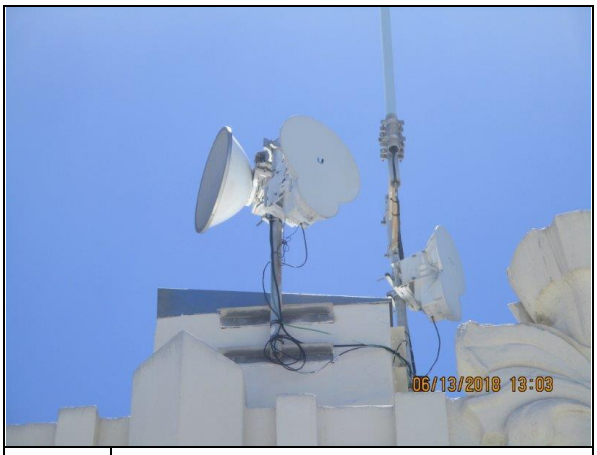
16.	Microwave and Omni Antennas on Northeast and Northwest side of Penthouse



17.	Microwave and Omni Antennas on Northeast and Northwest side of Penthouse



18.	Microwave and Omni Antennas on Northeast side of Penthouse

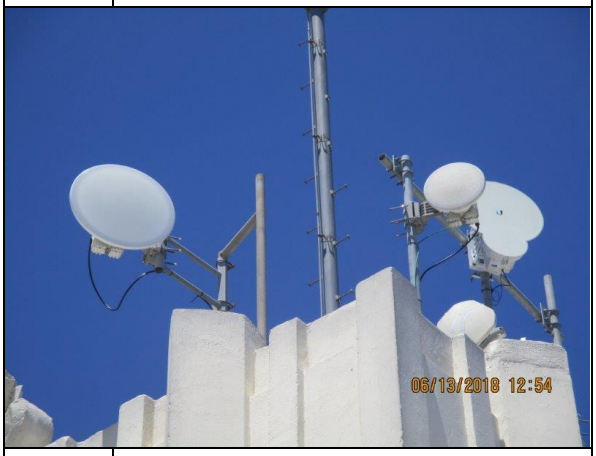


19.	Microwave and Omni Antennas on Northeast side of Penthouse

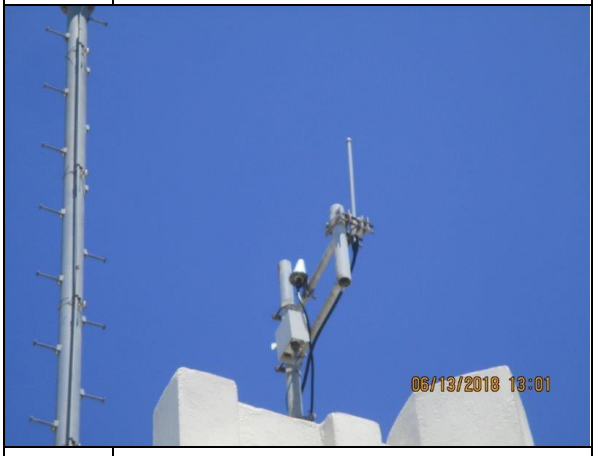
20.	Microwave Antennas on Northwest side of Penthouse

21.	Microwave Antennas on Southeast side of Penthouse

22.	Microwave Antennas on Southeast side of Penthouse



23.	Microwave Antennas on Southeast side of Penthouse



24.	Omni Antenna on Southwest side of Penthouse

25.	Existing Unknown Carrier Equipment Shelter

26.	Existing Signage on Existing Unknown Carrier Equipment Shelter

27.	Area between Equipment Shelter and Penthouse

28.	Stairway to Penthouse Access Door

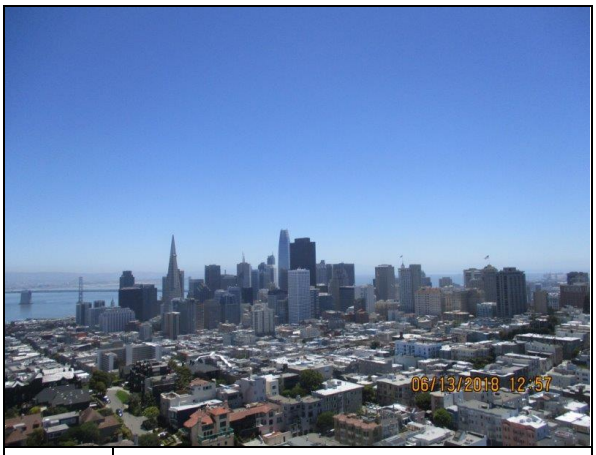
29.	Existing Signage on Penthouse Access Door

