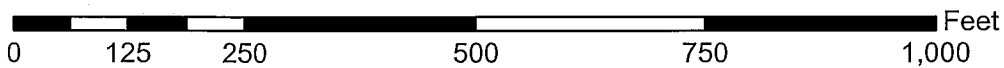


<b>Location:</b>	611 E. 20 <sup>th</sup> St.
<b>Assessor's Parcel Number:</b>	021 -0274-001-00
<b>Proposal:</b>	To modify a wireless telecommunications facility located on the rooftop of an apartment building in a residential neighborhood including installation of screen walls for concealment.
<b>Applicant /</b>	Michelle Weller/Cortel LLC
<b>Phone Number:</b>	(925) 997-1312
<b>Owner:</b>	Miller-Ravetti Co.
<b>Planning Permits Required:</b>	Major Conditional-Use Permit with additional findings for a Macro facility in a residential zone; Regular Design Review with additional findings for a Macro facility
<b>General Plan:</b>	Mixed Housing Type Residential
<b>Zoning:</b>	RM-4 Mixed Housing Type Residential Zone – 4
<b>Environmental</b>	Exempt, Section 15301 of the State CEQA Guidelines:
<b>Determination:</b>	Existing Facilities; Section 15183 of the State CEQA Guidelines: Project consistent with a Community Plan, General Plan or Zoning
<b>Historic Status:</b>	Non-Historic Property; Survey rating: D3 (minor importance)
<b>Service Delivery District:</b>	III
<b>City Council District:</b>	2
<b>Date Filed:</b>	September 22, 2011
<b>Staff Recommendation:</b>	Approve with conditions
<b>Finality of Decision:</b>	<i>Appealable to City Council within 10 days</i>
<b>For Further Information:</b>	Contact case planner <b>Aubrey Rose, Planner II</b> at (510) 238-2071 or <a href="mailto:arose@oaklandnet.com">arose@oaklandnet.com</a>

**SUMMARY**

The applicant requests Planning Commission approval of a Major Conditional Use Permit and Regular Design Review to modify a Macro telecommunications facility on an apartment rooftop including installation of screen walls for concealment. Staff recommends approval of the requested permits, subject to the Findings and Conditions of Approval.

# CITY OF OAKLAND PLANNING COMMISSION



Case File: CMD11-182  
Applicant: Michelle Weller/Cortel (for carrier: Clearwire)  
Address: 611 E. 20th Street  
Zone: RM-4

## **PROPERTY DESCRIPTION**

The property is a corner lot at a t-intersection and contains a four-story apartment building with beige stucco siding and a ground floor garage. The building measures 45-feet in height and contains a parapet along the roofline that varies in height, adding an additional two feet in height at minimum. The rooftop contains a penthouse with locked access containing a shed roof that is nine feet in height on the low end. The surrounding area is a hilly mixed housing type neighborhood. The hill slopes downward to the west towards the Eastlake district located at the intersection of Park Boulevard and East 18<sup>th</sup> Street.

The property contains a Macro Telecommunications Facility on the rooftop. The facility consists of twelve antennas (nine active, three “dummy”) divided between three antenna sectors at the north, south, and east corners of the rooftop (three masts per sector). There are three cabinets mounted on an unscreened platform west of the penthouse. Antennas measure 4’-8” in height and are mounted vertically on a PVC guardrail attached 4’-2” above the roof to top out at 53’4” in height. All but one antenna are set back nine feet from the roofline; one antenna facing East 20<sup>th</sup> Street towards the 6<sup>th</sup> Avenue corner is set back 7’-6”. Two microwave dishes and a GPS antenna are attached to the penthouse rooftop.

## **PROJECT DESCRIPTION**

The proposal is to swap several items and install screening (“screen walls”) in front of the antenna sectors. Specifically, the project would remove the three dummy antennas and three sets of guardrail; install three, six-foot tall panel antennas on existing masts to top out at fifty-four feet in height, three, nine-foot tall radio frequency (RF) transparent antenna screen walls (one in front of each sector), one new GPS antenna, six new Remote Radio Units (RRU) on existing masts, three new filters on the RRU’s, and hybrid cabling with conduits from new equipment to antennas along an existing antenna cabling path. The three equipment cabinets would be replaced by two cabinets on the same platform without screening.

The original proposal did not contain screening because the current facility has no screening. However, staff worked with the applicant to develop revised plans that contain screen walls to conceal antennas because the new antennas are larger than the existing.

## **BACKGROUND**

### **Limitations on Local Government Zoning Authority under the Telecommunications Act of 1996**

Section 704 of the Telecommunications Act of 1996 (TCA) provides federal standards for the siting of “Personal Wireless Services Facilities.” “Personal Wireless Services” include all commercial mobile services (including personal communications services (PCS), cellular radio mobile services, and paging); unlicensed wireless services; and common carrier wireless exchange access services. Under Section 704, local zoning authority over personal wireless services is preserved such that the FCC is prevented from preempting local land use decisions; however, local government zoning decisions are still restricted by several provisions of federal law.

Under Section 253 of the TCA, no state or local regulation or other legal requirement can prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service.

Further, Section 704 of the TCA imposes limitations on what local and state governments can do. Section 704 prohibits any state and local government action which unreasonably discriminates among personal wireless providers. Local governments must ensure that its wireless ordinance does not contain requirements in the form of regulatory terms or fees which may have the “effect” of prohibiting the placement, construction, or modification of personal wireless services.

Section 704 also preempts any local zoning regulation purporting to regulate the placement, construction and modification of personal wireless service facilities on the basis, either directly or indirectly, on the environmental effects of radio frequency emissions (RF) of such facilities, which otherwise comply with FCC standards in this regard. See, 47 U.S.C. 332(c)(7)(B)(iv) (1996). This means that local authorities may not regulate the siting or construction of personal wireless facilities based on RF standards that are more stringent than those promulgated by the FCC.

Section 704 mandates that local governments act upon personal wireless service facility siting applications to place, construct, or modify a facility within a reasonable time. 47 U.S.C.332(c)(7)(B)(ii). See FCC Shot Clock ruling setting forth “reasonable time” standards for applications deemed complete.

Section 704 also mandates that the FCC provide technical support to local governments in order to encourage them to make property, rights-of-way, and easements under their jurisdiction available for the placement of new spectrum-based telecommunications services. This proceeding is currently at the comment stage.

For more information on the FCC’s jurisdiction in this area, contact Steve Markendorff, Chief of the Broadband Branch, Commercial Wireless Division, Wireless Telecommunications Bureau, at (202) 418-0640 or e-mail "smarkend@fcc.gov".

## **GENERAL PLAN ANALYSIS**

The property is located in a Mixed Housing Type Residential area of the General Plan. The intent of the area is: *“To create, maintain, and enhance residential areas typically located near the City’s major arterials and characterized by a mix of single family homes, townhouses, small multi-unit buildings, and neighborhood businesses where appropriate.”* The proposal to expand a telecommunications facility would enhance an essential civic service in a residential district while ensuring it is better concealed. The project therefore conforms to the area’s intent and to the following Objective of the LUTE:

### **CIVIC AND INSTITUTIONAL USES.**

#### **Objective N2**

Encourage adequate civic, institutional, and educational facilities located within Oakland, appropriately designed and sited to serve the community.

Staff finds the proposal to be in conformance with the General Plan.

## **ZONING ANALYSIS**

The project requires a Major Conditional Use Permit and a Regular Design Review (non-residential) each with additional telecommunications findings because it features the expansion of a wireless telecommunications facility located within a residential zone. The property is located in the RM-4 Mixed Housing Type Residential Zone. The intent of the RM-4 zone is: “to create, maintain, and enhance residential areas typically located on or near the City’s major arterials and characterized by a mix of

single family homes, townhouses, small multi-unit buildings at somewhat higher densities than RM-3, and neighborhood businesses where appropriate.” The review must ensure the expanded facility would not generate negative impacts, aesthetic or otherwise, to the neighborhood. The proposal meets the Telecommunications Regulations for Site Location and Design Preferences by locating the antennas on a building with an existing wireless telecommunications facility, setting the antennas back from the roof edge, and concealing the facility from the public right-of-way. Site alternatives and design analyses are, therefore, not required.

Staff finds the proposal to be consistent with the Planning Code.

## **ENVIRONMENTAL DETERMINATION**

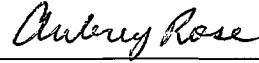
The California Environmental Quality Act (CEQA) Guidelines categorically exempts specific types of projects from environmental review. Section 15301(e) of the State CEQA Guidelines exempts project involving additions to existing facilities or structures. The proposal to upgrade an existing facility meets this description: the project would constitute a minor addition, only. The project is therefore exempt from environmental review.

## **KEY ISSUES AND IMPACTS**

The new antennas would extend nine feet above the roofline, six inches higher than the existing antennas. One existing antenna is set back 7'-6" from the roofline and does not meet the Planning Code's 1:1 height to setback requirement. The proposed antennas also not meet the setback requirement. Staff has, therefore, attached a condition of approval that the guardrail be relocated to be set back nine feet from the roofline to avoid a variance. Staff has also added conditions that the antennas be concealed behind screen walls that match the color and texture of the beige stucco building. As always, a condition of approval is attached that requires any exterior related/accessory equipment not be attached to a street facing façade and that it be colored to match the building. With these conditions, staff recommends approval of the project.


- RECOMMENDATIONS:**
1. Affirm staff's environmental determination.
  2. Approve the Major Conditional Use Permit and Regular Design Review subject to the attached Findings and Conditions of Approval.

Prepared by:



AUBREY ROSE, AICP  
Planner II

Approved by:



ROBERT MERKAMP  
Acting Zoning Manager

Approved for forwarding to the  
City Planning Commission:



SCOTT MILLER

Interim Planning and Zoning Director  
Department of Planning, Building and Neighborhood Preservation

**ATTACHMENTS:**

- A. Findings
- B. Conditions of Approval
- C. Plans
- D. Applicant's Photo-Simulations

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## Attachment A: Findings for Approval

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This proposal meets the required findings under Conditional Use Permit Procedure/General Use Permit Criteria (OMC Sec. 17.134.050), Telecommunications Regulations/Conditional Use Permit Criteria for Macro Facilities (OMC Sec. 17.128.080(C)), Design Review Procedure/Regular Design Review Criteria (OMC Sec. 17.136.040(B)) and Telecommunications Regulations/Design Review Criteria for Macro Facilities (OMC Sec. 17.128.080(B)), as set forth below. Required findings are shown in bold type; explanations as to why these findings can be made are in normal type.

