Case nos. PLN18095 / PLN18094 / PLN18093

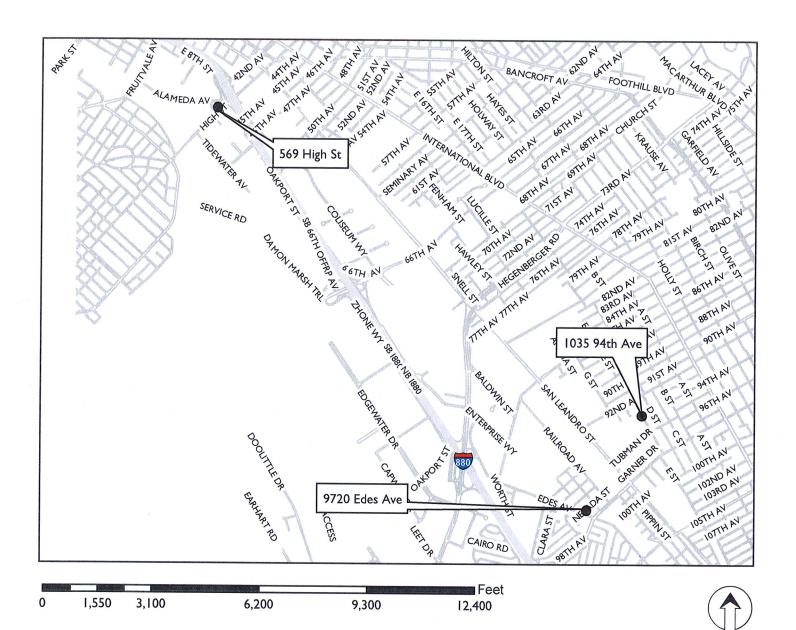
August 1, 2018

Υ									
Locations:	City street light poles in public right-of-way adjacent to:								
	1) Case no. PLN18095; 9720 Edes Ave (APN: 044 5007-007-01);								
	Submitted: 2/14/18; Zoning: CN-3 Neighborhood Commercial Zone;								
	General Plan: Neighborhood Center Mixed Use; Council District: 7								
	but a state of the								
	2) Case no. PLN18094; 1035 94th Ave (APN: 044 4986-019-00);								
	Submitted: 2/14/18; Zoning: RM-1 Mixed Housing Type Residential Zone;								
	General Plan: Mixed Housing Type Residential; Council District: 7								
	S 31 Section Product.								
	3) Case no. PLN18093; 569 High St @ Howard Street (APN: 033 2250-								
	001-06); Submitted: 2/14/18; Zoning: D-CE-2 Central Estuary Commercial								
4, 4, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	Zone (High Street Retail); Estuary Policy Plan: General Commercial 1:								
	Council District: 5								
	See map on reverse								
Proposal:	To consider requests for three (3) applications to install new "small cell								
	site" Monopole Telecommunications Facilities on City light poles by								
	attaching antenna and equipment.								
Applicant / Phone Number:	James Singleton for Mobilitie (650) 814-0564								
Owner:	City of Oakland								
Planning Permits Required:	Major Conditional Use Permit and Regular Design Review with additional								
	findings for Monopole Telecommunications Facility in or near a Residential								
	Zone;								
	Minor Variance for exceeding 1:1 height/setback to a residential lot line								
Environmental	Exempt, Section 15301 of the State CEQA Guidelines:								
Determination:	Existing Facilities;								
	Exempt, Section 15302: Replacement or Reconstruction;								
	Exempt, Section 15303: New Construction of Small Structures;								
	Section 15183: Projects Consistent with a Community Plan, General Plan or								
TI'-4- * C	Zoning								
Historic Status:	Non-historic property								
Action to be Taken:	Approve with Conditions								
Finality of Decision:	Appealable to City Council with 10 days								
For Further Information:	Contact case planner Aubrey Rose AICP at (510) 238-2071 or by email at								
	arose@oaklandca.gov								

EXECUTIVE SUMMARY

The applicant requests Planning Commission approval to establish three (3) small cell wireless telecommunication facility site on existing City street light poles located on the public right-of-way in residential and commercial districts. The project involves attaching one antenna within a shroud to the top of the pole and equipment mounted to the side of the pole, as described in the submitted plans, to enhance wireless services in those areas.

CITY OF OAKLAND PLANNING COMMISSION



Case Files: PLN18293, PLN18294, PLN18095

Applicant: James Singleton for Mobilitie

Addresses: 9720 Edes Ave, 1035 94th Ave, 569 High St

Zones: CN-3, RM-1, D-CE-2

Regular Design Review and a Major Conditional Use Permit decided by the Planning Commission, each with additional findings, are required for the installation of a new Monopole Telecommunications Facility. Additionally, Site # 2 requires a Minor Variance, for proximity to a residential property line. The proposed projects, antenna and associated equipment, would be similar to other facilities around the City. The proposed telecommunication facility is therefore sited at appropriate locations and would not significantly increase negative visual impacts to adjacent properties including residences. The project meets all the required findings for approval of these three (3) small cell sites.

TELECOMMUNICATIONS 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. Specifically:

- 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 Federal Communications Commission (FCC) standards in this regard. (See 47 U.S.C. Section 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 (See 47 U.S.C.332(c)(7)(B)(ii) and 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, consult the following:

Competition & Infrastructure Policy Division (CIPD) of the Wireless Telecommunications Bureau, main division number: (202) 418-1310. https://www.fcc.gov/general/competition-infrastructure-policy-division-wireless-telecommunications-bureau

PROPERTY DESCRIPTION

City street light poles in public right-of-way (sidewalk) adjacent to:

Site # 1) Case no. PLN18095; 9720 Edes Avenue

A 30-foot tall City street light pole (non-decorative "cobrahead" style light; height measured at top of pole, not luminaire) located in public right-of-way (sidewalk, towards curb) near an industrial property with large canopy;

Site # 2) Case no. PLN18094; 1035 94th Avenue

A 29-6 street light pole in a residential district consisting of one-story single-family homes; and,

Site #3) Case no. PLN18093; 569 High Street at Howard Street

A 25-foot tall street light pole near a full-service car wash business.

PROJECT DESCRIPTION

The sites are generally proposed for:

- Installation by top-mounting one omni-directional antenna within a shroud, mounted below top of pole to extend 4'-6" beyond top of pole;
- Installation of side-mounted 2'-11" tall equipment below the street light, above 16'-6" in height; and,
- Paint the proposed antennas and associated equipment to match the pole.

PLN18095 / PLN18094 / PLN18093

Following are site-specific proposals:

Site # 1) Case no. PLN18095; 9720 Edes Avenue: extension to total 34'-6" in height;

Site # 2) Case no. PLN18094; 1035 94th Avenue: extension to total 34-feet in height; and,

Site #3) Case no. PLN18093; 569 High Street at Howard Street: extension to total 29'-6" in height.

No portion of the telecommunication facilities would be located at grade. The proposed antenna and associated equipment would not be accessible to the public.

SIMILAR CASES

Records show that the Planning Commission has approved numerous Monopole Telecommunications Facilities requiring Design Review and Conditional Use Permits including some Minor Variances throughout the City since at least 2016.

GENERAL PLAN ANALYSIS

Site # 1 is located in the Neighborhood Center Mixed Use area of the General Plan's Land Use and Transportation Element (LUTE). The intent of the area is: "to identify, crate, maintain and enhance mixed use neighborhood commercial centers. These centers are typically characterized by smaller scale pedestrian-oriented, continuous street frontage with a mix of retail, housing, office, active open space, eating and drinking places, personal and business services, and small scaled educational, cultural, or entertainment uses." Site # 2 is in the Mixed Housing Type Residential area: "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." Site # 3 is in the Estuary Policy Plan's General Commercial 1 area; the intent of the area is to: "provide for the expansion of regional-serving retail and commercial uses that can benefit from freeway accessibility." The proposed telecommunication facilities would be mounted on existing City street light poles within the City of Oakland public right-of-way. The proposed unmanned wireless telecommunication facility would not adversely affect the characteristics of the neighborhood.

ZONING ANALYSIS

Site # 1 is located in the CN-3 Neighborhood Commercial Zone. Site # 2 is in the RM-1 Mixed Housing Type Residential Zone. Site # 3 is in D-CE-2 Central Estuary Commercial Zone (High Street Retail). Monopole Telecommunications Facilities on City light poles require a Conditional Use Permit and a Regular Design Review with additional findings; these permits are decided by the Planning Commission for sites located in or near to a residential zone. Additionally, Site # 2 requires a Minor Variance for proximity to a residential property line. New wireless telecommunications facilities may also be subject to a Site Alternatives Analysis, Site Design Alternatives Analysis, and a satisfactory radio-frequency (RF) emissions report. Staff analyzes the proposal in consideration of these requirements in the 'Key Issues and Impacts' section of this report. Additionally, attachment to City infrastructure requires review by the City's Real Estate Department, Electrical Division, and Information Technology Department. Given customers increasing reliance upon cellular service for phone and Wi-Fi, the proposal for a Monopole Telecommunications Facility that is not adjacent to a primary living space or historic structure conforms to this intent.

ENVIRONMENTAL DETERMINATION

The California Environmental Quality Act (CEQA) Guidelines list the projects that qualify as categorical exemptions from environmental review. The proposed project is categorically exempt from the environmental review requirements pursuant to Section 15301, minor additions and alterations to an existing City street light pole; Section 15302, replacement or reconstruction of existing utility systems and/or facilities; Section 15303, new construction or conversion of small structures, and Section 15183, projects consistent with the General Plan or Zoning.

KEY ISSUES AND IMPACTS

The proposal to establish a Monopole Telecommunications Facility is subject to the following Planning Code development standards, which are followed by staff's analysis in relation to this application:

17.128.080 Monopole Telecommunications Facilities.

A. General Development Standards for Monopole Telecommunications Facilities.

1. Applicant and owner shall allow other future wireless communications companies including public and quasi-public agencies using similar technology to collocate antenna equipment and facilities on the monopole unless specific technical or other constraints, subject to independent verification, at the applicant's expense, at the discretion of the City of Oakland Zoning Manager, prohibit said collocation. Applicant and other wireless carriers shall provide a mechanism for the construction and maintenance of shared facilities and infrastructure and shall provide for equitable sharing of cost in accordance with industry standards. Construction of future facilities shall not interrupt or interfere with the continuous operation of applicant's facilities.

The proposal involves use of an existing City of Oakland metal street light pole that would remain available for future collocation purposes as practicable.

2. The equipment shelter or cabinet must be concealed from public view or made compatible with the architecture of the surrounding structures or placed underground. The shelter or cabinet must be regularly maintained.

Recommended conditions of approval require painting and texturing the antenna and equipment to match the appearance of the metal pole. There is no equipment shelter or cabinet proposed; however, minimal equipment would be closely mounted onto the side of the metal pole.

3. When a monopole is in a Residential Zone or adjacent to a residential use, it must be set back from the nearest residential lot line a distance at least equal to its total height.

Site # 2 is adjacent to a residential use and this finding is not met by the proposal; a Minor Variance is, therefore, required. Findings to approve the Minor Variance can be made, as described in the Findings section of this report (Attachment A).

4. In all zones other than the D-CE-5, D-CE-6, IG, CIX-2, and IO Zones, the maximum height of Monopole Telecommunications Facilities and connecting appurtenances may be increased from the otherwise required maximum height to forty-five (45) feet upon the granting of a Conditional Use Permit (see Chapter 17.134 for the Conditional Use Permit Procedure).

This requirement does not apply. The subject property is not located in any of the described zoning districts. Nonetheless, the facility would not exceed the height of 34'-6".

5. In the D-CE-5, D-CE-6, CIX-2, and IO Zones, the maximum height of Monopole Telecommunications Facilities and connecting appurtenances may be increased from the otherwise required maximum height to eighty (80) feet upon the granting of a Conditional Use Permit (see Chapter 17.134 for the Conditional Use Permit Procedure).

This requirement does not apply. The subject property is not located in any of the described zoning districts. Nonetheless, the facility would not exceed the height of 34'-6".

6. In the IG Zone, the maximum height of Monopole Telecommunications Facilities and connecting appurtenances may reach a height of forty-five (45) feet. These facilities may reach a height of eighty (80) feet upon the granting of Regular Design Review approval (see Chapter 17.136 for the Design Review Procedure).

This requirement does not apply. The subject property is not located in the described zoning district. Nonetheless, the facility would not exceed the height of 34'-6".

7. The applicant shall submit written documentation demonstrating that the emissions from the proposed project are within the limits set by the Federal Communications Commission.

This standard is met by the proposal; a satisfactory emissions report has been submitted and is attached to this report (Attachments C-D-E).

8. Antennas may not extend more than fifteen (15) feet above their supporting structure.

The proposed antenna would project less than fifteen feet above the City light pole.

17.128.110 Site location preferences.

New wireless facilities shall generally be located on the following properties or facilities in order of preference:

- A. Co-located on an existing structure or facility with existing wireless antennas.
- B. City-owned properties or other public or quasi-public facilities.
- C. Existing commercial or industrial structures in Nonresidential Zones (excluding all HBX Zones and the D-CE-3 and D-CE-4 Zones).
- D. Existing commercial or industrial structures in Residential Zones, HBX Zones, or the DCE-3 or D-CE-4 Zones.
- E. Other Nonresidential uses in Residential Zones, HBX Zones, or the D-CE-3 or D-CE-4 Zones.
- F. Residential uses in Nonresidential Zones (excluding all HBX Zones and the D-CE-3 and D-CE-4 Zones).
- G. Residential uses in Residential Zones, HBX Zones, or the D-CE-3 or D-CE-4 Zones. Facilities locating on an A, B or C ranked preference do not require a site alternatives analysis. Facilities proposing to locate on a D through G ranked preference, inclusive, must submit a site alternatives analysis as part of the required application materials. A site alternatives analysis shall, at a minimum, consist of: a. The identification of all A, B and C ranked preference sites within one thousand (1,000) feet of the proposed location. If more than three (3) sites in each preference order exist, the three such closest to the proposed location shall be required. b. Written evidence indicating why each such identified alternative cannot be used. Such evidence shall be in sufficient detail that independent verification, at the applicant's expense, could be obtained if required by the City of Oakland Zoning Manager. Evidence should indicate if the reason an alternative was rejected was technical (e.g. incorrect height, interference from existing RF sources, inability to cover required area) or for other concerns (e.g. refusal to lease, inability to provide utilities).

A site alternatives analysis is not required because the proposal conforms to 'B' as it would be located on a public facility (City light pole). Nonetheless, the applicant has submitted an analysis which is attached to this report (Attachments C-D-E).

17.128.120 Site design preferences.

New wireless facilities shall generally be designed in the following order of preference:

- A. Building or structure mounted antennas completely concealed from view.
- B. Building or structure mounted antennas set back from roof edge, not visible from public right-of way.
- C. Building or structure mounted antennas below roof line (facade mount, pole mount) visible from public right-of-way, painted to match existing structure.
- D. Building or structure mounted antennas above roof line visible from public right-of-way.
- E. Monopoles.
- F. Towers.

Facilities designed to meet an A or B ranked preference do not require a site design alternatives analysis. Facilities designed to meet a C through F ranked preference, inclusive, must submit a site design alternatives analysis as part of the required application materials. A site design alternatives analysis shall, at a minimum, consist of: a. Written evidence indicating why each such higher preference design alternative cannot be used. Such evidence shall be in sufficient detail that independent verification could be obtained if required by the City of Oakland Zoning Manager. Evidence should indicate if the reason an alternative was rejected was technical (e.g. incorrect height, interference from existing RF sources, inability to cover required area) or for other concerns (e.g. inability to provide utilities, construction or structural impediments).

The proposal most closely conforms to 'E' (monopole) and the applicant has submitted a satisfactory site design alternatives analysis (Attachments C-D-E).

17.128.130 Radio frequency emissions standards.

The applicant for all wireless facilities, including requests for modifications to existing facilities, shall submit the following verifications:

- a. With the initial application, a RF emissions report, prepared by a licensed professional engineer or other expert, indicating that the proposed site will operate within the current acceptable thresholds as established by the Federal government or any such agency who may be subsequently authorized to establish such standards.
- b. Prior to commencement of construction, a RF emissions report indicating the baseline RF emissions condition at the proposed site.
- c. Prior to final building permit sign off, an RF emissions report indicating that the site is actually operating within the acceptable thresholds as established by the Federal government or any such agency who may be subsequently authorized to establish such standards.

A satisfactory report is attached to this report (Attachments C-D-E).

<u>Analysis</u>

The proposed site design would not be situated on an historic or decorative pole or structure, would not create a view obstruction, and would not negatively impact a view from a primary living space such as a living room or bedroom window. For Site # 2, the proximity to a residential property line is justified as it precludes use or installation of a new site that might be set back but not conform to these other considerations. Staff, therefore, finds the proposal to provide an essential service with a least-intrusive possible design. Draft conditions of approval stipulate that the components be painted and textured to match the metal pole in appearance for camouflaging.

In conclusion, staff recommends approval subject to recommended Conditions of Approval.

RECOMMENDATIONS:

- 1. Affirm staff's environmental determination.
- 2. Approve the Major Conditional Use Permit, Regular Design Review and Minor Variance (Site # 2), subject to the attached Findings and Conditions of Approval.

Prepared by:

AUBREY ROSE, AICP

Planner III

Reviewed by:

CATHERINE PAYNE Acting Zoning Manager

Approved for forwarding to the Planning Commission:

ED MANASSE, Interim Deputy Director

Planning Bureau

ATTACHMENTS:

- A. Findings
- B. Conditions of Approval

Plans / Photo-Simulations / Site Analyses / RF Report / Proof of Posting:

- C. Site # 1: Case no. PLN18095; 9720 Edes Avenue
- D. Site # 2: Case no. PLN18094; 1035 94th Avenue
- E. Site #3: Case no. PLN18093; 569 High Street @ Howard Street

ATTACHMENT A: FINDINGS

This proposal meets the required findings under General Use Permit Criteria (OMC Sec. 17.134.050), Conditional Use Permit Criteria for Monopole Facilities (OMC Sec. 17.136.040 (A)), Regular Design Review Criteria for Nonresidential Facilities (OMC Sec. 17.136.050(B)), Design Review Criteria for Monopole Telecommunications Facilities (OMC Sec. 17.128.070(B)), and Variance Procedure/Findings Required (OMC Sec. 17.148.050), 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 is to establish a Monopole Telecommunications Facility in or near a residential zone by attaching to an existing City light pole. Attachment to an existing structure with smallest possible components painted and texturized to match the pole will be the least intrusive design. The project will enhance existing service for merchants, shoppers, residents, and visitors in the area.

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.

Attachment to an existing structure with smallest possible components painted and texturized to match the pole will be the least intrusive design.

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.

The project will enhance existing service for merchants, shoppers, residents, and visitors in the area.

D. That the proposal conforms to all applicable design review criteria set forth in the design review procedure at Section 17.136.070.

The proposal conforms to Design Review findings which are included in that section of this attachment of Findings for Approval.

E. That the proposal conforms in all significant respects with the Oakland Comprehensive Plan and with any other applicable plan or development control map which has been adopted by the City Council.

Site # 1 is located in the Neighborhood Center Mixed Use area of the General Plan's Land Use and Transportation Element (LUTE). The intent of the area is: "to identify, crate, maintain and enhance mixed use neighborhood commercial centers. These centers are typically characterized by smaller scale pedestrian-oriented, continuous street frontage with a mix of retail, housing, office, active open space, eating and drinking places, personal and business services, and small scaled educational, cultural, or entertainment uses." Site # 2 is in the Mixed Housing Type Residential area: "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." Site # 3 is in the Estuary Policy Plan's General Commercial 1 area; the intent of the area is to: "provide for the expansion fo regional-serving retail and commercial uses that can benefit from freeway accessibility." The proposed telecommunication facilities would be mounted on existing City street light poles within the City of Oakland public right-of-way. The proposed unmanned wireless telecommunication facility would not adversely affect the characteristics of the neighborhood.

<u>CONDITIONAL USE PERMIT CRITERIA FOR MONOPOLE FACILITIES (OMC SEC. 17.128.070(C))</u>

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

The proposal conforms to Design Review findings which are included in that section of this attachment of Findings for Approval.

2. Monopoles should not be located any closer than one thousand five hundred (1,500) feet from existing monopoles unless technologically required or visually preferable.

Use of this pole precludes placement of a new pole with facility fronting an upper story residences at various viable sites in the surrounding area and is therefore "visually preferable."

3. The proposed project must not disrupt the overall community character.

Attachment to an existing structure with smallest possible components painted and texturized to match the pole will be the least intrusive design. The project will enhance existing service for merchants, shoppers, residents, and visitors in the area.

- 4. If a major conditional use permit is required, the Planning Director or the Planning Commission may request independent expert review regarding site location, collocation and facility configuration. Any party may request that the Planning Commission consider making such request for independent expert review.
- a. If there is any objection to the appointment of an independent expert engineer, the applicant must notify the Planning Director within ten (10) days of the Commission request. The Commission will hear arguments regarding the need for the independent expert and the applicant's objection to having one appointed. The Commission will rule as to whether an independent expert should be appointed.
- b. Should the Commission appoint an independent expert, the Commission will direct the Planning Director to pick an expert from a panel of licensed engineers, a list of which will be compiled, updated and maintained by the Planning Department.
- c. No expert on the panel will be allowed to review any materials or investigate any application without first signing an agreement under penalty of perjury that the expert will keep confidential any and all information learned during the investigation of the application. No personnel currently employed by a telecommunication company are eligible for inclusion on the list.

- d. An applicant may elect to keep confidential any proprietary information during the expert's investigation. However, if an applicant does so elect to keep confidential various items of proprietary information, that applicant may not introduce the confidential proprietary information for the first time before the Commission in support of the application.
- e. The Commission shall require that the independent expert prepare the report in a timely fashion so that it will be available to the public prior to any public hearing on the application.
- f. Should the Commission appoint an independent expert, the expert's fees will be paid by the applicant through the application fee, imposed by the City.

A Major Conditional Use Permit is required and the Planning Director or Planning Commission may therefore independent expert review in addition to that which is attached to this report.

REGULAR DESIGN REVIEW CRITERIA FOR NON-RESIDENTIAL FACILITIES (OMC SEC. 17.136.050(B))

1. That the proposed design will create a building or set of buildings that are well related to the surrounding area in their setting, scale, bulk, height, materials, and textures:

Attachment to an existing structure with smallest possible components painted and texturized to match the pole will be the least intrusive design.

2. That the proposed design will protect, preserve, or enhance desirable neighborhood characteristics;

The proposal will not create a view obstruction, will not be directly adjacent to a residential facility's primary living space windows, and will not be located on an historic or decorative structure.

3. The project will provide a necessary function without negatively impacting surrounding opens pace and hillside residential properties.

The proposal will enhance essential services in a residential or commercial district.

4. That the proposed design will be sensitive to the topography and landscape.

The proposal will not be ground mounted.

5. That, if situated on a hill, the design and massing of the proposed building relates to the grade of the hill.

This finding is inapplicable because the site is level.

6. 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.

This finding is met by this proposal as described in a previous section of this attachment.

<u>DESIGN REVIEW CRITERIA FOR MONOPOLE TELECOMMUNICATIONS FACILITIES</u> (OMC SEC. 17.128.070(B))

1. Collocation is to be encouraged when it will decrease visual impact and collocation is to be discouraged when it will increase negative visual impact.

The project does not involve collocation as it involves the establishment of a new telecommunications facility; however, the project should not preclude any future proposals for location at the site.

2. Monopoles should not be sited to create visual clutter or negatively affect specific views.

The Monopole Facility is sited on existing infrastructure where it will not create clutter or negatively affect specific views. The view of the City street light from the adjacent story residence should remain of the pole below the antenna and above the equipment.

3. Monopoles shall be screened from the public view wherever possible.

The Monopole Facility will be camouflaged and texturized to match the appearance of the existing light pole that will host it. The City street light is not located adjacent to a residential facility's window.

4. The equipment shelter or cabinet must be concealed from public view or made compatible with the architecture of the surrounding structures or placed underground. The shelter or cabinet must be regularly maintained.

Recommended conditions of approval require painting and texturing the antenna and equipment to match the appearance of the metal pole. There is no equipment shelter or cabinet proposed, however minimal equipment would be closely mounted on the side of the metal pole.

5. Site location and development shall preserve the preexisting character of the surrounding buildings and land uses and the zone district as much as possible. Wireless communication towers shall be integrated through location and design to blend in with the existing characteristics of the site to the extent practical. Existing on-site vegetation shall be preserved or improved, and disturbance of the existing topography shall be minimized, unless such disturbance would result in less visual impact of the site to the surrounding area.

The proposed Monopole Facility will be placed in an existing non-decorative City light pole. This enables the preservation of character in the area and will not pose a negative visual impact as the proposal will be camouflaged to match the pole. There is no adjacent vegetation or topography.

6. 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 minimal clearance to the facility will reduce or eliminate public access.

VARIANCE PROCEDURE/FINDINGS REQUIRED (OMC SEC. 17.148.050)

1. That strict compliance with the specified regulation would result in practical difficulty or unnecessary hardship inconsistent with the purposes of the zoning regulations, due to unique physical or topographic circumstances or conditions of design; or, as an alternative in the case of a minor variance, that such strict compliance would preclude an effective design solution improving livability, operational efficiency, or appearance.

For Site # 2, the project requires a Minor Variance. The proposal does not meet the following requirement:

When a monopole is in a Residential Zone or adjacent to a residential use, it must be set back from the nearest residential lot line a distance at least equal to its total height. (OMC Sec. 17.128.0809(A)(3))

The 29'-6" tall pole is set back the depth of the City sidewalk from a residential lot line. Under the project, the pole will be extended to 34-feet in height by attachment of a shrouded antenna at top. Strict compliance would preclude an effective design solution improving livability, operational efficiency, or appearance. The intent of the ordinance is to avoid the installation of a looming structure adjacent to a home and to avoid clutter. A code conforming alternative in this case might consist of a new structure measuring less than fifteen-feet in height including the attached telecommunications facility. The view of the City street light from the adjacent residence should be minimal, and other residences are set back further. The proposal will use an existing facility to enhance essential services with the least-intrusive design.

2. That strict compliance with the regulations would deprive the applicant of privileges enjoyed by owners of similarly zoned property; or, as an alternative in the case of a minor variance, that such strict compliance would preclude an effective design solution fulfilling the basic intent of the applicable regulation.

The intent of the ordinance is to avoid the installation of a looming structure adjacent to a home and to avoid clutter. A code conforming alternative in this case might consist of a new structure measuring less than fifteen-feet in height including the attached telecommunications facility. The view of the City street light from the adjacent residence should be minimal, and other residences are set back further. The proposal will use an existing facility to enhance essential services with the least-intrusive design. A code-conforming facility would add clutter and might create more obstruction to the view from an upper story residential unit.

3. That the variance, if granted, will not adversely affect the character, livability, or appropriate development of abutting properties or the surrounding area, and will not be detrimental to the public welfare or contrary to adopted plans or development policy.

The variance will eliminate the need to install an additional new pole.

4. That the variance will not constitute a grant of special privilege inconsistent with limitations imposed on similarly zoned properties or inconsistent with the purposes of the zoning regulations.

Other telecommunications facilities have been granted a similar variance.

5. That the elements of the proposal requiring the variance (e.g., elements such as buildings, walls, fences, driveways, garages and carports, etc.) conform with the regular design review criteria set forth in the design review procedure at Section 17.136.050

This finding is met by this proposal as described in a previous section of this attachment.

6. 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 have been adopted by the Planning Commission or City Council.

This finding is met by this proposal as described in a previous section of this attachment.

- 7. For proposals involving one (1) or two (2) residential dwelling units on a lot: That, if the variance would relax a regulation governing maximum height, minimum yards, maximum lot coverage or maximum floor area ratio, the proposal also conforms with at least one of the following additional criteria:
- a. 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 height variances, the proposal provides detailing, articulation or other design treatments that mitigate any bulk created by the additional height; or
- b. Over sixty percent (60%) of the lots in the immediate vicinity are already developed and the proposal does not exceed the corresponding as-built condition on these lots and, for height variances, 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 (see illustration I-4b); 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 variance.

This finding is non-applicable to the project; the proposal does not involve a house or duplex.

Attachment B: Conditions of Approval

1. Approved Use

The project shall be constructed and operated in accordance with the authorized use as described in the approved application materials, **staff report** and the approved plans **dated June 13 and 14, 2017** and **submitted February 14, 2018**, as amended by the following conditions of approval and mitigation measures, if applicable ("Conditions of Approval" or "Conditions").

Three (3) approvals to install new "small cell site" Monopole Telecommunications Facilities on an existing City street light pole in public right-of-way (sidewalk) by attaching an antenna within a shroud to the top of the pole and equipment mounted to the side of the pole adjacent to:

Site # 1: Case no. PLN18095; 9720 Edes Avenue (APN: 044 5007-007-01);

Site # 2: Case no. PLN18094; 1035 94th Avenue (APN: 044 4986-019-00); and,

Site # 3: Case no. PLN18093; 569 High Street @ Howard Street (APN: 033 2250-001-06)

2. Effective Date, Expiration, Extensions and Extinguishment

This Approval shall become effective immediately, unless the Approval is appealable, in which case the Approval shall become effective in ten calendar days unless an appeal is filed. Unless a different termination date is prescribed, this Approval shall expire **two calendar years** from the Approval date, or from the date of the final decision in the event of an appeal, 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 Approval, 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 or other construction-related permit for this project may invalidate this Approval if said Approval has also expired. If litigation is filed challenging this Approval, or its implementation, then the time period stated above for obtaining necessary permits for construction or alteration and/or commencement of authorized activities is automatically extended for the duration of the litigation.

3. Compliance with Other Requirements

The project applicant shall comply with all other applicable federal, state, regional, and local laws/codes, requirements, regulations, and guidelines, including but not limited to those imposed by the City's Bureau of Building, Fire Marshal, and Public Works Department. 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 #4.

4. Minor and Major Changes

- a. Minor changes to the approved project, plans, Conditions, facilities, or use may be approved administratively by the Director of City Planning.
- b. Major changes to the approved project, plans, Conditions, facilities, or use shall be reviewed by the Director of City Planning to determine whether such changes require submittal and approval of a revision to the Approval by the original approving body or a new independent permit/approval. Major revisions shall be reviewed in accordance with the procedures required for the original permit/approval. A new independent permit/approval shall be reviewed in accordance with the procedures required for the new permit/approval.

5. Compliance with Conditions of Approval

- a. The project applicant and property owner, including successors, (collectively referred to hereafter as the "project applicant" or "applicant") shall be responsible for compliance with all the Conditions of Approval and any recommendations contained in any submitted and approved technical report at his/her sole cost and expense, subject to review and approval by the City of Oakland.
- b. The City of Oakland reserves the right at any time during construction to require certification by a licensed professional at the project applicant's expense that the as-built project conforms to all applicable requirements, including but not limited to, approved maximum heights and minimum setbacks. Failure to construct the project in accordance with the Approval may result in remedial reconstruction, permit revocation, permit modification, stop work, permit suspension, or other corrective action.
- c. Violation of any term, Condition, or project description relating to the Approval 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 Approval 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 Approval or Conditions.