30.	Microwave Antennas on Adjacent Building Northeast

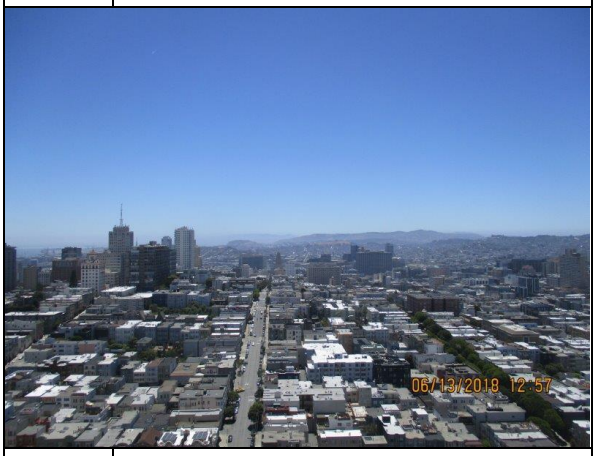
31.	Directional Photo - North

32.	Directional Photo - Northeast

33.	Directional Photo - East



34.	Directional Photo - Southeast



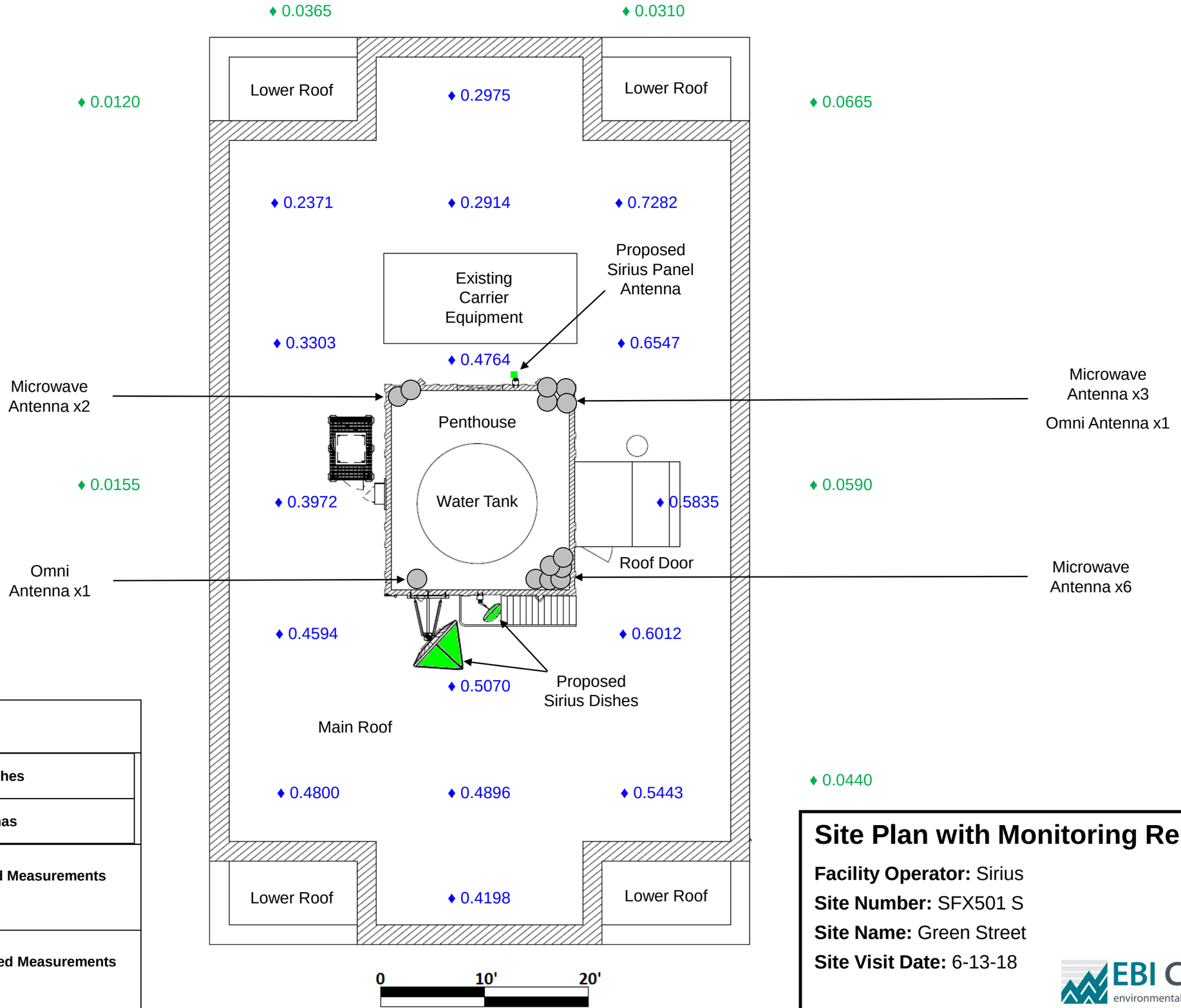
35.	Directional Photo - South

36.	Directional Photo - Southwest

37.	Directional Photo - West

38.	Directional Photo - Northwest

Appendix E: Site Plan with Monitoring Locations



LEGEND

	Proposed Sirius Antenna and Dishes
	Existing Unknown Carrier Antennas

♦ **Blue numbers are Spatially-Averaged Measurements**

% **FCC Occupational Limit**

♦ **Green numbers are Spatially-Averaged Measurements**

% **FCC General Public Limit**

Site Plan with Monitoring Results

Facility Operator: Sirius

Site Number: SFX501 S

Site Name: Green Street

Site Visit Date: 6-13-18

EBI Consulting
environmental | engineering | due diligence

Appendix F: Site Survey Data

Surveyor Name	David Keirstead	Site Visit Date	June 15, 2018

Site Information	
Green Street 1101 Green Street San Francisco, California 94109	**Site Coordinates (NAD83):** 37.797969; -122.417469

MONITOR INFORMATION **PROBE INFORMATION**

Monitor Model #	NMB-550	Probe Model #	EA5091
Monitor Serial #	F-0360	Probe Serial #	01207
Calibration Date	06/23/17	Calibration Date	06/28/17

CLIMATE INFORMATION

Temperature (°F)	70
Sunny / Overcast / Cloudy	Sunny
No Wind / Mild Breeze / Windy	No Wind
Rain / Drizzle / Fog / Snow	N/A
Other noteworthy weather factors that might influence readings	N/A

ACCESS INFORMATION

Type of facility	20 Story Residential Building
Property owner and contact information	Charlie Feick: Charlie@comsiteswest.com
Who manages access? (e.g. security, landlord, no one)	Doorman
How is access managed? (locks, sign-in, etc.)	Pre-Approval
Ease of access, in general (e.g. ease of breaching any physical access controls)	The roof door is unlocked but you must get pre-approval for roof access by contacting Charlie Feick

Appendix G: Roofview Export

StartMapDefinition

Roof Max Y	Roof Max X	Map Max X	Map Max Y	Y Offset	X Offset	Number of envelope			List Of Areas
170	160	180	170	10	10	1	$U$41:$FX	$U$41:$FX$210	$U$41:$FX$210

StartSettingsData

Standard	Method	Uptime	Scale Factc	Low Thr	Low Color	Mid Thr	Mid Color	Hi Thr	Hi Color	Over Color	Ap Ht Mult	Ap Ht Method
4	2	3	1	100	1	500	2	5000	3	3	1.5	1