### **GENERAL USE PERMIT CRITERIA (OMC SEC. 17.134.050)**

**A. That the location, size, design, and operating characteristics of the proposed development will be compatible with and will not adversely affect the livability or appropriate development of abutting properties and the surrounding neighborhood, with consideration to be given to harmony in scale, bulk, coverage, and density; to the availability of civic facilities and utilities; to harmful effect, if any, upon desirable neighborhood character; to the generation of traffic and the capacity of surrounding streets; and to any other relevant impact of the development**

The proposal to upgrade and conceal an existing facility will simultaneously enhance services and improve facility aesthetics in a residential neighborhood.

**B. That the location, design, and site planning of the proposed development will provide a convenient and functional living, working, shopping, or civic environment, and will be as attractive as the nature of the use and its location and setting warrant**

Screen walls installed to conceal an existing telecommunications facility will improve its aesthetics.

**C. That the proposed development will enhance the successful operation of the surrounding area in its basic community functions, or will provide an essential service to the community or region**

Upgrading a telecommunications facility in a residential area will enhance service given increased demands for bandwidth of advancing technologies.

**D. That the proposal conforms to all applicable regular design review criteria set forth in the regular design review procedure at Section 17.136.050**

These criteria are met as described in a following section of this Attachment.

**E. For proposals involving a One- or Two-Family Residential Facility: If the conditional use permit concerns a regulation governing maximum height, minimum yards, or maximum lot coverage or building length along side lot lines, the proposal also conforms with at least one of the following criteria:**

**1. The proposal when viewed in its entirety will not adversely impact abutting residences to the side, rear, or directly across the street with respect to solar access, view blockage and privacy to a degree greater than that which would be possible if the residence were built according to the applicable regulation, and, for conditional use permits that allow height increases, the proposal provides detailing, articulation or other design treatments that mitigate any bulk created by the additional height; or**

**2. At least sixty (60) percent of the lots in the immediate context are already developed and the proposal would not exceed the corresponding as-built condition on these lots, and, for conditional**

use permits that allow height increases, the proposal provides detailing, articulation or other design treatments that mitigate any bulk created by the additional height. The immediate context shall consist of the five (5) closest lots on each side of the project site plus the ten (10) closest lots on the opposite side of the street; however, the Director of City Planning may make an alternative determination of immediate context based on specific site conditions. Such determination shall be in writing and included as part of any decision on any conditional use permit.

This finding is not applicable; the project does not involve a single-family home or duplex.

**F. That the proposal conforms in all significant respects with the Oakland General Plan and with any other applicable guidelines or criteria, district plan or development control map which has been adopted by the Planning Commission or City Council.**

The property is located in a Mixed Housing Type Residential area of the General Plan. The intent of the area is: *"To create, maintain, and enhance residential areas typically located near the City's major arterials and characterized by a mix of single family homes, townhouses, small multi-unit buildings, and neighborhood businesses where appropriate."* The proposal to expand a telecommunications facility would enhance an essential service in a residential district while ensuring it is better concealed. The project therefore conforms to the area's intent and to the following Objective of the LUTE:

**CIVIC AND INSTITUTIONAL USES.**

**Objective N2**

Encourage adequate civic, institutional, and educational facilities located within Oakland, appropriately designed and sited to serve the community.

The proposal is therefore in conformance with the General Plan.

**CONDITIONAL USE PERMIT CRITERIA FOR MACRO FACILITIES (OMC SEC. 17.128.080(C))**

**1. The project must meet the special design review criteria listed in subsection B of this section.**

This finding is met in the following section of the Attachment.

**2. The proposed project must not disrupt the overall community character.**

This finding is met; the facility upgrade includes installation of screen walls to conceal the existing facility which will be more conducive for the surrounding residential neighborhood.

**REGULAR DESIGN REVIEW CRITERIA - NONRESIDENTIAL (OMC SEC. 17.136.050(B))**

**1. That the proposal will help achieve or maintain a group of facilities which are well related to one another and which, when taken together, will result in a well-composed design, with consideration given to site, landscape, bulk, height, arrangement, texture, materials, colors, and appurtenances; the relation of these factors to other facilities in the vicinity; and the relation of the proposal to the total setting as seen from key points in the surrounding area. Only elements of design which have some significant relationship to outside appearance shall be considered, except as otherwise provided in Section 17.136.060;**

The project involves concealing with screen walls an existing telecommunications facility located in a residential neighborhood. Screen walls will meet the Planning Code's minimum 1:1 height/setback



requirements and will be texturized and colored to match the beige stucco building.

**2. That the proposed design will be of a quality and character which harmonizes with, and serves to protect the value of, private and public investments in the area;**

The project will improve neighborhood aesthetics.

**3. That the proposed design conforms in all significant respects with the Oakland General Plan and with any applicable design review guidelines or criteria, district plan, or development control map which have been adopted by the Planning Commission or City Council.**

The proposed design conforms to the General Plan as described in a previous section of this Attachment.

**DESIGN REVIEW CRITERIA FOR MACRO FACILITIES (OMC SEC. 17.128.080(B))**

**1. Antennas should be painted and/or textured to match the existing structure.**

This finding is inapplicable; antennas will be concealed with screen walls set back from the roofline that, as conditioned, will be colored and texturized to match the beige stucco building.

**2. Antennas mounted on architecturally significant structures or significant architectural detail of the building should be covered by appropriate casings which are manufactured to match existing architectural features found on the building.**

The antennas will be set back from the ornate parapet along the roofline and concealed with screen walls.

**3. Where feasible, antennas can be placed directly above, below or incorporated with vertical design elements of a building to help in camouflaging.**

This finding is inapplicable; the antennas will roof mounted.

**4. Equipment shelters or cabinets shall be screened from the public view by using landscaping, or materials and colors consistent with surrounding backdrop or placed underground or inside existing facilities or behind screening fences.**

Equipment cabinets will be concealed by obscure screen walls colored and texturized to match the beige stucco building as required by conditions of approval.

**5. Equipment shelters or cabinets shall be consistent with the general character of the area.**

See finding #4.

**6. For antennas attached to the roof, maintain a 1:1 ratio (example: ten feet high antenna requires ten feet setback from facade) for equipment setback; screen the antennas to match existing air conditioning units, stairs, or elevator towers; avoid placing roof mounted antennas in direct line with significant view corridors.**

Antennas will be roof mounted. Top height with mounting will be nine feet in height and antennas will be set back nine feet from the roofline, as conditioned.

**7. That all reasonable means of reducing public access to the antennas and equipment has been made, including, but not limited to, placement in or on buildings or structures, fencing, anti-climbing measures and anti-tampering devices.**

The rooftop is only accessible through a locked penthouse that is only accessible through the locked apartment building.

## **Attachment B: Conditions of Approval**

### **1. Approved Use**

#### ***Ongoing***

- a) The project shall be constructed and operated in accordance with the authorized use as described in the application materials submitted to the City **on September 22, 2011 (application) and revised plans dated July 23, 2012**, and as amended by the following conditions. Any additional uses or facilities other than those approved with this permit, as described in the project description and the approved plans, will require a separate application and approval. Any deviation from the approved drawings, Conditions of Approval or use shall require prior written approval from the Director of City Planning or designee.
- b) This action by the **Planning Commission** ("this Approval") includes the approvals set forth below. This Approval includes **upgrades to a Macro telecommunications facility to result in 12 panel antennas at three sectors, three screen walls, two equipment cabinets, 1 GPS antenna, 6 RRUs and 3 RRU filters.**

### **2. Effective Date, Expiration, Extensions and Extinguishment**

#### ***Ongoing***

Unless a different termination date is prescribed, this Approval shall expire **two calendar years** from the approval date, unless within such period all necessary permits for construction or alteration have been issued, or the authorized activities have commenced in the case of a permit not involving construction or alteration. Upon written request and payment of appropriate fees submitted no later than the expiration date of this permit, the Director of City Planning or designee may grant a one-year extension of this date, with additional extensions subject to approval by the approving body. Expiration of any necessary building permit for this project may invalidate this Approval if the said extension period has also expired.

### **3. Scope of This Approval; Major and Minor Changes**

#### ***Ongoing***

The project is approved pursuant to the **Planning Code** only. Minor changes to approved plans may be approved administratively by the Director of City Planning or designee. Major changes to the approved plans shall be reviewed by the Director of City Planning or designee to determine whether such changes require submittal and approval of a revision to the approved project by the approving body or a new, completely independent permit.

### **4. Conformance with other Requirements**

#### ***Prior to issuance of a demolition, grading, P-job, or other construction related permit***

- a) The project applicant shall comply with all other applicable federal, state, regional and/or local laws/codes, requirements, regulations, and guidelines, including but not limited to those imposed by the City's Building Services Division, the City's Fire Marshal, and the City's Public Works Agency. Compliance with other applicable requirements may require changes to the approved use and/or plans. These changes shall be processed in accordance with the procedures contained in Condition of Approval 3.
- b) The applicant shall submit approved building plans for project-specific needs related to fire protection to the Fire Services Division for review and approval, including, but not limited to automatic extinguishing systems, water supply improvements and hydrants, fire department access, and vegetation management for preventing fires and soil erosion.

**5. Conformance to Approved Plans; Modification of Conditions or Revocation**

*Ongoing*

- a) Site shall be kept in a blight/nuisance-free condition. Any existing blight or nuisance shall be abated within 60-90 days of approval, unless an earlier date is specified elsewhere.
- b) The City of Oakland reserves the right at any time during construction to require certification by a licensed professional that the as-built project conforms to all applicable zoning requirements, including but not limited to approved maximum heights and minimum setbacks. Failure to construct the project in accordance with approved plans may result in remedial reconstruction, permit revocation, permit modification, stop work, permit suspension or other corrective action.
- c) Violation of any term, **Conditions** or project description relating to the Approvals is unlawful, prohibited, and a violation of the Oakland Municipal Code. The City of Oakland reserves the right to initiate civil and/or criminal enforcement and/or abatement proceedings, or after notice and public hearing, to revoke the Approvals or alter these **Conditions** if it is found that there is violation of any of the **Conditions** or the provisions of the Planning Code or Municipal Code, or the project operates as or causes a public nuisance. This provision is not intended to, nor does it, limit in any manner whatsoever the ability of the City to take appropriate enforcement actions. The project applicant shall be responsible for paying fees in accordance with the City's Master Fee Schedule for inspections conducted by the City or a City-designated third-party to investigate alleged violations of the Conditions of Approval.