6. Signed Copy of the Approval/Conditions

A copy of the Approval letter and Conditions shall be signed by the project applicant, attached to each set of permit plans submitted to the appropriate City agency for the project, and made available for review at the project job site at all times.

7. Blight/Nuisances

The project site shall be kept in a blight/nuisance-free condition. Any existing blight or nuisance shall be abated within 60 days of approval, unless an earlier date is specified elsewhere.

8. Indemnification

a. To the maximum extent permitted by law, the project applicant shall defend (with counsel acceptable to the City), indemnify, and hold harmless the City of Oakland, the Oakland City Council, the Oakland Redevelopment Successor Agency, the Oakland City Planning Commission, and their respective agents, officers, employees, and volunteers (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 this Approval or implementation of this Approval. The City may elect, in its sole discretion, to participate in the defense of said Action and the project 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 project applicant shall execute a Joint Defense Letter of Agreement with the City, acceptable to the Office of the City Attorney, which memorializes the above obligations. These obligations and the Joint Defense Letter of Agreement shall survive termination, extinguishment, or invalidation of the Approval. Failure to timely execute the Letter of Agreement does not relieve the project applicant of any of the obligations contained in this Condition or other requirements or Conditions of Approval that may be imposed by the City.

9. Severability

The Approval 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 Monitoring

The project applicant may be required to cover the full costs of independent third-party technical review and City monitoring and inspection, including without limitation, special inspector(s)/inspection(s) during times of extensive or specialized plan-check review or construction, and inspections of potential violations of the Conditions of Approval. The project applicant shall establish a deposit with the Bureau of Building, if directed by the Building Official, Director of City Planning, or designee, prior to the issuance of a construction-related permit and on an ongoing asneeded basis.

12. Public Improvements

The project applicant shall obtain all necessary permits/approvals, such as encroachment permits, obstruction permits, curb/gutter/sidewalk permits, and public improvement ("p-job") permits from the City for work in the public right-of-way, including but not limited to, streets, curbs, gutters, sidewalks, utilities, and fire hydrants. Prior to any work in the public right-of-way, the applicant shall submit plans for review and approval by the Bureau of Planning, the Bureau of Building, and other City departments as required. Public improvements shall be designed and installed to the satisfaction of the City.

13. Construction Days/Hours

Requirement: The project applicant shall comply with the following restrictions concerning construction days and hours:

- a. Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling 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.
- b. Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday.

c. No construction is allowed on Sunday or federal holidays.

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.

Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case basis by the City, with criteria including the urgency/emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. The project applicant shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

PROJECT-SPECIFIC CONDITIONS

14. Emissions Report

Requirement: A RF emissions report shall be submitted to the Planning Bureau indicating that the site is actually operating within the acceptable thresholds as established by the Federal government or any such agency who may be subsequently authorized to establish such standards.

Requirement: Prior to a final inspection

When Required: Prior to final building permit inspection sign-off

Initial Approval: N/A

Monitoring/Inspection: N/A

15. Camouflage

Requirement: The antenna and equipment shall be painted, texturized, and maintained the same color and finish of the City light pole.

When Required: Prior to a final inspection

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

16. Operational

Requirement: 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.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

17. Graffiti Control

Requirement:

- a. During construction and operation of the project, the project applicant shall incorporate best management practices reasonably related to the control of graffiti and/or the mitigation of the impacts of graffiti. Such best management practices may include, without limitation:
- b. The project applicant shall remove graffiti by appropriate means within seventy-two (72) hours. Appropriate means include the following:
 - i. Removal through scrubbing, washing, sanding, and/or scraping (or similar method) without damaging the surface and without discharging wash water or cleaning detergents into the City storm drain system.
 - ii. For galvanized poles, covering with new paint to match the color of the surrounding surface.
 - iii. Replace pole numbers.

When Required: Ongoing Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

ATTACHMENT C

Site #1: Case no. PLN18095; 9720 Edes Avenue

Plans / Photo-Simulations / Site Analyses / RF Report / Proof of Posting



SITE ID/CASCADE ID-CANDIDATE LETTER: 9CAB013219/SF90XS0C7C intelligent infrastructure

2965 RED HILL AVE. SUITE 200 COSTA MESA, CA 92626

L5 ENGINEERING INC.

944 CALLE AMANECER, STE E SAN QLEMENTE, CA 82873 WWW.LEAFCC.LLC.COM PHONE: (949) 388-0192

FOR REYES

A 05/14/18

37.73673000/-122.18412700 LATITUDE/LONGITUDE:

EDES AVE & NEVADA ST CITY, STATE, ZIP: OAKLAND, CA 94603 CROSS STREET:

(E) 28'-0" PAINTED STEEL LIGHT POLE

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GENERAL NOTES

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SITE INFORMATION

BROOKFIELD REGIONAL MAP GARDENS LOCATION MAP Wages Jalisco Market VICINITY MAP SITE

END USER PROPOSES TO INSTALL EQUIPHENT ON AN (E) STEEL LIGHT POLE WITHIN AN EXISTING RIGHT-OF-WAY. THE SCOPE WILL CONSIST OF THE FOLLOWING: PROJECT DESCRIPTION

- INSTALL PROPOSED BACKHAUL TRANSPORT EQUIPI/ENT ON AN (E) STEEL LIGHT POLE CODES

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SHEET NO:	1-1	SP-1	SP-2	EV-1	EV-2	PL-1	E0-1	E0-2	E-1	E-2	G-1	TC-1	TC-2	GN-1	GN-2	GN-3		

TITLE SHEET

SHEET TITLE

MAP DATA @ 2017 GOOGLE

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06/05/2018 FOFGALFO

C70587

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ENGINEER

WOBILITE, LLC 2966 REDNILL MENUE, STE. 200 COSTA, MESS, CO. 92626 COMMAT: JAMES SINGETRON PHOME: (600) 814-0584 EMAIL: JSINGLETON®/MOBILITE.COM

PUBLIC RIGHT-OF-WAY

PROPERTY OWNER:

VPPLICANT:

JURISDICTION:

CITY OF OAKLAND

EDES AVE & NEVADA ST

-122,18412700

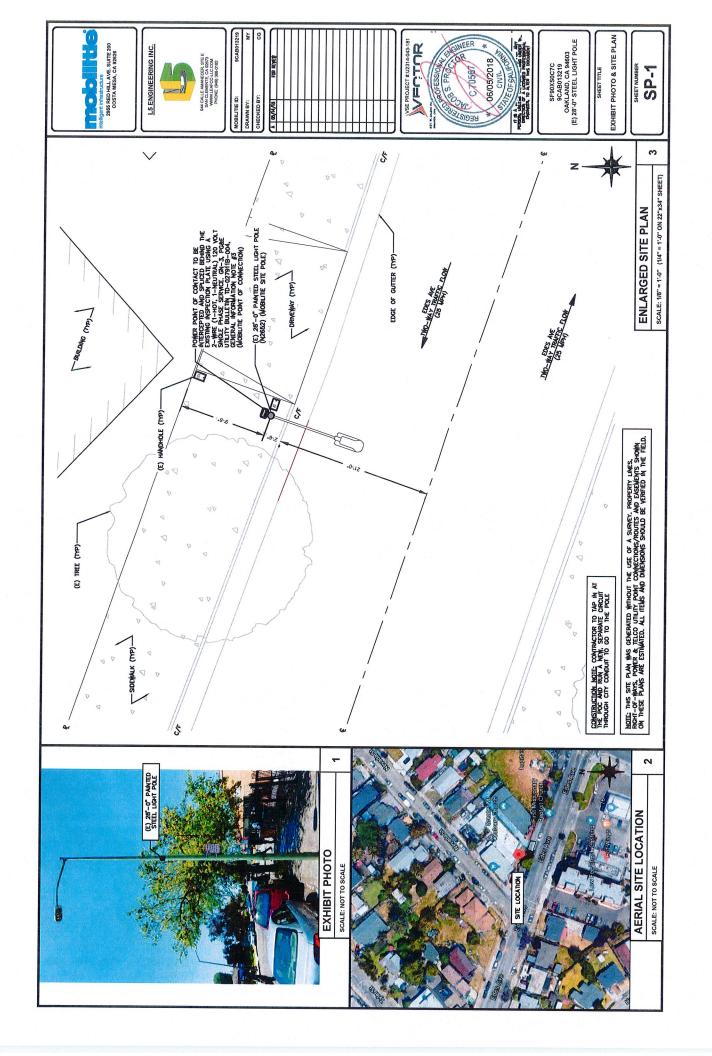
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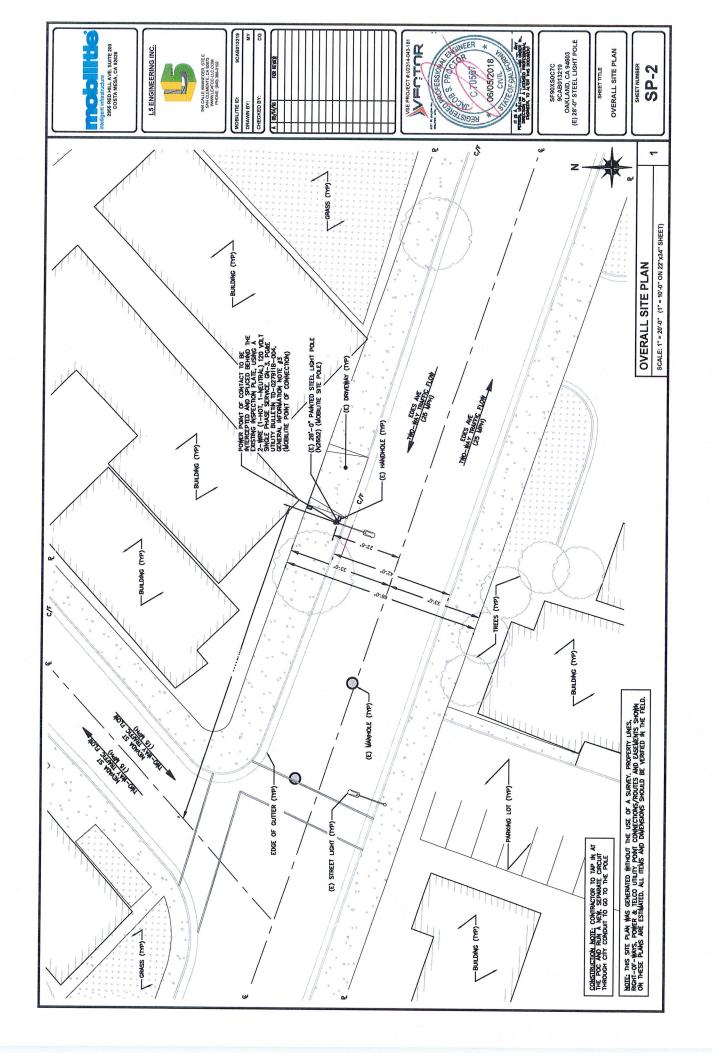
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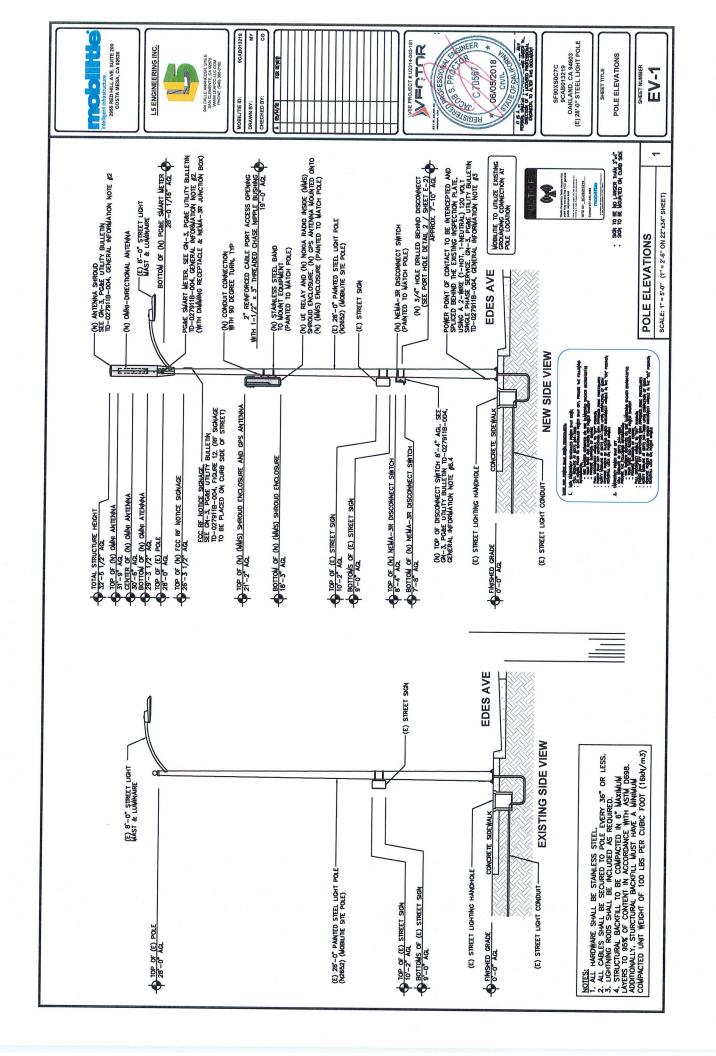
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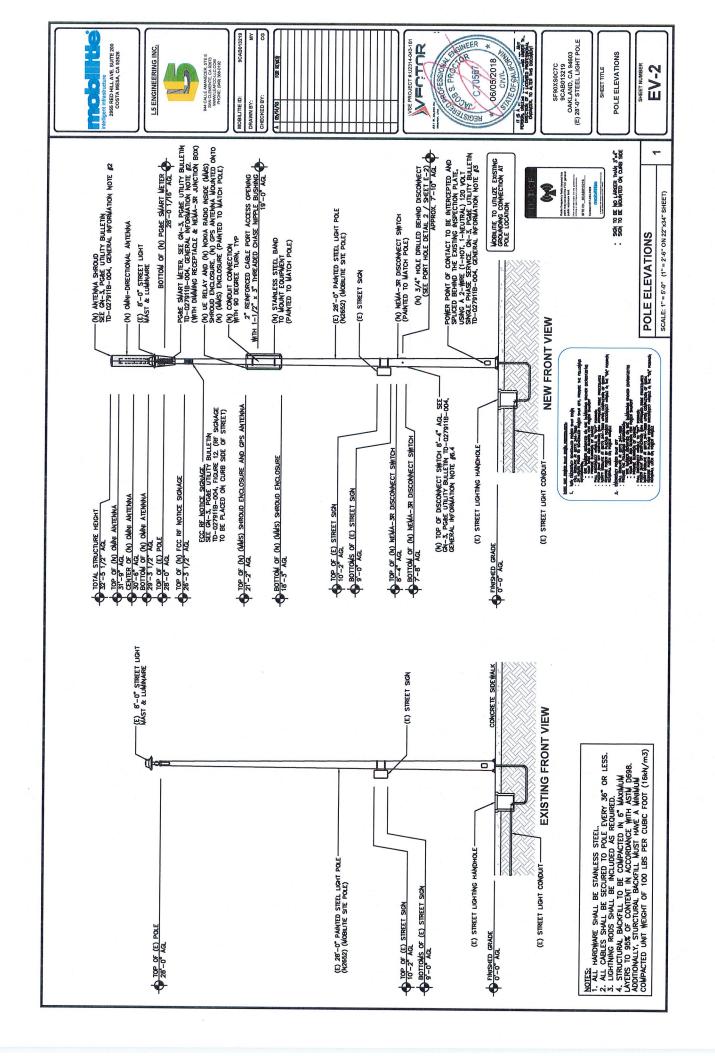
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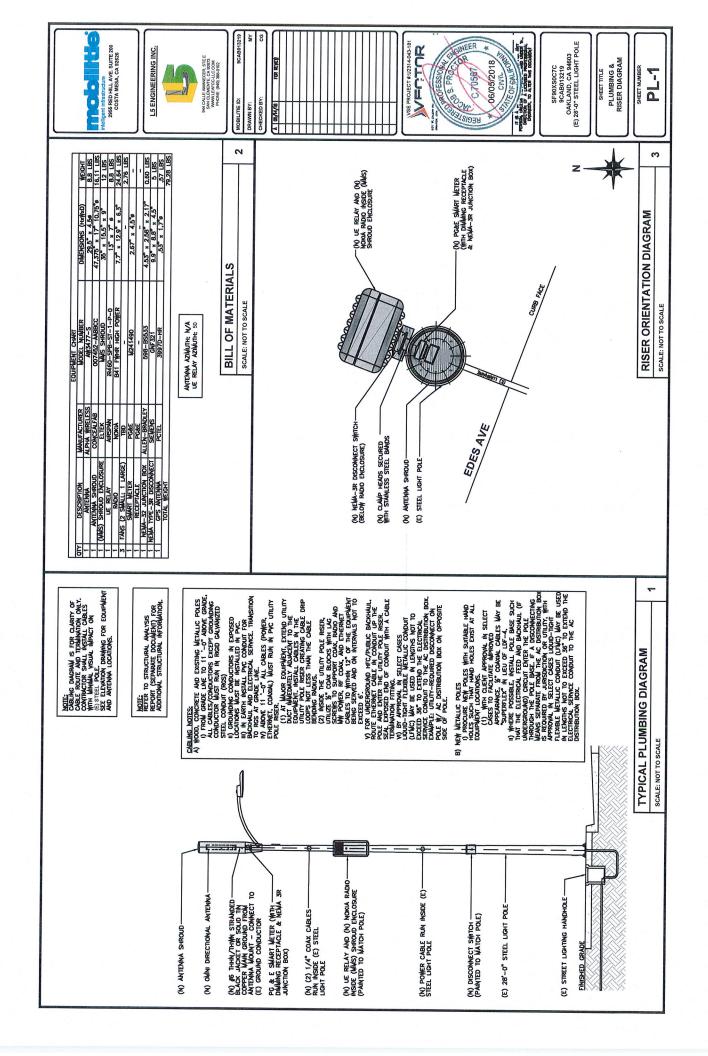
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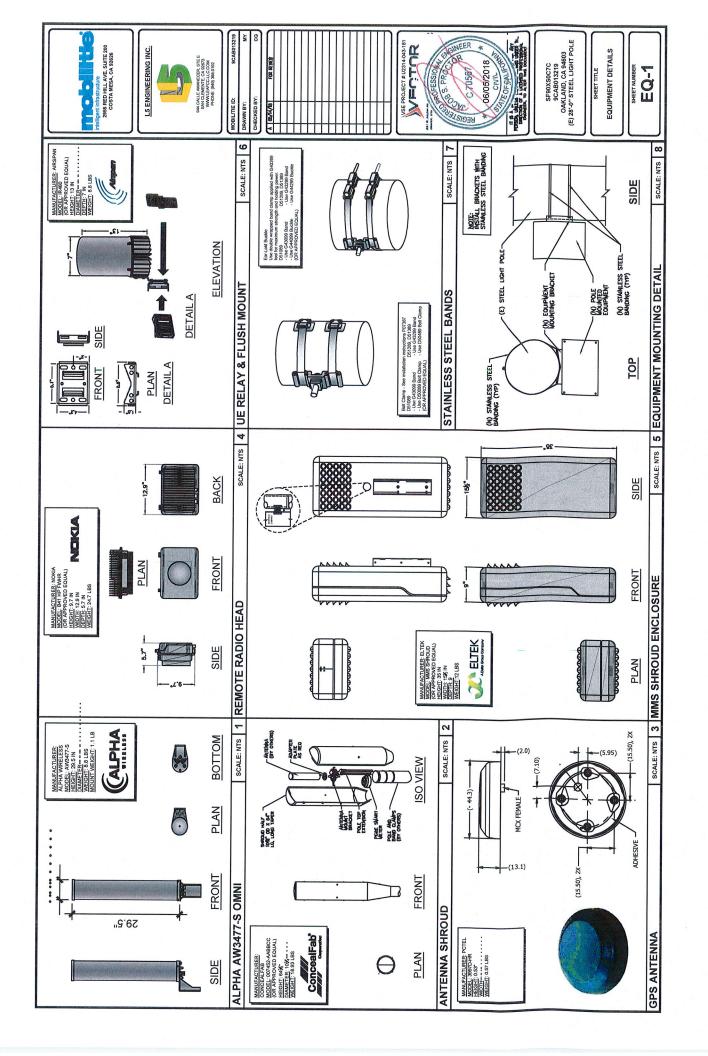


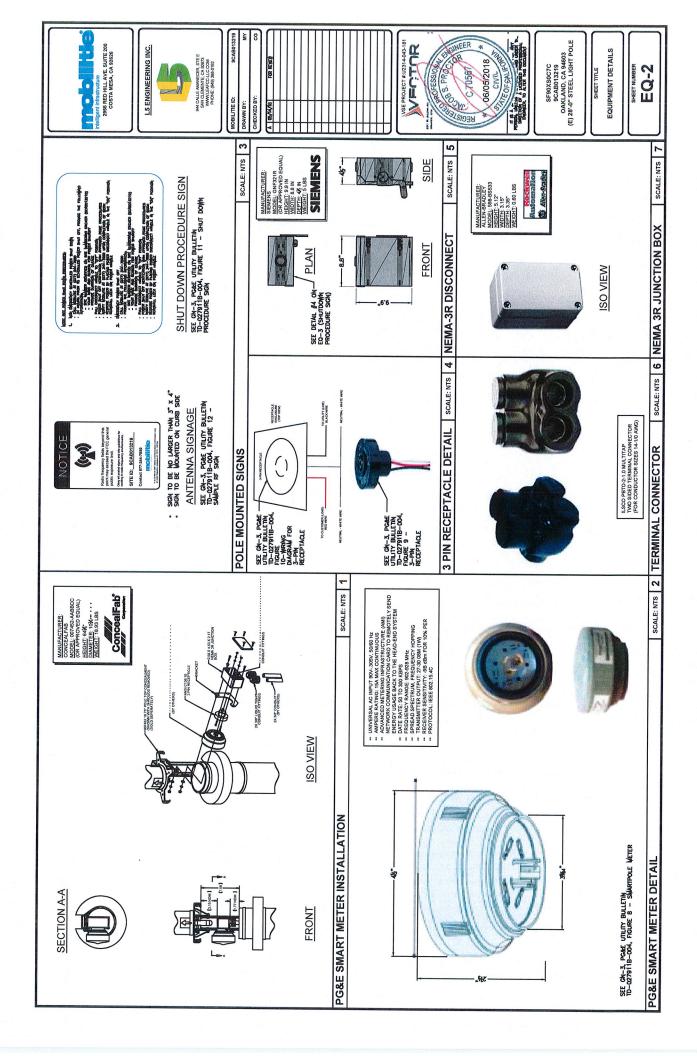


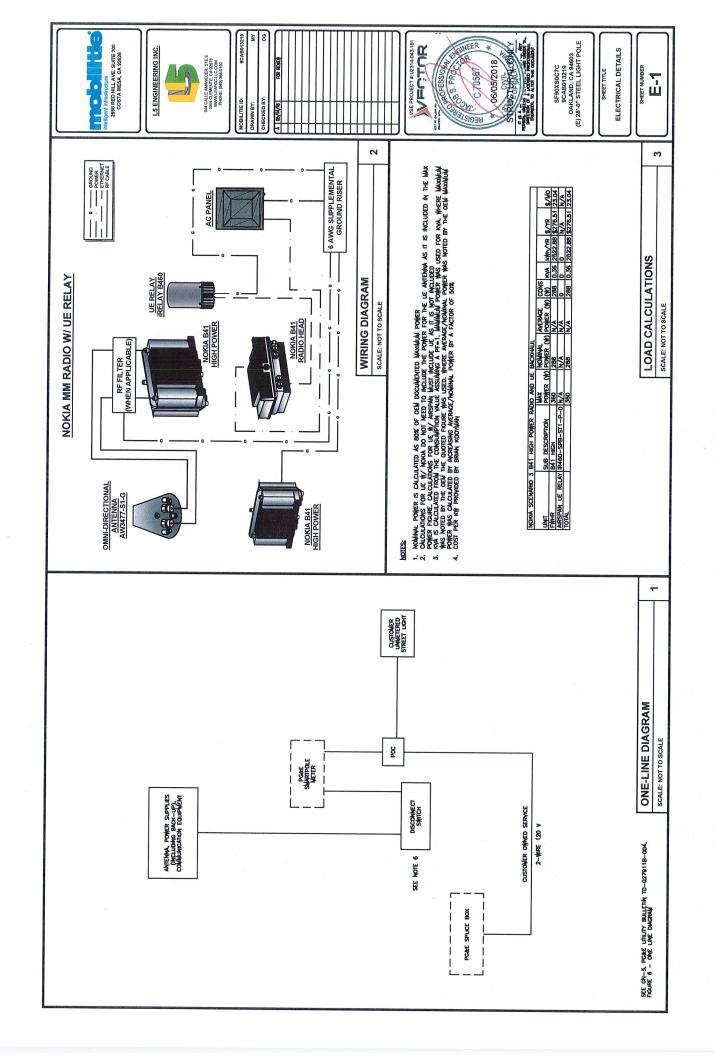


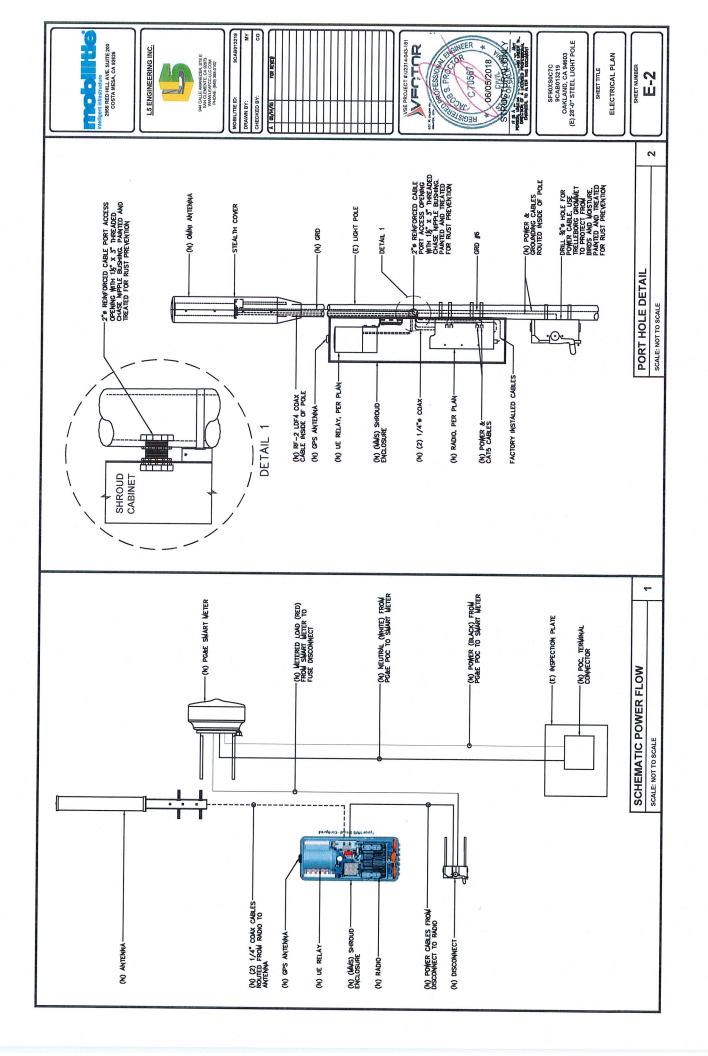


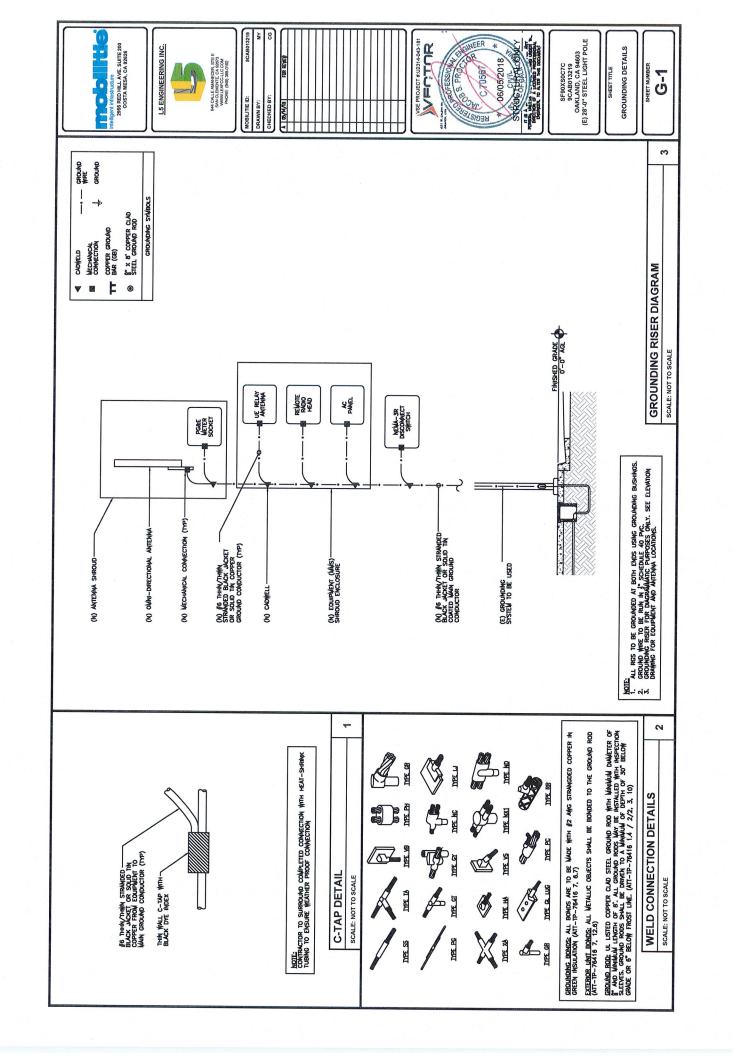


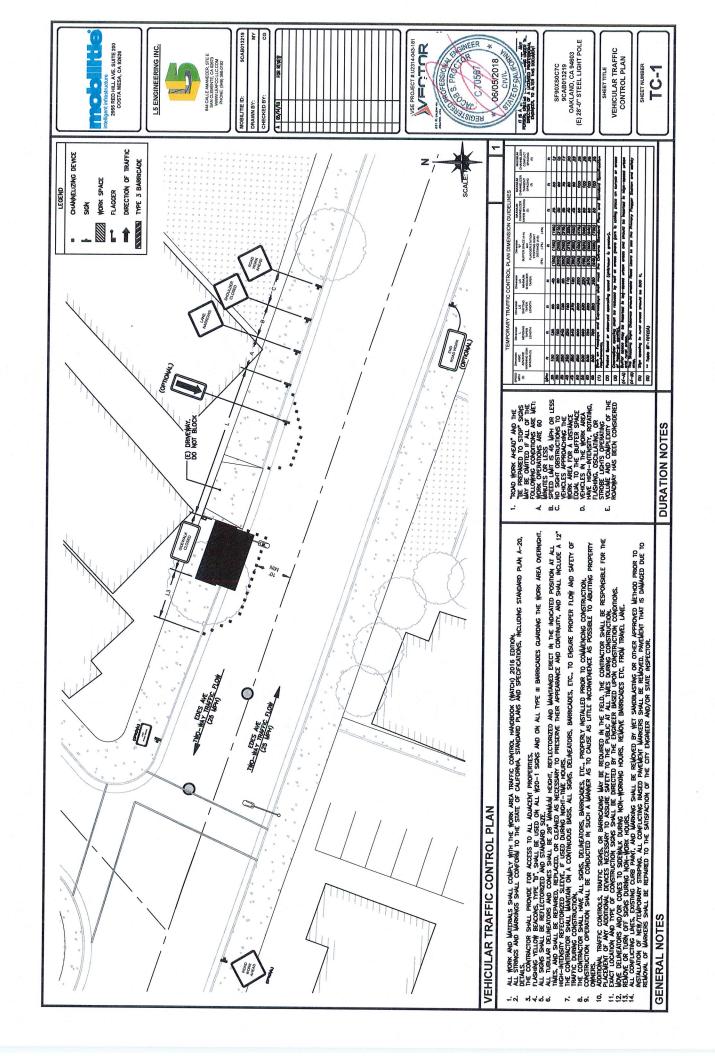


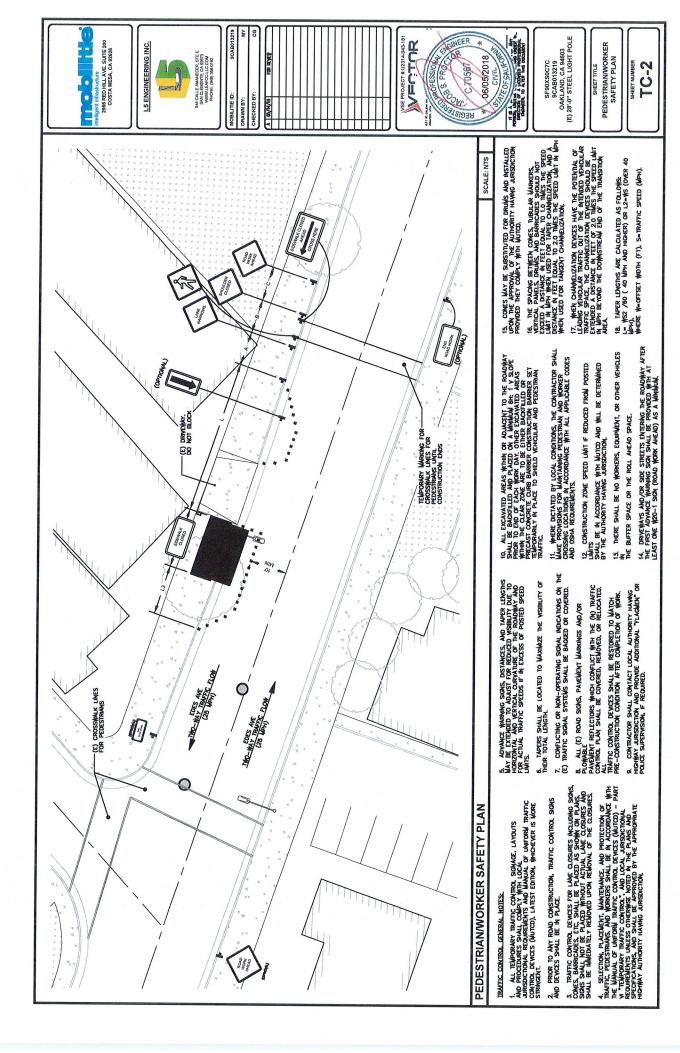












CENERAL CONSTRUCTION NOTES:

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E) OSSIA. – OCCUPATIONAL SAFETY AND HEALTH ACT
E) SSG. – STANDAND BULDING CODE
F) NEPA. – NATIONAL FIRE PROTECTION AGENCY
C) ANSI – AMERICAL NATIONAL STANDANDERS NESTIVUTE
H) IEEE – NASTITUTE OF ELECTRICAL, AND ELECTRICALS
C) ASTIM. – AMERICAN SOCIETY FOR TESTING MATERIALS

REFER TO SITE PLAKS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT, AND CONFIRM WITH MOBILITE CM ANY SZES AND LOCATIONS WHEN WEBDED.

(E) SERVICES: CONTRACTOR SHALL NOT INTERRUPT (E) SERVICES INTHOUT WRITTEN PERMISSION OF THE OWNER.

MINIMUM WRE SZE SHALL BE #12 AWG, NOT INCLUDING CONTROL WIRNG, UNLESS NOTED OTHERWISE. ALL CONDUCTORS SHALL BE COPPER WITH THIN INSULATION, UNLESS OTHERWISE NOTED.

7

QUILET BORES SAML BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THEADED HUBS IN WITCHARP LOCATIONS AND SPECIAL ENGLOSURES FOR OTHER CLASSIFED AREAS. ග්

IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MANOR DETAIL OF THE CONSTRUCTION, CONFINENCIA LE SEPECTED TO TURNISH AND INSTALL LITENS FOR A COMPLETE ELECTRICAL SYSTEM, AND PROPONDE ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER INGRANG GROER. oi.

ELECTRICAL SYSTEM SHALL BE AS COMPLETELY AND EFFECTIVELY GROUNDED, AS REQUIRED BY SPECIFICATIONS, SET FORTH BY APPLICANT. ó

ALI WORK SHALL BE PERFORNED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CASS, WORKELMER SHANGER THE CONFILETED SYSTEM, SHALL BE FULLY INICIDIAL, AND SHALL BE FULLY PREPROPED BY THE MOBILITE CAL AND LOCAL JARSDICH, AND PODERÍACES SHALL BE CORRECTED BY AN ELECTRICAL CONTRACTOR, ATT THE SOLE COST OF THE CONTRACTOR. Ξ.

ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROCRESS OF CONSTRUCTION. 5

THE CORRECTION OF ANY DEFECTS SHALL BE COMPLETED BY THE CONTRACTOR WITHOUT ANY ADDITIONAL CHARGE AND SHALL INCLUDE THE REPLACEMENT OR THE REPLACEMENT OR THE REPLACEMENT OR THE RESTALLATION, IMPICH MAY HAVE BEEN DAMAGED THEREIN. ĸ

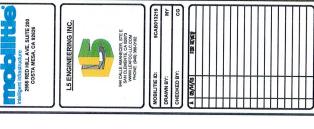
CONTRACTOR SHALL PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WRRES, BOXES, COVER PLATES AND DEVICES FOR ALL OUTLETS AS INDICATED. 4

DITCHIKG AND BACK FILL: CONTRACTOR SHALL PROVIDE FOR ALL UNDERGROUND INSTITUTED COMPUT AND YEAR SHALLONING EXCAVATION AND BACKFILLING AND COMPACTION, REFER TO NOTES AND REQUIREMENTS EXCAVATION, AND BACKFILLING. ō

MATERALS, PRODUCTS AND EQUIPARYT, INCLUDING ALL COMPONENTS THEREOF. SHALL BE NEW AND STALL BETTER OF THE NEW AND STALL BETTER OF THE NEE, MAJA AND IECE. SHALL ARETOR STALL METTER SECRED THE RECOMMENTS OF THE NEE, MAJA AND IECE. 16

CONTRACTOR SHALL SLIBIÁT SHOP DRÁMNGS OR MANUFACTURER'S CATALOG HYFORMATON OR ANY/ALL EQUIPMENT AND ALL ONER ELECTRICAL ITEMS FOR APPROVAL BY THE WOBLINE ON PROPE TO NESTALATION. 1,

ANY CUTTING OR PATCHING DEEJED NECESSARY FOR ELECTRICAL, WORK IS THE ELECTRICAL, COMPARATIONS RESPONSIBILITY AND SYAL, BE INCLUDED IN THE COSTS FOR HORR AND PERFORMED TO THE SATISFACTION OF THE MOBILITIE CALL UPON FIALL, ACCEPTANCE. ø





SF90XS0C7C 9CAB013219 OAKLAND, CA 94603 (E) 28'-0" STEEL LIGHT POLE

GN-1

GENERAL NOTES

- THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS WITH ONLY TYPENMITEN DIRECTRORES, ALL ELECTRICAL WRING SHALL BE THE RESONSBILLTY OF THE ELECTRICAL CONTRACTOR.
- DISCONNECT SWITCHES SHALL BE UL-RATED, H.P. RATED HEAVY-DUTY, QUICK-WAKE AND QUICK-BREAK ENCLOSURES, AS REQUIRED BY EXPOSURE TYPE. ALL CONNECTIONS SHALL BE MADE WITH A PROTECTIVE COATING OF ANY ANT-DOODE AND SHADON NAVION AS "NO COODE ANY ANT-DADE AND COATING AND ALL MEE SHEAKES BEFORE CONNECTIVIC, EXPOSED COPPER SHEAKES INCLUDING GROUND BARS, SHALL BE TREATED - NO SUBSTITUTIONS.
 - RACEMA'S: CONDUIT SHALL BE SO-EDULE BO PAC METING OR EXCEEDING NEWA A 1980. COMPARTOR SHALL HOLK MO, CARE EACH BYO, OF SPARE AND ELFO-ENCINE THE SHALL SHANGS 200 LBS TEST PACE RELIES READ SHALL SHANGS 200 LBS TEST RELIES. RELIES SHALL BE SHANGHING OF STATES. RELIES. A TO COMPANY SHALL SECTION SHALL WEET OU. FOR CALLANZED COMPANY CARE SPECIATION SHALL WEET OU. FOR CALLANZED COMPANY. COAT ALL THREADED RIGHD COMPANY.
 - SUPPORT OF ALL ELECTRICAL WORK SHALL BE AS REQUIRED BY NEC.
 - - 20
 - SERVICE: AS SPECIFIED ON THE DRAMMICS. OWNER OR OWNER'S AGENT WILL BE OBTAINED BY THE CONTRACTOR.

 BY THE CONTRACTOR. 26.
 - TELEPHONE OR FIBER SERVICE: CONTRACTOR SHALL PROVIDE EMPTY CONDUITS WITH PULL STRINGS AS INDICATED ON DRAWINGS. ELECTRICAL AND TELCO/FIBER RACEMAYS TO BE BURIED A MINIMUM DEPTH OF 30°, UNLESS OTHERMISE NOTED. 27. 28
- CONTRACTOR SHALL PLACE 6" WIDE DETECTABLE WARNING TAPE AT A DEPTH OF 6" BELOW GROUND AND DIRECTLY ABOVE ELECTRICAL AND TELCO SERVICE CONDUITS, CALITICANS TAPE TO READ "CALITON BURED ELECTRIC" OR "BURRED TIELECON".
- THE ELECTRICAL CONTRACTOR SYALL LABEL ALL PANELS WITH ONLY TYPE/WRITEN DIRECTORIES, ALL ELECTRICAL (WRING SYALL BE THE RESPONSBILITY OF THE ELECTRICAL CONTRACTOR. ALL BOLTS SHALL BE 3-16 STAINLESS STEEL. क्ष क्ष

- FOR GROUND BOND TO STEEL ONLY: NSERT A CADMOUN FLAT WASHER BETWEEN CAMP STEEL, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BETOR MATHING. ALL HARDIWARE SAML BE 3-16 STAMBLESS STEEL INCLUDING LOCK WASHERS COAT ALL SUFFACES WITH AN ANTI-DOXDANT COMPOUND, AS SPECIFICD, BETORE WATHING ALL HARDIWARE SHALL BE STAMLESS STEEL \$\frac{1}{2}\$ DIAMETER OR LARGER.
 - ALL STEEL CONDUIT SHALL BE BONDED AT BOTH ENDS WITH GROUNDING BUSHING.
- ALL ELECTRICAL, AND GROUNDING AT THE POLE STE SHALL COMPLY WITH THE MATRICAL ELECTRICAL CODE (NEC), MATRICALE THE PROTECTION ASSOCIATION (MPP.) 780 (LATEST EDITION), AND MANUACHIER.
- ALL DETAILS ARE SHOWN IN GENERAL TERAIS ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION WAY VARY DUE TO SITE SPECIFIC CONDITIONS. GROUND ALL ANTENAN BASES, FRAMES, CABLE RUNS, AND OTHER VETALLIC COMPONENTS USING 16 GROUND WRESS FOLLOW ANTENAN AND BTS WANCHDERS PRACTICES FOR GROUNDING REQUIREMENTS.
 - CONTRACTOR TO VERIEY AND TEST GROUND TO SCURED. TO ONIS MAININI, PROVIDE SUPPLIFIENT GROUNDING RODS AS REQUIRED TO ACHEVE SPECIFIED ONIS REJANG, GROUNDING AND OTHER OPTICALAL TESTING WILL BE WITHESSED BY THE MOBILITE CAL. ALL GROUND CONNECTIONS SHALL BE JIB ANG, UNLESS OTHERWISE NOTED, ALL WIRES SHALL BE CORPER WITH THAT UNLESS OTHERWISE WINDED, ALL GROUND WITE SHALL BE SOLD THIS CONTED OF STRANDED GREEK INSULATED WINE.
 - NOTIFY ARCHITECT /ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS. တ်
- ALL HORIZONTALLY RUN GROUNDING CONDUCTORS SHALL BE INSTALLED A MANNIMUM OF 30' BELON GRADE, 6" BELON FROST-LINE IN TRENCH, UNLESS OTHERWES NOTEL BACK FILL SHALL BE COMPACTED AS REQUIRED BY ARCHITECT FRIGHER. ō
- all ground conductors shall be run as straight and short as possible, imth a miniaum 12" bending radius not less than 90 degrees. Ë 4
 - ACCEPTABLE CONNECTONS FOR GROUNDING SYSTEM SHALL BE: BURNOY, HY-GRADE UL, LISTED CONNECTORS FOR OUTDOOR USE OR AS APPROVED BY APPLICANT PROJECT MANAGER.
- CADMELD, EXOTHERAIG (MELDS (MELDED CONNECTIONS).
 ONE (1) HOLE TINNED COPPER COMPRESSION (LONG BARREL) FITTINGS.

- ALI CRIMPED COMMECTIONS SHALL HANE EMBOSSED MANUFACTURER'S DIEMAR WSBIE AT THE CRIMP (RESULTING TROM) USE OF PROPER CRIMPING DEVICES) AND MEATHER-PROJEDI WITH HEAT SHRIM;
 - ALL CONNECTION HARDWARE SHALL BE TYPE 3-16 STAINLESS STEEL (NOT ATTRACTED TO MACNETS).
- EECTRICAL SERVICE EQUIPALENT GROUNDING SHALL COÁPLY WITH MEC, ARTICLE 280-82 AND SHALL BOND ALL (E) AND NEW GROUNDING ELECTRODES, NEW GROUNDING ELECTRODE SHALL INCLUDE BUT NOT LIMITED TO GROUND RODS.

TESTING AND EQUIPMENT TURN UP REQUIREMENTS:

- FF CARE, DATA CABEL, RAUD CUMPERTA DAS BACK HAU, ECUMPERT TESTIN FOR THE COUNTRY WITH CURRENT HOUSTRY STANDARDS AND OR THOSE STANDARDS FOR THE COUNTRY WANUFACTURER OR PROVIDED TO THE CONTRACTOR PROPERTY TO TESTING.
- CONTRACTOR WILL USE THE APPROPRIATE CALIBRATED TESTING EQUIPALENT HAT BENEVING OF RECALE, DATA CALEE, RADIA CEQUIPALENT AND BACK HALL COUPLENT THAT ALET MUSICIFY STANDARDS OF THE MANUFACTURER OR PROSESSIAMOMBOS PROVIDED TO THE CONTRACTOR PRORE TO TESTING.
- ALL PERSONNEL INVOLVED IN THE TESTING OF RF CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK AMAL COURTHENT WILL BE REQUIRED TO HAVE BEEN TRANKED AND OR CERTIFED IN THE PROPER TESTING OF RF CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK HAUL EQUIPMENT. CONTRACTOR TO VERFY AND RECORD ALL TEST RESULTS AND PROVIDE THESE RESULTS WITHIN THE FINAL CLOSE OUT PACKAGE.
 - all test results shal be time stamped, recorded and presented prior to energizing and turn up of any equipment.
- gps Equipåent (mien required) is not to be tested or attached to any Cabling during testing, doing so mil damage the GPs unit,
 - Counwight is not to be energized until all testing has been completed. Approved and to the appropante allupority has been nothed and gives approved to energy the equivalent. PRIOR TO TESTING IF THE CONTRACTOR HAS ANY QUESTIONS ABOUT THE IESTING PROCEDURES THEY ARE TO CALL AND GBTAIN ASSISTANCE. FROM A QUALIFD DESORATED TESTING REPRESENTATING.

SITE WORK NOTES:

- DO NOT EXCAVATE OR DISTURB BEYOND THE PROPERTY LINES OR LEASE LINES, UNLESS OTHERMISE NOTED.
- SEZ, LOCADION AND THE OF ANY MODERGROUND UTLINES OR MARROFELMENTS SHALL BE ACCURATELY NOTED AND PLACED ON A SPELL IT DRAWINGS BY SHALL EXPLANCED AND PLACED ON A SPELL IT DRAWINGS BY CENTER CAPACITY REACHER AT COMPLETION OF
- ALL (E) UTLIFES, FACURES, CONDITIONS, AND THERE DIMENSIONS SHOPING ON HAME ARE TO RECORDED. THE RECORDED THE RECORDED THE RECORDED THE RECORDED THE RECORDED THE WINNESS AND CHORENCE OF THE RECORDED THE PROPERTY OF THE RECORDED THE ADMINISTRATION OF THE RECORDED THE ADMINISTRATION SHOWN THE
- COMPACTOR SHALL VERFY ALL (E) URLINES BOTH HORZONYALLY AND VERFOLD START OF CONFINEMENT, AND DESCREAMERS OR DOUBTS. AS TO THE INTERPEXATION OF PLANS SHALL BE IMMEDIATE. OR BOOSTED TO THE ACHITECT/FEMBER ON MEDIATE OF PROBLET OF THE ACHITECT/FEMBER OF BOSTED-SHALL BE PERFORMED UNTIL THE DISCREAMY IS OFFICED AND ORDERETED BY THE ACHITECT/FEMBERS. ALLINE TO SECURE SHOW IN ACHITECT/FEMBERS. AT THE OWN REST AND DESCREAMENT OF MEANS COMPACTOR HILL HAVE WERE AT THE OWN REST AND DESCREAMENT OF MEANS COMPACTOR HILL HAVE WERE HOURS SHALL CALL LICKAL URLINGATED TO START OF CONSTRUCTION.
 - All Ne'n And (E) utilty structures on sit. And in areas to be desirable dy campacting and state by dausted to finish elevations prace to pinal mysecting of horax. Any cost related to adjusting (E) structures shall be borne solely by the contranctor.
 - ALI TEMPORARY EXCAVATIONS FOR THE INSTALLATION OF FOUNDATIONS. THE INSTALLATION OF FOUNDATIONS. WITHERS, ETC., SAALL BE PROPERLY LAID BACK OR BRACED IN ACCORDANCE WITH CORRECT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (1994A). REQUIRELARITS. GRADING OF THE SITE WORK AREA IS TO BE SWOOTH AND CONTINUOUS IN SLOPE AND IS TO FEATHER INTO (E) GRADES AT THE GRADING LIMITS.
- STRUCTURAL FILLS SUPPORTING PAYEMENTS SHALL BE COMPACTED TO 95% OF WAXIMUM STANDARD PROCTOR DRY DENSITY, UNLESS OTHERWISE NOTED. NEW GRADES NOT IN BUILDING AND DRINEWAY IMPROVEMENT AREA TO BE ACHIEVED BY TELLING WITH APPROVED CLEAN FILL AND COMPACTED TO 95% OF STANDARD PROCTOR DENSITY. oi
 - ALL FILL SHALL BE PLACED IN UNITORAL LETTS. THE LIFTS" THICKNESS SHOULD MOT EXCEED THAT WHICH CAN BE PROPERLY COMPACTED THROUGHOUT ITS ENTIRE DETTH WITH THE EQUIPARTY AVAILABLE. ō
- ANY FILLS PLACED ON (E) SLOPES THAT ARE STEEPER THAN 10 HORIZONTAL TO

- 1 YERTICAL SHALL BE PROPERLY BENCHED INTO THE (E) SLOPE AS DIRECTED BY A GEOTECHNICAL ENGINEER.
 - CONTRACTOR SHALL CLEAN ENTRE SITE AFTER CONSTRUCTION SUCH THAT NO DEBRIS, PAPER, TRACES, SHALL, MEDS, BANSE, EXCESS FILL, OR ANY OTHER DEPOSITS HIM, REMAIN, ALL MATERIALS COLLECTED DERING CLEAMIN, CALL MATERIALS COLLECTED DERING CLEAMING OPERATIONS SHALL BE DISPOSED OF OFF-SITE BY THE GENERAL CONTRACTOR.
 - ALL TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH THE IMPROVEMENTS SHALL BE PROTECTED BY THE CENERAL CONTRACTOR.

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2955 RED HILL AVE. SUITE 200 COSTA MESA, CA 92626

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L5 ENGINEERING INC.

ALL STE WORK SAALL BE CAREFULLY COORDINATED BY GENERAL CONTRACTOR WITH COLOMANY, RELEAVEN COLOMANY, AND ANY ONER UTILITY COMPANIES HANNES JURSDACTION, ONER THIS LOCATION, 4

ENVIRONMENTAL NOTES:

- ALL HORS PERCHÁRED SAALL BE DANK IN ACCRODANCE WITH ISSUED PERMITS. TO CONTRACTOR SAALL BE DESON/SBEE FOR PAYMENT OF PIECS AND PROPER CLEAN UP FOR AREAS IN VOLUTION. N
- CANTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF EROSION AND SETMENTIATION CONTRACTION CONSTRUCTION OF THE SETMENT OF THE

944 CALLE AMANECER, STEE SAN CLEMENTE, CA 92673 WWW.LEAFCC-LLC.COM PHONE: (949) 388-0192

- NO SEDIÉNT SHALL BE ALLONGED TO EXT THE PROPERTY. THE COMPACTOR IS RESPONSIBLE FOR TANING JACOUAIT L'ÉLAJIRES FOR CONTROLLING EROSON, ADDITIONAL SEDIÉNT CONTROL FENCING MAY BE REQUIRED IN ANY AREAS SABLECT TO EROSON. COMPACTOR SHALL MSTALL/COMPETRICT ALL MCDSSARY SEDMÉNY/SILT MSTATIONE AND PROFICENCE MEASURES AS REQUIRED BY THE LOCAL LINESDICTION WHITH THE LIMITS OF SITE DISTURBANCE PRIOR TO CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING POSITIVE DRAWAGE ON THE STEE ALT THISE STATE THE RESPONSION CONTROL. LENGUAGES MAINTAINED ON THE DONNETSEEMEN SIDE OF SITE BRANKAGE, ANY DAMAGET TO ADJACENT PROPERTY AS A RESULT OF EROSION WILL BE CORRECTED AT THE CONTRACTORS EXPRENSE.

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- CONTRACTOR SHALL BE RESPONSIBLE FOR DALLY INSPECTIONS AND ANY REPAIRS OF ALL SEDIMENT CONTROL MEASURES INCLUDING SEDIMENT REMOVAL AS OF CESSARY. CLEARING OF VEGETATION AND TREE REMOVAL SHALL BE ONLY AS PERMITTED AND BE HELD TO A MINIMILM, ONLY TREES NECESSARY FOR CONSTRUCTION OF THE FACILITIES SHALL BE REMOVED. ó
 - SEEDING AND MULCHING AND/OR SODDING OF THE STE WILL BE ACCOMPLISHED SOON AS POSSIBLE, RETER COMPLETION OF THE PROJECT FACILITIES AFFECTING LAND DISTURBANCE. ග්
 - COMPACTOR SHALL PROVING ALL ENDSON AND SEDIAENTAND CONTROL.
 MEASURES AS PROURED IN COLCL, COMPITY AND STATE CODES AND ORDINANCES TO PROTECT ENBANABRITS ROAD SOL. LOSS AND TO PRECRIVE CONCLULATION OF SOL, AND STATE IN INSTRUCTION AND ROAD AND TO SHALL SHOW CONSTRUCTION AREA. THIS MAY INCLUDE, BUT IS NOT LIMITED TO SUCH CANSERIES AS SLI FENCES, STRAM BALE SEDIAENT BARRERS, AND CHECK DAMS.
- RP RAP OF SZES INDICATED SHALL CONSST OF CLEAN, HARD, SOUND, DURAGE, LINFORM IN QUALITY STORE FREE OF ANY DETRIBUENT, QUANTITY OF SOFT, FRABLE, FINK, ELONGATED OF LAMANED PECCES, DISHIFEGAKED, MATERAL, ORGANIC MATER, QI., ALKALI, OR OTHER DELETEROUS SUBSTANCES, CC TO PLACE FILTER MATERIAL AT ALL CATCH BASINS ADJACENT TO CONSTRUCTION SITE TO PREVENT SOLID WASTE CONTAMINATION FROM ENTERING SEMES SYSTEM.





OAKLAND, CA 94603 (E) 28'-0" STEEL LIGHT POLE 9CAB013219

GENERAL NOTES

GN-2

PG&E UTILITY BULLETIN TD-027911B-004. GENERAL INFORMATION NOTES:

A PAGE ASSO, WHO STRVCE AGREEKENT IS REQUIRED TO BE SIGHED WHEN CONTROL WHO POPEL THE OWNERS AND THE OWNERS OWNERS

THE STREET LIGHT POLE MUST HAVE A RADOME SHROUD INSTALLED AT THE SHROUD OR A PART OF THE SHROUD INSTALL AND THE SHROUD OR A THO THE SHROUD INSTALL SHROUD OR A THO THE SHROUD INSTALL SHROUD INSTALL ADDRESS OF THE SHROUT SHROUD INSTALL AND THE SHROU

A 2-VME (4-HOT) - HEUTRAN) 190 VOT SMOEL-PHASE SERVICE MUST BE NOUT THE OF SERVICE DISTOLOGE SMOTHER THIS IN HE ONLY THE OF SERVICE ALDIOED TO POPIER THE SAME WE ALDIOE WINTH THE CASTOWER AND 350 PARTY EQUIPMENT. THE CASTOWER SERVICE WINT THE SEED AS NEEDED TO ACCOMMODATE ALL WETERED AND UNKETERED LOADIS.

E: N VERY LAMITD LOCATIONS IF AN EXISTING PORE 2—WRE SNOILE—PHASE 20M OUT SECUNDARY STREM IS AVAILABLE. THE SLART POLE WETER MAY BE COMMENTED. THESE LOCATIONS ARE NOT COMPANY.

CAUTION: DO NOT INSTALL A 5-WRE 1-PHASE 120/240 VOLT SERVICE AS THIS IS THE INCORRECT WIRING AND VOLTAGE FOR THE SMARTPOLE METERING APPLICATION.

THE AVTENIA COMMUNICATION EQUIPAENT, AND STREET LIGHT MUST BE POPHERD TROOD THE SME CUSTOMEN ON SEPARATE CUSTOMER POINED SERVICE IS NOT ALLOWED.

DISCONNECT SINTCH REQUIREMENTER. A DISCONNECT SINTCH MUST BE INSTITUTED AND METER ALL OF THE POLLONING RECONSELEMENT BE BELOW. BELOW SON THE SINTCH MUST BE READLY ACCESSIBLE AT ALL THRES THE SINTCH WILL BE RECOURD BE USED AS PART OF THE NORMAL OR EMERGENCY SHUTTOWN PROTOCOCAS POLITICOWN A CALIFORNIA PUBLIC UTILITY COMMISSION (GPUC) GENERAL ORDER 95, RULE 94.

6.2 The simtch shall de-energee all poiner supplies, including black-up Poines, and any communication equipient emitting baddo frequences (RF), sich ace Must be a 11 ached 10 the simtch dentifiche (HA1) Ecounièry II will de-energae. 6.6 If THE SPECIPIC REQUIREMENTS ARE WET THE SINTENT MAY BE LOCATED MANNING THE WINNER THE SINTENT MAY BE INSTITUTED MANNING THE BUSING THE PROCESSOR SPECIALED MANNING THE MAY BE LOCATED THE PROCESSOR SPECIAL SPECIAL SHOWN WITH LOCACING THE PROCESSOR SPECIAL SPECIAL SHOWN THE SPECIAL SPECIAL SHOWN THE SPECIAL SPECIAL SHOWN THE SPECIAL SPECI 6.4 The smitch wust be attached externally on the pole less than 10 feet above grade, as measured to the top of the smitch englosure. 6.3 The switch Wust not de-energze (turn off) the street light(s) or The pighe swart Weter, see the snole line drawing in Figure 6,

6.6. The switch way not be installed inside the pole (except inside the Pedestal), in a subsurface engloshe, or in a reviote location away from the pole.

6.7 PROVISIONS FOR LOCKING THE DISCONNECT SHITCH IN THE OFF POSITION ARE REQUIRED.

POLES AUST HAVE SOAN AGE THAT MET FCC CAUDELMES FOR THE ANTENNAS AND COMMUNICATION FOUNDEMENT EMETINGS THE TRANSMISSION, SITES SHALL BE SICHED ACCORDING TO FCC CAUDELMES.