StartAntennaData It is advisable to provide an ID (ant 1) for all antennas

ID	Name	(MHz) Freq	Trans Power	Trans Count	Coax Len	Coax Type	Other Loss	Input Power	Calc Power	Mfg	Model	(ft) X	(ft) Y	(ft) Z	Type	(ft) Aper	dBd Gain	BWdth Pt Dir	Uptime Profile	ON flag
Sirus Panel	Sirius	2330	200	2	0	0	1		317.7313	Til-Tek	TA-2304-2-DAB-L	50	50	25.3		3.291667	10.85	120;340		ON•

StartSymbolData

Sym	Map Mark	Roof X	Roof Y	Map Label	Description (notes for this table only)
Sym		5	35	AC Unit	Sample symbols
Sym		14	5	Roof Access	
Sym		45	5	AC Unit	
Sym		45	20	Ladder	

San Francisco Planning Department Wireless Telecommunications

Services Facility Siting Checklist for Sirius Site: SFX501 S

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

There are eleven (11) microwave and two (2) omni antennas existing on the rooftop located at 1101 Green Street, San Francisco, CA 94109. These antennas belong to other carriers at the site that could not be identified during the site survey. See appendix E for the location of the existing antennas.

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

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

3. Provide a narrative description of the proposed work for this project. The description should be consistent with scope of work for the final installation drawings.

This project involves the addition of one (1) proposed Sirius XM Panel antenna, one (1) Sirius XM RX dish, and one (1) Sirius XM VSAT dish on an existing rooftop located at 1101 Green Street in San Francisco, California.

4. Provide an inventory of the make and model of antennas or transmitting equipment being installed or removed. The antenna inventory should also include the proposed installation height above the nearest walking/working surface as well as the height above ground level. Also include the orientations of the antennas.

Existing and Proposed Antennas

Carrier	Antenna Number	Type	Antenna Make	Antenna Model	Height (ft) Above Nearest Walking Surface	Height (ft) Above Ground	Azimuth	Antenna Status (existing or proposed)
Sirius	1	Panel	Til-Tek	TA-2304-2-DAB-L	25.4	258.4	340	Proposed
Sirius	2	Dish	Prodelin	1183	3	236	127	Proposed
Sirius	3	Dish	Til-Tek	2324-LHCP	3	236	128	Proposed

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. Please include a description of any assumptions made when doing the calculations.

At the nearest walking/working surfaces to the existing antennas, the maximum power density is 0.0170 mW/cm2, which is 3.641 percent of the FCC's general public limit (0.7282 percent of the FCC's occupational limit). Values based on collected field measurements.

At ground level, the maximum power density generated by the existing antennas on-site is 0.0003 mW/cm2, which is 0.0133 percent of the FCC's general public limit (0.0665 percent of the FCC's occupational limit). Values based on collected field measurements.

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 the frequency band width (i.e. PCS, AWS, Cellular, etc…)

Effective Radiated Power (ERP) per Frequency and Sector		
Antenna	**Frequency (MHz)**	**ERP (Watts)**
Panel	2330	3864
RX	N/A	N/A
VSAT	N/A	N/A

7. Based on the antenna orientation, describe the maximum cumulative predicted radio frequency energy level for any nearby publicly accessible building or area. Include the address of the building or structure and the maximum predicted amount of radio frequency energy both as a percent of the FCC standard and in mW/cm2. Include a description of any assumptions made when doing these calculations.

The nearest publicly accessible area is ground/street level (approx. 260 ft). At ground level, the maximum power density generated by all antennas for this proposed site is 0.003 mW/cm2, which is 0.3000 percent of the FCC's general public limit (0.0600 percent of the FCC's occupational limit).

8. Report the estimated cumulative radio frequency fields for the proposed site at ground level. State the percentage of the FCC standard utilized and power density exposure level in mW/cm2.

At ground level, the maximum power density generated by all antennas for this proposed site is 0.003 mW/cm2, which is 0.3000 percent of the FCC's general public limit (0.0600 percent of the FCC's occupational limit).

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. Indicate if this will include any walking/working surfaces or if it extends only into free space.

Based on worst-case modeling at antenna face level there are modeled exceedances of the general public and occupational limits. It is predicted that there will be an occupational exceedance in front of the Sirius panel antenna within 6 feet and a general public exceedance within 12 feet. These exceedances are into free space and do not impact any walking working/surface at this site.

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. At a minimum, signs should be provided in English, Spanish and Chinese.

Access to the rooftop of the site is locked. To reduce the risk of exposure and/or injury, EBI recommends that access to the rooftop or areas associated with the active antenna installation continue to be restricted and secured where possible. In order to alert any workers potentially accessing the site, a blue Notice sign and a yellow Guidelines sign are recommended for installation at the access to the rooftop.

11. Statement on who produced this report and qualifications. Report must be signed off by a licensed engineer expert in the field of radio frequency emissions. Typically, this is a licensed electrical engineer. The engineer must be licensed in the State of California.

Please see report for this information.

EXHIBIT G

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 : *XM Satellite Radio* **Planner:** *Elizabeth Watty*

RF Engineer Consultant: *EBI Consulting* **Phone Number:** *(781) 273-2500*

Project Address/Location: *1101 Green St*

Site ID: *2811* **SiteNo.:** *SFX501S* **Report Dated:** *6/15/2018*

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: **13**

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: **3864** 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: **0.3** %

Distance to this nearby building or structure: **260** 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: **0.003** mW/cm^2 Maximum RF Exposure Percent: **0.3** %

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: **12**

☑ 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 13 antennas existing operated by Next Nav, installed on the roof top of the building at 1101 Green 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. XM Satellite Radio proposes to install 3 new antennas. The antennas are mounted at a height of 236 and 258.4 feet above the ground. The estimated ambient RF field from the proposed XM Satellite Radio transmitters at ground level is calculated to be 0.003 mW/sq cm., which is 0.3 % of the FCC public exposure limit. The three dimensional perimeter of RF levels equal to the public exposure limit extends 12 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. Access to the roof doors shall be kept locked.