**6. Signed Copy of the Conditions**

*With submittal of a demolition, grading, and building permit*

A copy of the approval letter and **Conditions** shall be signed by the property owner, notarized, and submitted with each set of permit plans to the appropriate City agency for this project.

**7. Indemnification**

*Ongoing*

- a) To the maximum extent permitted by law, the applicant shall defend (with counsel acceptable to the City), indemnify, and hold harmless the City of Oakland, the Oakland City Council, the City of Oakland Redevelopment Agency, the Oakland City Planning Commission and its respective agents, officers, and employees (hereafter collectively called City) from any liability, damages, claim, judgment, loss (direct or indirect) action, causes of action, or proceeding (including legal costs, attorneys' fees, expert witness or consultant fees, City Attorney or staff time, expenses or costs) (collectively called "Action") against the City to attack, set aside, void or annul, (1) an approval by the City relating to a development-related application or subdivision or (2) implementation of an approved development-related project. The City may elect, in its sole discretion, to participate in the defense of said Action and the applicant shall reimburse the City for its reasonable legal costs and attorneys' fees.
- b) Within ten (10) calendar days of the filing of any Action as specified in subsection A above, the applicant shall execute a Letter Agreement with the City, acceptable to the Office of the City Attorney, which memorializes the above obligations. These obligations and the Letter of Agreement shall survive termination, extinguishment or invalidation of the approval. Failure to timely execute the Letter Agreement does not relieve the applicant of any of the obligations contained in this condition or other requirements or conditions of approval that may be imposed by the City.

**8. Compliance with Conditions of Approval**

***Ongoing***

The project applicant shall be responsible for compliance with the recommendations in any submitted and approved technical report and all the Conditions of Approval set forth below at its sole cost and expense, and subject to review and approval of the City of Oakland.

**9. Severability**

***Ongoing***

Approval of the project would not have been granted but for the applicability and validity of each and every one of the specified conditions, and if one or more of such conditions is found to be invalid by a court of competent jurisdiction this Approval would not have been granted without requiring other valid conditions consistent with achieving the same purpose and intent of such Approval.

**10. Job Site Plans**

***Ongoing throughout demolition, grading, and/or construction***

At least one (1) copy of the stamped approved plans, along with the Approval Letter and Conditions of Approval, shall be available for review at the job site at all times.

**11. Special Inspector/Inspections, Independent Technical Review, Project Coordination and Management**

***Prior to issuance of a demolition, grading, and/or construction permit***

The project applicant may be required to pay for on-call third-party special inspector(s)/inspections as needed during the times of extensive or specialized plancheck review or construction. The project applicant may also be required to cover the full costs of independent technical review and other types of peer review, monitoring and inspection, including without limitation, third party plan check fees, including inspections of violations of Conditions of Approval. The project applicant shall establish a deposit with the Building Services Division, as directed by the Building Official, Director of City Planning or designee.

**12. Underground Utilities**

***Prior to issuance of a building permit***

The project applicant shall submit plans for review and approval by the Building Services Division and the Public Works Agency, and other relevant agencies as appropriate, that show all new electric and telephone facilities; fire alarm conduits; street light wiring; and other wiring, conduits, and similar facilities placed underground. The new facilities shall be placed underground along the project applicant's street frontage and from the project applicant's structures to the point of service. The plans shall show all electric, telephone, water service, fire water service, cable, and fire alarm facilities installed in accordance with standard specifications of the serving utilities.

**13. Improvements in the Public Right-of-Way (General)**

***Approved prior to the issuance of a P-job or building permit***

- a) The project applicant shall submit Public Improvement Plans to Building Services Division for adjacent public rights-of-way (ROW) showing all proposed improvements and compliance with the conditions and City requirements including but not limited to curbs, gutters, sewer laterals, storm drains, street trees, paving details, locations of transformers and other above ground utility structures, the design specifications and locations of facilities required by the East Bay Municipal Utility District (EBMUD), street lighting, on-street parking and accessibility improvements compliant with applicable standards and any other improvements or requirements for the project

as provided for in this Approval. Encroachment permits shall be obtained as necessary for any applicable improvements- located within the public ROW.

- b) Review and confirmation of the street trees by the City's Tree Services Division is required as part of this condition.
- c) The Planning and Zoning Division and the Public Works Agency will review and approve designs and specifications for the improvements. Improvements shall be completed prior to the issuance of the final building permit.
- d) The Fire Services Division will review and approve fire crew and apparatus access, water supply availability and distribution to current codes and standards.

**14. Payment for Public Improvements**

***Prior to issuance of a final inspection of the building permit.***

The project applicant shall pay for and install public improvements made necessary by the project including damage caused by construction activity.

**15. Compliance Matrix**

***Prior to issuance of a demolition, grading, or building permit***

The project applicant shall submit to the Planning and Zoning Division and the Building Services Division a **Conditions** compliance matrix that lists each condition of approval, the City agency or division responsible for review, and how/when the project applicant has met or intends to meet the conditions. The applicant will sign the Conditions of Approval attached to the approval letter and submit that with the compliance matrix for review and approval. The compliance matrix shall be organized per step in the plancheck/construction process unless another format is acceptable to the Planning and Zoning Division and the Building Services Division. The project applicant shall update the compliance matrix and provide it with each item submittal.

**16. Construction Management Plan**

***Prior to issuance of a demolition, grading, or building permit***

The project applicant shall submit to the Planning and Zoning Division and the Building Services Division for review and approval a construction management plan that identifies the conditions of approval related to construction impacts of the project and explains how the project applicant will comply with these construction-related conditions of approval.

**17. Construction-Related Air Pollution Controls (Dust and Equipment Emissions)**

***Ongoing throughout demolition, grading, and/or construction***

During construction, the project applicant shall require the construction contractor to implement all of the following applicable measures recommended by the Bay Area Air Quality Management District (BAAQMD):

- a) Water all exposed surfaces of active construction areas at least twice daily (using reclaimed water if possible). Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible.
- b) Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
- c) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- d) Pave all roadways, driveways, sidewalks, etc. as soon as feasible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.

- e) Enclose, cover, water twice daily or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.).
- f) Limit vehicle speeds on unpaved roads to 15 miles per hour.
- g) Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations. Clear signage to this effect shall be provided for construction workers at all access points.
- h) All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- i) Post a publicly visible sign that includes the contractor's name and telephone number to contact regarding dust complaints. When contacted, the contractor shall respond and take corrective action within 48 hours. The telephone numbers of contacts at the City and the BAAQMD shall also be visible. This information may be posted on other required on-site signage.

**18. Days/Hours of Construction Operation**

***Ongoing throughout demolition, grading, and/or construction***

The project applicant shall require construction contractors to limit standard construction activities as follows:

- a) Construction activities are limited to between 7:00 AM and 7:00 PM Monday through Friday, except that pile driving and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m. Monday through Friday.
- b) Any construction activity proposed to occur outside of the standard hours of 7:00 am to 7:00 pm Monday through Friday for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case by case basis, with criteria including the proximity of residential uses and a consideration of resident's preferences for whether the activity is acceptable if the overall duration of construction is shortened and such construction activities shall only be allowed with the prior written authorization of the Building Services Division.
- c) Construction activity shall not occur on Saturdays, with the following possible exceptions:
  - i. Prior to the building being enclosed, requests for Saturday construction for special activities (such as concrete pouring which may require more continuous amounts of time), shall be evaluated on a case by case basis, with criteria including the proximity of residential uses and a consideration of resident's preferences for whether the activity is acceptable if the overall duration of construction is shortened. Such construction activities shall only be allowed on Saturdays with the prior written authorization of the Building Services Division.
  - ii. After the building is enclosed, requests for Saturday construction activities shall only be allowed on Saturdays with the prior written authorization of the Building Services Division, and only then within the interior of the building with the doors and windows closed.
- d) No extreme noise generating activities (greater than 90 dBA) shall be allowed on Saturdays, with no exceptions.
- e) No construction activity shall take place on Sundays or Federal holidays.
- f) Construction activities include but are not limited to: truck idling, moving equipment (including trucks, elevators, etc) or materials, deliveries, and construction meetings held on-site in a non-enclosed area.

- g) Applicant shall use temporary power poles instead of generators where feasible.

19. **Noise Control**

***Ongoing throughout demolition, grading, and/or construction***

To reduce noise impacts due to construction, the project applicant shall require construction contractors to implement a site-specific noise reduction program, subject to the Planning and Zoning Division and the Building Services Division review and approval, which includes the following measures:

- a) Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, wherever feasible).
- b) Except as provided herein, Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.
- c) Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction.
- d) The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.

20. **Noise Complaint Procedures**

***Ongoing throughout demolition, grading, and/or construction***

Prior to the issuance of each building permit, along with the submission of construction documents, the project applicant shall submit to the Building Services Division a list of measures to respond to and track complaints pertaining to construction noise. These measures shall include:

- a) A procedure and phone numbers for notifying the Building Services Division staff and Oakland Police Department; (during regular construction hours and off-hours);
- b) A sign posted on-site pertaining with permitted construction days and hours and complaint procedures and who to notify in the event of a problem. The sign shall also include a listing of both the City and construction contractor's telephone numbers (during regular construction hours and off-hours);
- c) The designation of an on-site construction complaint and enforcement manager for the project;
- d) Notification of neighbors and occupants within 300 feet of the project construction area at least 30 days in advance of extreme noise generating activities about the estimated duration of the activity; and
- e) A preconstruction meeting shall be held with the job inspectors and the general contractor/on-site project manager to confirm that noise measures and practices (including construction hours, neighborhood notification, posted signs, etc.) are completed.

21. **Interior Noise**

***Prior to issuance of a building permit and Certificate of Occupancy***

If necessary to comply with the interior noise requirements of the City of Oakland's General Plan Noise Element and achieve an acceptable interior noise level, noise reduction in the form of



sound-rated assemblies (i.e., windows, exterior doors, and walls), and/or other appropriate features/measures, shall be incorporated into project building design, based upon recommendations of a qualified acoustical engineer and submitted to the Building Services Division for review and approval prior to issuance of building permit. Final recommendations for sound-rated assemblies, and/or other appropriate features/measures, will depend on the specific building designs and layout of buildings on the site and shall be determined during the design phases. Written confirmation by the acoustical consultant, HVAC or HERS specialist, shall be submitted for City review and approval, prior to Certificate of Occupancy (or equivalent) that:

- (a) Quality control was exercised during construction to ensure all air-gaps and penetrations of the building shell are controlled and sealed; and
- (b) Demonstrates compliance with interior noise standards based upon performance testing of a sample unit.
- (c) Inclusion of a Statement of Disclosure Notice in the CC&R's on the lease or title to all new tenants or owners of the units acknowledging the noise generating activity and the single event noise occurrences. Potential features/measures to reduce interior noise could include, but are not limited to, the following:
  - a) Installation of an alternative form of ventilation in all units identified in the acoustical analysis as not being able to meet the interior noise requirements due to adjacency to a noise generating activity, filtration of ambient make-up air in each unit and analysis of ventilation noise if ventilation is included in the recommendations by the acoustical analysis.
  - b) Prohibition of Z-duct construction.