AL MATERIAS EXCEPT THE PORK METRE, SHALL BE FURNISHED AND METALLED BY THE CUSTOMER METALLED BY THE PORK METRE REQUERED DE SHAPILAN HET REQUERED BY THE CUSTOMER METALLED BY METALLED BY METALLED BY THE CUSTOMER METALLED BY METALLED ANTENNAS AND POWER UNITS MUST HAVE AN OWNERSHIP LABEL WITH THE COMPANY'S NAME, CONTACT NUMBER, AND SITE IDENTIFICATION INFORMATION, ග්

THE LOCAL AUTHORITY HANNG JARSDICTION (AHJ) OF INSPECTIONS FOR THE CITY OF COUNTY MISTS PROVIDE APPROVAL OF THAL INSPECTION AND METER RELEASE BEFORE DEFORE POSE WILL INSTALL A METER AND ENERGAZE THE CUSTOMERYS THE METERMIC PROVISON CONTAMED HEREIN IS AN EXCEPTION TO THE GREEN BOOK REQUEREINT THE DESCARED PRIMARIAT FOR MATEL, CABLE TY POWER SUPPLIES, AND OTHER TELECOM EQUIPMENT REQUERING METERMIC TO, THATE APPLICATION GAUDE — ELECTING MELLE 9. DO NOT COMMETA ANY COMMUNICATION EQUIPMENT, AND STREET LIGHTS. ō =

A PORE INSPECTOR OR TROUBLE WAY (T-WAN) WUST INSPECT THE INSTALLATION TO VERFY THE REQUIREWENTS IN THIS DOCUMENT HAYE BEEN WET

FOR SERVICE COMMECTIONS TO STEEL POLES THAT ARE NOT ON AM LS-2 RANG, ONE THE RECOURTELANTS IN THIS DOCUMENT CANNOT BE MET, THEN THE PEREZ APPROVED METHOD OF PROVIDING SERVICE TO A PAID-MOUNTED METERANG PEDESTAL SHOULD BE USED. PORE FENDE (BUCKT TRACO) ACRESS US NO AND AROUND THE POLE IS REDUED IN ALL TIMES THIS INCLUDES A ROUN WHICH ALLOWS THE PORE FENDE TO DRIVE UN KEXT TO THE POLE AND FOR THE AREA TO BUCK UP, WARLINGS, AND EAST, THIS FENDELE DRIVE OF THE POLE FETTS. IS REQUIRED FOR THE POLE WITTEN.

MISCELLANEOUS MATERIALS

FROM THE TO THE, IT MAY BE NECESSIARY TO WAKE WINDS ADJUSTIVENTS TO ACCOMMENDING THE CONTROL AND THE WORKS AND TO THE CAMPLE. SOUTH AND THE THE CONTROL AND THE CAMPLE. SPECIFICATIONS, AND THE THE OWNER OF A BRACKET OF MOUNT TO WELL SPECIFICATIONS, AND THE THE OWNER OWNER OF A BRACKET OF MOUNT TO BE TO MATCHING THE OWNER OWNER OWNER OWNERS. HOWE OF THE SHALL FOR SHALL SH





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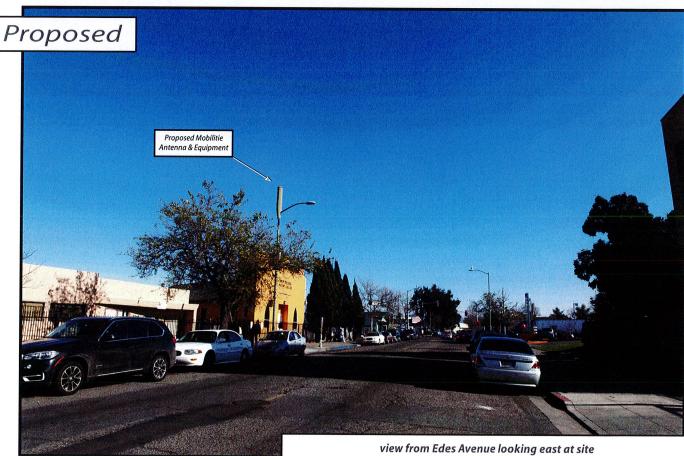
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SF90XS0C7C 9CAB013219 OAKLAND, CA 94603 (E) 28-0" STEEL LIGHT POLE

GENERAL NOTES

CN-S





AdvanceSimple Solutions Contact (925) 202-8507

mobilitie intelligent infrastructure

9CAB013219 / SF90XS0C7C Edes Avenue & 98th Avenue , Oakland, CA **Photosims Produced on 6-22-2017**



Sent from my iPhone

On Jul 11, 2018, at 1:01 PM, James Singleton < isingleton@mobilitie.com wrote:

James Singleton | Sr. Permitting Manager [cid:image001.png@01D0FC3A.CCA80310]JSingleton@mobilitie.com
San Francisco, CA
650-814-0564 mobile
www.mobilitie.comhttp://www.mobilitie.com/
FOLLOW US ON [cid:image003.jpg@01D1E7DE.1A89CED0]
https://www.linkedin.com/company/mobilitie/ [cid:image005.jpg@01D1E7DE.1A89CED0]
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Mobilitie, LLC 2955 Red Hill Ave. Ste. 200 Costa Mesa, CA 92626 USA Tel: 714.415.4500 www.mobilitie.com

Alternative Site Analysis

Proposed Small Cell Wireless Facility

Applicant: Mobilitie, LLC

Site ID: 9CAB013219/SF90XS0C7C

Nearest Site Address: Public Right of Way near 9720 Edes Ave., Oakland, CA 94603

Latitude/Longitude: 37.73673, -122.184127

Mobilitie considered alternative sites on other street lights and utility poles in this area, but found them to not to be as desirable when taking into consideration coverage goals, constructability, geographic topography of the surrounding area, and potential visual impact in the surrounding area. The proposed location is desirable because of the limited obstructions in the area, allowing our antenna to effectively propagate a signal. Furthermore, the proposed location is the optimal solution for providing maximum coverage to the surrounding area identified. Additionally, by locating on an existing street light with equipment concealed, visual impact in the surrounding area is minimized.

Mobilitie is a privately held, CLEC (Competitive Local Exchange Carrier) regulated by the California Public Utilities Commission (CPUC) to provide telephone related services. By proposing this location on an existing street light in the public right of way, Mobilitie is proposing an appropriate co-location to existing infrastructure according to our rights under the CPUC.

The alternative locations that Mobilitie considered include, but are not limited to, the sites listed below:

Alternate B (37.737294, -122.183963) / Near 675 Nevada Street: This wooden utility pole located on Nevada Street, approximately 270 ft. north of our proposed facility. The geographical features surrounding the ornamental street light illustrates the difficulty our antennas would encounter in providing coverage. The overhang of the trees would prove technologically problematic for the antenna by interfering and degrading the facility's effectiveness. Furthermore, a facility here would be highly visible to the adjacent residential buildings where as our current proposal is not immediately adjacent to any residential buildings.

Alternate C (37.737349, -122.183213) / Near 9745 Walter Avenue: This wooden utility pole located on Nevada Street, approximately 270 ft. north of our proposed facility. Our wireless facility is not constructible on this utility pole because the pole is already overloaded with a cobra head light and multiple wooden cross-arms with associated utility lines. There is not enough climbing space on the pole for our facility. Furthermore, a facility here would be highly visible to the adjacent residential buildings where as our current proposal is not immediately adjacent to any residential buildings.

Radio Frequency- Electromagnetic Energy-EME Measurements & Compliance Report

Site ID:

9CAB013219

Site Name:

9CAB013219

Market/Region:

California

Address:

EDES AVE., E. OF NEVADA ST.,

OAKLAND, CA 94603

Latitude:

37.73673

Longitude:

-122.184127

Site Type:

Light Pole

Compliance Status:

Proposed equipment at the site is compliant with FCC guidelines for General Population environments

Prepared for:

Mobilitie, LLC 2220 University Drive, Newport Beach, CA 92660

> By ATG LLC

Date:09/05/2017



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1 Executive Summary

Purpose of Report

ATG LLC's RF Engineering has conducted radio frequency electromagnetic energy (RF-EME) modeling for Mobilitie LLC's site 9CAB013929 located at EDES AVE., E. OF NEVADA ST OAKLAND, CA to determine RF-EME exposure levels from the carrier's proposed wireless communications equipment.

The Federal Communications Commission (FCC) has developed Maximum Permissible Exposure (MPE) limits for general public and occupational exposures to RF-EME. This report summarizes the results of RF-EME modeling in relation to relevant FCC compliance standards for limiting human exposure to RF-EME. The details of FCC defined exposure limits are provided in Appendix A of this report.

Analysis results included in this report are based on drawings dated June 14th, 2017.

Statement of Compliance

Predictive modeling conducted using the original equipment manufacturers (OEMs) specifications for radio and antenna performance along with the supplied construction drawings dated June 14th, 2017, indicate there will be no exposure due to the carrier's proposed equipment on accessible ground-level walking surface at this site that exceeds the FCC's general public exposure limits.

Proposed equipment at the site is compliant with FCC guidelines for general population environments.

2 Maximum Permissible Exposure (MPE) Modeling Results for Proposed Site

The predictive modeling was conducted using the RoofView 5.0 suite of analysis tools. The modeling was conducted with the antennas operating at 100% capacity, all antenna channels transmitting simultaneously and the radio transmitters operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are more conservative (higher) than the actual signal levels would be during normal operations. The modeling calculations were made for an area 40'x 40' area with the equipment at the center.

Table 1: Maximum Permissible Exposure- Summary

Location	% of FCC General Public/Uncontrolled Exposure Limit	% of FCC Occupational/Controlled Exposure Limit	Power Density (mW/cm²)	Compliance Status
6ft above ground level	2.1	0.42	0.021	Compliant

3 Antenna Inventory

The Antenna Inventory shows all transmitting antennas on the site (see Table 2). This inventory was used by ATG to perform the software modeling of RF emissions. The inventory conforms with the submitted construction drawings which identifies the proposed mounting location of each antenna at the site. The exposure level is calculated for a person of height 6ft standing right below the devices at ground level.

Carrier/Operator BeamWidth (deg) Frequency (MHz) **Iransmitter** count **Antenna Type** Z (6 ff. above Aperture (ft.) ₽ Technology Horizontal **Bain dBd** ERP (W) Antenna Model Mfg. Alpha Mobilitie 2496 1 Omni LTE 172.58 6.35 AW3477-S 2.56 2 360 25.3 Wireless LTE 2 Mobilitie 2496 Relay 1 TF 1.93 9.85 **Airspan** iR460 1.1] 35 10.5 ВН

Table 2: Antenna Inventory

The table below details the operating power and Effective Radiated Power (ERP) for each carrier and frequency used in the modeling.

Frequency (MHz)	Power per Transmitter (Watts)	# of Transmitters	ERP (watts)
2496 (Omni)	20	2	172.58
2496 (UE Relay)	0.2	1	1.93

4 Modeling Summary and Assumptions

4.1 General Model Assumptions

The modeling was conducted using the antenna and radio maximum power values, while operating at full power with 100% duty cycle.

The site has been modeled with these assumptions to calculate the maximum RF energy density. ATG believes this to be a worst case analysis, based on data supplied by the OEMs and client. If actual power density measurements were made, ATG believes the real time measurements would indicate levels below those shown in the report.

5 Preparer Certification

I, Preparer, state that:

- I am an employee of ATG LLC that provides RF-EME safety and compliance services to the wireless communications industry.
- I have successfully completed 100s of RF-EME exposure studies and reports for various carriers.
- I am aware of the potential hazards from RF-EME exposures that would be classified "occupational" or "general public" under the FCC regulations.
- I am familiar with the FCC rules and regulations as well as OSHA regulations both in general and as they apply to RF-EME exposure.
- I have reviewed all the data related to the site and incorporated it into this study and Compliance Report such that the information contained in this report is true and accurate to the best of my knowledge.

Ahmed Saadallah

Ahmed Saadallah (RF Engineer)

Appendix A

Federal Communications Commission (FCC) Requirements

This appendix summarizes the policies, guidelines and requirements that were adopted by the FCC on August 1, 1996, amending Part 1 of Title 47 of the Code of Federal Regulations, and further amended by action of the Commission on August 25, 1997 (see 47 CFR Sections 1.1307(b), 1.1310, 2.1091 and 2.1093, as amended). Commission actions granting construction permits, licenses to transmit or renewals thereof, equipment authorizations or modifications in existing facilities, require the preparation of an Environmental Assessment (EA), as described in 47 CFR Section 1.1311, if the particular facility, operation or transmitter would cause human exposure to levels of radiofrequency (RF) electromagnetic fields in excess of these limits.

The potential hazard associated with the RF electromagnetic fields is discussed in OET Bulletin No. 65. This document can be obtained on the FCC website. (https://transition.fcc.gov/Bureaus/Engineering Technology/Documents/bulletins/oet65/oet65.pdf)

As per FCC guidelines there are two separate tiers of exposure limits that are based upon occupational/controlled exposure limits (for workers) and general public/uncontrolled exposure limits for members of the general public.

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. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made 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

General public/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 and not be made fully aware of the potential for exposure or cannot exercise control over their exposure.

The FCC's MPE limits for field strength and power density are given in Table 1 (and in 47 CFR § 1.1310) Figure 1 is a graphical representation of the limits for plane-wave (farfield) equivalent power density versus frequency. The FCC's limits are generally applicable to all facilities, operations and transmitters regulated by the Commission, and compliance is expected with the appropriate guidelines. The power density limits vary by frequency to take into account the different types of equipment that may be in operation at a particular facility and are "time-averaged" limits to reflect different durations resulting from controlled and uncontrolled exposures.

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time $ E ^2$, $ H ^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f²)*	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	$(180/f^2)^*$	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

f = frequency in MHz

*Plane-wave equivalent power density

f = frequency in MHz *Plane-wave equivalent power density **Table 1**

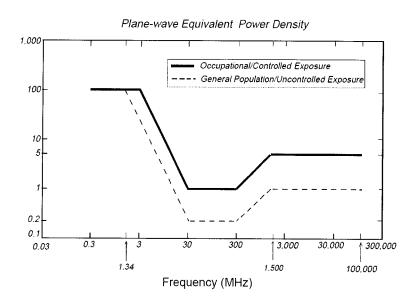


Figure 1. FCC Limits for Maximum Permissible Exposure (MPE)

FCC Compliance Requirement

In general, as specified in 47 C.F.R. 1.1307(b), as amended, when the FCC's guidelines are exceeded in an accessible area due to the emissions from multiple fixed transmitters the following policy applies. Actions necessary to bring the area into compliance with the guidelines are the shared responsibility of all licensees whose transmitter's contribution to the RF environment at the non-complying area exceeds 5% of the exposure limit (that applies to their particular transmitter) in terms of power density or the square of the electric or magnetic field strength.

For non-compliant sites, Occupational Safety and Health Administration (OSHA) set recommendations to make the sites compliant. The document can be found in the link: https://www.osha.gov/dte/library/radiation/nir stds 20021011/nir stds 20021011.ppt

Appendix B

Glossary of Terms

- 1. Electromagnetic Field (energy density) the electromagnetic energy contained in an infinitesimal volume divided by that volume.
- 2. Exposure Exposure occurs whenever and wherever a person is subjected to electric, magnetic or electromagnetic fields other than those originating from physiological processes in the body and other natural phenomena.
- 3. General Population / Uncontrolled Exposure applies to human exposure to RF fields when the general public is 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 always fall under this category when exposure is not employment-related.
- 4. Maximum Permissible Exposure (MPE) the rms and peak electric and magnetic field strength, their squares, or the plane-wave equivalent power densities associated with these fields to which a person may be exposed without harmful effect and with an acceptable safety factor.
- 5. Occupational / Controlled Exposure applies to human exposure to RF fields when 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/controlled limits.
- 6. Power Density (S) Power per unit area normal to the direction of propagation, usually expressed in units of watts per square meter (W/m²) or, for convenience, units such as milliwatts per square centimeter (mW/cm²) or microwatts per square centimeter (µW/cm²).

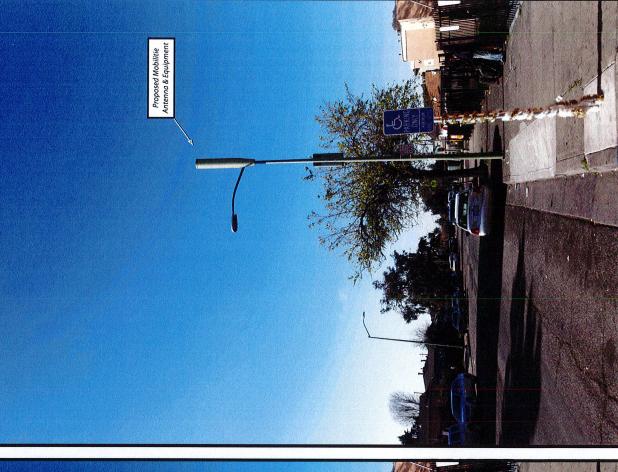
Appendix C

RoofView Export File

The below file shows the Antenna information that has been used to calculate the MPE levels using RoofView 5. RoofView is a powerful, Excel based software analysis tool for evaluating radiofrequency (RF) field levels at telecommunications sites that are produced by antennas of the type commonly used in the cellular, paging, SMR, PCS and conventional two-way radio communication services

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ATTACHMENT D

Site # 2: Case no. PLN18094; 1035 94th Avenue

Plans / Photo-Simulations / Site Analyses / RF Report / Proof of Posting



SITE ID/CASCADE ID-CANDIDATE LETTER: 9CAB013755/SF90XS2G3A intelligent infrastructure

ligent infrastructure 2955 RED HILL AVE. SUITE 200 COSTA MESA, CA 92626

L5 ENGINEERING INC.

944 CALLE AMANECER, STE E SAN CLEMENTE, CA 92673 WANYLEAFCC-LLC, COM PHONE (949) 388-0192

A 05/07/18

LATITUDE/LONGITUDE: 37.74437900/-122.17888000

94TH AVE & E ST CROSS STREET:

CITY, STATE, ZIP: OAKLAND, CA 94603

IF YOU DIG IN ANY STATE DAL 811 FOR THE LOCAL "ONE CALL CENTER" - IT'S THE LAW

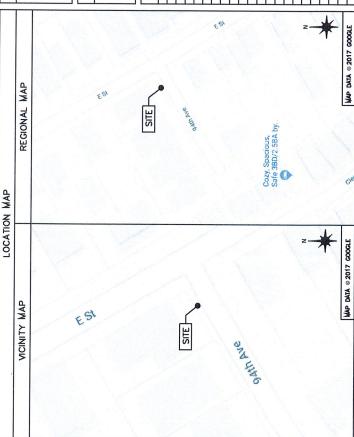
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ENGINEER	JACOB S. PROCTOR, P.E. VECTOR STRUCTURAL ENGINEERS 651 W. GALENA PARK BLYD DRAPER, UT 84020 (801) 990–1775
ENC	L6 ENGINEERING, INC 944 CALLE AMANCER SIE E SAN CLEMENTE, CA 92673 CARLOS GODINE, (949) 218-8724

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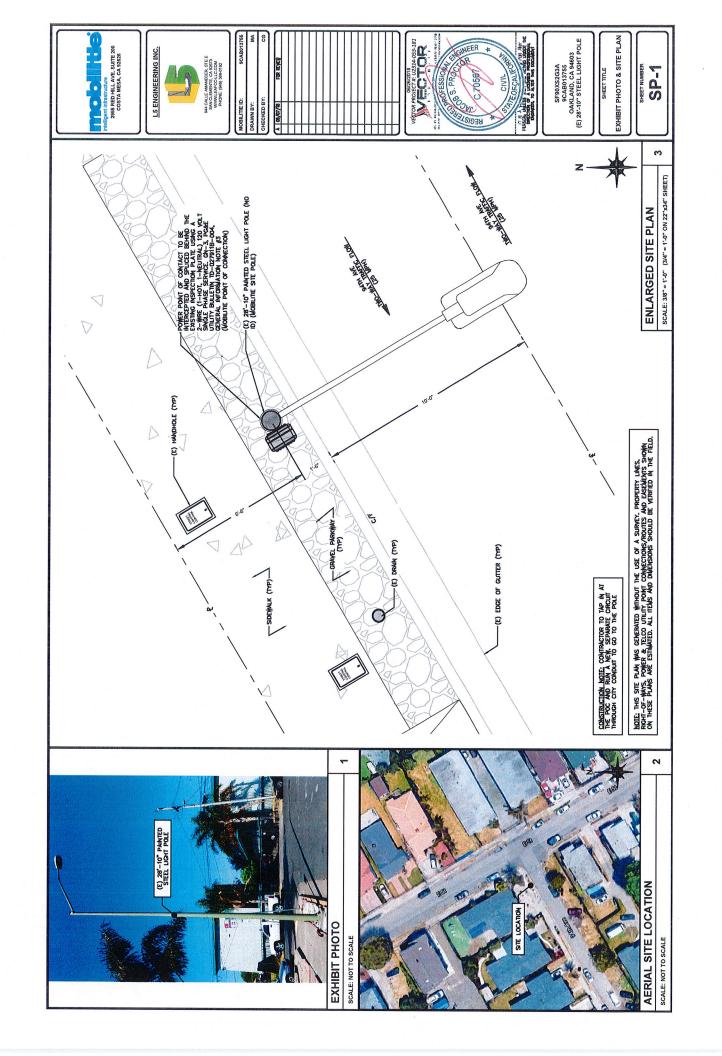
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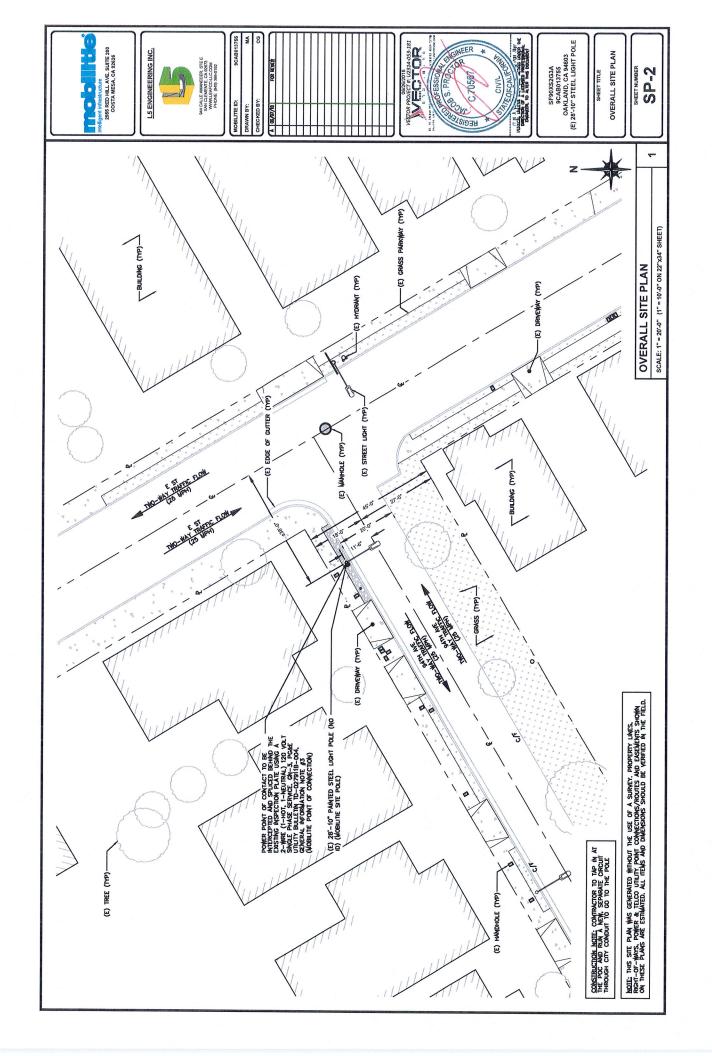
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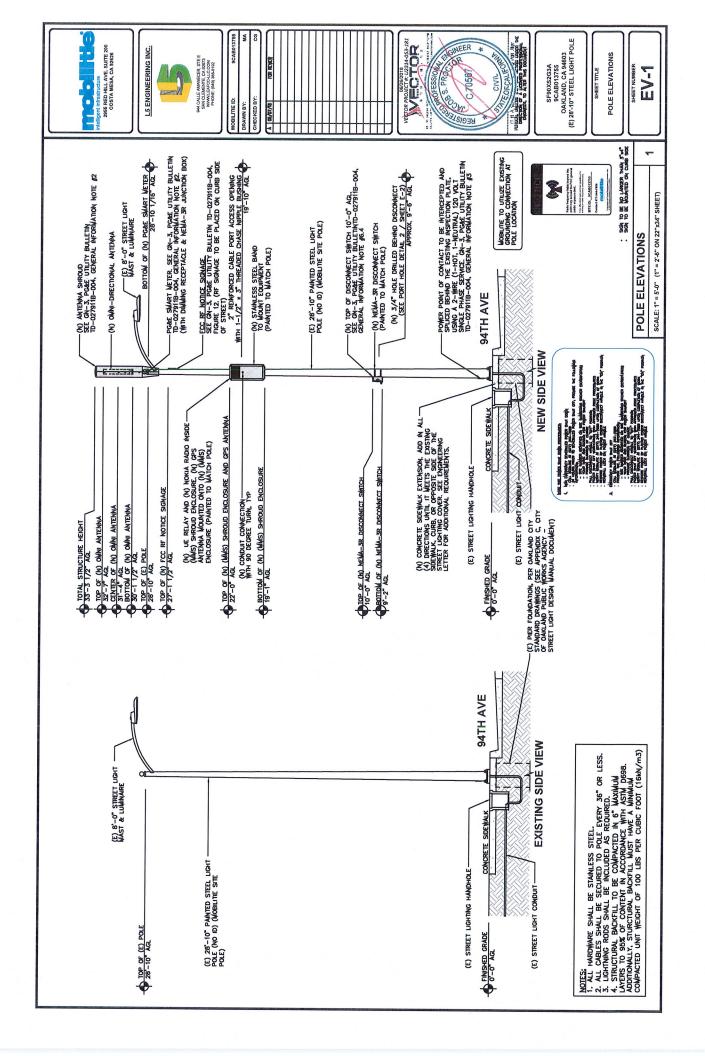
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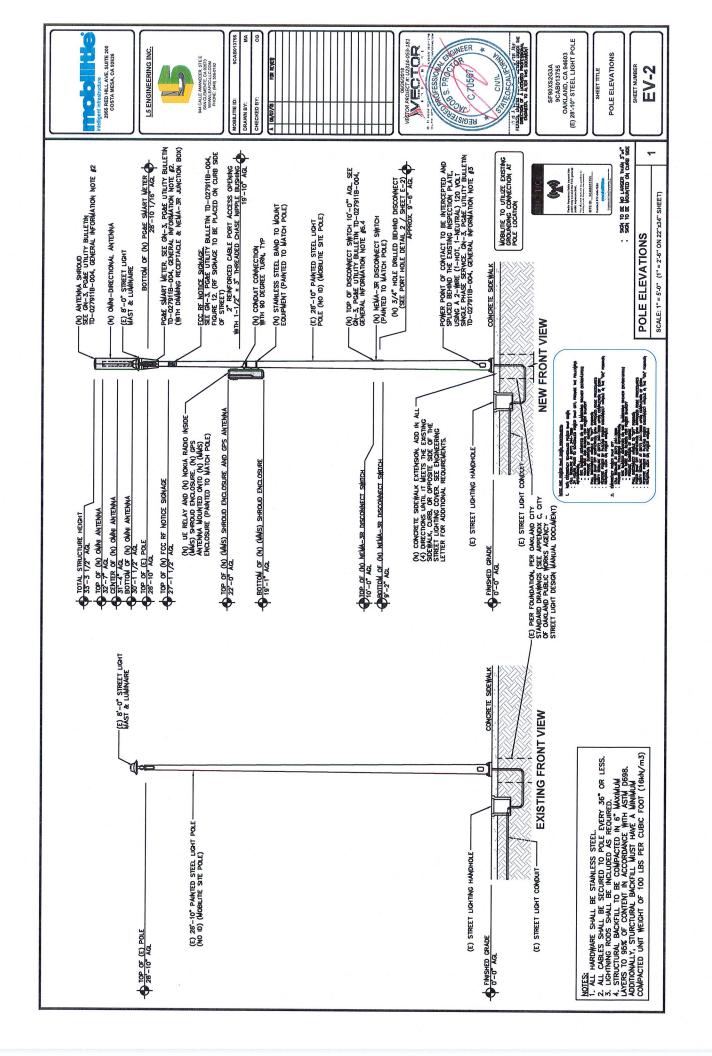
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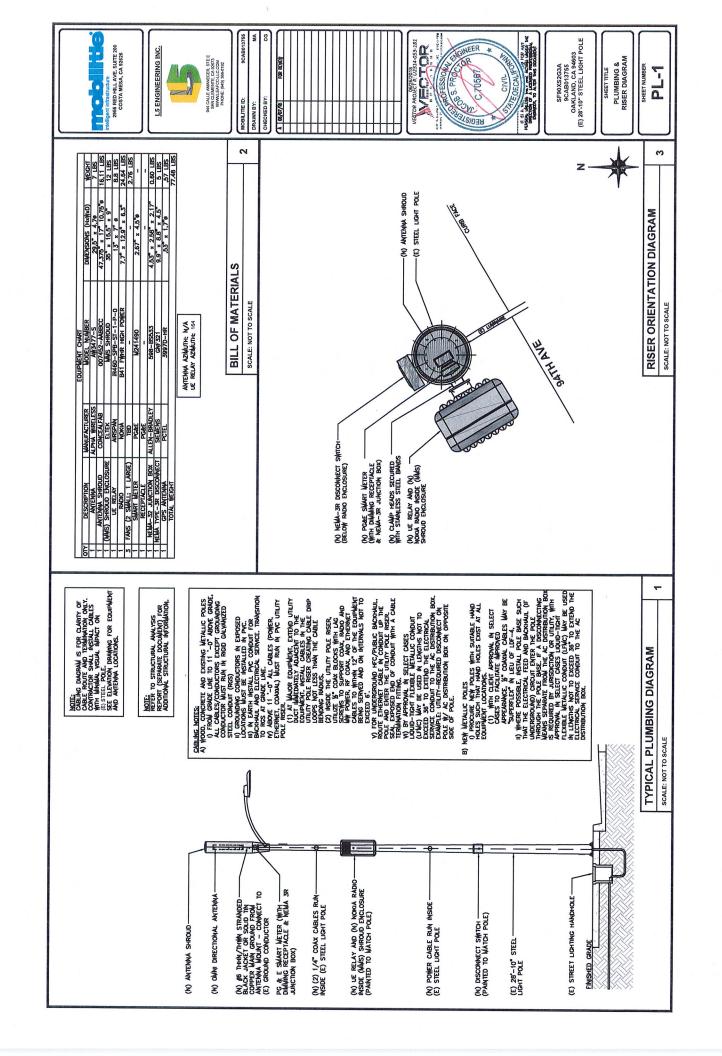
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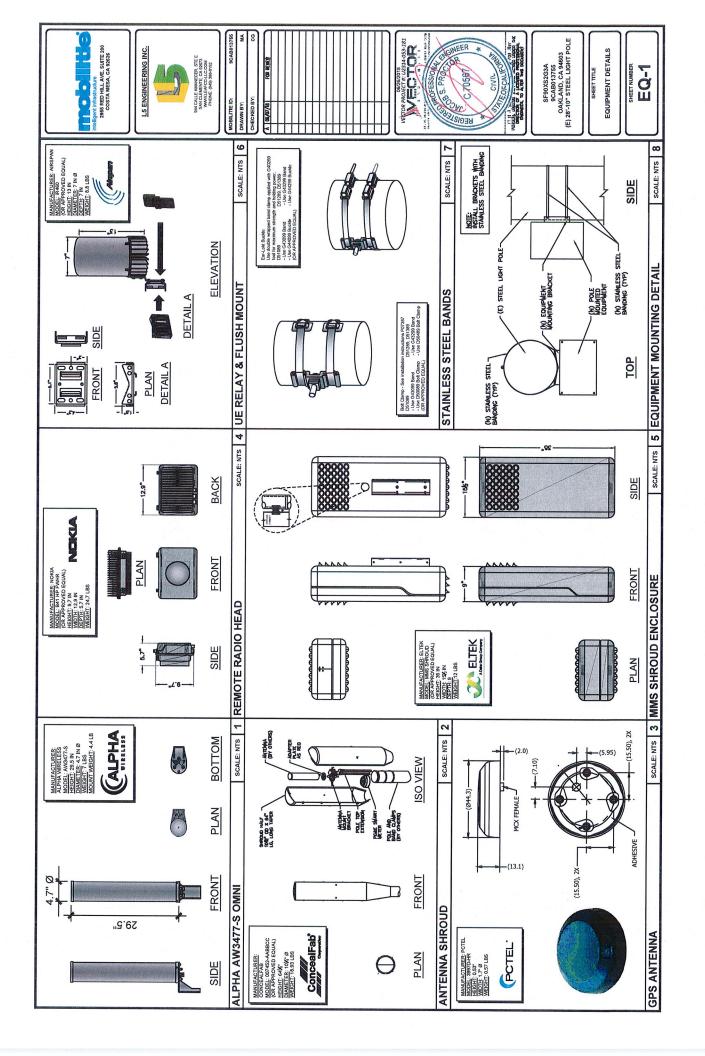