___ **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

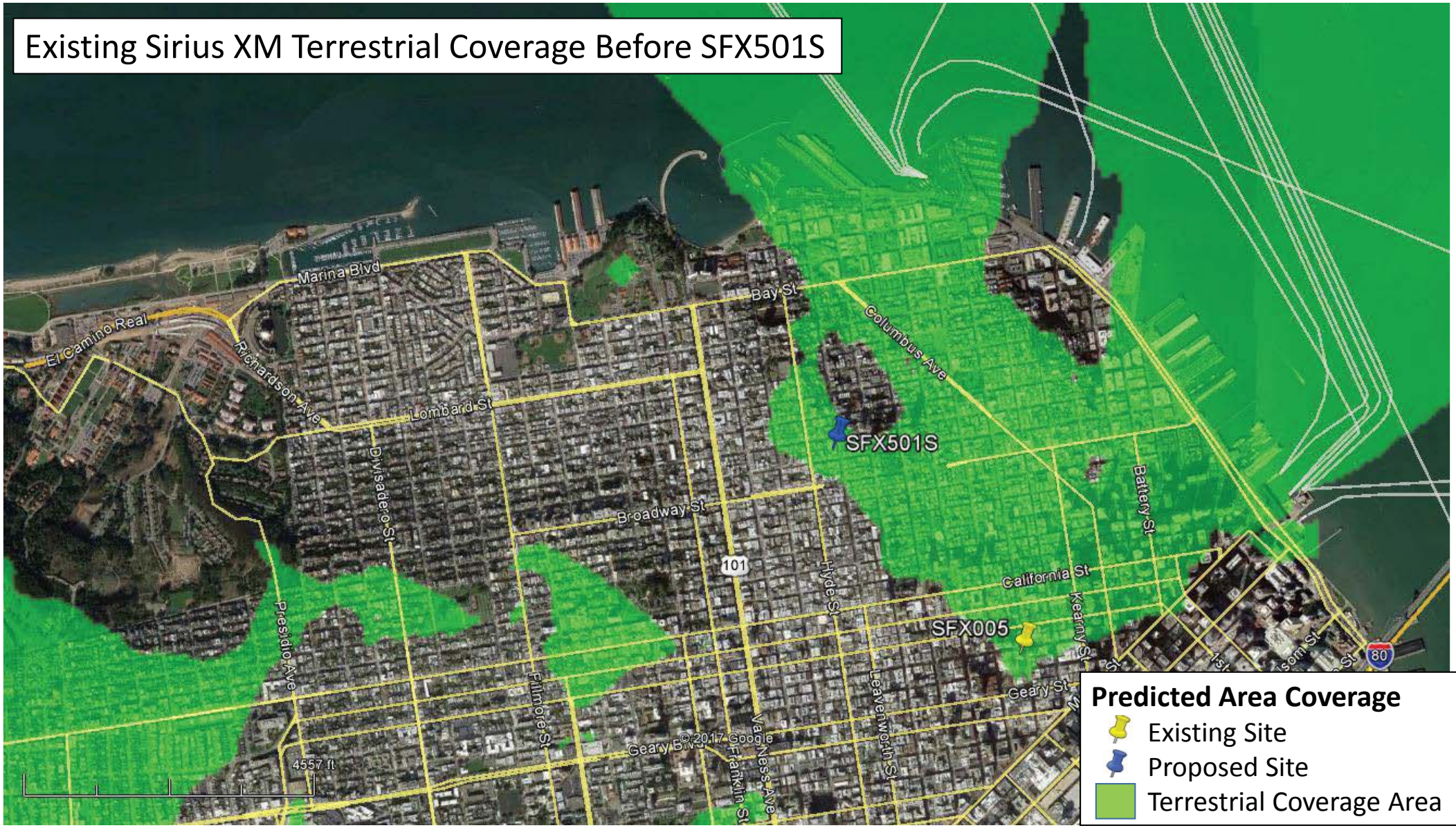
Charges to Project Sponsor (in addition to previous charges, to be received at time of receipt by Sponsor)