**22. Operational Noise-General**  
***Ongoing***

Noise levels from the activity, property, or any mechanical equipment on site shall comply with the performance standards of Section 17.120 of the Oakland Planning Code and Section 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the Planning and Zoning Division and Building Services.

**23. Construction Traffic and Parking**  
***Prior to the issuance of a demolition, grading or building permit***

The project applicant and construction contractor shall meet with appropriate City of Oakland agencies to determine traffic management strategies to reduce, to the maximum extent feasible, traffic congestion and the effects of parking demand by construction workers during construction of this project and other nearby projects that could be simultaneously under construction. The project applicant shall develop a construction management plan for review and approval by the Planning and Zoning Division, the Building Services Division, and the Transportation Services Division. The plan shall include at least the following items and requirements:

- a) A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes.
- b) Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures will occur.
- c) Location of construction staging areas for materials, equipment, and vehicles at an approved location.
- d) A process for responding to, and tracking, complaints pertaining to construction activity, including identification of an onsite complaint manager. The manager shall determine the cause of the complaints and shall take prompt action to correct the problem. Planning and Zoning shall be informed who the Manager is prior to the issuance of the first permit issued by Building Services.

- e) Provision for accommodation of pedestrian flow.

**24. Hazards Best Management Practices**

***Prior to commencement of demolition, grading, or construction***

The project applicant and construction contractor shall ensure that construction of Best Management Practices (BMPs) are implemented as part of construction to minimize the potential negative effects to groundwater and soils. These shall include the following:

- a) Follow manufacture's recommendations on use, storage, and disposal of chemical products used in construction;
- b) Avoid overtopping construction equipment fuel gas tanks;
- c) During routine maintenance of construction equipment, properly contain and remove grease and oils;
- d) Properly dispose of discarded containers of fuels and other chemicals.
- e) Ensure that construction would not have a significant impact on the environment or pose a substantial health risk to construction workers and the occupants of the proposed development. Soil sampling and chemical analyses of samples shall be performed to determine the extent of potential contamination beneath all UST's, elevator shafts, clarifiers, and subsurface hydraulic lifts when on-site demolition, or construction activities would potentially affect a particular development or building.
- f) If soil, groundwater or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notification of regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.

**25. Waste Reduction and Recycling**

The project applicant will submit a Construction & Demolition Waste Reduction and Recycling Plan (WRRP) and an Operational Diversion Plan (ODP) for review and approval by the Public Works Agency.

***Prior to issuance of demolition, grading, or building permit***

Chapter 15.34 of the Oakland Municipal Code outlines requirements for reducing waste and optimizing construction and demolition (C&D) recycling. Affected projects include all new construction, renovations/alterations/modifications with construction values of \$50,000 or more (except R-3), and all demolition (including soft demo). The WRRP must specify the methods by which the development will divert C&D debris waste generated by the proposed project from landfill disposal in accordance with current City requirements. Current standards, FAQs, and forms are available at [www.oaklandpw.com/Page39.aspx](http://www.oaklandpw.com/Page39.aspx) or in the Green Building Resource Center. After approval of the plan, the project applicant shall implement the plan.

***Ongoing***

The ODP will identify how the project complies with the Recycling Space Allocation Ordinance, (Chapter 17.118 of the Oakland Municipal Code), including capacity calculations, and specify the methods by which the development will meet the current diversion of solid waste generated by operation of the proposed project from landfill disposal in accordance with current City requirements. The proposed program shall be implemented and maintained for the duration of the proposed activity or facility. Changes to the plan may be re-submitted to the Environmental Services Division of the Public Works Agency for review and approval. Any incentive programs shall remain fully operational as long as residents and businesses exist at the project site.

**PROJECT SPECIFIC CONDITIONS FOR TELECOMMUNICATIONS FACILITIES**

**26. Emissions Report**

***Prior to a final inspection***

The applicant shall provide an RF emissions report to the City of Oakland Zoning Division indicating that the site is actually operating within the acceptable thresholds as established by the Federal government or any such agency that may be subsequently authorized to establish such standards.

**27. Antenna guardrail**

***Prior to submitting for a building permit and final inspection***

The guardrail located towards the northern corner of the building shall be repositioned so that it is set back a minimum of nine feet from the roofline, or further as necessary so that antennas extending above the roofline line meet the Planning Code's requirement for a 1:1 height/setback.

**28. Equipment cabinets**

***Prior to submitting for a building permit and final inspection.***

Plans shall be revised to include screen walls to conceal equipment cabinets.

**29. Screen walls**

***Prior to submitting for a building permit and final inspection***

All screen walls shall consist of obscure material that shall be colored and textured to match the beige stucco building.

**30. Cabling/accessory or related equipment**

***Prior to submitting for a building permit and final inspection***

Any cabling (and/or addition accessory/related equipment) attached to the side of the building shall be attached to either the eastern or southern non street facing façade and shall be colored beige to match the building.

**APPROVED BY:**

City Planning Commission: \_\_\_\_\_ (date) \_\_\_\_\_ (vote)

# Sprint



SITE NAME: 611 E. 20TH STREET

SITE NUMBER: FN03XC003-A  
MARKET NAME: SF BAY  
NETWORK VISION MM LAUNCH

SITE ADDRESS: 611 E. 20TH STREET  
OAKLAND, CA 94606  
ALAMEDA COUNTY

SITE TYPE: ROOFTOP EQUIPMENT & ANTENNAS

## SITE INFORMATION

**SITE ADDRESS:**  
611 E. 20TH STREET  
OAKLAND, CA 94606

**PROPERTY OWNER:**  
MILLER RAVETTI COMPANY  
1000 RAVETTI DRIVE  
SAN FRANCISCO, CA 94107

**CONTACT: TERRY RAVETTI**  
TELEPHONE: (415) 774-1000  
FAX: (415) 774-1001

**APPLICANT REPRESENTATIVE:**  
CORTEL, LLC  
1000 RAVETTI DRIVE  
SAN FRANCISCO, CA 94107  
PHONE: (415) 774-1000

**CONSTRUCTION MANAGER:**  
OVERLAND CONTRACTING  
4999 OAK ROAD SUITE 100  
SAN FRANCISCO, CA 94132  
PHONE: (415) 344-2175

**EQUIPMENT SUPPLIER:**  
SABIRAS TELECOMMUNICATIONS AMERICA (S7A)  
1000 RAVETTI DRIVE  
SAN FRANCISCO, CA 94107  
PHONE: (415) 774-1000

**COUNTY:**  
ALAMEDA

**APN:**  
01-0714-001

**ZONING:**  
RESIDENTIAL

**ELEVATION:**  
500' AHSLL

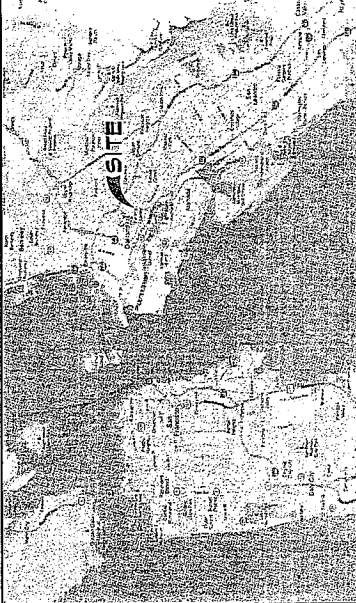
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37.79859

**LONGITUDE (NAD83):**  
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-122.247531

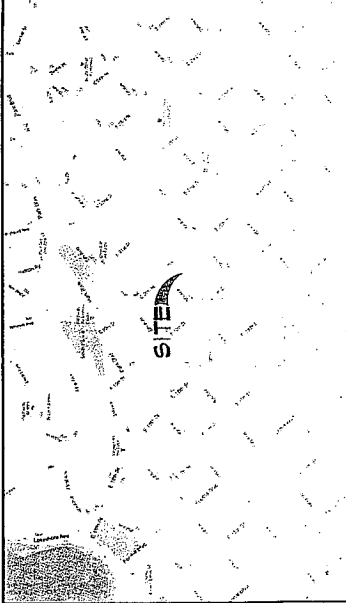
**NTL:**

**NTL:**

## AREA MAP



## LOCATION MAP



## APPLICABLE CODES

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:  
2010 CALIFORNIA BUILDING CODE  
2010 CALIFORNIA MECHANICAL CODE  
2010 CALIFORNIA PLUMBING CODE  
2010 CALIFORNIA ELECTRICAL CODE  
IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL

## PROJECT DESCRIPTION

THE PROPOSED PROJECT SHALL INCLUDE:  
REMOVAL AND ADDITION OF EQUIPMENT WITHIN THE EXISTING EQUIPMENT AREA.  
REMOVAL (1) EXISTING EQUIPMENT CABINETS & (1) EXISTING GPS ANTENNA  
INSTALL (2) NEW EQUIPMENT CABINETS  
REMOVAL AND ADDITIONAL INSTALLATION OF ANTENNAS ON THE EXISTING BUILDING ROOFTOP.  
INSTALL (3) NEW SF TRANSPARENT ANTENNA SCREEN WALLS  
REMOVAL (3) EXISTING SPRINT DUMPTY ANTENNAS  
REMOVAL (3) EXISTING SPRINT DUMPTY ANTENNAS  
REMOVAL (3) SETS OF PVC GUARDRAILS  
INSTALLATION OF ASSOCIATED EQUIPMENT/CABLING ON THE EXISTING ROOFTOP ANTENNA ARRAY.  
INSTALL (1) NEW GPS ANTENNA  
INSTALL (2) NEW BRUS ON EXISTING ANTENNA MASTS  
INSTALL (3) NEW BRUS ON PROPOSED BRUS  
INSTALL NEW HYBRID CABLING WITHIN NEW CONDUITS FROM NEW EQUIPMENT TO THE ANTENNAS ALONG THE EXISTING ANTENNA CABLING PATH