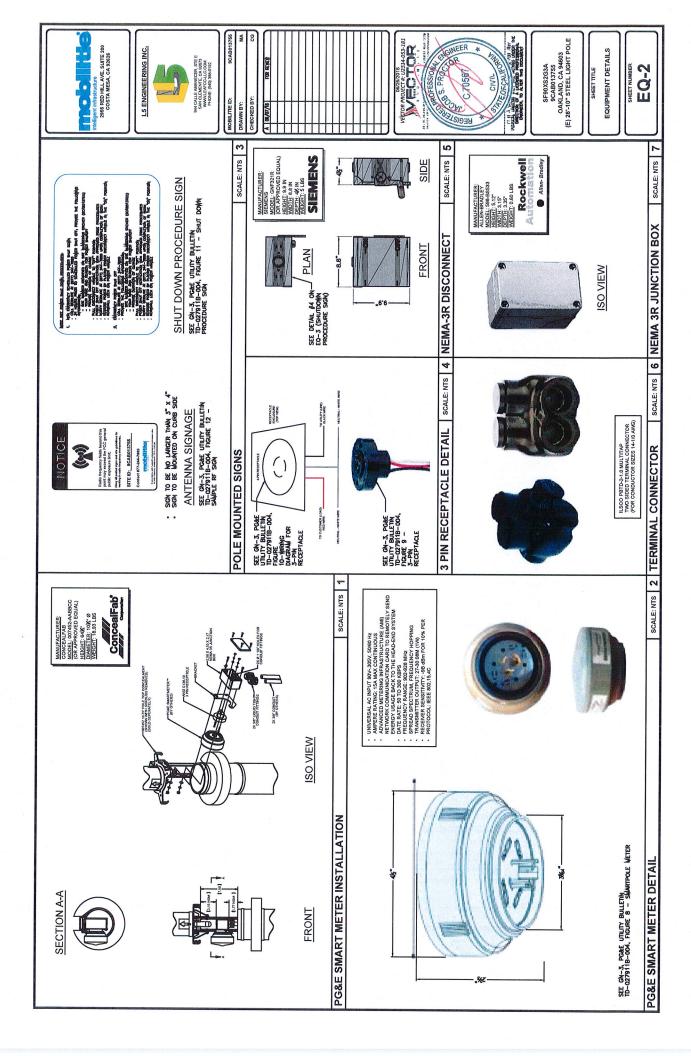


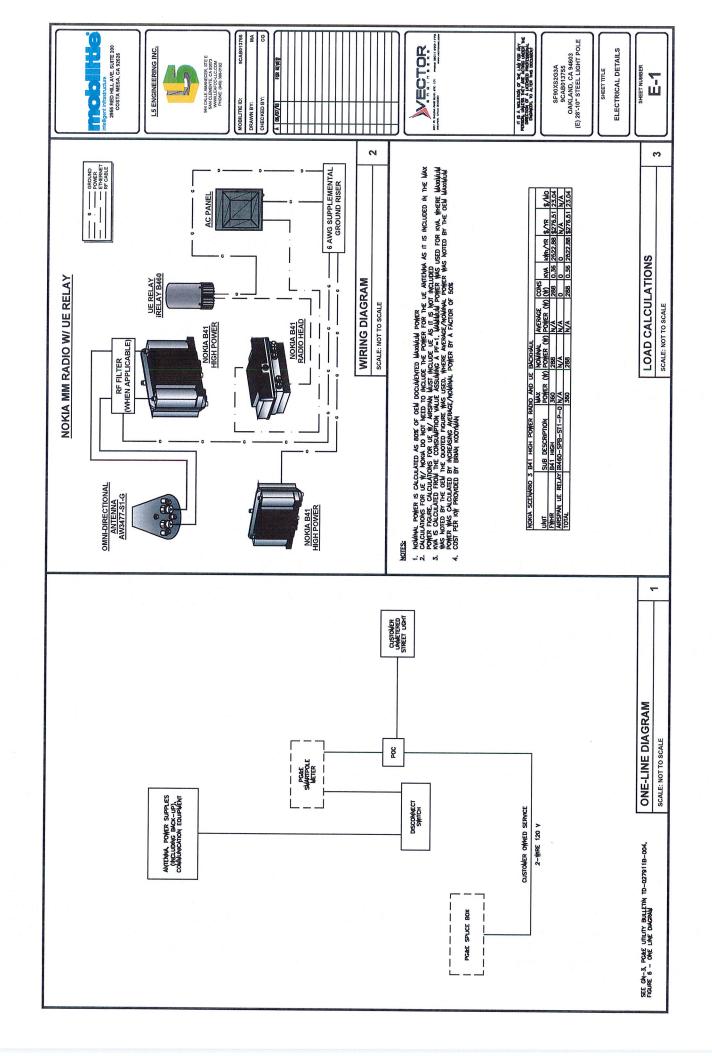


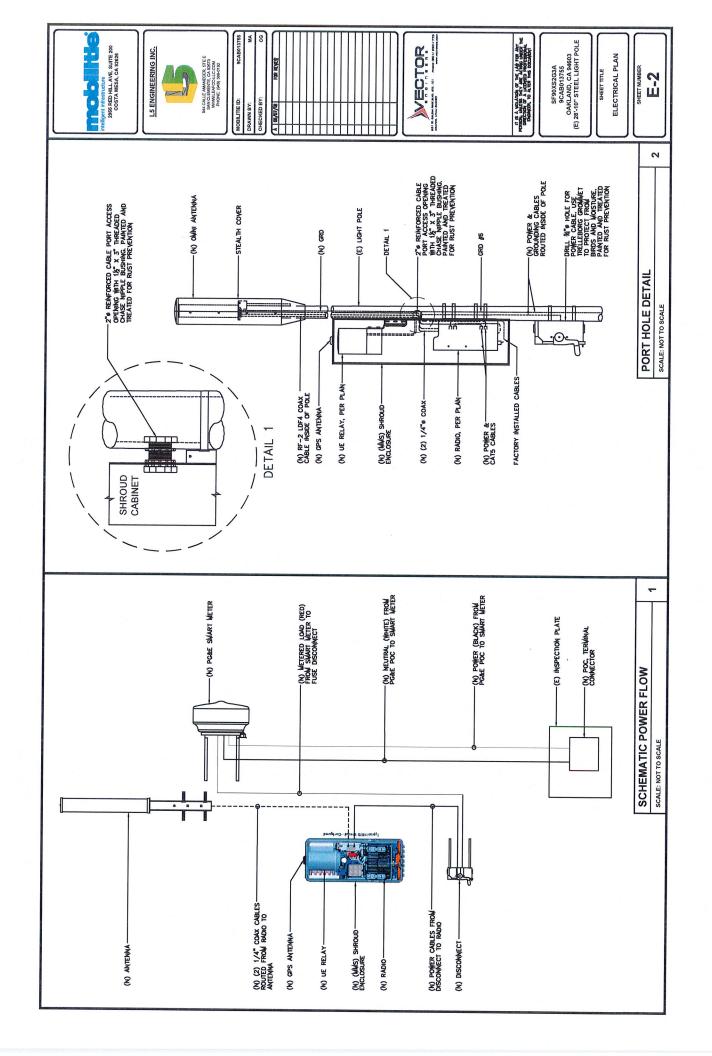


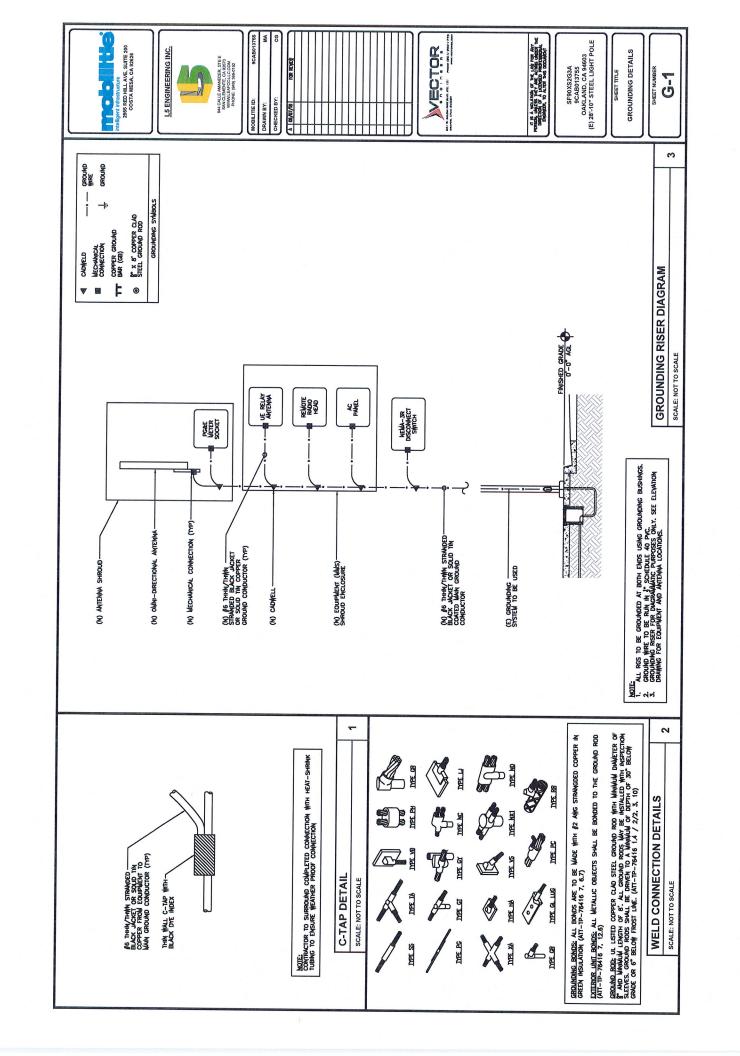


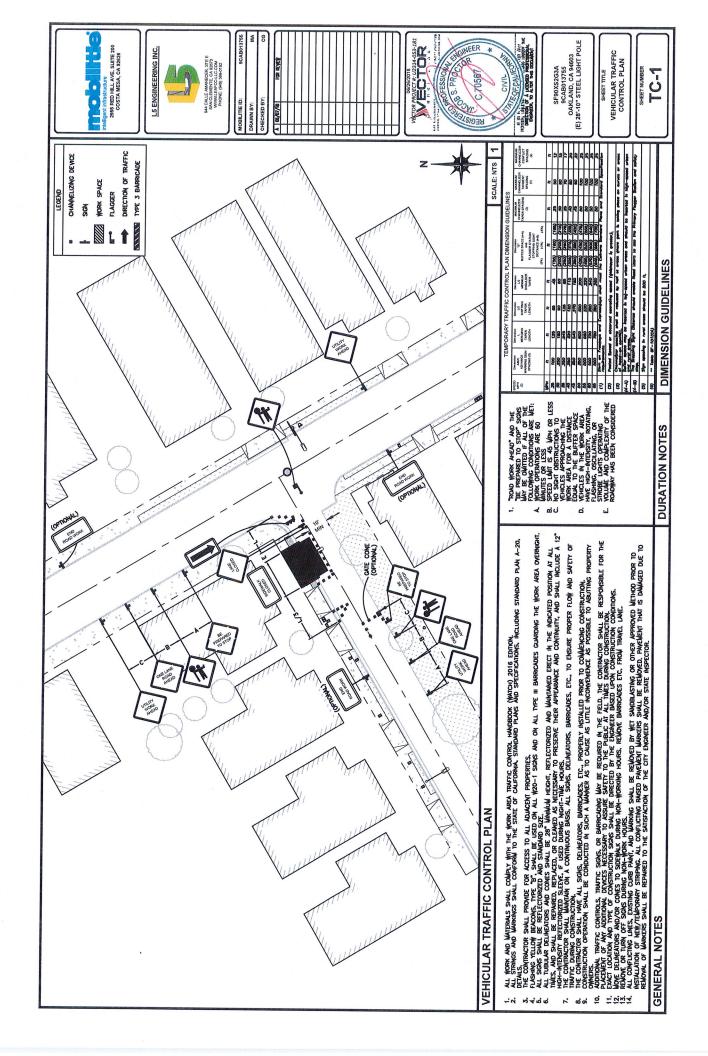


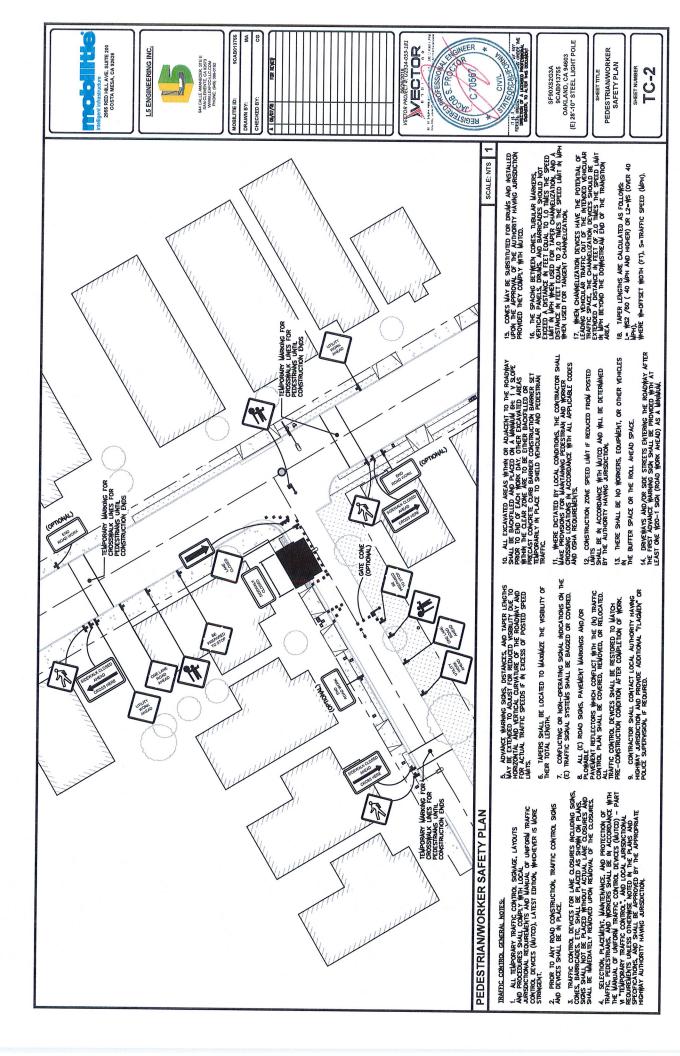












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AL MORS SALE BE PERFORMED AN ACCORDANCE WITH THE LATEST EDITION OF POPE, ALL CODES AND CONMANCES OF THE LOCAL JAMEDICTION, AND POMPER & TELEPHORM COMPANIES AND AND SHALL INCLUDE BUT ARE NOT BE LUITED TO.

A) UL. - UNDERHINTERS LABORATORIES

B) NEC. - NATIONAL ELECTRICAL LADORATORIES

C) NEMA. - NATIONAL ELECTRICAL MANUFACTURERS ASSOC.

D) OSHA - OCCUPATIONAL SAFETY AND HEALTH ACT

NFPA – NATIONAL FIRE PROTECTION AGENCY
MAGNAL FIRE PROTECTION AGENTUTE
FIEE – NATITUTE OF ELECTRODAL AND ELECTRODICS ENCHERS
ASTM – AMERICAN SOCIETY FOR TESTING WATERALS. 86935

REFER TO STE PLAYS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL RECUPLENT, AND CONFIBM WITH MOBILITE CM ANY SZES AND LOCATIONS MHEIN REDED.

(E) SERVICES, CONTRACTOR SHALL NOT INTERRUPT (E) SERVICES (#THOUT WRITTEN PERMISSION OF THE OWNER.

COMPACTOR SALL CONTRA WHI LOCAL UTILITY COMPANY ANY/ALL REQUIREMENTS STOOTON ENTRY, SZE O TREQUIREMENTS CONDUIT ENTRY, SZE O TREASCONDLES SOLD DOM/MINK FOR THE ONNESS CONTRAKTON, ETC... ANY/ALL CONFLORS SALL BE BECOMENT TO THE ATTENTION OF THE MOBILITY CALL, PROF.

MANMAN WRE SZE SHALL BE FIZ ANG, NOT INCLUDING CONTROL WRING, UNLESS NOTED OTHERWISE, ALL CONDUCTORS SHALL BE COPPER WITH THIN INSULATION, UNLESS OTHERWISE NOTED,

QUITET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HIBBS IN WEIT/DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CASSISTED AREAS. ග්

IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MAKED DETAIL OF THE COMPRISHOROUR, CONFINENCION, CONFINENCION, CONFINENCION SECRED TO THORISM AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM, AND PROPURE ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER HORKING ORDER.

AS ELECTRICAL SYSTEM SHALL BE AS COMPLETELY AND EFFECTIVELY GROUNDED, REQUIRED BY SPECIFICATIONS, SET FORTH BY APPLICANT. õ

ALL WORK SALL BE PERFORNED BY A LICENSED ELECTRICAL CONTRACTOR IN A PIERT CASS. MORKAMINE MANNER. THE CONFILETED SYSTEM, SALL BE FULLY LINEARCHAIL BY AND SALL BE CHARGED BY THE WORKING AND LOSE OF THE CONFINCED BY AND LICENSELL CONTRACTOR ANY THE SOLE COST OF THE CONFINCTION ANY ELECTRICAL =

ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION. 7

THE CORRECTION OF ANY DEFECTS SHALL BE COMPLETED BY THE CONTRACTOR WITHOUT ANY ADDITIONAL CHARGE AND SHALL INCLUDE THE REPLACEMENT OR THE REPLACEMENT OR THE REPLACEMENT OR THE RESTALLATION, MHICH MAY HAVE BEEN DAMAGED THEREIN. Ę

CONTRACTOR SHALL PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WRES, BOXES, COVER PLATES AND DEVICES FOR ALL CUTLETS AS INDICATED. 7

DITCHING AND BACK FILL: CONTRACTOR SHALL PROVIDE FOR ALL UNDERGROUND INSTALLED CONDUIT AND/OR CABLES INCLUDING EXCAVATION AND BACKFLLING AND COMPACTION, REFER TO NOTES AND REQUIREMENTS EXCAVATION, AND BACKFLING. ō

MATERALE REQUETS AND EQUIPMENT, MICLIDING ALL COMPONENTS THEREOF. SHALL BE, WITH AND STALL APPEAR OF THE LIST OF ULL, APPENDED THE RECOMPLEMENTS OF THE REC. NEW, AND IECE. 16,

CONTRACTOR SHALL SUBAIT SHOP DRAMINGS OR MANUFACTURER'S CATALOG MYROMATION OF ANYTALL SUDWÄNKT AND ALL OHER ELECTRICAL ITEMS FOR RESPONL BY THE WOBLITHE CAP PRIOR TO NIST'ALLATION. 17

CUTTING OR PATCHING DEDIVED NECESSARY FOR ELECTRICAL, WORK IS THE TRICAL, COMPRACTIONS RESPONSIBILITY AND SYALL BE INCLUDED IN THE FOR WINCK AND PERFORMED TO THE SATISFACTION OF THE MOBILITIE CALL HOMAL ACCEPTANCE. ANY C ELECTE COST I

2965 RED HILL AVE, SUITE 200 COSTA MESA, CA 92626





9CAB01





OAKLAND, CA 94603 (E) 28'-10" STEEL LIGHT POLE SF90XS2G3A 9CAB013755

GENERAL NOTES SHEET TITLE

CZZ

- THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS WITH ONLY INFERENTIEN DIRECTORIES. ALL ELECTRICAL WIRNG SHALL BE THE RESON/SBLLTY OF THE ELECTRICAL CONTRACTOR.
- disconnect synthes shall be ul-rated, H.P. Rated Heavy-duty, ouick-ware and ouick-break enclosures, as required by exposure type. ALL COMPETIONS SHALL BE MADE WITH A PROTECTIVE COATING OF AN ANTI-CADIE CAMPOUND KNOWN AS "NO-COODE A" BY DEABBRONE CHEMICAL CO. COAT ALL WISE SURFACES BEFORE COMMETING EXPOSED COPPER SURFACES, INCLUDING GROUND BARS, SHALL BE TREATED — NO SUBSTITUTIONS.
 - RACEMA'S: CONDUIT SHALL BE SCHEDULE BO PHO' HETING OR EXCEDING NELMA PLAN SHORT OF SHALL BE SCHEDULE OF SHALL SHALL SHALL SHALL SHALL SHANGS 200 LBS TEST SHALL SHALL SHANGS 200 LBS TEST SHALL SH
 - SUPPORT OF ALL ELECTRICAL WORK SHALL BE AS REQUIRED BY NEC.
- CONDUCTORS. CONTRACTOR SAAL USE 98% CONDUCTIVITY COPER WITH TYPE THINK INSULATION, UNLESS OTHERWENE NOTED, 600 YOUT, COLOR CODED, USE SOLD CONDUCTORS FOR HIRE UP TO AND INCLUDING NO. 8 ANG. USE STRANDED CONDUCTORS FOR HIRE ABOVE NO. 8 ANG. 26
 - SERVICE: AS SPECIFIED ON THE DRAMMINGS, OWNER OR OWNER'S AGENT WILL APPLY FOR POWER, ALL PROWINGN FOR TEMPORARY POWER WILL BE DBTANED BY THE CONTRACTOR. COMPLETORS FOR POPER CONDUCTORS, CONTRACTOR SHALL USE PRESSURE THE PREJUDENT PROBLETS, USE SOLDERLESS MECHANICAL TREMINAL LIOUS FOR NO. 8 AND AND LARGER. 26.
 - 27. TELEPHONE OR FIBER SERVICE: CONTRACTOR SHALL PROVIDE EMPTY CONDUITS WITH PULL STRINGS AS INDICATED ON DRAWINGS. 28. ELECTRICAL AND TELCO/FIBER RACEWAYS TO BE BURIED A MINIMUM DEPTH OF 30", UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL PLACE 6" WIDE DETECTABLE WARNING TAPE AT A DEPTH OF 6" BELOW GROUND AND DIRECTLY ABOVE ELECTRICAL AND TELCO SERVICE CONDUINES, CALINDÁS TAPE TO READ "CALINDÁ BURED ELECTRIC" OR "BURED TILECOM". 28
- ALI BOLTS SHALI BE 3-16 STANLESS SIFEL.
 THE ELECTRICAL CONTRACTOR SHALL LABEL ALI PANELS WITH ONLY THE MERTITAL DIRECTORES. ALL ELECTRICAL WINNING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. S F

- FOR GROUND BOND TO STEEL ONLY: INSERT A CADMUNIA FLAT WASHER BETWEEN LICE AND STEEL, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE WATHING. ALL MADINES SALL RE 5-16 STANESS STEEL, INCLUDING LOCK MASHERS, STORT ALL SUBFACES WITH AN ANTI-ORDAN TO AND SOLD SETORE WATHOUT ALL MADINESS WITH RE STANESS STEEL \$" DANKETRE OR LARGER.
 - ALL STEEL CONDUIT SHALL BE BONDED AT BOTH ENDS WITH GROUNDING BUSHING.
- ALL ELECTRICAL AND GROUNDING AT THE POLE STE SHALL COMPLY WITH THE MATINGHEL ELECTRICAL AND CODE (REC.), ANTINONEL THE PROTECTION ASSOCIATION (MPP.) 798 (LATEST EDITION), AND MANUFACTURER.
- ALL DETAILS ARE SHOWN IN GENERAL TERAIS. ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION MAY VARY DUE TO STE SPECIFIC CONDITIONS.
 - GROUND ALL MITCHAN BASES, FRANCES, CABLE RINS, AND OTHER WETALLIC COMPONENTS USING JO GROUND WRES, FOLLOW ANTERNA AND BISS WAYNER ACTURER'S PRACTICES FOR GROUNDING REQUIREMENTS.
- CONTRACTOR TO YERFY AND TEST GROUND TO SOURCE, 10 ONLY MAINLY PROVIDE SUPPLEIENT GROUNDING RODS AS REQUIRED TO ACHIEVE SPECIFIED ONLYS REJUNG, GROUNDING AND OTHER OPTICALAL TESTING WILL BE WITNESSED BY THE MOBILITE CAL. ALL GROUND CONNECTIONS SHALL BE JA AMC, UNLESS OTHERMES NOTED, ALL MEES SHALL BE CORPER WITH THAIR UNLESS OTHERMES WERE ALL BE SOLD THIS CARED OR STRANDED GREEN MSULATED MIRE.
 - NOTIFY ARCHITECT /ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL COMPITIONS. တ်
- ALL HORIZONTALLY RUN GROUNDING CONDUCTORS SHALL BE INSTALLED A MAINING OF SIZE BELON GRADE/ 6" BELON FROST-LINE IN TRENCH, UNLESS OTHERINES NOTED, BACK FILL SHALL BE COMPACTED AS REQUIRED BY ARCHITECT / FANDMER. õ
- ALL GROUND CONDUCTORS SHALL BE RUN AS STRAIGHT AND SHORT AS POSSBLE, MTH A MINIMUM 12" BENDING RADIUS NOT LESS THAN 90 DEGREES. Ë 12
 - BURNDY, HY-GRADE U.L. LISTED CONNECTORS FOR OUTDOOR USE OR AS APPROVED BY APPLICANT PROJECT MANAGER. ACCEPTABLE CONNECTIONS FOR GROUNDING SYSTEM SHALL BE:

 - CADIFELD, EXOTHERNIAC INCLUS (MELDED CONINECTICNGS).
 ONE (1) HOLE TINNED COPPER CONIPRESSION (LONG BARREL) FITTINGS. മെ വ

- ALL CRANETS CONNECTIONS SHALL HAVE ENBOSSED WANUFACTURER'S DIEWAR WSBIE AT THE CRANET NEW TROMU USE OF PROPER CRANETHING DEVICES) AND WEATHER—PROJECT WITH HEAT SHRINK.
 - ALL CONNECTION HARDWARE SHALL BE TYPE 3-16 STAINLESS STEEL (NOT ATTRACTED TO MAGNETS).
- ELECTRICA, SERVICE CRUPIÉNT GROUNDING SEALL COÀPLY WITH NEC, ARTICLE CONCES, NO SAALL BOND AAL (E) AND NEY GROUNDING ELECTRODES, NEY GROUNDING ELECTRODE SAALL INGLUDE BUT NOT LIMITED TO GROUND RODS.

TESTING AND EQUIPMENT TURN UP REQUIREMENTS:

- FF CABE, DATA CABE, RADIO EQUIPERTA DECEMBLE COMPLEXITEERING TO COMPLEXITY WHIT CAPERY WHIT CAPERY WHITE CAPE, WE ELLIPMENT WANGFOLDER OR PROVIDED TO THE CONTRACTOR PROPERTY OF THE CONTRACTOR PROPERTY.
- CONTRACTOR WILL USE THE APPROPRIATE CALIBRATED TESTING EQUIPAENT IN THE TESTING OF BE CALBLE, DATA CALBE, FAND OEQUIPAENT AND BACK HAUS COUPLENT THAT AEET INDUSTRY STANDARDS OF THE MANUFACTURER OR THOSE STANDARDS PROVIDED TO THE CONTRACTOR PROVE TO TESTING.
- ALL PERSONNEL INVOLNED IN THE TESTING OF RF CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK MALL COURNENT MILL BE REQUIRED TO HAN'E BEEN TRANED AND ON CERTIFED IN THE PROPERT INSTINGO OF RF CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK HAUL EQUIPMENT. CONTRACTOR TO VERIFY AND RECORD ALL TEST RESULTS AND PROVIDE THESE RESULTS WITHIN THE FINAL CLOSE OUT PACKAGE.
- ALL TEST RESULTS SYALL BE TIME STAMPED, RECORDED AND PRESENTED PRIOR TO EMERGAZING AND THINKIN UP OF ANY COUNTAIN.

 OR EQUIPACIN' (MINEN REQUIRED) IS NOT TO BE TESTED OR ATTACHED TO ANY CABLANG DURING TESTING, DOING SO MILL DAMAGE. THE GASS UNIT.
- PRIOR TO TESTING IF THE CONTRACTOR HAS ANY QUESTIONS ABOUT THE TESTING PROCEDURES THEY ARE TO COLL AND GRIMIN ASSISTANCE FROM A COLAIRED DESORAYIED TESTING REPRESENTATIVE.

 EQUIPAÇENT IS NOT TO BE ENERGIZED UNTIL ALL TESTING HAS BEEN COMPLETED. APPROVAL. TO EREPRESENDENT AMOUNTY HAS BEEN NOTHED AND GIVES APPROVAL. TO BE ENGINEED.