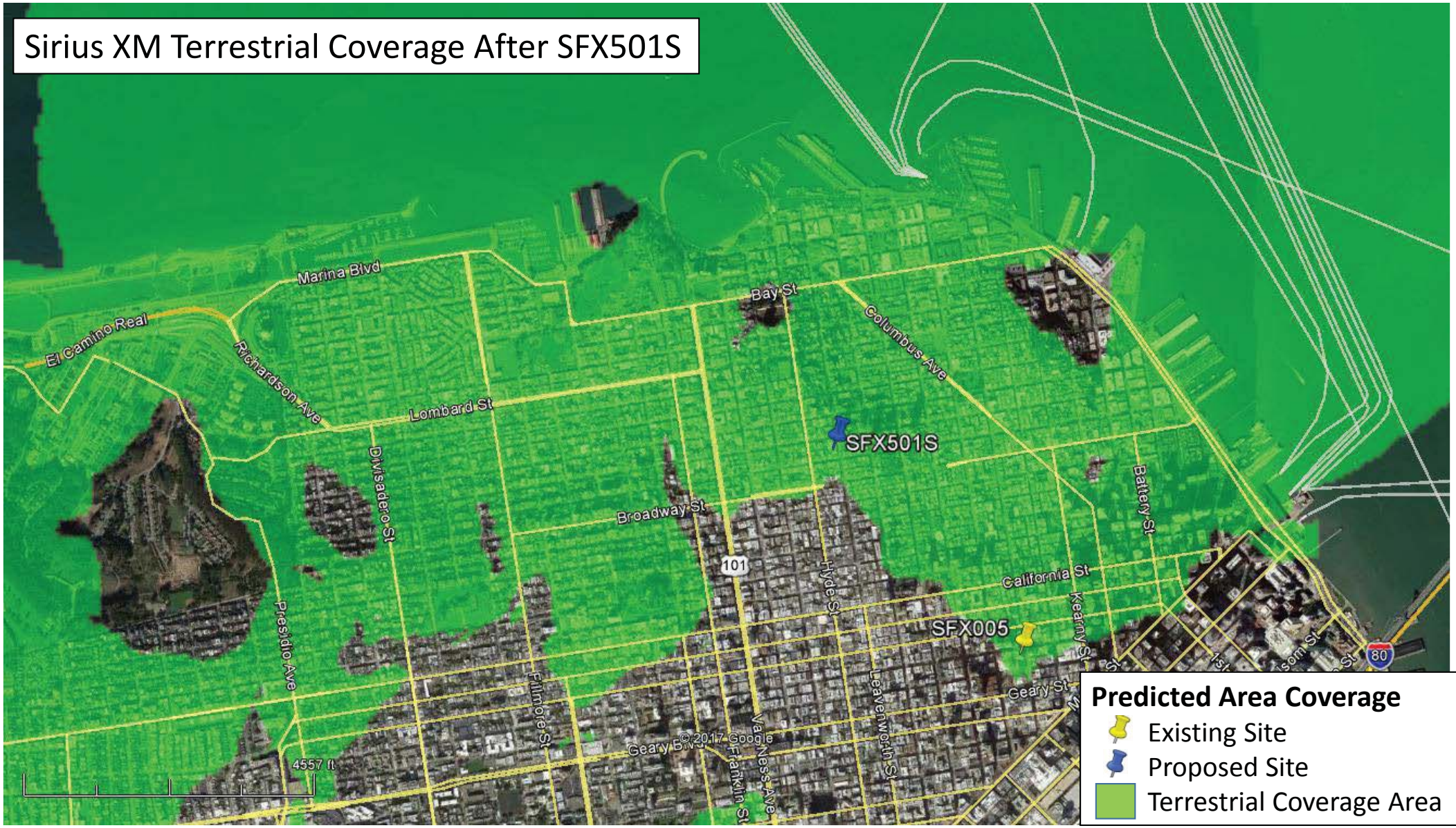
Dated: 6/22/2018

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

EXHIBIT H


Existing Sirius XM Terrestrial Coverage Before SFX501S
Marina Blvd
El Camino Real
Richardson Ave
Lombard St
Bay St
Columbus Ave
SFX501S
Broadway St
Divisadero St
Presidio Ave
Filmore St
Hyde St
101
Battery St
California St
Kearny St
SFX005
Geary St
Geary Blvd
Van Ness Ave
Franklin St
Leavenworth St
4557 ft
© 2017 Google
80
Predicted Area Coverage
Existing Site
Proposed Site
Terrestrial Coverage Area


Sirius XM Terrestrial Coverage After SFX501S
Marina Blvd
El Camino Real
Richardson Ave
Lombard St
Bay St
Columbus Ave
SFX501S
Broadway St
Divisadero St
Presidio Ave
Filmore St
Hyde St
Battery St
California St
Kearny St
SFX005
Geary St
Geary Blvd
Van Ness Ave
Franklin St
Leavenworth St
101
80
4557 ft
© 2017 Google
Predicted Area Coverage
Existing Site
Proposed Site
Terrestrial Coverage Area

SFX501S one mile radius site list and distances

Site Number	Distance	Name	Street Number	Street Name	Cross Street	Latitude	Longitude
SFX501S	NA	Green St	1101	Green St	Leavenworth St	37.7983	-122.4175
SFX005	.83	Grand Hyatt	345	Stockton St	Sutter St	37.789157	-122.40728

EXHIBIT I

Radio Frequency Review for a Proposed Wireless Broadcast Installation

Applicant

Sirius XM

Site ID

SFX501S

1101 Green Street
San Francisco, CA 94109

Prepared for:
Fullerton Engineering Consultants
1100 E Woodfield Rd, Suite 500
Schaumburg, IL 60173

Reviewed by: Jason Palmer, PE-EE

FULLERTON
ENGINEERING · DESIGN

California License Number: 20363
Expiration Date: 6/30/2019

Prepared By: G Pierson
Date: December 14 2017

Introduction

The following Radio Frequency (RF) review was prepared for Sirius XM. It has been prepared by Pier Four Enterprises LLC, an independent RF consulting company with over 30 years of experience with wireless systems. The purpose of the analysis is to address the application requirements in the City of San Francisco, California for a proposed wireless broadcast installation on an existing rooftop. The location of the proposed installation is the property known as 1101 Green Street San Francisco, CA 94109.

Background

Sirius XM is licensed by the Federal Communications Commission (FCC) and maintains a wireless broadcast network throughout the country. A part of maintaining the wireless broadcast network is to address any deficiencies and strive to provide consumers with ubiquitous service. The Sirius XM network is comprised of satellites located near the equator, broadcasting their signal across the earth, and land based transmitters designed to fill in areas where the satellite coverage is inadequate. The satellite signal performs well in open areas and along open roadways without nearby obstructions. Obstructions that can block the satellite signal and cause gaps in service are nearby buildings, dense trees and hills. Since the satellites are located south of the San Francisco area, when consumers are located north of obstructions, the signal from the satellite is blocked, which creates a gap in the broadcast service. These gaps in service (from the satellites) are often experienced in cities with and in areas with steep hills. San Francisco is a city with many buildings and steep hills, creating gaps in the satellite service.

Currently Sirius XM has two (2) land based transmitters in San Francisco which supplement the satellite coverage. The coverage that can be obtained from the land based (terrestrial) installations is limited by local terrain and obstructions similar to any other land based wireless network such as public safety systems and cellular networks. Similar to the cellular networks, the Sirius XM signal requires a near line of site path to the consumers vehicles in order to provide reliable service. The range that can be obtained from a Sirius XM terrestrial installation varies between a half mile and 1 ½ miles. The actual coverage from any terrestrial installation will vary based on the elevation of the antenna, the local topography and obstructions.