## DRIVING DIRECTIONS FROM NEAREST AIRPORT

FROM SFO AIRPORT:  
TAKE THE RAMP ONTO US-101 N, SLIGHT RIGHT ONTO I-80 E (SIGNS FOR BAY BRIDGE/OAKLAND), TAKE EXIT 88 TO MERGE ONTO I-880 E TOWARD CALIFORNIA/REDWOOD CATION. TAKE EXIT 22 TOWARD PARK BLVD. MERGE ONTO MACARTHUR BLVD. TURN RIGHT ONTO PARK BLVD. SLIGHT LEFT ONTO 5TH AVE. TURN LEFT ONTO E 20TH ST. SITE WILL BE ON THE RIGHT.  
4811 E 20TH ST OAKLAND, CA 94606

## DRAWING INDEX

T-1 TITLE SHEET  
A-1 SITE PLAN  
A-2 ROOF PLAN & EQUIPMENT LAYOUT PLANS  
A-3 ANTENNA LAYOUT & SCHEDULE  
A-4 ELEVATIONS  
A-5 EQUIPMENT DETAILS  
D-1 ANTENNA, RRU & FILTER DETAILS  
D-2

6500 SPRINT PARKWAY  
OVERLAND PARK, KANSAS 66201

ZALZALI & ASSOCIATES INC.  
2070 BUSINESS CENTER DR. SUITE 200  
IRVINE, CA 92612

PROJECT NO. -  
DRAWN BY: RF  
CHECKED BY: DM

REV	DATE	DESCRIPTION
0	07/25/2011	ISSUED FOR ZAP
1	08/24/2011	ISSUED FOR REVIEW
2	09/20/2011	ISSUED FOR CONSTRUCTION

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

FN03XC003-A  
611 E. 20TH STREET  
OAKLAND, CA 94606

SHEET TITLE  
TITLE SHEET

SHEET NUMBER  
T-1



BLACK & VEATCH



ZACHRY ASSOCIATES INC.  
2070 BUSINESS CENTER DRIVE, SUITE 200  
IRVINE, CA 92612

PROJECT NO. \_\_\_\_\_  
DRAWN BY: RF  
CHECKED BY: DH

REV	DATE	DESCRIPTION
0	07/23/2007	100% JDS FOR ZAP
B	06/29/2007	100% JDS FOR REDLINE
A	06/05/2007	100% JDS BY TRC

NOT TO BE USED  
FOR CONSTRUCTION

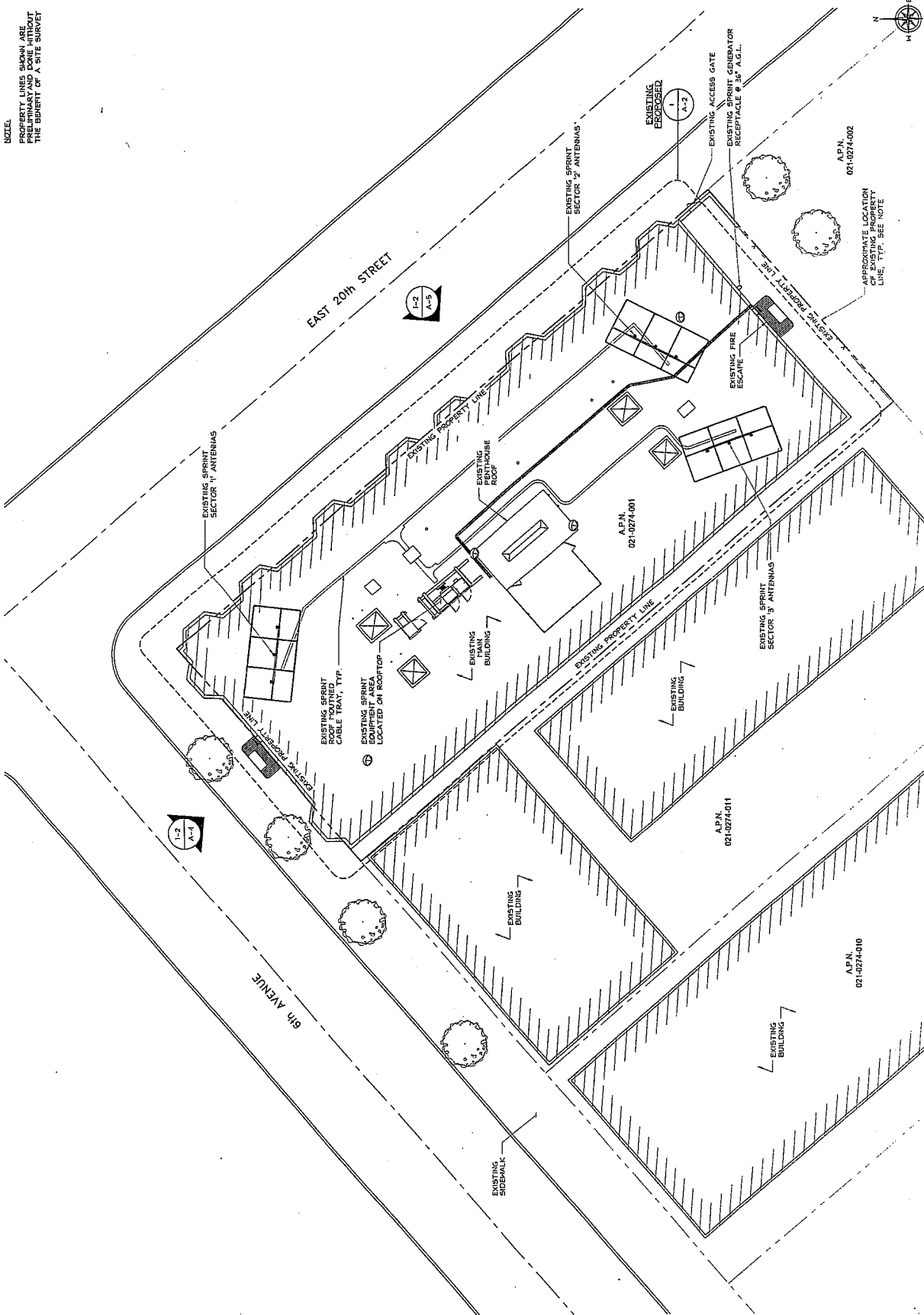
THIS IS A VOLUNTARY JDS FOR ANY  
PERSON OR ENTITY TO REVIEW  
UNDER THE DIRECTION OF A LICENSED  
PROFESSIONAL ENGINEER TO ALTER  
THIS DOCUMENT.

FN03XC003-A  
611 E. 20TH STREET  
611 E. 20TH STREET  
OAKLAND, CA 94606

SHEET TITLE  
SITE PLAN

SHEET NUMBER  
A-1

NOTES:  
PROPERTY LINES SHOWN ARE  
PRELIMINARY AND DONE WITHOUT  
THE BENEFIT OF A SITE SURVEY



3"=30' SCALE  
1"=20'-0" SCALE

SITE PLAN



PROJECT NO.	-
DRAWN BY:	RF
CHECKED BY:	DM

REV	DATE	DESCRIPTION
1	07/21/2012	ISSUE FOR ZAP
2	10/26/2012	ISSUE FOR RESUME
3	03/05/2013	ISSUE FOR DIS

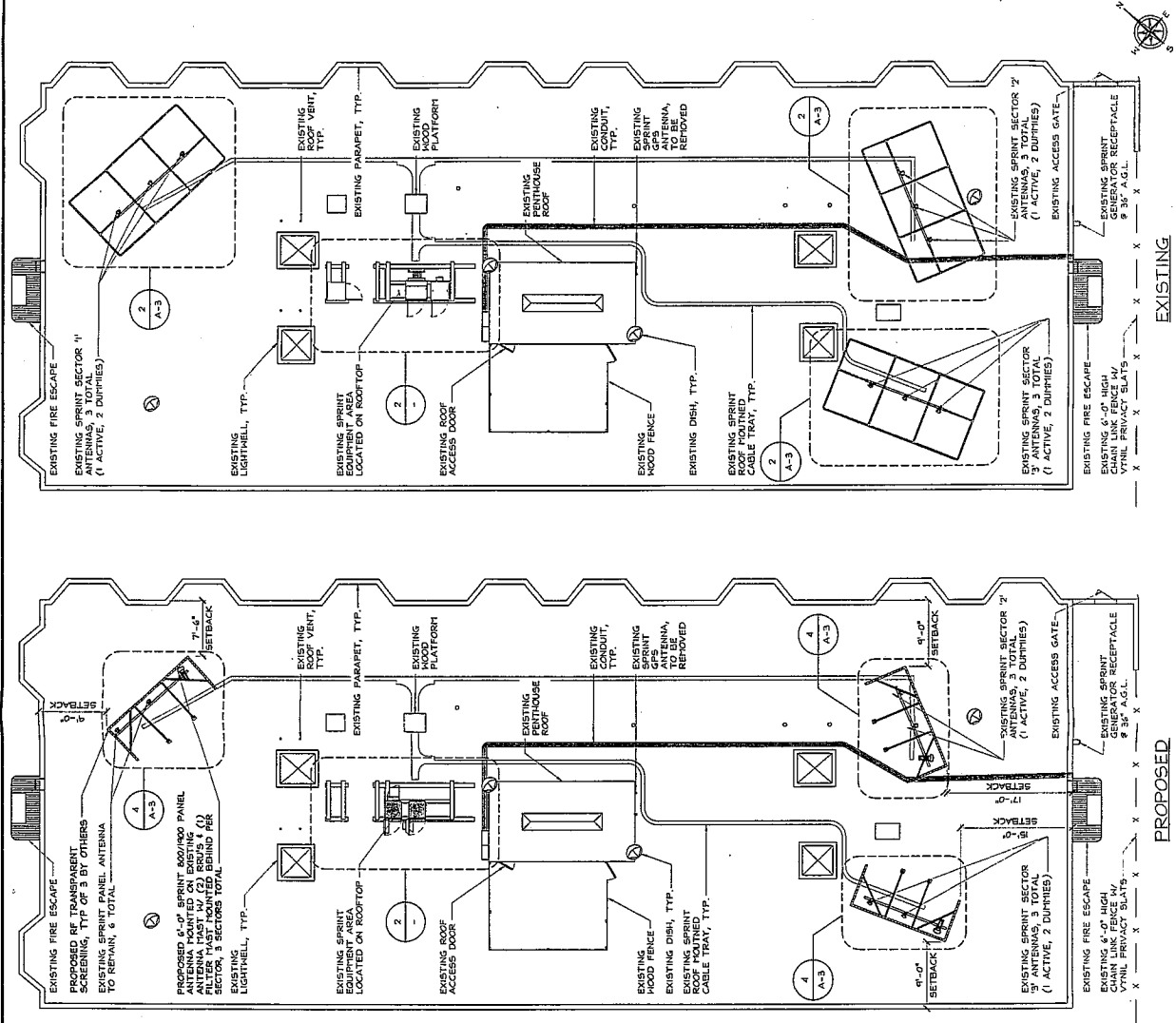
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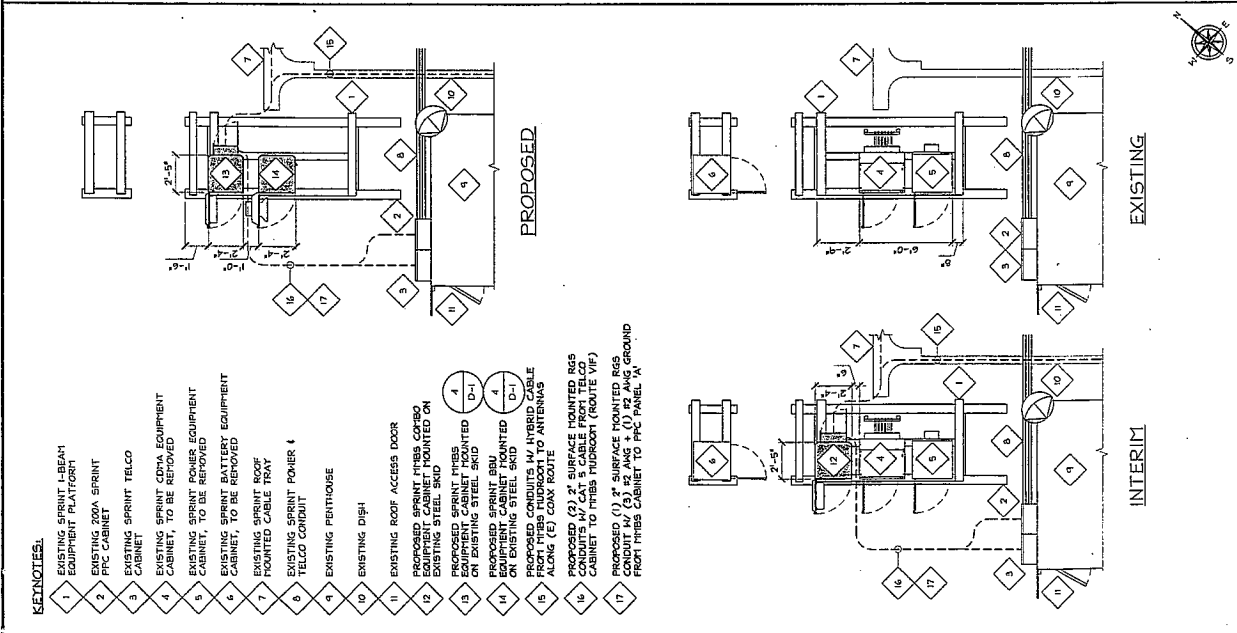
FN03XC003-A  
611 E. 20TH STREET  
611 E. 20TH STREET  
OAKLAND, CA 94606