SITE WORK NOTES:

- DO NOT EXCAVATE OR DISTURB BEYOND THE PROPERTY LINES OR LEASE LINES, UNLESS OTHERMISE NOTED.
- SZE, LOCATION AND TPE OF ANY UNDERGROUND UTLITIES OR INPROVENIENTS SMALL BE ACCURATELY NOTED AND PLACED ON AS-BUILT DRAWINGS BY GENER CONTRACTOR AND ISSUED TO ARCHITECT/ENGINEER AT COMPLETION OF PROJECT.
- ALL (E) UTLITES, FACUTIES, CONDITIONS AND THERE DIMENSIONS SHOPING ON MAIL ABOUTED THE ACCOUNT THE ACCOUNTS. THE ACCOUNTS THE ACCOUNTS THE ACCOUNTS THE ACCOUNTS THE ACCOUNTS THE ACCOUNTS AND ACCOUNTS AND THE RESERVENCY OF THE MANAGE OF THE MANAGE OF THE RESERVENCY OF THE ACCOUNTS AND ACCOUNTS THE OFFICE ACCOUNTS AND ACCOUNTS AND
- COMPACTOR SHALL VERFY ALL (E) UNLINES BOTH HORIZONTALLY AND VERFEACHES AND SOURTHEACH, AND DISCREPACHES CORDOURTS AS TO THE MITTERSTANDES BOARDOWN SALL BE TAMBEDATED. THE PACHETICAT/REMEETER OR MEDIUM CALL FOR ESCULINDIA AND WESTERCIDA, AND WE DERFEATER OF MEDICE TO THE ACHIEF TO THE ACHIEF TO THE ACHIEF TO THE ACHIEF TO ACHIEF TO STORE SHOW IN A MEDICATION MEANS COMPACTOR MILL HAVE WERE AT THE TO SECURE SHOW TO STORE SHOW THE WESTER OF THE WESTER TO THE WESTER OF THE WESTER TO THE WESTE
 - All he'r and (e) utilty structures on ste and in areas to be desirancen symmetry of the factorian symmetry proper 100 final resecting of fight. Any cost related to adjusting (e) structures shall be bothe solely by the compancior.
 - ALI TEMPORARY EXCAVATIONS FOR THE NSTALLATION OF FOUNDATIONS. UTILITIES, ETC., SAALL BE PROPERTY LAD BACK OR BRACED IN ACCORDANCE (IFFIN FORMEZET OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSAA). RECONDELIGITS. GRADING OF THE STE WORK AREA IS TO BE SAVOOTH AND CONTINUOUS IN SLOPE AND IS TO FEATHER INTO (E) GRADES AT THE GRADING LIMITS.
- STRUCTURAL FILLS SUPPORTING PANEWENTS SHALL BE COMPACTED TO 95% OF MAXIMUM STANDARD PROCTOR DRY DENSITY, UNLESS OTHERMISE NOTED. NEW GRADES NOT IN BUILDING AND DRINCHAY IMPROVEMENT AREA TO BE ACHIEVED BY TELLING WITH APPROVED CLEAN FILL AND COMPACTED TO 95% OF STANDARD PROCTOR DENSITY.
 - AL FILL SALL BE PLACED IN UNICORAL LETS. THE LIFTS' THICKNESS SHOULD NOT EXCEED THAT WHICH CAM BE PROPERAY COMPACTED THROUGHOUT ITS ENTIRE DEPTH WITH THE EQUIPMENT AMALMBLE. ó
- ANY FILLS PLACED ON (E) SLOPES THAT ARE STEEPER THAN 10 HORIZONTAL

- VERTICAL SHALL BE PROPERLY BENCHED INTO THE (E) SLOPE AS DIRECTED BY GEOTECHNICAL ENGINEER.
 - CONTRACTOR SHALL GLEAN ENTRE SITE AFTER CONSTRUCTION SUCH THAT NO DEBRISE, PAPER, TRASA, WEDS, BRUSH, EXCESS ELLI, OR ANY OTHER DEPOSITS MILL REMAIN, ALL MÁTERALS COLLECTED DURNG CLÁNNÍC OPERATIONS SHALL BE DISPOSED OF OFF-SITE BY THE GRARRAL CONTRACTOR. 13
 - ALL STE WORK SAALI BE CAREFULY COORDINATED BY GENERAL CONTRACTOR WITH COOK-MARY, RIEEPANN, ECCHANN, ALEVANY, ALEVANY, ALEVAND, SOKANDES HAYNO, SURESPICINGN, OVER THIS LOCATION, ALL TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH THE IMPROVEMENTS SHALL BE PROTECTED BY THE GENERAL CONTRACTOR.

2955 RED HILL AVE. SUITE 200 COSTA MESA, CA 92626

L5 ENGINEERING INC.

ENVIRONMENTAL NOTES

- ALL WORR PERFORMED SHALL BE DONE IN ACCORDANCE WITH ISSUED PERMITS. THE CONTRACTORS SHALL BE RESPONDEDE FOR PAYMENT OF FINES AND PROPER CLEM UP FOR AREAS IN YOLATION. 7
- CONTRACTOR SHALL BE RESPONSBLE FOR CONSTRUCTION AND MAINTHANGE OF BENGSING AND SEMBLESTATION CONTRACTOR CONSTRUCTION FOR PROTECTION OF ADJUGGNI PROPERTIES, RODBIN'NS AND WATERWAYS, ALL ENGISION AND SEMBLESTATION CONTRACTS SHALL BE MAINTHAND IN PLACE THROUGH FINAL JURISDICTIONAL INSPECTION & RELEASE OF SITE.

944 CALLE AMANECER, STE E SAN CLEMENTE, CA 92973 WWW,LEAFCC-LLC,COM PHONE: (949) 388-0192

- COMPRATOR SHALL NETAL/CONSTRUCT ALL NECESSARY SEDMÉNT/SLIT MENSURE ENQUE AND PROFECTIVE RESOURCES ARE REQUIRED BY THE LOCAL JURISDICTION WHITH THE LIMITS OF SITE DISTURBANCE PRIOR TO CONSTRUCTION, NO SEDIMENT SHALL BE ALLOMED TO EXT THE PROPERTY. THE CONTRICUENCY RESPONSIBLE FOR TANNE ADEQUATE MEASURES FOR CONTROLLING EROSION, ADDITIONAL SEDIMENT CONTROL FROM MAY BE REQUIRED IN ANY AREAS.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING POSITIVE DRAWANGE ON THE SITE AND RESPONSIVE DRAWANGE, MAINTAINED ON THE DOMINITIES. MAINTAINED ON THE DOMINITIES. MISS TO ADJACKT PROPERTY AS A RESULT OF EROSION WILL BE CORRECTED AT THE CONTRACTORS SERVENSE.

FOR REVER

DRAWN BY: A 05/07/8

- COMTRACTOR, SHALL BE RESPONSIBLE FOR DALLY INSPECTIONS AND ANY REPARS OF ALL SEDIMENT CONTROL MEASURES INCLUDING SEDIMENT REMOVAL AS INCESSARY.
 - SEEDING AND MULCHING AND/OR SODDING OF THE STE WILL BE ACCOMPLISHED AS SOON AS POSSIBLE ATTER COMPLETION OF THE PROJECT FACILITIES AFFECTINGLAND DISTURBANCE. CLEARNG OF VEGETATION, AND TREE REMOVAL SHALL BE ONLY AS PERMITTED AND BE HELD TO A MINIMILIAL, ONLY TREES NECESSARY FOR CONSTRUCTION OF THE FACULINES SHALL BE REMOVED.
 - CANTRACTOR SHALL PROVIDE ALL EROSON AND SEDIJENTATION CONTROL.
 MEKASIRES AS RECORDED BY COLCL, COUNTY AND STATE COORSES AND
 ORDINANCES TO PROTECT EMBANARENTS TRAMS SOLL LOSS AND TO PREVENT
 OSCULLATION OF SOL AND STATE IN STREAMS AND PRANARCE, PATHS, LEAVING
 THE CONSTRUCTION AREA, THIS MAY INCLUDE, BUT IS NOT LIMITED TO SUCH
 CANSTRUCTION AREA, THIS MAY INCLUDE, BUT IS NOT LIMITED TO SUCH
 CANSTRUCTION AREA.

 THE STATE OF THE SEDILE STREAMS AND CHECK
 DAMS.
- RIP RAP OF SZES NOICATED SHALL CONSST OF CLEAN, HARD, SOUND, DIARDEL, LINFORM IN QUALITY STOWNE FREE OF ANY DETRABLEMENT, QUANITY OF SOOT, FRAUBLE, THIN, ELONGATED OF LAMINATED PECES, DISMIERANTED MATERAL, ORGANIC MATERAL, ORGANIC MATERAL, ORGANIC MATERAL, ORGANIC MATERAL, OR OTHER DELETIFICOUS SUBSTANCES. GC TO PLACE FILTER MATERIAL AT ALL CATCH BASINS ADJACENT TO CONSTRUCTION, SITE TO PREVENT SOLID MASTE CONTAMINATION FROM ENTERING SEMER SYSTEM,
- POSITION OF A LECTION PROPERTIES OF THE PASS DECEMBER OF A LECTION OF A LECTION OF A LECTION OF A DECEMBER OF A LECTION OF A LECTIO VECTOR PROJECT #: U2314-053-181 PROPERTY OF S. PROP C.70567
- OAKLAND, CA 94603 (E) 28'-10" STEEL LIGHT POLE SF90XS2G3A

GENERAL NOTES SHEET TITLE

GN-2

PGASE UTILITY BULLETIN TD-027911B-004, GENERAL INFORMATION NOTES:

A PARE ASSUME STRVICE GAREEKENT IS RECURED TO BE SIGHED WEN CASTOMER OWNED STRVICES SUPPLY. WHO POPIET TO WON-PORCE OWNED STEEL STREETINGTON TO LES WITH COMMUNICATION AND ANTIQUIA COUNTRIENT. ME WITERCOMMENTED TO ME PRESIDENT STRICES, CONTRICT THE PROSE STRVICE DAVINING OFFICE FOR AN EXPLANATION OF AN ASSOCIATION ACREDIENT, IN PRESIDEN FROM PRESONNEL CAN CONTRACT THE TARRET STATIC

THE STREET LIGHT POLE MIST HAVE A RADOME SHROUD NESTALED AT THE SHROUD NESTALED AT THE SHROUD NESTALED AT THE SHROUD NESTALED AT THE SHROUD NEST BE WALCO OF DEBREACASS OF OTHER MATTERAL THAT SHROUD DOES NOT PRIVE SHACK THE SHROUD DOES NOT THE SHACK THE SHROUD OR A NATION OF THE SHROUD NEST SHOUD NEST SHOUD SHOULD SHROUT ACCESS. THE THE THE SHACK THE SHROUD NEST A DISTRICT ACCESS TO THE STREET ACCESS TO THE STREET ACCESS TO THE STREET ACCESS TO THE SHROUT SHOULD DESCRIPT ACCESS. THE ATTEMPT AND WITTENING COUPMENT OF SHROUT SHROUT SHOULD SHOULD SHROUT SHOULD SHROUT 7

A 2-WRE (1-HOT (1-NEUTRAL) 120 YOLT SMORE-TELL WIST BE WISTALD FROM THE POET SETTING MIST BE WISTALD FROM THE POET SETTING SHOULD FROM THE OF SETTING ALLOHOOMY THE OF SETTING AND THE POSTURE AND THE POSTURE AND THE COSTOMER AND THE POSTURE THE SETTING WHE THE SETTING THE SETTING THE COSTOMER SETTING THE LONDS.

NOTE: MY VERY LAMITED LOCATIONS IF AM EXISTING PORE 2—MARE SINGLE—PHASE 2014 VOT. SECROPLARY STREM, IS A STAML LIBE. THE SILMAY POLE METER MAY BE CONNECTED. THESE LOCATIONS ARE NOT COMPANY.

CAUTION; DO NOT INSTALL A 3- WRE 1-PHASE 120/240 YOLT SERVICE AS THIS IS THE WORRECT WRING AND YOLTAGE FOR THE SAARTPOLE WETERING ALLOCATION.

THE ANTENNA, COMMUNICATION EQUIPMENT, AND STREET LIGHT MUST BE POWERED FROM THE SAME DISTOMER OWNED SERVICE: A SECOND OR SEPARATE CUSTOMER OWNED SERVICE IS NOT ALLOYING. ń

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6.2 The Shitch Shall De-Energae all power supplies, including back-up power, and any combinishmen couplent Emitting Radio Freglences (PR), sofa age, must be a 11 ached to the spirca identifying healt Equipment it hall de-energae.

6.6 F THE SPECIAL REQUIREMENTS ARE WET THE SHITCH MAY BE LOCATED HISTORY AND THE SHITCH MAY BE LOCATED HISTORY AND THE SHITCH MAY BE LOCATED THE SHITCH SHITCH MAY BE LOCATED THE SHITCH SHITC 6.4 THE SMITCH MUST BE ATTACHED EXTERNALLY ON THE POLE LESS THAN 10 FEET ABOVE GRADE, AS MEASURED TO THE TOP OF THE SMITCH ENCLOSURE. 6.3 THE SMITCH MUST NOT DE-ENERGZE (TURN OFF) THE STREET LIGHT(S) OR THE POCKE SAART METER, SEE THE SINGLE LINE DRAMING IN FIGURE 6,

6.6 THE SWITCH WAY NOT BE INSTALLED INSIDE THE POLE (EXCEPT INSIDE THE PREJISTIAL), IN A SUBSURFACE ENCLOSURE, OR IN A REWOTE LOCATION AWAY FROM THE POLE.

6.7 PROVISIONS FOR LOCKING THE DISCONNECT SWITCH IN THE OFF POSITION ARE REQUIRED.

POLIZE MUST HAY SOM AGE TANI WET FCC GUDELINES FOR THE SHARMS AND COMMUNICATION ECOMPHICE EMPIRICAL PROBLEMS FOR TRANSMISSION, STESSINGLE BE SIGNED ACCORDING TO FCC GUDELINES, THE FAMILY SAY DEPORTED WHITE MUST HAVE AN OMMERSHIP LABEL, WITH THE COMPANYS NAME, CONTACT NUMBER, AND SITE DELITIESTAND INFORMATION. 7.

AL MATERIAL STACET THE PORE METER SHALL BE FURNISHED AND NETALLED BY THE GUSTOMER MICHODING THE S-THY STOCKET AND PROVISONS FOR THE METER TO BE SCONGELY IT A CAFED INSDE. THE SHROUD, THE PORE ATTER ENGMEDIAC EDPARTMENT MILL REVIEW AND APPROVE THESE ATTERIAL PROVISONS FOR THE METER IN ග් oi

THE METRING PROVISION CONTAINED HEREIN IS AN EXCEPTION TO THE GREEN BOOK RECURBERTY AND DESCRAED PRARMARY FOR URING META. CABLE TY POWER SUPPLIES, AND OTHER TELECOM COUNHARY RECURBER METRING, RETER TOTAL STAFF APPLICATION QUIDE — LECTION CHAIL 9. DO NOT CONNECT ANY COMPLEX TYPES OF LOAD TO THIS SERVICE EXCEPT FOR ANTENNA AND COMMUNICATION EQUIPMENT, AND STREET LIGHTS. õ

THE LOCAL AUTHORNIY HANNG JARSDICINON (AHJ) OF INSPECTIONS FOR THE CITY OR COUNTY MUST PROYNE APPROVIL OF FINAL INSPECTION AND WETER RELEASE BEFORE POSE WILL INSTALL A WETER AND ENERGIZE THE CUSTOMERYS =

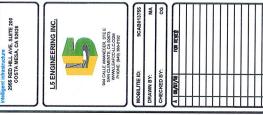
A PGAE INSPECTOR OR TROUBLE MAN (T-MAN) MUST INSPECT THE INSTALLATION TO VERIFY THE REQUIREMENTS IN THIS DOCUMENT HAVE BEEN MET Ę 7

PORE FENDE (BUCKT THROUGH ACKESS UP NO AND AROUND THE POLE IS RECURED AT ALL THEES THIS NICLIDES A ROLD WHICH ALLOFS THE PORE FENDER TO DRIVE UP REST TO THE POLE AND THAY ADECUALE MER TO BACK UP, AMERICHEN AND EST THIS YEARLED FROME UP ACCESS IS RECOURED FOR THE MISTALLATION AND MAINTENANCE OF THE PORE METER. 4

FOR SERVICE COMMECTIONS TO STEEL POLES THAT ARE NOT ON AM LS-2 RANG, ONE THE REPUBLIES HAT HAS DOCUMENT CANNOT BE MET, THEN THE PEDES APPROVED METHOD OF PROVIDING SERVICE TO A PAD-MOUNTED METERING PEDESTAL SYGULD BE USED.

MISCELLANEOUS MATERIALS

FROM THE TO THE IT MAY BE NECESSARY TO MAKE WINDER ADJUSTIFIENTS TO ACCOMMENT BY TO THE THE WAY TO STORY AND THE NEW TO ACCOMMENT TO THE MAY THE NEW TO THE STORY AND THE NEW THE NEW TO THE STORY AND THE NEW THE NEW TO THE STORY AND THE NEW THE NEW TO ACCOMMENT AND THE PREMISERY TO ACCOMMENT AND THE PREMISERY TO ACCOMMENT AND THE PREMISERY TO ACCOMMENT AND THE REPRESSARY AFFINED BUT TO THE WORN'T BRACET, OR POLE: AS REVER TO BECOME A MAN THINGE AND THE STANDARY AND THE STANDARY AND THE STANDARY AND THE STANDARY AND THE WAS THE WAS THE WAY TO SENDED CONTAINT ON THE WAY THE WAY TO SENDED CONTAINT ON THE WAY THE WAY TO SENDED CONTAINT ON THE WAY TO SENDED CONTAINT ON THE WAY TO SENDED CONTAINT ON THE WAY THE WAY TO SENDED THE WAY THE WAY THE WAY TO SENDED THE WAY THE WAY THE WAY THE WAY TO SENDED THE WAY THE WAY



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9CAB013755 OAKLAND, CA 94603 (E) 28"-10" STEEL LIGHT POLE SF90XS2G3A

SHEET TITLE

GENERAL NOTES

GN-3



Mobilitie, LLC 2955 Red Hill Ave. Ste. 200 Costa Mesa, CA 92626 USA Tel: 714.415.4500 www.mobilitie.com

Alternative Site Analysis

Proposed Small Cell Wireless Facility

Applicant: Mobilitie, LLC

Site ID: 9CAB013755/SF90XS2G3A

Nearest Site Address: Public Right of Way near 1035 94TH St., Oakland, CA 94603

Latitude/Longitude: 37.744379, -122.17888

Mobilitie considered alternative sites on other street lights and utility poles in this area, but found them to not to be as desirable when taking into consideration coverage goals, constructability, geographic topography of the surrounding area, and potential visual impact in the surrounding area. The proposed location is desirable because of the limited obstructions in the area, allowing our antenna to effectively propagate a signal. Furthermore, the proposed location is the optimal solution for providing maximum coverage to the surrounding area identified. Additionally, by locating on an existing street light with equipment concealed, visual impact in the surrounding area is minimized.

Mobilitie is a privately held, CLEC (Competitive Local Exchange Carrier) regulated by the California Public Utilities Commission (CPUC) to provide telephone related services. By proposing this location on an existing street light in the public right of way, Mobilitie is proposing an appropriate co-location to existing infrastructure according to our rights under the CPUC.

The alternative locations that Mobilitie considered include, but are not limited to, the sites listed below:

Alternate B (37.744672, -122.178896) / Near 9329 E Street: This wooden utility pole is located approximately 96 ft. north of our proposal. The existence of a power riser running up this pole precludes it from being used there because there is not enough usable space on the pole for our facility.

Alternate C (37.743862, -122.178268) / Near 9449 E Street: This wooden utility pole is located approximately 96 ft. southeast of our proposal. The existence of a power riser running up this pole precludes it from being used there because there is not enough usable space on the pole for our facility.

Radio Frequency- Electromagnetic Energy-EME Measurements & Compliance Report

Site ID:

9CAB013755

Site Name:

9CAB013755

Market/Region:

California

Address:

94TH AVE., W. OF E ST.OAKLAND, CA 94603

Latitude:

37.744379

Longitude:

-122.17888

Site Type:

Light Pole

Compliance Status:

Proposed equipment at the site is compliant with FCC guidelines for General Population environments

Prepared for:

Mobilitie, LLC 2220 University Drive, Newport Beach, CA 92660

> By ATG LLC

Date:09/06/2017

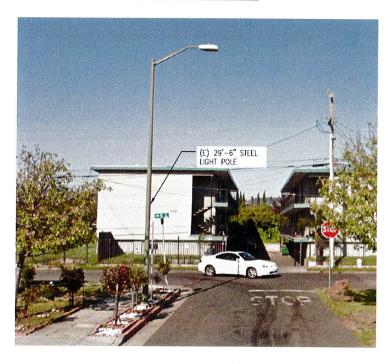


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1 Executive Summary

Purpose of Report

ATG LLC's RF Engineering has conducted radio frequency electromagnetic energy (RF-EME) modeling for Mobilitie LLC's site 9CAB013755 located at 94TH AVE., W. OF E ST.OAKLAND, CA to determine RF-EME exposure levels from the carrier's proposed wireless communications equipment.

The Federal Communications Commission (FCC) has developed Maximum Permissible Exposure (MPE) limits for general public and occupational exposures to RF-EME. This report summarizes the results of RF-EME modeling in relation to relevant FCC compliance standards for limiting human exposure to RF-EME. The details of FCC defined exposure limits are provided in Appendix A of this report.

Analysis results included in this report are based on drawings dated June 13th, 2017.

Statement of Compliance

Predictive modeling conducted using the original equipment manufacturers (OEMs) specifications for radio and antenna performance along with the supplied construction drawings dated June 13th, 2017, indicate there will be no exposure due to the carrier's proposed equipment on accessible ground-level walking surface at this site that exceeds the FCC's general public exposure limits.

Proposed equipment at the site is compliant with FCC guidelines for general population environments.

2 Maximum Permissible Exposure (MPE) Modeling Results for Proposed Site

The predictive modeling was conducted using the RoofView 5.0 suite of analysis tools. The modeling was conducted with the antennas operating at 100% capacity, all antenna channels transmitting simultaneously and the radio transmitters operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are more conservative (higher) than the actual signal levels would be during normal operations. The modeling calculations were made for an area 40'x 40' area with the equipment at the center.

Table 1: Maximum Permissible Exposure- Summary

Location	% of FCC General Public/Uncontrolled Exposure Limit	% of FCC Occupational/Controlled Exposure Limit	Power Density (mW/cm²)	Compliance Status
6ff above ground level	2.1	0.42	0.021	Compliant

3 Antenna Inventory

The Antenna Inventory shows all transmitting antennas on the site (see Table 2). This inventory was used by ATG to perform the software modeling of RF emissions. The inventory conforms with the submitted construction drawings which identifies the proposed mounting location of each antenna at the site. The exposure level is calculated for a person of height 6ft standing right below the devices at ground level.

Carrier/Operator Frequency (MHz) **Transmitter** count **Antenna Type** Z (6 ff. above ₽ **Technology** Aperture (ft.) Gain dBd ERP (W) Antenna Model Alpha 1 Mobilitie Omni 2496 LTE 172.58 6.35 360 AW3477-S 2.56 24.8 Wireless LTE 2 Mobilitie Relay 2496 LTE 1.93 9.85 **Airspan** iR460 1 1.1 35 10.5 BH

Table 2: Antenna Inventory

The table below details the operating power and Effective Radiated Power (ERP) for each carrier and frequency used in the modeling.

Frequency (MHz)	Power per Transmitter (Watts)	# of Transmitters	ERP (watts)
2496 (Omni)	20	2	172.58
2496 (UE Relay)	0.2	1	1.93

4 Modeling Summary and Assumptions

4.1 General Model Assumptions

The modeling was conducted using the antenna and radio maximum power values, while operating at full power with 100% duty cycle.

The site has been modeled with these assumptions to calculate the maximum RF energy density. ATG believes this to be a worst case analysis, based on data supplied by the OEMs and client. If actual power density measurements were made, ATG believes the real time measurements would indicate levels below those shown in the report.

5 Preparer Certification

I, Preparer, state that:

- I am an employee of ATG LLC that provides RF-EME safety and compliance services to the wireless communications industry.
- I have successfully completed 100s of RF-EME exposure studies and reports for various carriers.
- I am aware of the potential hazards from RF-EME exposures that would be classified "occupational" or "general public" under the FCC regulations.
- I am familiar with the FCC rules and regulations as well as OSHA regulations both in general and as they apply to RF-EME exposure.
- I have reviewed all the data related to the site and incorporated it into this study and Compliance Report such that the information contained in this report is true and accurate to the best of my knowledge.

Ahmed Saadallah

Ahmed Saadallah (RF Engineer)

Appendix A

Federal Communications Commission (FCC) Requirements

This appendix summarizes the policies, guidelines and requirements that were adopted by the FCC on August 1, 1996, amending Part 1 of Title 47 of the Code of Federal Regulations, and further amended by action of the Commission on August 25, 1997 (see 47 CFR Sections 1.1307(b), 1.1310, 2.1091 and 2.1093, as amended). Commission actions granting construction permits, licenses to transmit or renewals thereof, equipment authorizations or modifications in existing facilities, require the preparation of an Environmental Assessment (EA), as described in 47 CFR Section 1.1311, if the particular facility, operation or transmitter would cause human exposure to levels of radiofrequency (RF) electromagnetic fields in excess of these limits.

The potential hazard associated with the RF electromagnetic fields is discussed in OET Bulletin No. 65. This document can be obtained on the FCC website. (https://transition.fcc.gov/Bureaus/Engineering Technology/Documents/bulletins/oet65/oet65.pdf)

As per FCC guidelines there are two separate tiers of exposure limits that are based upon occupational/controlled exposure limits (for workers) and general public/uncontrolled exposure limits for members of the general public.

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. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made 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

General public/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 and not be made fully aware of the potential for exposure or cannot exercise control over their exposure.

The FCC's MPE limits for field strength and power density are given in Table 1 (and in 47 CFR § 1.1310) Figure 1 is a graphical representation of the limits for plane-wave (far-field) equivalent power density versus frequency. The FCC's limits are generally applicable to all facilities, operations and transmitters regulated by the Commission, and compliance is expected with the appropriate guidelines. The power density limits vary by frequency to take into account the different types of equipment that may be in operation at a particular facility and are "time-averaged" limits to reflect different durations resulting from controlled and uncontrolled exposures.

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f²)*	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	$(180/f^2)^*$	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

f = frequency in MHz

f = frequency in MHz *Plane-wave equivalent power density **Table 1**

^{*}Plane-wave equivalent power density

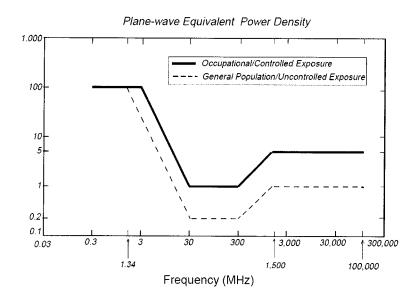


Figure 1. FCC Limits for Maximum Permissible Exposure (MPE)

FCC Compliance Requirement

In general, as specified in 47 C.F.R. 1.1307(b), as amended, when the FCC's guidelines are exceeded in an accessible area due to the emissions from multiple fixed transmitters the following policy applies. Actions necessary to bring the area into compliance with the guidelines are the shared responsibility of all licensees whose transmitter's contribution to the RF environment at the non-complying area exceeds 5% of the exposure limit (that applies to their particular transmitter) in terms of power density or the square of the electric or magnetic field strength.

For non-compliant sites, Occupational Safety and Health Administration (OSHA) set recommendations to make the sites compliant. The document can be found in the link: https://www.osha.gov/dte/library/radiation/nir stds 20021011/nir_stds 20021011.ppt

Appendix B

Glossary of Terms

- 1. *Electromagnetic Field (energy density)* the electromagnetic energy contained in an infinitesimal volume divided by that volume.
- 2. Exposure Exposure occurs whenever and wherever a person is subjected to electric, magnetic or electromagnetic fields other than those originating from physiological processes in the body and other natural phenomena.
- 3. General Population / Uncontrolled Exposure applies to human exposure to RF fields when the general public is 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 always fall under this category when exposure is not employment-related.
- 4. Maximum Permissible Exposure (MPE) the rms and peak electric and magnetic field strength, their squares, or the plane-wave equivalent power densities associated with these fields to which a person may be exposed without harmful effect and with an acceptable safety factor.
- 5. Occupational / Controlled Exposure applies to human exposure to RF fields when 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/controlled limits.
- 6. Power Density (S) Power per unit area normal to the direction of propagation, usually expressed in units of watts per square meter (W/m²) or, for convenience, units such as milliwatts per square centimeter (mW/cm²) or microwatts per square centimeter (µW/cm²).

Appendix C

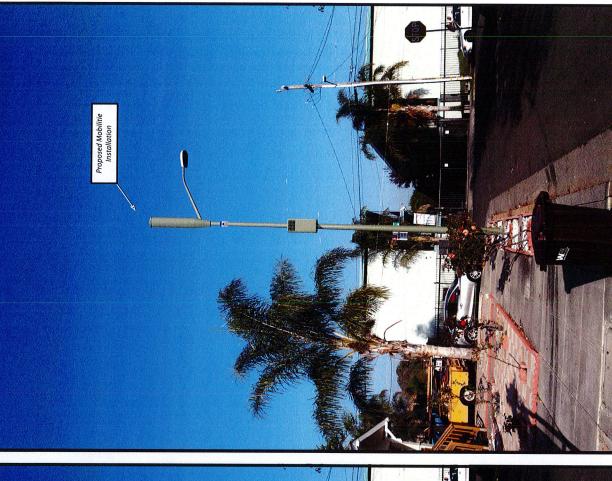
RoofView Export File

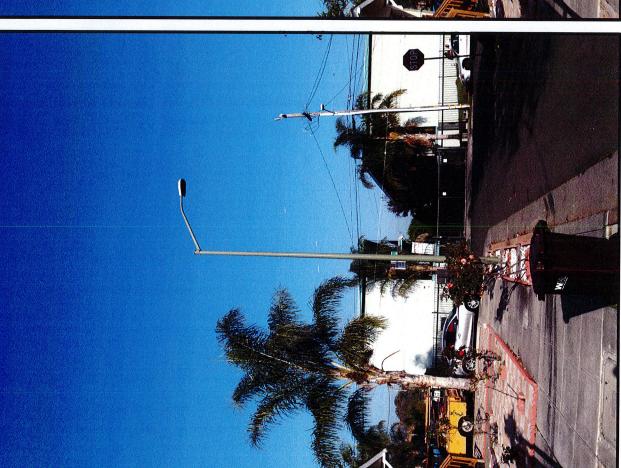
The below file shows the Antenna information that has been used to calculate the MPE levels using RoofView 5. RoofView is a powerful, Excel based software analysis tool for evaluating radiofrequency (RF) field levels at telecommunications sites that are produced by antennas of the type commonly used in the cellular, paging, SMR, PCS and conventional two-way radio communication services

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	Mobilitie	2496						0.2	0.2	Airspan	iR460	20	20	10.5	vc	1.1	9.85	35		ON•	
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Sym	Map Mark	Roof X	Roof Y	Map Label	Description	n (notes f	or this tabl	e only)													

view from 94th Avenue looking northeast at site

9CAB013755/SF90XS2G3A 94th Avenue & E Street , Oakland, CA **Photosims Produced on 6-23-2017**







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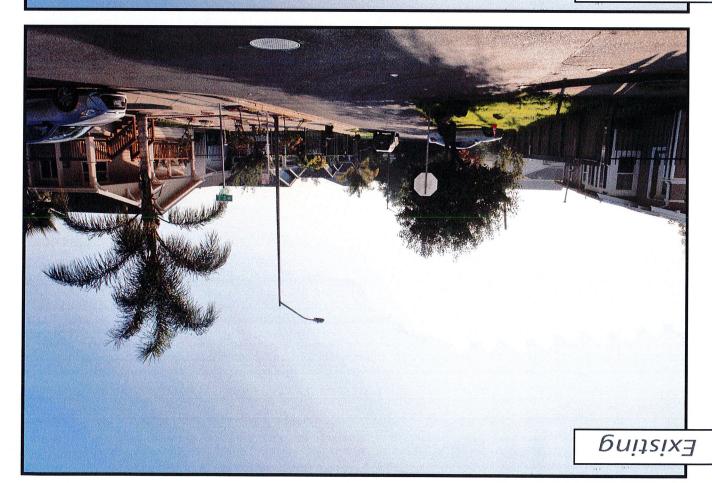
Photosims Produced on 6-23-2017 94th Avenue & E Street, Oakland, CA 9CAB013755/SF90XS2G3A





view from 94th Avenue looking west at site







Sent from my iPhone

On Jul 11, 2018, at 1:12 PM, James Singleton < isingleton@mobilitie.com wrote:

FYI

James Singleton | Sr. Permitting Manager [cid:image001.png@01D0FC3A.CCA80310]JSingleton@mobilitie.com San Francisco, CA 650-814-0564 mobile

www.mobilitie.com/>

FOLLOW US ON [cid:image003.jpg@01D1E7DE.1A89CED0]

https://www.linkedin.com/company/mobilitie/ [cid:image005.jpg@01D1E7DE.1A89CED0] https://twitter.com/mobilitie

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569 High Street @ Howard Street



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L5 ENGINEERING INC.