Justification of a New Wireless Facility

Sirius XM has identified gaps in their wireless broadcast service in the City of San Francisco. Propagation maps have been provided in support of a new terrestrial installation on the rooftop of an existing building at 1101 Green Street. The computer generated propagation maps were created by Sirius XM using an industry accepted propagation program and depict existing coverage from only the two (2) Sirius XM existing terrestrial installations. One of these existing terrestrial installations is near the proposed installation, Site ID SFX005 located at 345 Stockton Street. Coverage from satellites is not provided but based on the background provided above, one can easily determine where satellite coverage would be unreliable (for example, on the north sides of steep hills and amongst buildings). Based on an analysis of the propagation maps, review of the topography, review of the site drawings by Fullerton Engineering Design dated 9/26/2016, and review of the buildings in the area, gaps in satellite and terrestrial coverage exist in 3 main areas. They are as follows:

- North of the ridgeline that runs from the intersection of Broadway Street and Taylor Street northwest to the intersection of Bay Street and Hyde Street.
- Along the east/west streets that run parallel to Broadway Street, Lombard Street and Marina Boulevard. Since the satellites are located near the equator, there is a hill that is 300' Above Mean Sea Level (AMSL) along Broadway Street and when vehicles are driving east/west, gaps in satellite coverage exists due to signal blockage by the hill and blockage by buildings along south sides of the streets.
- Northeast of Telegraph Hill

For reference, the Sirius XM propagation map depicting the coverage from existing terrestrial installations is attached below as Exhibit A.

The proposed Sirius XM terrestrial installation at 1101 Green Street is located on the corner of Leavenworth Street at an elevation of 300' AMSL. This location, on top of the ridgeline, almost completely satisfies the first two coverage gaps above. The third coverage gap, north of Telegraph Hill, is reduced in size. In order to fully alleviate this gap in coverage, an installation on the northwest side of the Telegraph Hill would be required and is not part of this application. Based on topography, no one location can eliminate all the gaps in coverage defined above. The placement of the proposed SFX501S installation is optimal for alleviating as many gaps in coverage as possible from one installation. The Sirius XM propagation map depicting the existing and proposed terrestrial coverage is attached below as Exhibit B.

Conclusion

Based on the analysis above, I conclude that a gap in coverage in Sirius XM coverage exists in the northern section of San Francisco. This conclusion is based on the propagation maps provided by Sirius XM (Exhibit A), which accurately depict the existing terrestrial coverage, review of the San Francisco topology, and knowledge of the characteristics of satellite broadcast propagation. The proposed installation SFX501S eliminates almost all of the identified gaps in coverage utilizing an existing structure located at 1101 Green Street in San Francisco. The additional terrestrial coverage provided by the proposed installation has been accurately demonstrated by the attached propagation map provided by Sirius XM (Exhibit B).

Please feel free to reach out to me if there are any questions regards the above review and analysis. For reference, a copy of my CV summary is attached as Exhibit C below.