ROOF PLAN & EQUIPMENT LAYOUT PLANS

SHEET NUMBER  
A-2



EXISTING  
PROPOSED  
24" DIA. SCALE 1/8" = 1'-0"  
1/4" SCALE 1/8" = 1'-0"



EXISTING  
INTERIM  
PROPOSED  
24" DIA. SCALE 1/8" = 1'-0"  
1/4" SCALE 1/8" = 1'-0"

KEYNOTES:

- EXISTING SPRINT I-BEAM EQUIPMENT PLATFORM
- EXISTING 200A SPRINT PFC CABINET
- EXISTING SPRINT TELCO CABINET
- EXISTING SPRINT CDMA EQUIPMENT CABINET, TO BE REMOVED
- EXISTING SPRINT POWER EQUIPMENT CABINET, TO BE REMOVED
- EXISTING SPRINT BATTERY EQUIPMENT CABINET, TO BE REMOVED
- EXISTING SPRINT ROOF MOUNTED CABLE TRAY
- EXISTING SPRINT POWER & TELCO CONDUIT
- EXISTING FIBERHOUSE
- EXISTING DISH
- EXISTING ROOF ACCESS DOOR
- PROPOSED SPRINT IIBS CORBO EQUIPMENT CABINET MOUNTED ON EXISTING STEEL SKID
- PROPOSED SPRINT IIBS EQUIPMENT CABINET MOUNTED ON EXISTING STEEL SKID
- PROPOSED SPRINT SBU EQUIPMENT CABINET MOUNTED ON EXISTING STEEL SKID
- PROPOSED CONDUITS IN HYBRID CABLE FROM IIBS CABINET TO ANTENNAS ALONG (E) CORN ROUTE
- PROPOSED (2) 2" SURFACE MOUNTED RGS EQUIPMENT CABINET TO IIBS CABINET TO IIBS FIBERHOUSE (ROUTE VIF)
- PROPOSED (1) 4" SURFACE MOUNTED RGS CONDUIT IN (3) 12" DIA. (1) 12" DIA. GROUND FROM IIBS CABINET TO PFC PANEL 'A'



PROJECT NO. \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
DATE: \_\_\_\_\_

REV	DATE	DESCRIPTION
0	07/23/2012	100% RFS FOR JAP
1	06/29/2012	100% RFS FOR REDLINE
2	06/29/2012	100% RFS FOR TRC

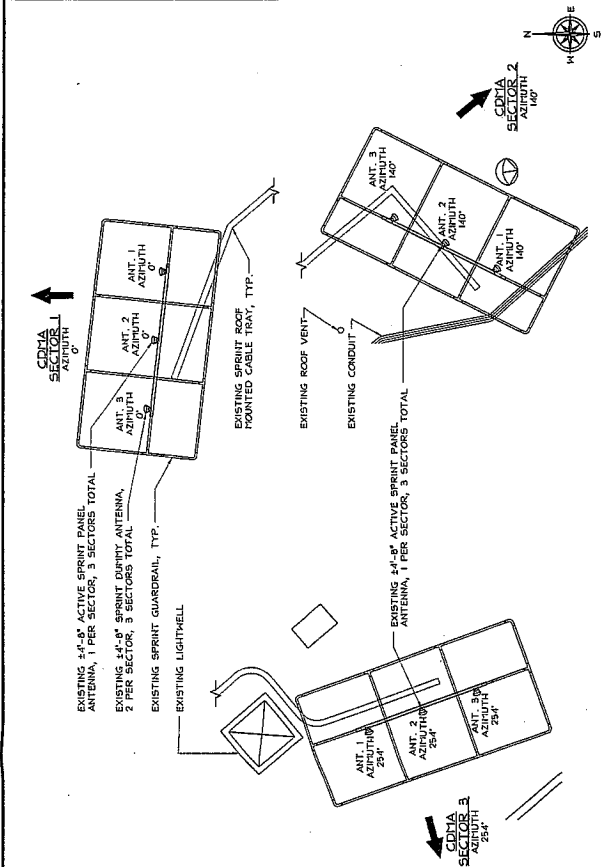
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611 E. 20TH STREET  
611 E. 20TH STREET  
OAKLAND, CA 94606

SHEET TITLE  
ANTENNA LAYOUT  
& SCHEDULE

SHEET NUMBER  
A-3

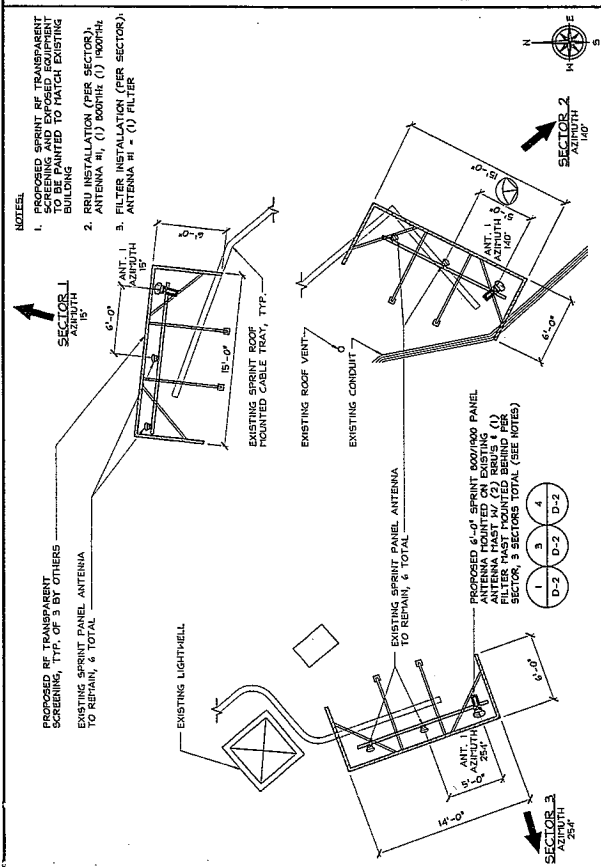


EXISTING ANTENNA LAYOUT

ANTENNA TECHNOLOGY	EXISTING	PROPOSED	ANTENNA MODEL	PROPOSED CENTER (FEET)	RAD	TRANS. LINE	CONVEYANCE
1	600/900 MHz	"DUPITY"	P65-16-XLPP-RR	0"	8"	600/900	1.7 6
2	-	RR90-17-0ADP	-	-	-	-	-
3	-	"DUPITY"	-	-	-	-	-
1	600/900 MHz	"DUPITY"	P65-16-XLPP-RR	140"	140"	600/900	1.7 6
2	-	RR90-17-0ADP	-	-	-	-	-
3	-	"DUPITY"	-	-	-	-	-
1	600/900 MHz	"DUPITY"	P65-16-XLPP-RR	254"	254"	600/900	1.7 7
2	-	RR90-17-0ADP	-	-	-	-	-
3	-	"DUPITY"	-	-	-	-	-
GPS	-	GPS LI	GPS-TMG-HR-24H	-	-	-	1076

- NOTE:
- EXISTING ANTENNAS ARE CDMA UNLESS NOTED OTHERWISE.
  - DIMENSIONS OF EXISTING ANTENNAS SPACING OR DISTANCE SHALL BE VERIFIED BY THE DOWNTOWN OF EACH ANTENNA WITH DIGITAL LEVEL.
  - CONTRACTOR TO CORRECT ANTENNA CABLE COLOR CODING PRIOR TO CONSTRUCTION (SEE SHEET 2).
  - CABLE BUNDLES SHALL BE AT LEAST 18" FROM THE MAIN LINE (8 INCH MIN.) SPACING TO BE 1" BETWEEN CABLE BUNDLES AND ON TOP OF THE MAIN LINE. SHIELD WITH 1" SPACE START COLOR BANDS 2" BEYOND THE MAIN LINE. SEE SHEET 2 OF 2 FOR ANTENNA CABLE COLOR CODING.
  - COAX JUNCTIONS SHALL NOT EXCEED 30" IN LENGTH. CONFIRM SPECIFIC LENGTH PER SITE WITH CURRENT EBT'S.