944 CALLE AMANECER, STE E SAN CLEMENTE, CA 92673 WWW.LEAF.CC.LLC.COM PHONE: (949) 388-0192

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SITE ID/CASCADE ID-CANDIDATE LETTER: 9CAB013427/SF90XS0Y5C LATITUDE/LONGITUDE: 37.767900/-122.222322

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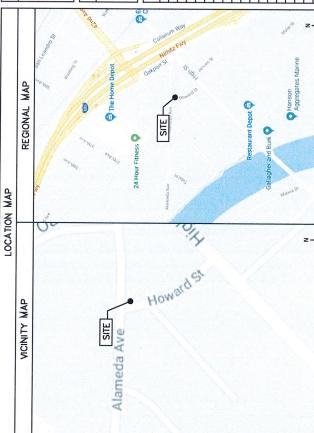
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COUNTY	ALAMEDA
JURISDICTION:	CITY OF OAKLAND
PROPERTY OWNER.	PUBLIC RIGHT-OF-WAY
APPLICANT:	WOBLITE, LLC SEGS REDULL, ARNUE, STE. 200 COSTA, MESA, CA 2626 COSTA, MESA, SIAGES SIGNETTON PROPER: (COS) 814—COSA EMAL: JSIAGLETON-BARBILITE.COM

NGINEER	JACOB S. PROCTOR, P.E. VECTOR STRUCTURAL ENGINEERS SEST H. GALENA PARK BLVD DRAPER, UT 84020 (801) 990-1775
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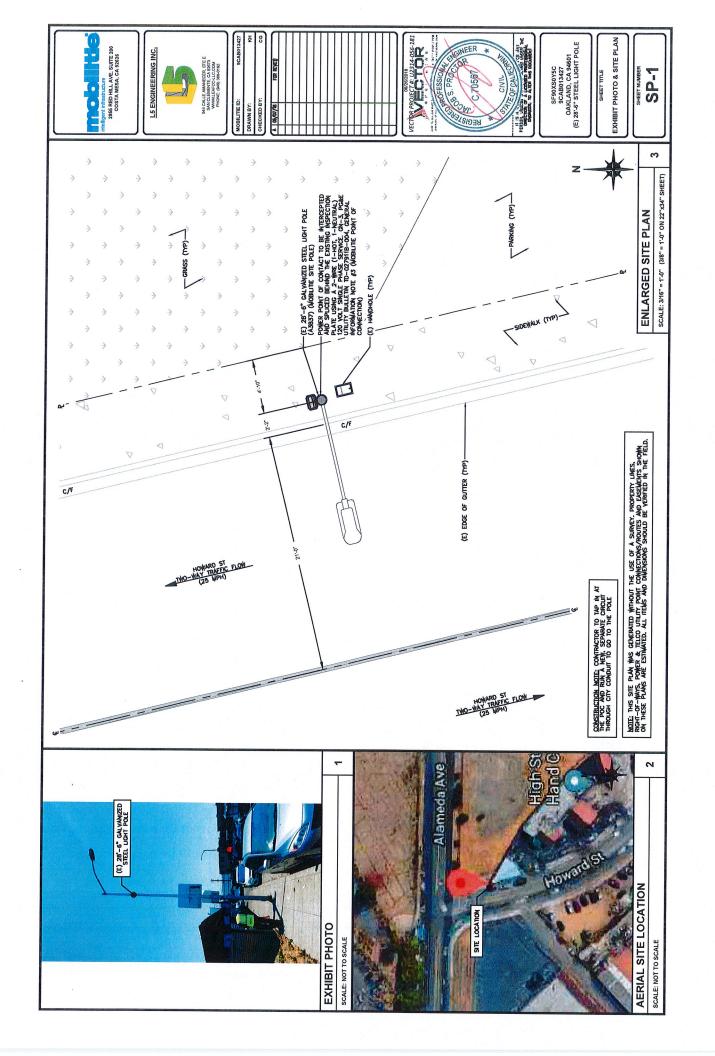
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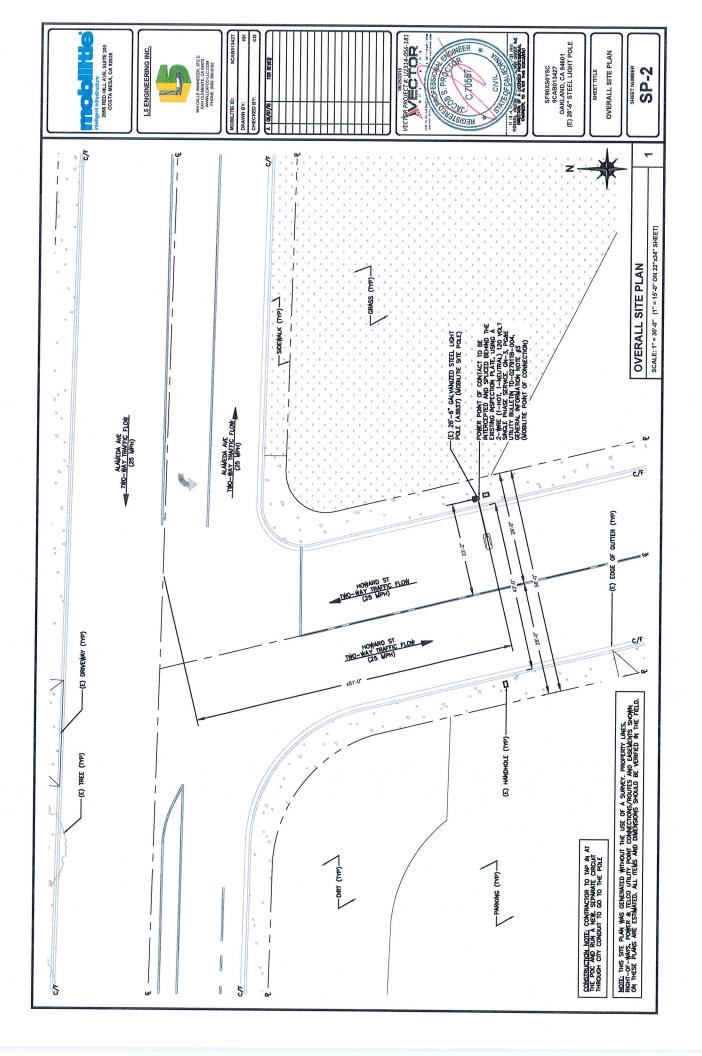
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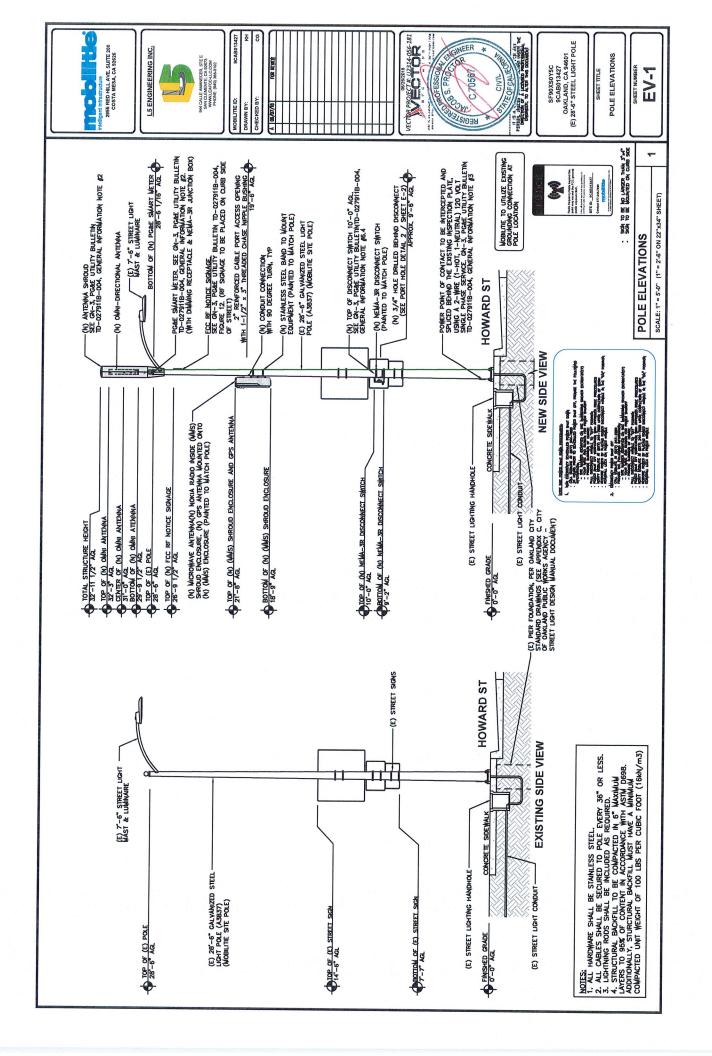
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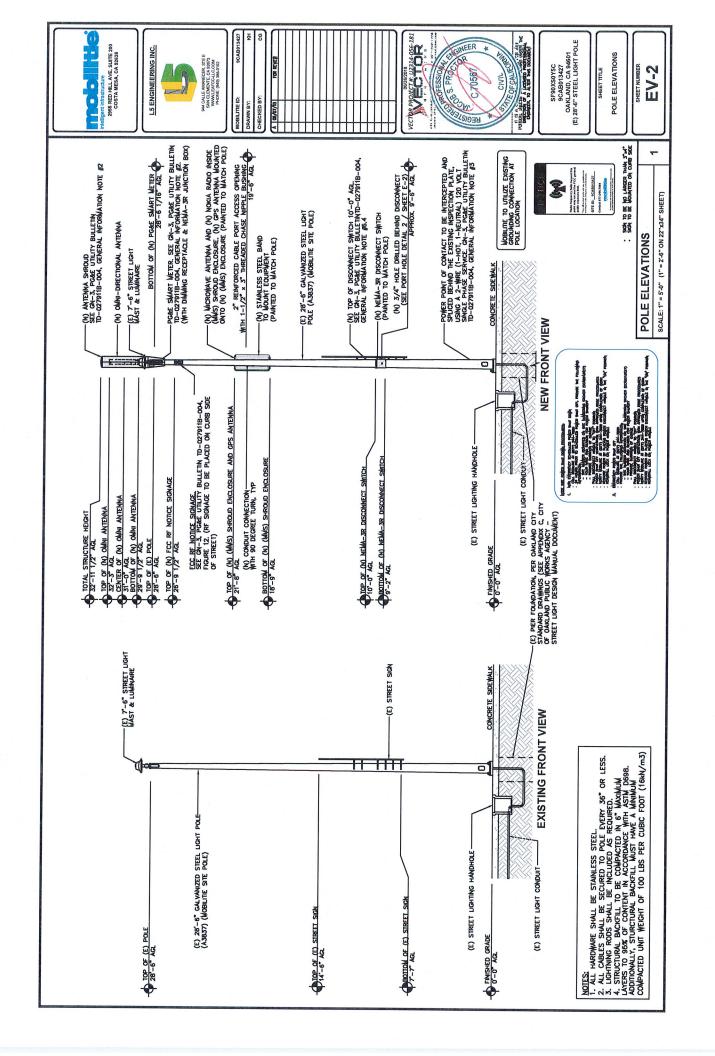
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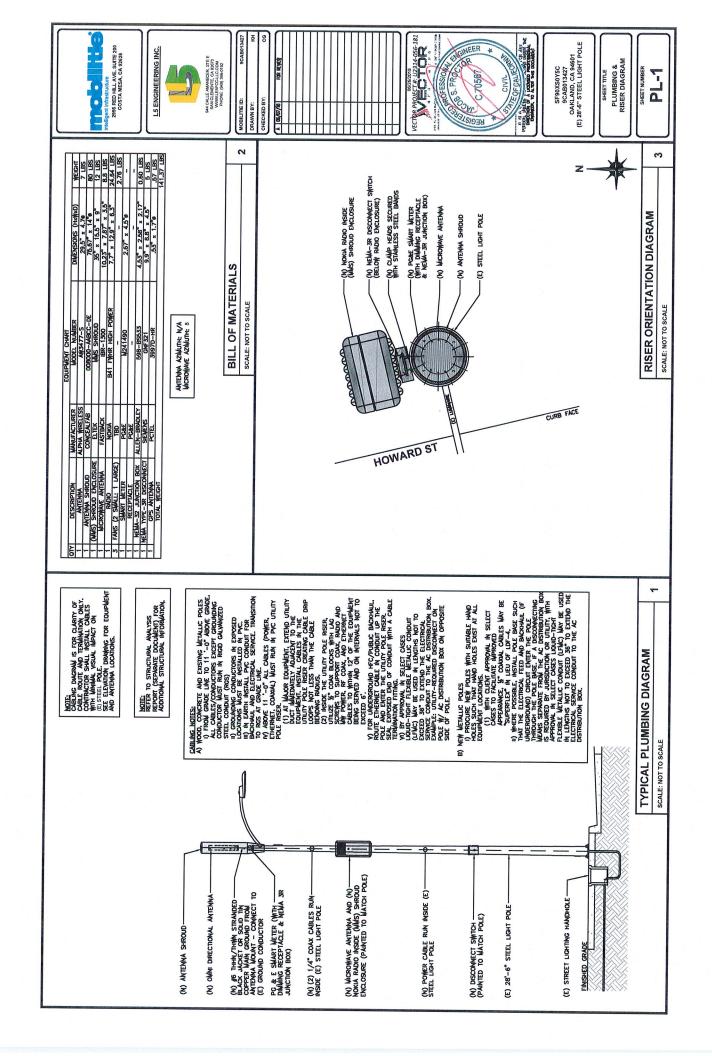
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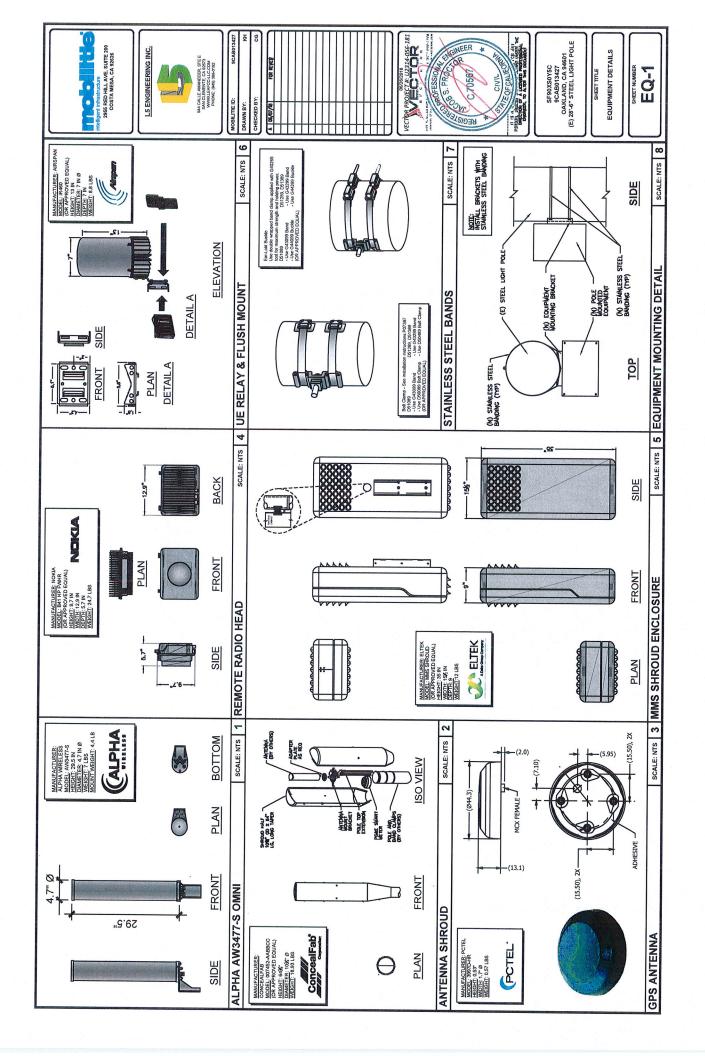


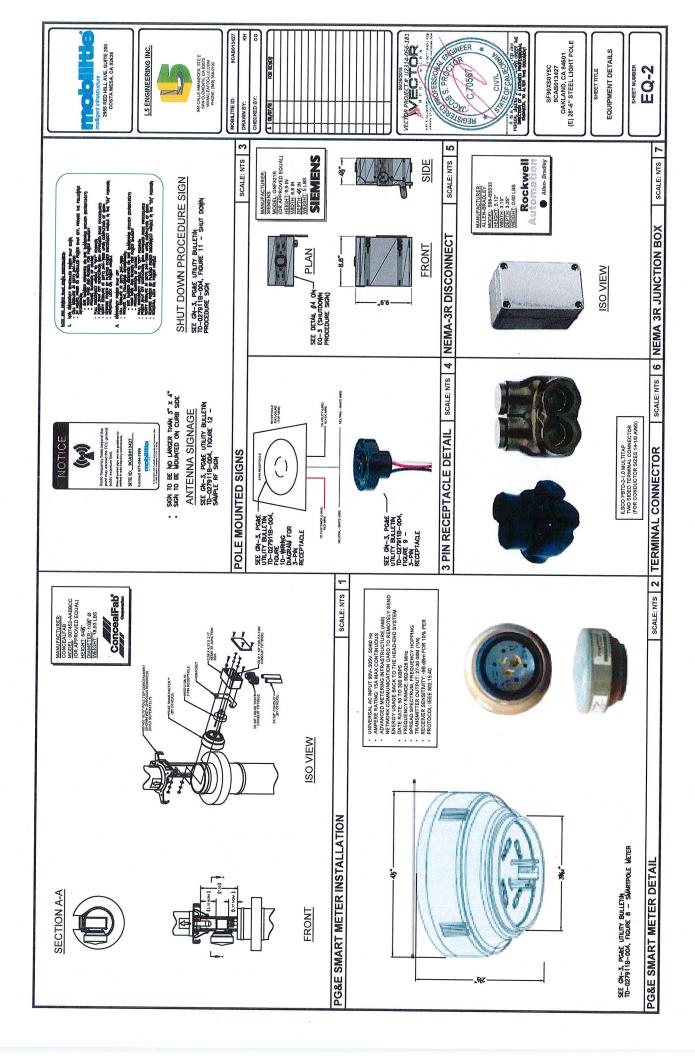


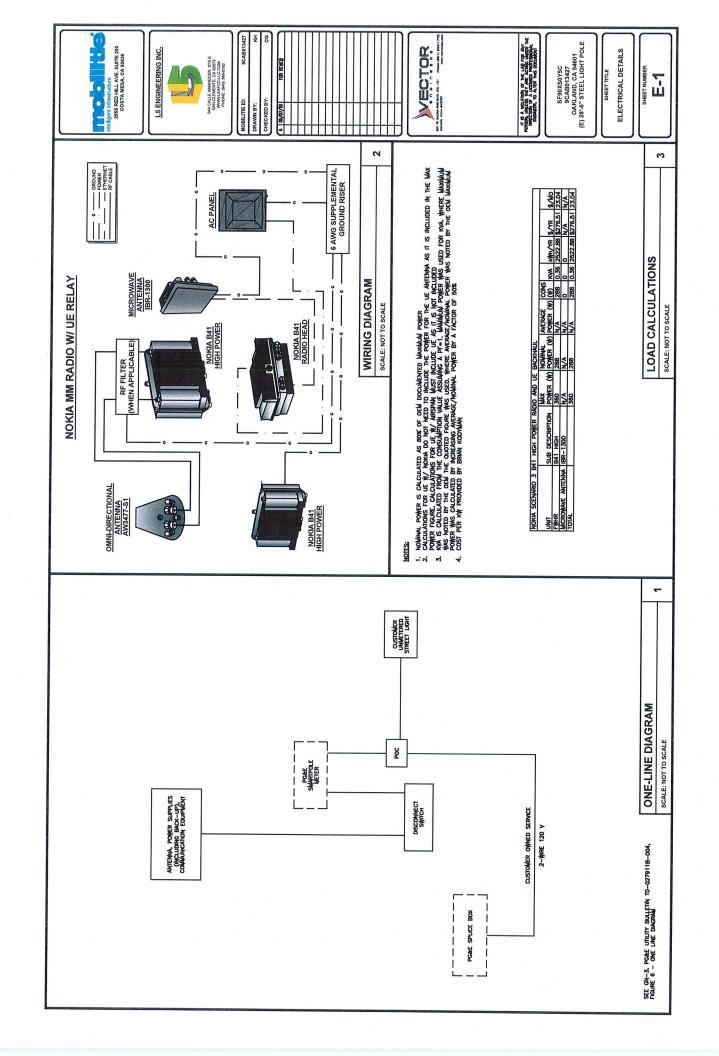


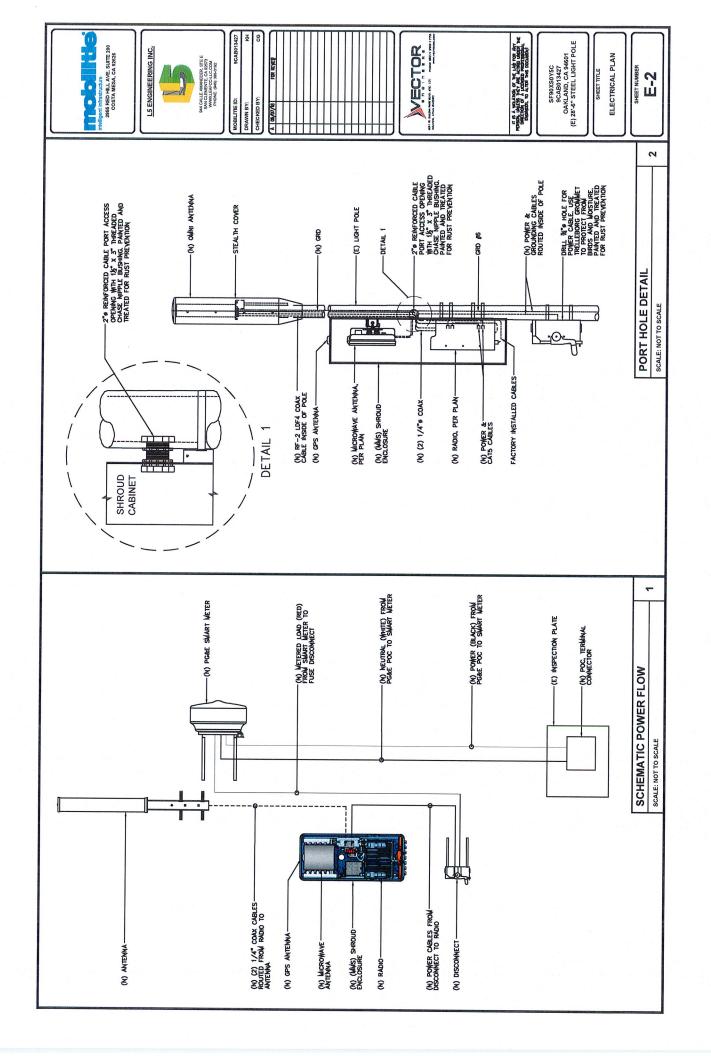


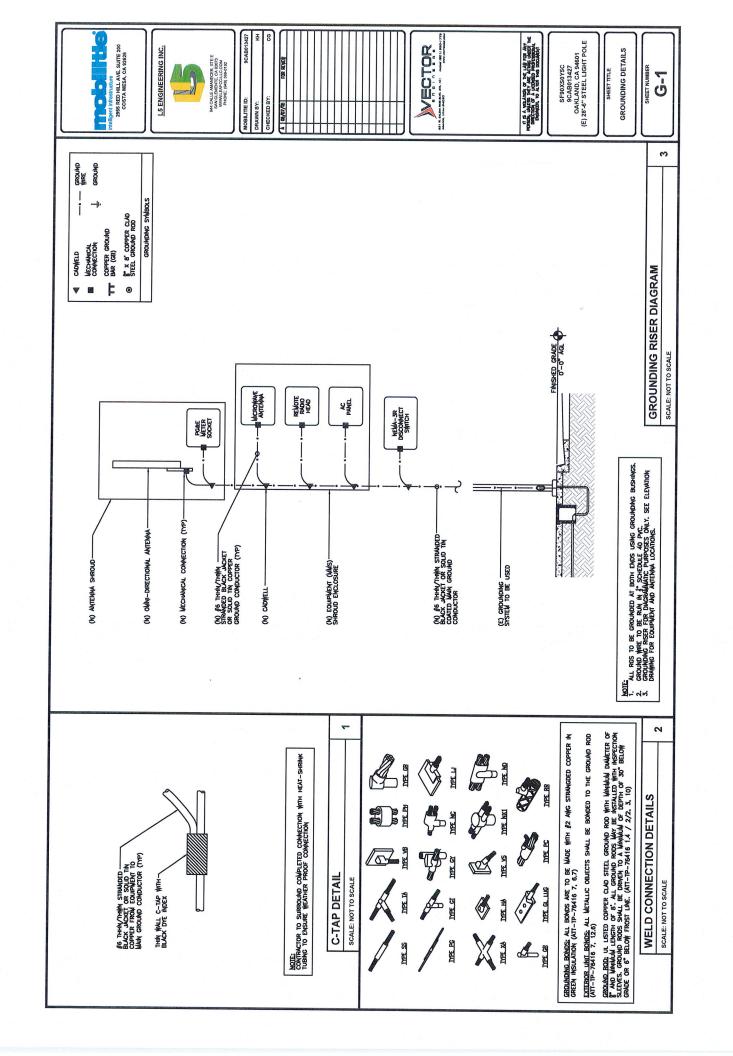


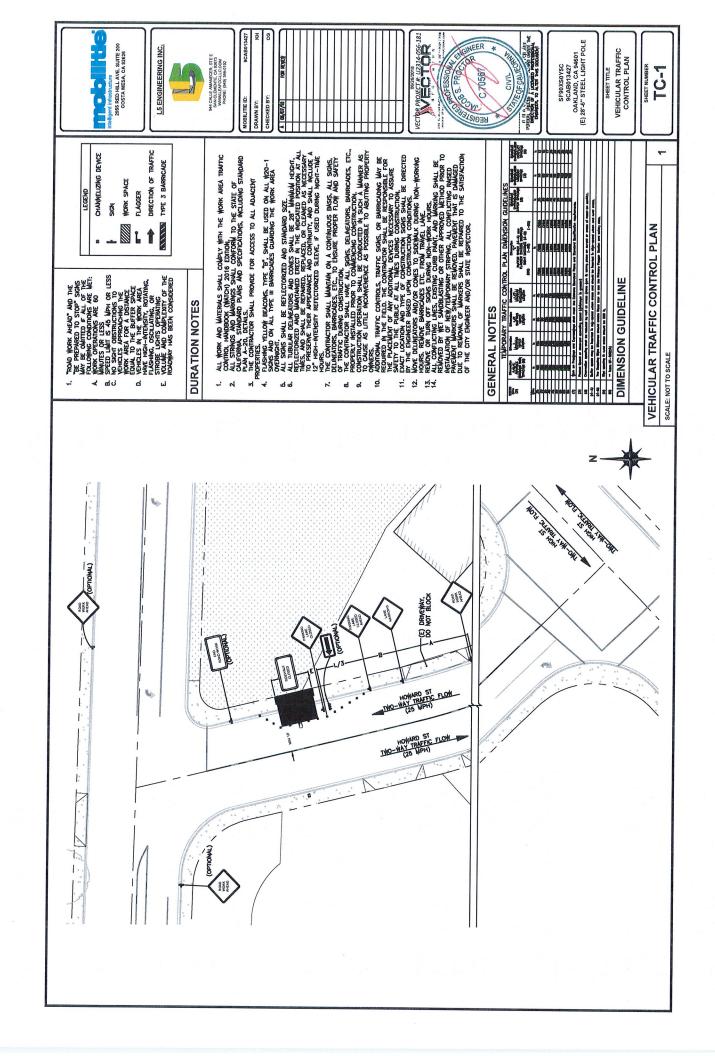


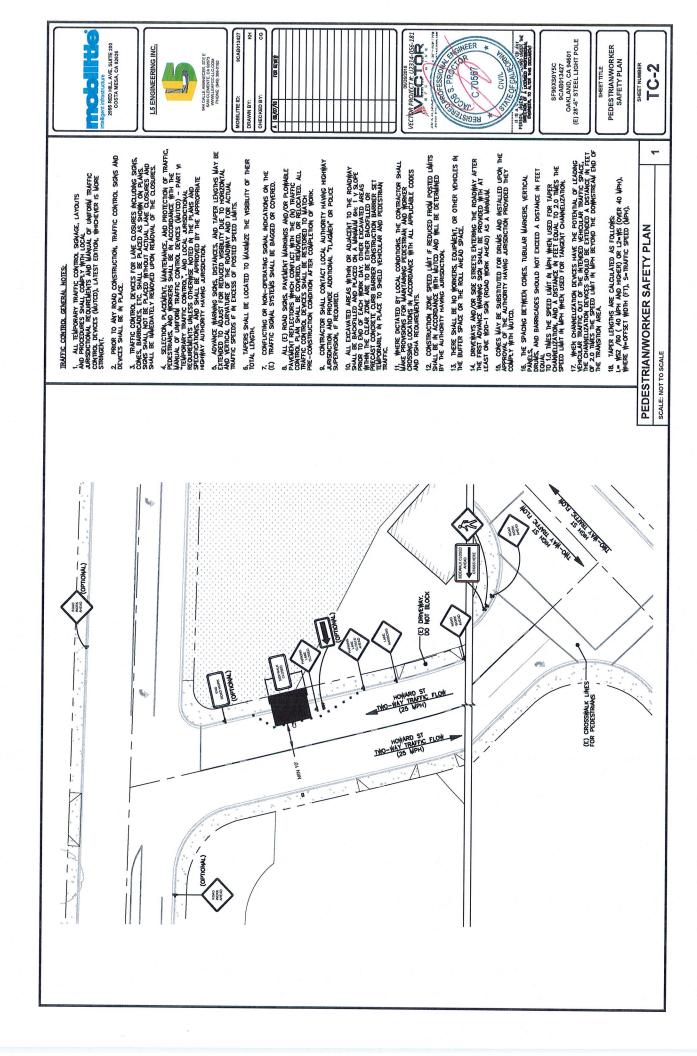












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CONTRACTOR SHALL COORDHATE THER WORK WITH THE WOBLITE CAL AND SCHEDLE, THEIR ACTIVITIES AND WORKING HOURS IN ACCORDANCE WITH THE REQUIREMENT. CONTRACTOR SHALL BE RESPONSBLE FOR COORDINATING THEIR WORK WITH I WORK OF DIMERS AS IT MAY RELATE TO RADIO EQUIPMENT, ANTENNAS AND ANY ORDER PORTIONS OF THE WORK. 4

CONTRACTOR SHALL MAKE NECESSARY PROVISONS TO PROTECT (E) SUFFACES, EQUIPÉRY, MEROFEMENTS, PRING ETC. AND MAKEDAIT REPAIR, TO NEW CONDITION, ANY DAMAGE THAT OCCURS DURING CONSTRUCTION AT THE SQLE COST OF THE CONTRACTOR. COMPACTORS SHALL INSTALL ALL COUPLINT AND WATERALS IN ACCORDANCE THE MANIFACTURERS RECOMMENDATIONS UNLESS SECRETALLY OTHERWISE MOCATED OR PRECEDENCE. Q \$

IN DRILLING HOLES, OR CORING, INTO CONCRETE WHETHER FOR FASTENING OR ANCHORING PURPOSES, OR PENETRATIONS THROUGH THE FLOOR FOR COMDUIT

REMS, PPE RANS, ETC., MUST BE CLEARLY UNDERSTOOD THAT REINFORCING STEEL SAALL NO TE BRILLED INTO, CLTO POADAMAGED UNDER ANY CRECUMSTANCES (CHALES NOTED OTHERWES). LOCATIONS OF ENFORCING CREEL ARE NOTE DETINIELT VERWING MAD THEREFORE MUST BE LOCATED BY CONTRACTOR USING APPROPRIATE WETHOUS AND EQUIPMENT PRIOR TO ANY DRILLING OR CORNIC OPERATIONS IN (E) CONCRETE.