Regards,

Glenn Pierson

Senior Radio Frequency Engineer

Pier Four Enterprises

Appendix

Exhibit A: Existing Sirius XM Terrestrial Coverage Before SFX501S

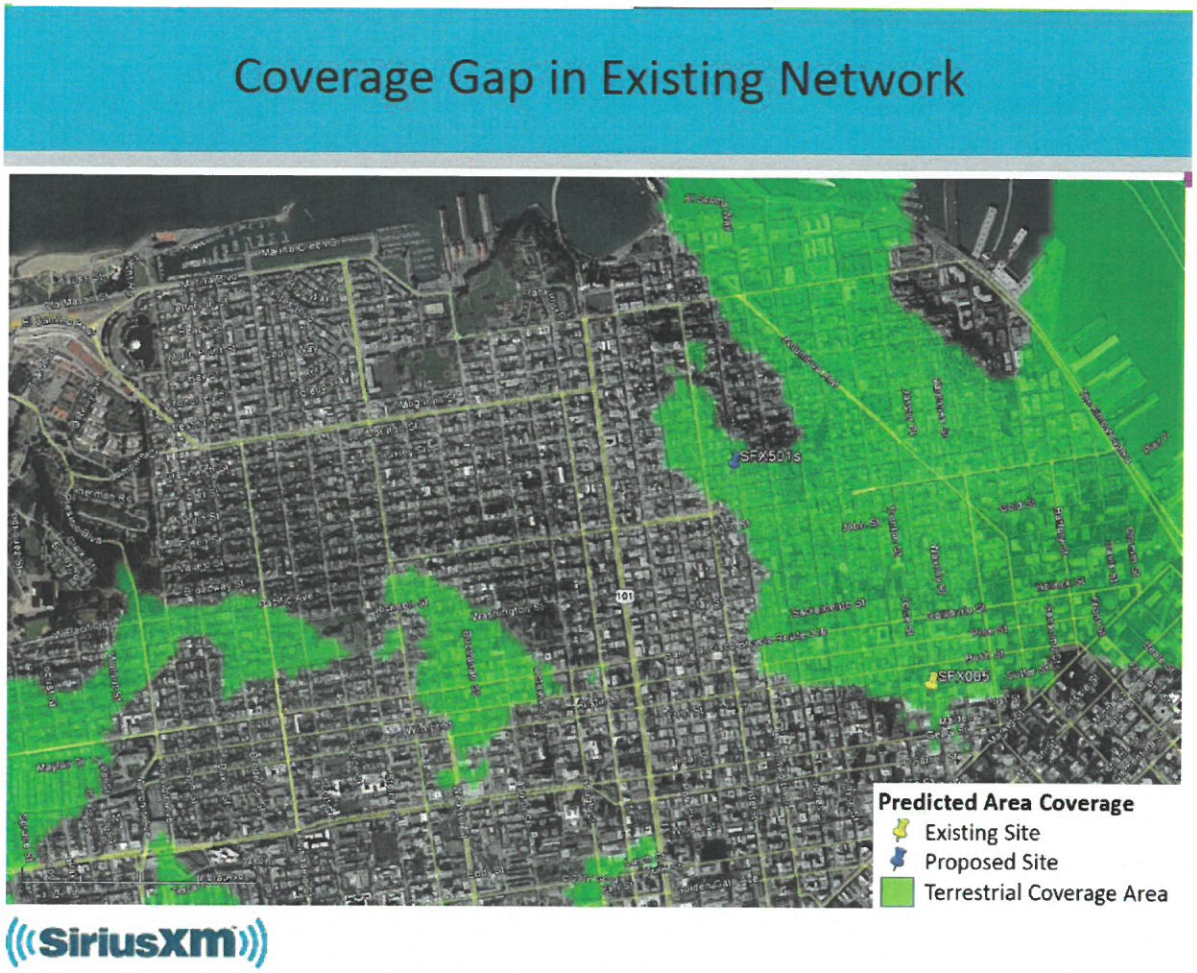


Exhibit B: Sirius XM Terrestrial Coverage After SFX501S

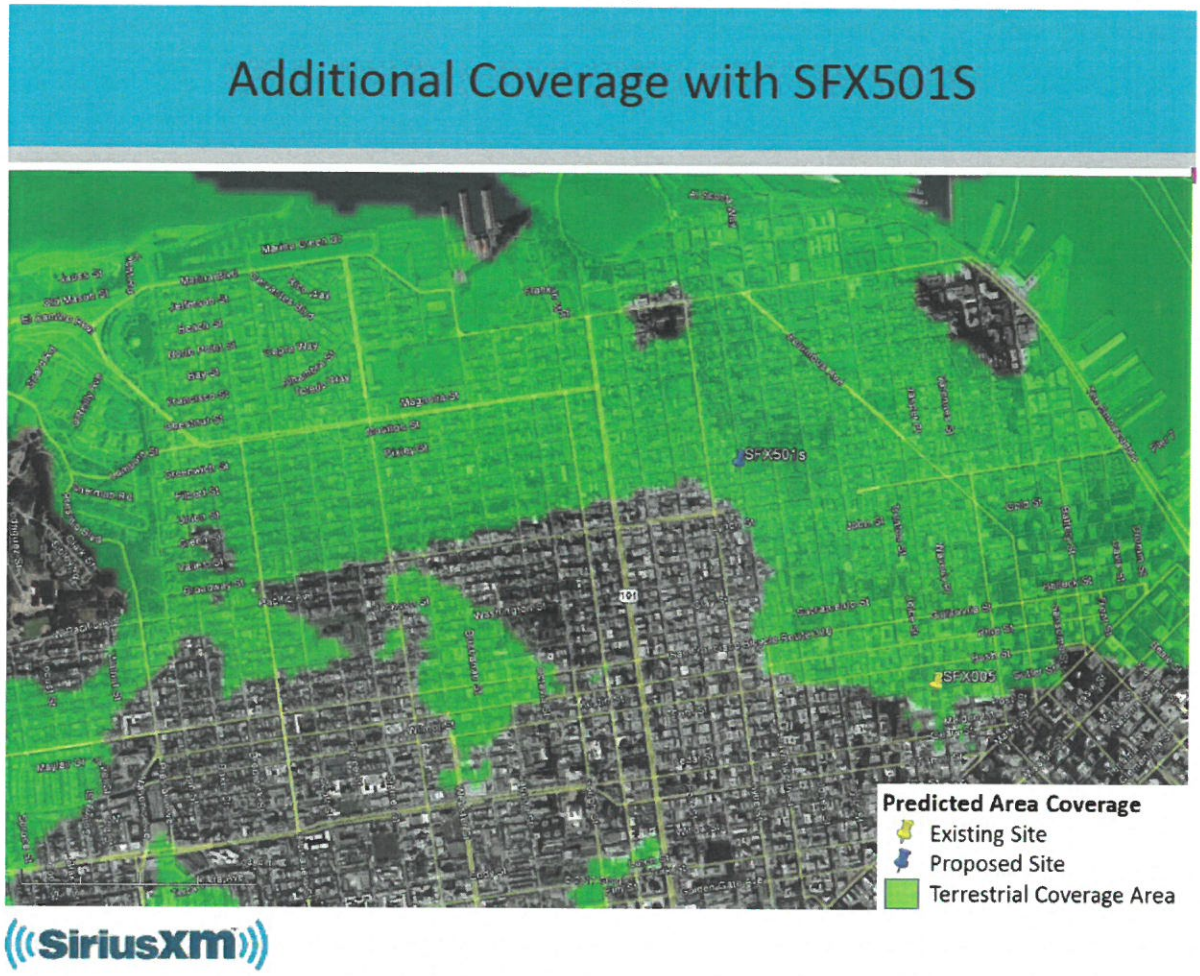


Exhibit C: Curriculum Vitae Summary

GLENN D. PIERSON
Pier Four Enterprises LLC
39 Overlook Avenue
East Hanover, NJ 07936
(201) 572-6206

EXPERIENCE

Pier Four Enterprises LLC June 2017 to Present

Verizon Wireless – 2017 – to Present
Services provided to Verizon Wireless include RF design and expert testimony.

PierCon Solutions LLC April 1998 to June 2017

Co-Owner - Responsible for providing technical consulting services to Clients in the wireless industry. Services include all aspects of Wireless System Design, Optimization, Implementation and Project Management.

Primary Clients:

Verizon Wireless – 2003 – to 2017
Services provided to Verizon Wireless include, expert testimony, and drive testing.

T-Mobile - 2006 –to 2017
Services provided includes, expert testimony, and drive testing.

Rockland County, NY – 2007 –to 2012
Services included Public Safety System Design.

Sprint – 1998 – to 2017
Services provided to Sprint-Nextel includes RF Engineering and design, project coordination, expert testimony, and new cell site planning and design.

Motorola Solutions – 2007-2017
Services provided include site design, frequency planning, project management and interference analysis.

Wireless Systems Consulting October 1996 to November 1998

Consultant - Providing Radio Frequency Engineering and Management
Clients:

Omnipoint Communications Services (currently d.b.a T-Mobile) October 1996 to September 1998

Services provided to Omnipoint included RF Engineering and design for the start-up network, training Omnipoint engineers, design and deployment of special projects, project coordination, expert testimony, and new cell site planning and design.

Bell Atlantic Mobile (currently d.b.a. Verizon Wireless) January 1991 to October 1996

Manager - New Technologies - The position focused on being a member of a small, highly skilled team responsible for implementing new products and services such as CDMA, fraud systems and voice activated dialing.

Manager - RF Design - Managed, as part of an engineering team, four engineers with the responsibility for radio engineering, expert testimony and expansion of the Northern New Jersey Cellular Network.

Senior Radio Engineer - Responsible for the Performance and Growth of the Northern NJ Cellular network.