ANTENNA SCHEDULE

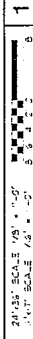
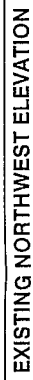
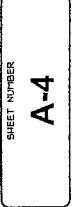


PROPOSED ANTENNA LAYOUT

ANTENNA TECHNOLOGY	EXISTING	PROPOSED	ANTENNA MODEL	PROPOSED CENTER (FEET)	RAD	TRANS. LINE	CONVEYANCE
1	600/900 MHz	"DUPITY"	P65-16-XLPP-RR	0"	8"	600/900	1.7 6
2	-	RR90-17-0ADP	-	-	-	-	-
3	-	"DUPITY"	-	-	-	-	-
1	600/900 MHz	"DUPITY"	P65-16-XLPP-RR	140"	140"	600/900	1.7 6
2	-	RR90-17-0ADP	-	-	-	-	-
3	-	"DUPITY"	-	-	-	-	-
1	600/900 MHz	"DUPITY"	P65-16-XLPP-RR	254"	254"	600/900	1.7 7
2	-	RR90-17-0ADP	-	-	-	-	-
3	-	"DUPITY"	-	-	-	-	-
GPS	-	GPS LI	GPS-TMG-HR-24H	-	-	-	1076

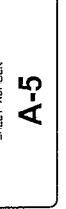
- NOTE:
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  - DIMENSIONS OF EXISTING ANTENNAS SPACING OR DISTANCE SHALL BE VERIFIED BY THE DOWNTOWN OF EACH ANTENNA WITH DIGITAL LEVEL.
  - CONTRACTOR TO CORRECT ANTENNA CABLE COLOR CODING PRIOR TO CONSTRUCTION (SEE SHEET 2).
  - CABLE BUNDLES SHALL BE AT LEAST 18" FROM THE MAIN LINE (8 INCH MIN.) SPACING TO BE 1" BETWEEN CABLE BUNDLES AND ON TOP OF THE MAIN LINE. SHIELD WITH 1" SPACE START COLOR BANDS 2" BEYOND THE MAIN LINE. SEE SHEET 2 OF 2 FOR ANTENNA CABLE COLOR CODING.
  - COAX JUNCTIONS SHALL NOT EXCEED 30" IN LENGTH. CONFIRM SPECIFIC LENGTH PER SITE WITH CURRENT EBT'S.

INTERIM ANTENNA LAYOUT



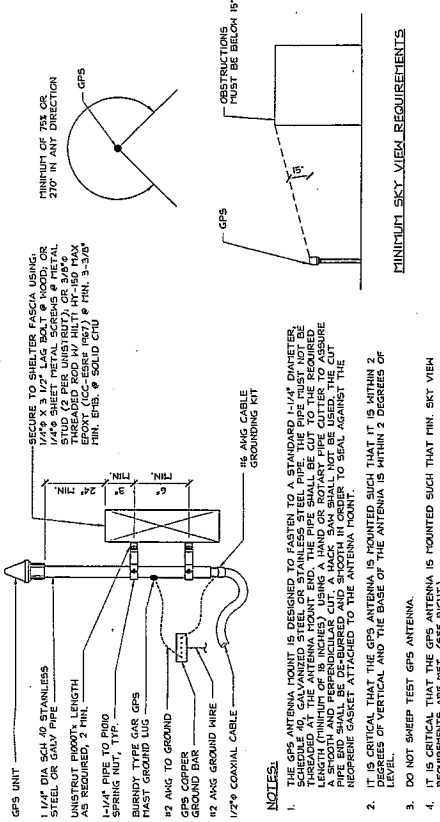
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY'RE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.



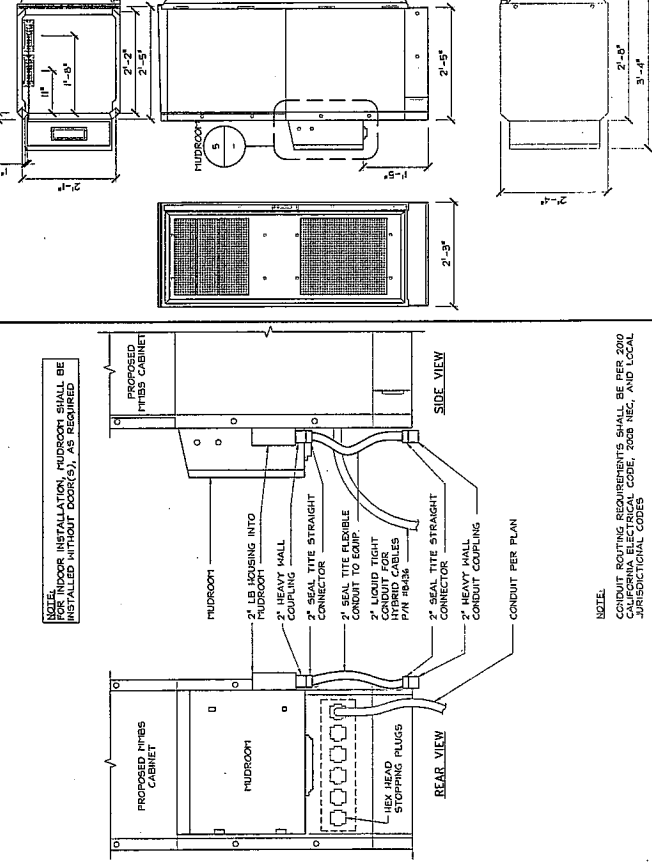


24' 56' 56.43" N 101° 0' 0.00" W

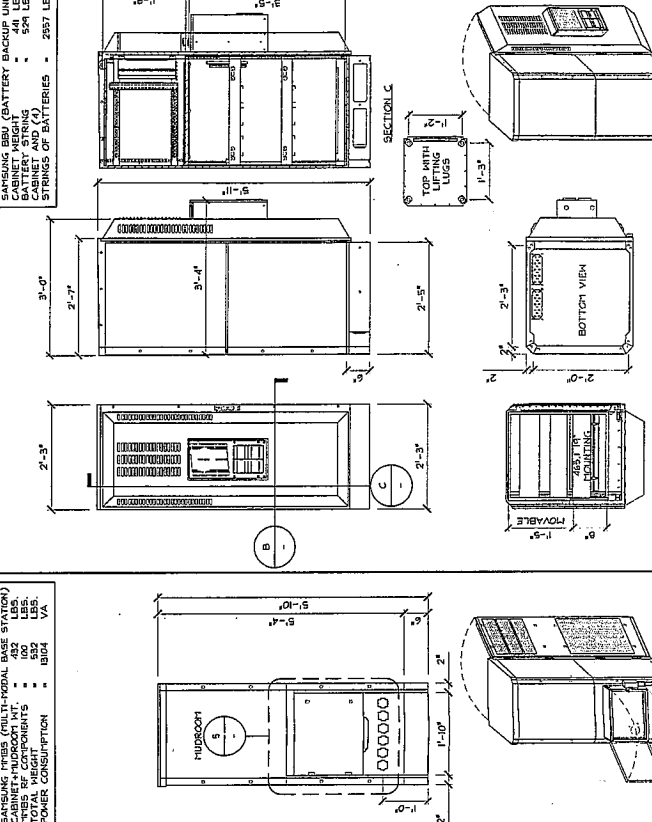
NOT TO BE USED  
FOR CONSTRUCTION



## MMBS/BBU TYPICAL FLOOR PLAN



## GPS ANTENNA GROUNDING & SPECIFICATIONS



**CONDUIT AT MUDROOM**

## MMBS SPECIFICATIONS

2012.03.29

## BBU (BATTERY CABINET) SPECIFICATIONS

**NOTE:** CONDUIT ROUTING REQUIREMENTS SHALL BE PER 2019 CALIFORNIA ELECTRICAL CODE, 2008 NEC, AND LOCAL JURISDICTIONAL CODES

**NOTE:** FOR INDOOR INSTALLATION, MUDROOM SHALL BE INSTALLED WITHOUT DOOR(S), AS REQUIRED

2  
24"x36" SCALE: NTS  
11"x17" SCALE: NTS

## **INNA GROUND**

4	11"x36" SCALE: NTS
	11"x17" SCALE: NTS

## FLOOR PLAN

MMBS/BBN

SAMSUNG MMB5 (MULTI-MODAL BASE STATION)	
CABINET+HARDROOM WT.	= 452 LBS.
MMB5 RF COMPONENTS	= 100 LBS.
TOTAL WEIGHT	= 552 LBS.
POWER CONSUMPTION	= 13104 VA

SAMSUNG BBU (BATTERY BACKUP UNIT)	
CABINET WEIGHT	= 441 LBS.
BATTERY STRING	= 529 LBS.
CABINET AND (4) STRINGS OF BATTERIES	= 2557 LBS.