Senior Support Engineer- Providing training and RF design assistance to 6 regions within Bell Atlantic Mobile and assigned as the Bell Atlantic Mobile representative for Telecommunications Industry Association (TIA)

Lead Radio Engineer- Provided all RF engineering support for the Baltimore/Washington Cellular system.

Motorola Communications & Electronics Inc. January 1986 to January 1991

System Engineer to Senior Systems Engineer - National Engineering Team
Primary function consisted of complete system design for major Public and Private Two Way radio systems including state wide communication systems. Responsibilities included:

Providing assistance and training to Motorola Engineers throughout the United States. Explore emerging technologies in radio communications. Continue research in the area of RF propagation and assist with the development of RF propagation programs. Customer Engineer for ConEdison.

PATENTS Co-Author on 2 US Patents relating to Cellular services.

EDUCATION New Jersey Institute of Technology
Newark, New Jersey
May 1986 Bachelor of Science, Electrical Engineering

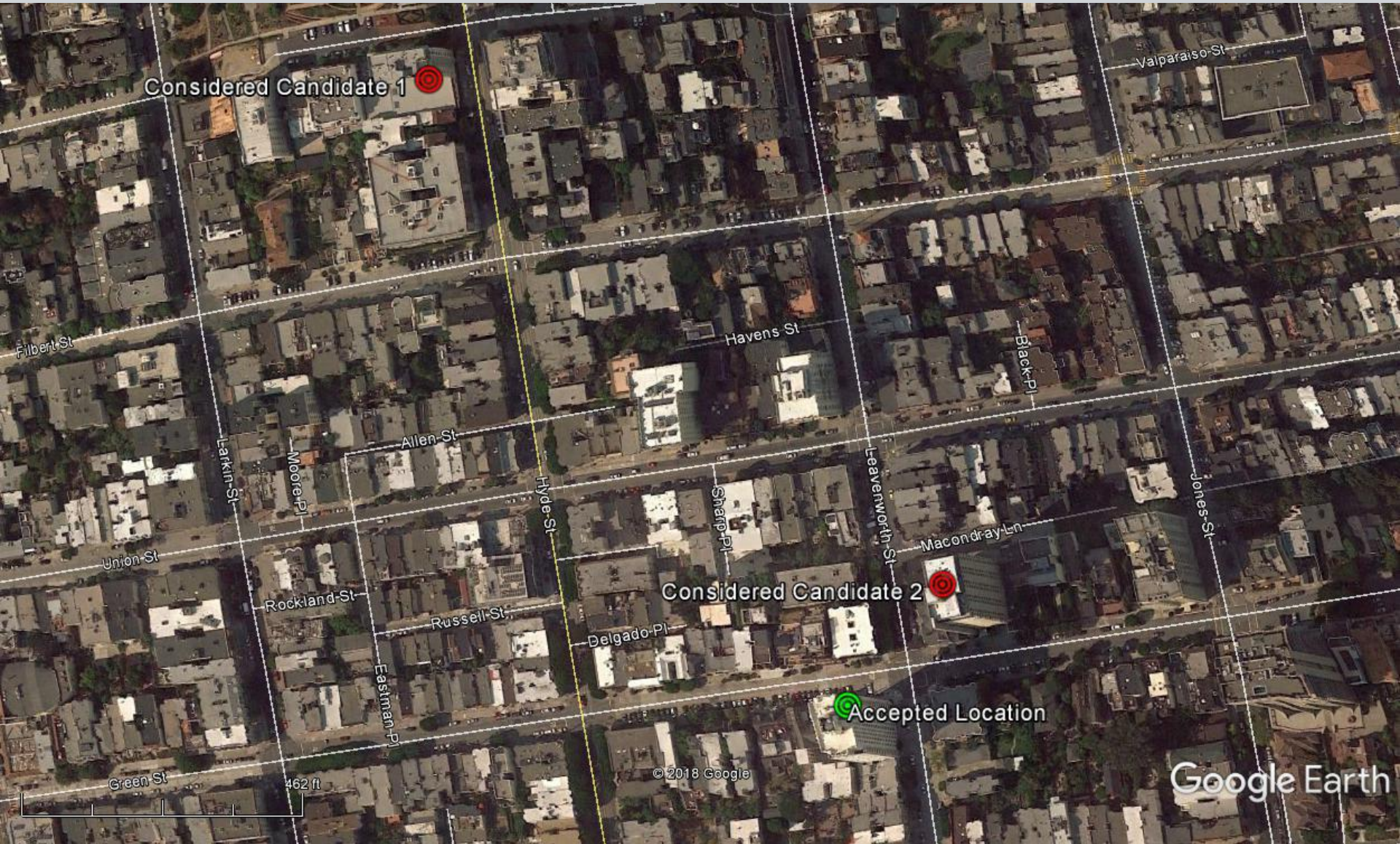
REFERENCES Will be furnished upon request

EXHIBIT J

SFX501
Analyzed Candidates

Terrestrial Engineering

Site Map


Considered Candidate 1
Considered Candidate 2
Accepted Location
Filbert St
Havens St
Valparaiso St
Black Pl
Allen St
Larkin St
Moore Pl
Hyde St
Sharp Pl
Leavenworth St
Jones St
Macondray Ln
Union St
Rockland St
Russell St
Delgado Pl
Eastman Pl
Green St
462 ft
© 2018 Google
Google Earth

Site Information

Accepted Location: 1101 Green Street San Francisco, CA

Reason for Acceptance: Site is of adequate height, optimal location, and meets coverage objective.

Existing facilities at this site include (11) microwave and two (2) omni antennas existing on the rooftop. These antennas belong to other carriers at the site that could not be identified during the site survey.

Considered Candidate 1: 1201 Greenwich Street San Francisco, CA

Reason for disqualification: Site is too far north and will not satisfy the coverage objective

Zoning = RM-2 - Disfavored Site

Considered Candidate 2: 1070 Green Street San Francisco, CA

Reason for disqualification: Antenna placement not optimal and does not meet coverage objective.

Zoning = RM-2 - Disfavored Site

SiriusXM