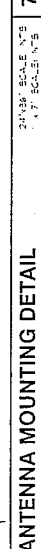
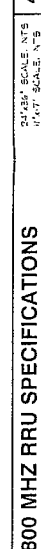
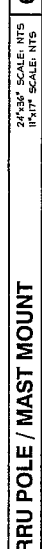
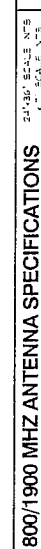
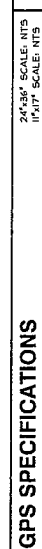
NOT TO BE USED  
FOR CONSTRUCTION

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

FN03XC003-A  
611 E. 20TH STREET  
611 E. 20TH STREET  
OAKLAND, CA 94606

**EQUIPMENT DETAILS**

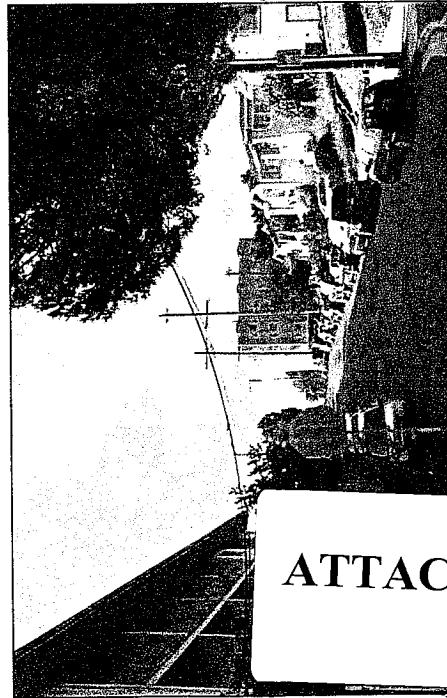
**SHEET NUMBER**



**FN03XC003-A**  
 611 E. 20TH STREET  
 611 E. 20TH STREET  
 OAKLAND, CA 94505



LOCATION



EXISTING

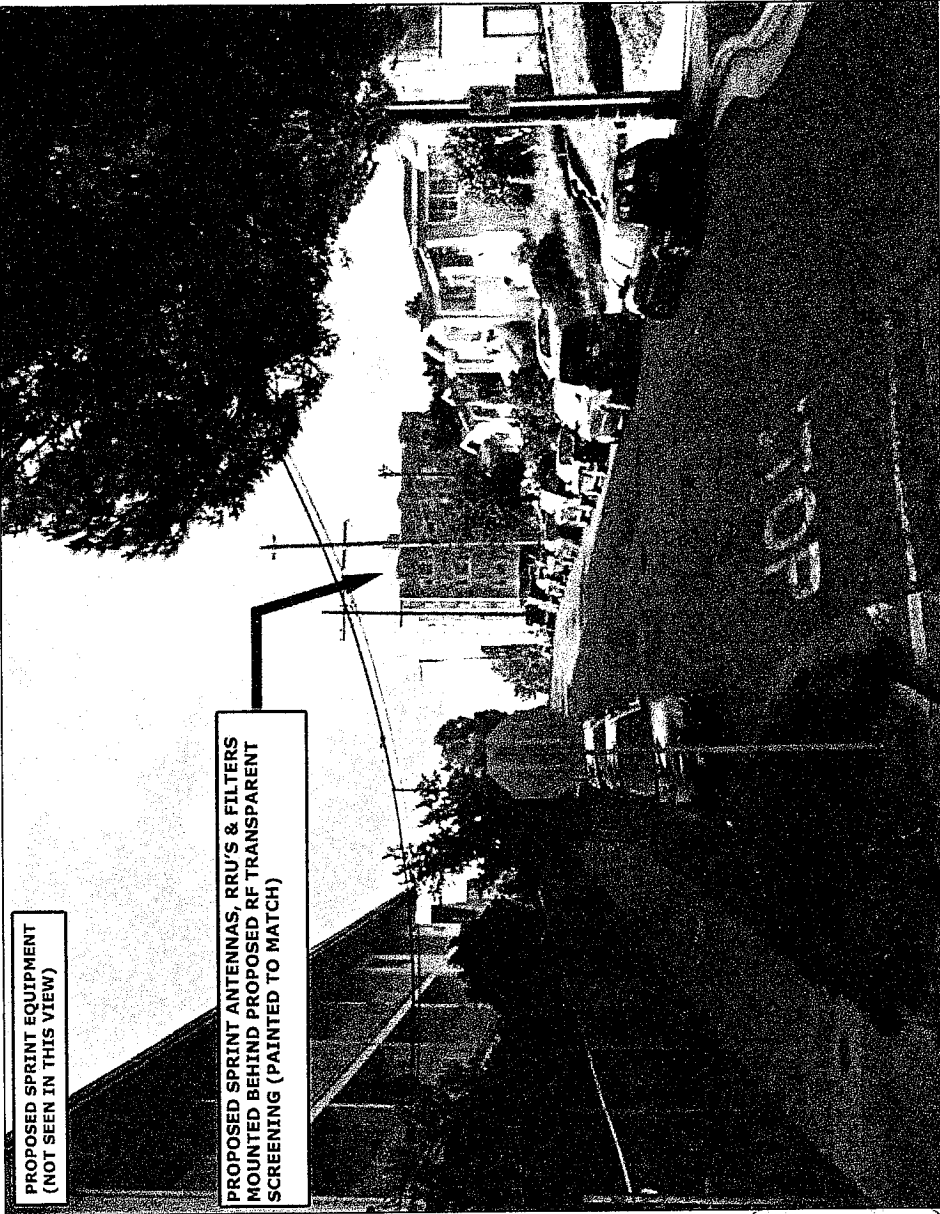
PROPOSED

# ATTACHMENT D

IRKWAY  
 IK, KS 66251

**Sprint**  
 JULY 25, 2012

VIEW #: 1



PROPOSED SPRINT EQUIPMENT  
 (NOT SEEN IN THIS VIEW)

PROPOSED SPRINT ANTENNAS, RRU'S & FILTERS  
 MOUNTED BEHIND PROPOSED RF TRANSPARENT  
 SCREENING (PAINTED TO MATCH)

The illustration above is a representation of the proposed project based on information provided by the Client. Actual construction may vary depending on applicable construction plans and therefore the A&E firm will not be held responsible for any post production design changes.



**ZALZALI & ASSOCIATES, INC.**  
 2070 BUSINESS CENTER DRIVE, SUITE 200  
 IRVINE, CA 92612  
 949.609.9559  
 949.606.7222 (FAX)

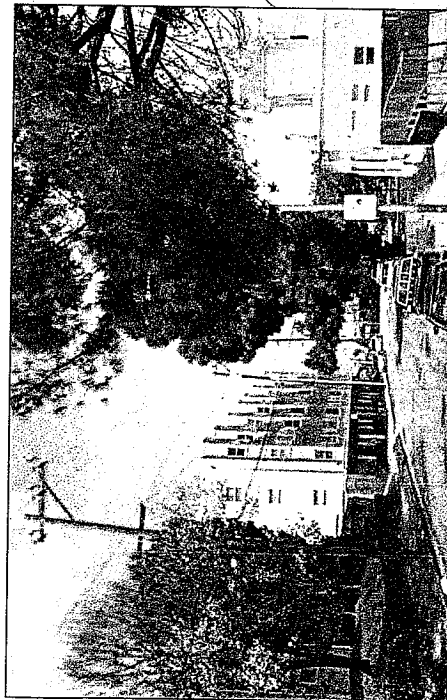
REV:

A

**FN03XC003-A**  
 611 E. 20TH STREET  
 611 E. 20TH STREET  
 OAKLAND, CA 94505



**LOCATION**

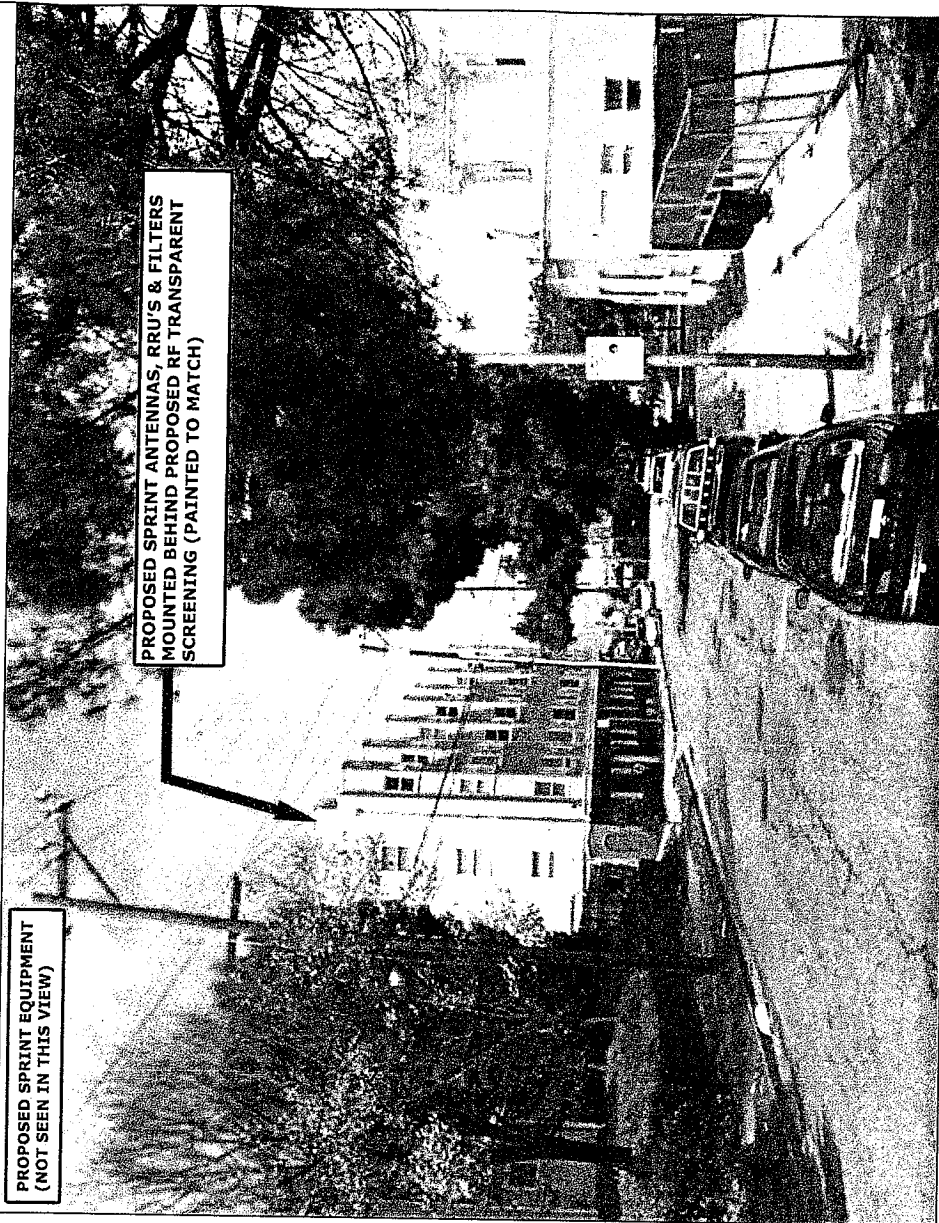


**EXISTING**

**PROPOSED**

**Sprint**  
 JULY 25, 2012

**VIEW #: 2**



The illustration above is a representation of the proposed project based on information provided by the client. All construction may vary dependent on approved construction plans and therefore the A&E firm will not be held responsible for any post production design changes.

**SPRINT**  
 6580 SPRINT PARKWAY  
 OVERLAND PARK, KS 66251



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REV:

**A**