CONTRACTOR SHALL REPARR, TO NEW CONDITION, ALL (E) WALL SURFACES DAMAGED DURING CONSTRUCTION SUCH THAT THEY WATCH AND BLEND IN BAUACHY SURFACES. ₩,

CONTRACTOR SHALL SEAL PENETRATIONS THROUGH FIRE RATED ASSEMBLES OR MATERIALS WITH ULL INSTED AND FIRE CODE APPROVED MATERIALS AND SYSTEMS. THAT MEET OR EXCEED THE RATING OF THE ASSEMBLY IN MINICH THE MEYERARDING IS PLACED.

COMPACTOR SHALL KEEP CONTRACT AREA OLEAN, HAZARD FREE, AND DISPOSE OF ALL DOTT, DEBROS, AND RUBBRAS, COUNDENT, NOT SECULDED AS REMAINING ON THE OWNERS SHALL BE REMONED. PLEATE PREMISES IN CLEAN COMMENT OF THE OWNER SHALL BE RESOLVED, DUST, OR SAUDIOSES OF ANY AND USE. CONTRACTOR SHALL BE RESOLVED ET OR MAINTAINING ALL ITEMS INTO COMPETENCY OF CONSTRUCTION.

MINIMUM BEND RADIUS OF ANTENNA CABLES SHALL BE IN ACCORDANCE WITH CABLE MANUFACTURERS RECOMMENDATIONS. 7

CONTRACTOR SHALL MANAGE DISTURBANCE TO (E) SITE DURING CONSTRUCTION, CONTRACTOR SHALL BE IN CONTRACTOR CONSTRUCTION. TO STATE AND LOCAL GUIDELINES FOR ENCIRGINAL MACE THE WILL ADMISSION OF AND LOCAL GUIDELINES FOR AUTOFORM TO WITH LOCAL RECULATIONS AND LOCAL RECULATIONS TO CONTRACTOR WILL BE RESTORABLE FOR MAINTENANCE OF ANY TO THE OWNER AND RECULATION ALTHORY ALTHORY MAINTENANCE OF ANY TO THE OWNER AND RECULATION MAINTENANCE OF ANY TO THE OWNER AND RECULATION MAINTENANCE. ž

ALL CONSTRUCTION WORK IS TO ADHERE TO APPLICANT'S INTEGRATED CONSTRUCTION STANDARDS UNLESS STATE OR LOCAL CODE IS MORE STRINGEN! 23

The Withstop of the Paaks And Specifications is to persoral the Constitution of Theodory of Theodory Constitution of Theo 24.

ADEQUATE. AND REQUIRED LABILITY INSURANCE SHALL BE PROVIDED BY THE DAMACTOR FOR PROPERTIES PUBLIC LOSS AND ANY/ALL PROPERTY DAMACE FOR THE DA 25

CONTRACTOR SHALL GUARANTE ANY/ALL WATERALS AND WORK FREE FROM DEFECTS FOR A PERBOD OF NOT LESS THAN ONE YEAR FROM DATE OF COSETIANACE. ANY CORRECTIVE WORK SHALL BE COMPLETED AT THE SOLE COST OF THE CONTRACTOR. 26.

ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTIAL ANY/ALL ELECTRICAL HOW WORKING ANY/ALL EN ACCORDANCE. WORKING SHALL BE IN ACCORDANCE. WORKING SHOUTH HERE REQUESTEDING SHALL SHOWN WERE BY CHOCKING SHALL SHOWN WERE SHALL SHOW SHALL SHOW SHALL SHOW SHALL SHALL SHOW SH

ELECTRICAL, CONTRACTOR SHALL VIST THE JOB STE AND FAMILIARIZE THE SECTRICAL AND COMMUNICATION WISTOMED ELECTRICAL, AND COMMUNICATION WISTALLATOR AND MAKE PROVISIONS AS TO THE COST THEREOK. ALL (E) CONDITIONS OF ELECTRICAL EQUIP., ETC., THAT ARE PART OF THE FINAL SYSTEM, SHALL BE VERRED BY THE COMPACTIONS PROOF OF THE SUBMITTING OF THEIR BD. FALLURE TO COMPACTION PROPERLY OF THE COMPACTION OF THE COMPACTION OF THE COMPACTION OF THE COMPACTION HILL IN TO MAINTAIN THE COMPACTION OF THE COMPACTION HILL IN THE PART OF THE COMPACTION OF THE COMPACTION HILL IN THE PART OF THE COMPACTION OF THE COMPACTION HILL IN THE COMPACTION OF THE COMPACTION OF THE COMPACTION HILL IN THE COMPACTION OF THE COMPACTION HILL IN THE COMPACTION OF THE COMPACTION OF THE COMPACTION HILL IN THE COMPACTION OF THE COMPACTION HILL IN THE COMPACTION OF THE COMPA 7

ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE MOST ALL CODES AND ORDINANCES OF THE LOCAL JURISDICTION, AND DEPORTE A TELEPHONE COMPANIES HAVING JURISDICTION AND SHALL INCLIDE BUT ARE NOT BE LIMITED TO:

A) UL – UNDERWATERS LABORATORIES
NEC – MATONAL ELECTRICAL, CODE
C) NEWA – NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
D) OSHA – OCCUPATIONAL SMETY AND HEALTH ACT

SBC – STAMDARD BUILDING CODE
NPPA – NATIONAL FIRE PROFECTION ACENCY
AS – AMERICAN NATIONAL STAMDARDS INSTITUTE
FEEF – INSTITUTE OF ELECTRICAL, AND ELECTRONICS ENGINEERS
ASTM – AMERICAN SOCIETY FOR TESTING MATERIALS 5.50 E

REFER TO SITE PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT, AND CONFIRM WITH MOBILITIE CM ANY SZES AND LOCATIONS WHEIN WEIDED.

CONTRACTOR SALL CONFISH WITH COQL UNITY COMPANY ANY VALI REQUIREMENTS SUCH AS THE: UG SZE RESTRICTORS, COMPUTE ETTRY, SZE OF TRANSCORMERS, SCHEDULED DOMENTME FOR THE OMNERS, COMPUTABLATION, ETC... ANY VALL COMPLICES SALL BE BROCKET TO THE ATTENTION OF THE MOBILITIE (E) SERVICES; CONTRACTOR SHALL NOT INTERRUPT (E) SERVICES INTHOUT MATTER PERMISSION OF THE OWNER. ıci

Whylkum wre sze small be \$12 amg, not including control meng. Unless hoteld dopered all compere mit think insulations, unless hoteld.

QU'ILET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY THERADED HUBS IN HIGTDAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREA.

IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF THE CONSTRUCTION, CONFINENCION IS EXPECTED TO TENNISH AND INSTALL ALL ITENS FOR A COMPLETE ELECTRICAL SYSTEM, AND PROMODE ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER MORNING GODER.

VS ELECTRICAL SYSTEM SHALL BE AS COMPLETELY AND EFFECTIVELY GROUNDED, REQUIRED BY SPECIFICATIONS, SET FORTH BY APPLICANT. ō

ALL WIPON SAUL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A PIERST CLASS. WORNAME MANNER. THE CONFEITED SYSTEMS SAUL BE UNITY FUNCTIONAL AND SAULL BE PREVIOUS THE WOBBLITE CAN AND LOCATION. AND PROTECTIONS AND PROTECTIONS SAULT BE CONSECTED BY AN ELECTRICAL CONTRACTOR. Ξ.

ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION. 7

THE CORRECTION OF ANY DEFECTS SHALL BE COMPLETED BY THE CONTRACTOR WITHOUT ANY ADDITIONAL CHARGE AND SHALL INCLUDE THE REPLACEMENT OR THE REPLACEMENT OR THE RESTALLATION, IMPICH MAY HAVE BEEN DAMANGED THEREIN. 15

CONTRACTOR SHALL PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WRES, BOXES, COVER PLATES AND DEVICES FOR ALL OUTLETS AS INDICATED.

DITCHING AND BACK FILL: CONTRACTOR SHALL PROVIDE FOR ALL UNDERGROUND INSTALLED CONDUIT AND/OR CABLES INCLUDING EXCAVATION AND BACKFILLING AND COMPACTION, REFER TO NOTES AND REQUIREMENTS EXCAVATION, AND BACKFILLING. ō

MATERIALS, PRODUCTS AND EQUIPIENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SHALL APPEAR ON THE LIST OF U.L. APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF THE NEC, NEWA AND IECE.

CONTRACTOR SHALL SUBMIT SHOP DRAININGS OR MANUFACTURER'S CATALOG INFORMATION OF AMY/ALL EQUIPMENT AND ALL O'HER ELECTRICAL ITEMS FOR APPROVAL BY THE MOBILITIE CAP PRIOR TO INSTALLATION, 17.

ANY CUTTING OR PATCHING DELAKED NECESSARY FOR ELECTRICAL, WORK IS THE ELECTRICAL, CONTRACTIONS RESPONSIBILITY AND SMALL BE INCLUDED IN THE COST FOR WORK AND PERFORMED TO THE SATISFACTION OF THE WORKLING.









9CAB0 MOBILITIE ID: DRAWN BY: CHECKED BY:

FOR REYES





9CAB013427 OAKLAND, CA 94601 (E) 28'-6" STEEL LIGHT POLE SF90XS0Y5C

GENERAL NOTES SHEET TITLE

GN-1

- The Electrical Contractor shall label all panels imp only typermetry directories. All electrical impig small be the resonsibility of the electrical contractors.
- 20. DISCONNECT SMITCHES SHALL BE UL-RATED, H.P. RATED HEAVY-DUTY, OUICK-MAKE ÅND QUICK-BREAK ENCLOSURES, AS REQUIRED BY EXPOSURE TYPE. ALL CONNECTIONS SHALL BE MADE WITH A PROTECTIVE COUTING OF ANY ANT-DAMBER AT PERMEMBER CHEMICAL CO. COAT ALL WITE SHIP ACES BEFORE CONNECTION E REPORTS COPIETING REPORTS CONNECTION E REPORTS CONNECTION E NOTION SHIP ACES. 7
 - RACTIVES CONDUT SALL BE SOCEDULE 80 PAC INTERNO OR EXCEEDING NEMA TICZZ 15990. CONTRACTOR SALL BE LICE AND OFFER SALD OF OR SAME AND ELEPTR CONDUCT WHO PROPARATE PULL STRINGS 200 LBS TEST BACK THAT CONDUCT SALD SERVICE SALL BE & MINIMAR OF 2 FT. RADIES, REST CONDUTS IN THE SPECIATIO, SALL IN BEST OFFER SALL BE STANDED FOR CALL PRINCIPLES AND THE SALL BE STANDED FOR CONDUCT. COAT ALL THREADED RIGHD SALL BEST SALL BE STAND OFFER SALL BEST SAL ä

 - SUPPORT OF ALL ELECTRICAL, WORK SHALL BE AS REQUIRED BY NEC.
 CONDUCTORS. COMPACTOR SHALL USE SBS. CONDUCTINTY CORPER WITH TIPE
 THIN INSULATION, UNLESS OTHERWES, NOTED, 600 VOLT, COLOR CORDE, USE
 SSULO SOUNCTIONS TO WE WER UP TO AND INCLUDING MO. B ANG. USE STRANDED
 CONDUCTORS TOW WIRE ADDR. NO. 8 ANG.
 - COMPETIONS FOR POPER COMPUCTORS, CONTRACTOR SHALL USE PRESSURE TYPE RESULTED THIS CALL OF COMPETIONS FOR NO. 8 AND SHALLER, USE SOLDERLESS MECHANICAL TRAINFALL LIOS FOR NO. 8 AND AND LARGER. 26,
- SERVICE: AS SPECIFED ON THE DRAMINGS. OWNER OR OWNER'S AGENT WILL APPLY FOR POWER, ALL PROVISIONS FOR TEMPORARY POWER WILL BE OBTAINED BY THE COMPANCION. 26.
 - TELEPHONE OR FIBER SERVICE: CONTRACTOR SHALL PROVIDE EMPTY CONDUITS WITH PULL STRINGS AS INDICATED ON DRAMMINGS. ELECTRICAL AND TELCO/FIBER RACEMAYS TO BE BURIED A MINIMUM DEPTH OF 30°, UNLESS OTHERMISE NOTED. 27. 28.
- CONTRACTOR SHALL PLACE 6" WIDE DETECTABLE WARNING TAPE AT A DEPTH OF 6" BELOW GROUND AND DIRECTLY ABOVE ELECTRICAL AND TELCO SERVICE CONDUITS, CALITICALS TAPE TO READ "CALITICAL BURED ELECTRIC" OR "BURED TILECOM". 20
- ALI BOLTS SHALL BE 3-16 STANLESS STEEL.
 THE ELECTRICAL CONTRACTOR SHALL LAREL ALL PAMELS WITH ONLY TYPE WATTER DIRECTORES ALL ELECTRICAL WINNEN SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

GROUNDING NOTES

- ALL HARDINARE SHALL BE 3-16 STANLESS STEEL INCLUDING LOCK WASHERS. CCAN ALL HARDINARE SHALL BE STANLESS STEEL \$ DANKETER OR LARGER, WATHER OR LARGER. FFO GROUND BOND TO STEEL ONLY: NISERT A CADMINIM FLAT WASHER BETNEEN LUC AND STEEL COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE WATHING.
 - ALL STEEL CONDUIT SHALL BE BONDED AT BOTH ENDS WITH GROUNDING BUSHING.
- ALL ELECTRICAL, AND GROUNDING AT THE POLE SITE SHALL COMPLY WITH THE NATIONAL ELECTRICAL, CODE (NEC), MINONAL THE REPORTECTION ASSOCIATION (NFPA.) 700 (LATEST EDITION), AND MANUFACTINER.
- ALL DETAILS ARE SHOWN IN GENERAL TERAIS. ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.
- ALL GROUND CONNECTIONS SHALL BE AS ANG. UNLESS OTHERWER NOTED, ALL MINES SHALL BE COPPER WITH THAN, UNLESS OTHERWER FOR INCIDE ALL GROUND WITH SHALL BE SOLD THE CANTED OR STRANDED GREEN INSLALTED WITH COUNTERCOTED THE CANTED OR SOURCE, TO GANGE MANUAL PROVING SUPPLIEIT GROUND TO SOURCE, TO GANG MANUAL PROVING SUPPLIEIT GROUNDING ROOTS AS RECURED TO AGREEN SPECIFIED ONLY RATING, GROUNDING AND OTHER OPTIONAL TESTING WILL BE WITHESSED BY THE WIGHIGHT CAN.
 - NOTIFY ARCHITECT /ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.
- ALL HORZONTALLY RUN GROUNDING CONDUCTORS SHALL BE INSTALLED A MANIMUM OF 30° BELON GRADE/ 8° BELON FROST-LINE IN TRENCH, UNLESS OTHERWISE NOTED BACK FILL SHALL BE COMPACTED AS REQUIRED BY AROPHECT / CHANGER.
- ali ground conductors shali be run as straight and short as possible, mth a winimum 12" beyding radius not less than 90 degrees.
 - BURNDY, HY-GRADE U.L. LISTED CONNECTORS FOR OUTDOOR USE OR AS APPROVED BY APPLICANT PROJECT MANAGER. ACCEPTABLE CONNECTIONS FOR GROUNDING SYSTEM SHALL BE:

 - CADIFILD, EXOTHERAING WILLOS (WELDED CONNECTIONS).
 ONE (1) HOLE THANED COPPER COMPRESSION (LONG BARREL) FITTINGS.

- ALL CRIMED CONNECTIONS SHALL HAVE ENBOSSED MANUFACTURER'S DIEMARN WISBLE AT THE CRIME (RESULTING TROI) USE OF PROPERS CRIMENING DEVICES) AND WEATHER—PROJECTS.
 - ALL CONNECTION HARDWARE SHALL BE TYPE 3-16 STAINLESS STEEL (NOT ATTRACTED TO MAGNETS). 7.
- ELECTRICAL SERVICE EQUIPALENT GROUNDING SHALL COÁPLY IPTH NEC, ARTICLE 280-82 AND SHALL BOND ALL (E) AND NEIW GROUNDING ELECTRODES NEW GROUNDING ELECTRODE SHALL INCLUDE BUT NOT LIMITED TO GROUND RODS.

TESTING AND EQUIPMENT TURN UP REQUIREMENTS:

- CABLE, DATA CABLE, RADIO EQUIPALENT AND BACK HAUL EQUIPALENT TESTING L. COMELY WITH CURRENT INDUSTRY STANDARDS AND OR THOSE STANDARDS THE EQUIPALENT MANUFACTURER OR PROVIDED TO THE CONTRACTOR PRORE TESTING.
- CONTRACTOR WILL USE THE APPROPRIATE CALIBRATED TESTING EQUIPALENT AND BACK KHUI, EGUPHENT TAND BACK KHUI, EGUPHENT TAND THE WASHING STANDARDS OF THE MANUFACTURER OR THOSE STANDARDS PROVIDED TO THE CONTRACTOR PRIOR TO TESTING.
 - CONTRACTOR TO VERFY AND RECORD ALL TEST RESULTS AND PROVIDE THESE RESULTS WITHIN THE FINAL CLOSE OUT PACKAGE.
- ALI PERSONNEL INVOLVED IN THE TESTING OF RF CABLE, DATA CABLE, RADIO EQUIPALENT AND BACK AMAL, EQUIPALENT WIN BECKURED TO HANE BEEN TRANSED AND ONE CERTIFIED IN THE PROPER TESTING OF RF CABLE, DATA CABLE, RADIO EQUIPALENT AND BACK HALL EQUIPALENT.
 - ALL TEST RESULTS SHALL BE TIME STAMPED, RECORDED AND PRESENTED PRIOR TO ENERGIZING AND TURN UP OF ANY EQUIPMENT.
 - GPS EQUIPMENT (WERN REQUIRED) IS NOT TO BE TESTED OR ATTACHED TO ANY CABLE OUTHING. TESTING, DONG TO WILL LANGER THE GPS UNIT, BRIDGE THE CAPTING THE ANY OLISTINGS ABOUT THE TISTING PROCEDURES THEY ARE TO CALL AND GOTAM ASSISTANCE. FROM A GOALHEED DESORANTED TESTING REPRESENTATING. TO CALL AND GOTAM ASSISTANCE FROM A BOUNTED DESORANTED TESTING THE AND GOTAM ASSISTANCE. THOSE APPROVED THE ADMINISTRY HAS BEEN NOTHED AND GIVES APPROVED.

SITE WORK NOTES:

- DO NOT EXCAVATE OR DISTURB BEYOND THE PROPERTY LINES OR LEASE LINES, UNLESS OTHER MISE NOTED.
- SZZ. LOCATION, AND TYPE OF ANY UNDERGROUND UTLITIES OR IMPROVEMENTS SYALL BE ACCURATELY MOTED AND PLACED ON AS-BILLT DRAMMAGS BY GENERAL CONTRACTOR AND ISSUED TO ARCHITECT/ENGNERR AT COMPLETION OF PROJECT.
- ALL (E) UTLITES, FACILITES, CONDITIONS AND THERE DIMENSIONS SHOPING ON THE WARE THE TREATEST THE ACTIONS. THE CHARLESS AND OWNERS OF THE SUFFICIENCY OF THE OFFICIANCY OF THE WARNER OF THE RESPONSED FOR THE PRESENCE OF THE WARNER OF THE TH
- COMPRICTOR SALL VERTO ALL CONTINES DAY HORSONALIZ AND VERTICALLY PRIOR TO START OF CONSTRUCTION, ANY DESCRIPANCES OF DOUBTS AS TO THE HURTEMETANCE AND OF PLANS SALL BE MAGINET. AND VERTICALLY CHARLIES OF MAGINET CAPERAGES OF MOBILITY OF THE RESOURCE OF THE MAGINET CAPERAGES OF MOBILITY OF CONTINUE THE MAGINET CAPERAGE. TO SECURE SOL INSTRUCTION MAD SOUR PACTOR MILL HAVE WORSED ATT THEN ONE BISS. AND EXPENSE. COMPACTOR SALL CALL, LOCAL UNITY LOCATION OF THE MAGINET OF
 - ALI NEW AND (E) UTILIY STRUCTURES ON STE. AND IN AREAS TO BE DISTURBED BY CONFINENCIND SALLE BE ADJUSTED TO FINISH ELEVATIONS PRORE TO FINISH SECTION OF MORK. ANY COST RELATED TO ADJUSTING (E) STRUCTURES SHALL BE BORNE SOLELY BY THE CONTRACTOR.
 - GRADING OF THE SITE WORK AREA IS TO BE SWOOTH AND CONTINUOUS IN SLOPE AND IS TO FEATHER INTO (E) GRADES AT THE GRADING LIMITS.
- ALI TEMPORARY EXCANATIONS FOR THE INSTALLATION OF FOUNDATIONS.
 UTILITIES, ETC., SAALL BE PROPERLY LAUD BACK OR BRACED IN ACCORDANCE
 WITH CORRECT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
 - STRUCTURAL FILLS SUPPORTING PAVENENTS SHALL BE COMPACTED TO 95% OF MAXIMUM STANDARD PROCTOR DRY DENSITY, UNLESS OTHERWISE NOTED.
- NEW GRADES NOT IN BUILDING AND DRIVEWAY IMPROVEMENT AREA TO BE STANDAND PROCTOR DENSITY. AL FIL SHALL BE PLACED IN UNITORAL LIFTS. THE LIFTS' THICKNESS SHOULD MOT EXCEED THAT WHICH CAN BE PROPERAY COMPACTED THROUGHOUT ITS RIME DEPTH WITH THE EQUIPARTAL AVALABLE.
- ANY FILLS PLACED ON (E) SLOPES THAT ARE STEEPER THAN 10 HORIZONTAL TO

- I YERTICAL SHALL BE PROPERLY BENCHED INTO THE (E) SLOPE AS DIRECTED BY A GEOTECHNICAL ENGINEER.
 - CONTRACTOR SHALL GLEAR ENTRE SITE AFTER CONSTRUCTION SUCH THAT NO TOERNS, PAPER, TRACK, WEEDS, BRUNS, EXCESS FILL, OR ANY OTHER DEPOSITS WHILL REMAIN, ALL MATERIALS COLLECTED DURING CLEANING OPERATIONS SHALL BE DISPOSED OF OFF-SITE BY THE GENERAL CONTRACTOR. 13
 - ALL STE WORK SAAL BE CAREFULY COORDINATED BY GENERAL CONTRACTOR WITH LOCAL UNITY COMPANY. TELEMONE COMPANY, ALE NO ANY OTHER UTILITY COMPANIES MANING JURISDICTION, OVER THIS LOCATION. ALL TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH THE IMPROVEMENTS SHALL BE PROTECTED BY THE GENERAL CONTRACTOR.

2965 RED HILL AVE. SUITE 200 COSTA MESA, CA 92626

L5 ENGINEERING INC.

ENVIRONMENTAL NOTES:

- ALI WORR PERFORMED SHALL BE DONE IN ACCORDANCE WITH ISSUED PERMITS. THE CONTRACTORS SHALL BE RESPONDEDE FOR PAYMENT OF FINES AND PROPER CLEM UP FOR AREAS IN YOLATION.
- CONTRACTOR SHALL BE RESPONSBLE FOR CONSTRUCTION AND MAINTHANGE OF REPOSTOR AND SEDIMENT CONSTRUCTION FOR PROTECTION, OF ADJUGATIVE TROPERTIES, BOADMAYS AND WATERWAYS, ALL ENGINEN AND SEDIMENTATION CONTRACTORS, SHALL BE MAINTHAND IN PLACE THROUGH FINAL LUMSDICTIONAL MSPECIDIN & RELEKS OF SITE.
 - CONTRACTOR SHALL MSTALL/CONSTRUCT ALL NECESSARY SEDMENT/SLT
 CONTRACTOR SHALL MSTALL/CONSTRUCT ALL NECESSARY SEDURED BY THE LOLON,
 MSTALL SERVICE BY THE LALLINE OF SITE DISTURBANCE PRIOR TO CONSTRUCTION,
 NO SEDMENT SALL BE ALLONED TO SET THE REPORTER. THE CONTRACTOR IS
 SESPONSBLE FOR TANNIG ALECUATE MESSARES FOR CONTRACTING FROSON,
 ADDITIONAL SEDMENT CONTROL FENCINE MAY BE RECURED IN ANY AREAS
 SHALECT TO RECOON.

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FOR REYEST

A 06/07/18

944 CALLE AMANECER, STEE SAN CLEMENTE, CA 92673 WWW.LEAFCC-LLC,COM PHONE: (949) 388-0192

- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING POSTITIC DRAININGE ON THE STEE ALT THESE WHY THE STEE PORTSON CONTOURT, MENDAINES WANTHANDED ON THE DOMINISTREAMY SIDE OF STIE DANAINGE, ANY DAMAINGE TO ALJACENT PROPERTY AS A RESULT OF EROSION WILL BE CORRECTED AT THE CONTRACTORS DEPORTS.
 - COMTRACTOR SHALL BE RESPONSBLE FOR DALY INSPECTIONS AND ANY REPARS OF ALL SEDMENT CONTROL MEASURES INCLUDING SEDIMENT REMOVAL AS PROCESSARY.
- CLEARING OF VEGETATION, AND TREE REMOVAL SHALL BE ONLY AS PERMITTED AND BE HELD TO A MINIMULA, ONLY TREES NECESSARY FOR CONSTRUCTION OF THE FACULITIES SHALL BE REMOVED.
- SEEDING AND MULCHING AND/OR SOODING OF THE STEF WILL BE ACCOMPLISHED AS SOON AS POSSBLE AFTER COMPLETION OF THE PROJECT FACILITIES AFFECTING LAND DISTURBANCE. MEMBERGE AS REQUIRED RALL EROSON AND SEDMENTATION CONTROL. MEASURES AS REQUIRED BY LOCAL, CONTOY AND STATE COORS. AND ORDINANCES TO PROTECT ENBANAGENTS REQUIRED TO SOST, AND STOT IN STREAMEN AND DRAMAGE PARTIES. THEN THE CONSTRUCTION AREA. THIS MAY INCLUDE. BUT IS NOT LIMITED TO SUCH CONSTRUCTION AREA. THIS MAY INCLUDE. BUT IS NOT LIMITED TO SUCH DARKS, AS SULT FENCES, STRAM, BALE SEDMENT BARRERS, AND CHECK DARKS.
- RP RAP OF SZES INDICATED SHALL CONSST OF CLEAN, HARD, SOUND, DURABLE, LINFORM IN QUALITY STORME FREE OF ANY DETRIBATION, QUANITY OF SZOT, FRABLE, FININ, ELONGATED OF LAMINATED PECES, DISMIERANTED AT LAMINATED PECES, DISMIERANTED AT MATERIAL, ORGANIC MATTER, OIL, ALKALI, OR OTHER DELETRIBUOUS SUBSTANCES. CC TO PLACE FILTER MATERIAL AT ALL CATCH BASINS ADJACENT TO CONSTRUCTION SITE TO PREVENT SOLID WASTE CONTAMINATION FROM ENTERING SEMES SYSTEM. ō Ę,
- HILLS A WILLS A LOCKED WORK THE DESCRIPTION AND THE DESCRIPTION OF A LOCKED WORK THE DESCRIPTION OF A THE TWO DOCUMENTS. TO A THE TWO DOCUMENTS VECTOR PROJECT #: U2314-056-181 EOFCALIE C 70567

9CAB013427 OAKLAND, CA 94601 (E) 28'-6" STEEL LIGHT POLE SF90XS0Y5C

GENERAL NOTES

GN-2

PG&E UTILITY BULLETIN TD-027911B-004, GENERAL INFORMATION NOTES:

A POGE ABSOLVING SERVICE AGREENENT IS REQUIRED TO BE SIGHED WHEN COSTINGER ON MON-BOOKED (WHEN STREET) TO MON-BOOKED (WHEN STREET) TO MON-BOOKED STREET ON MON-BOOKED STREET ON MON-BOOKED STREET ON MON-BOOKED STREET ON THE POGE SERVICE FOR MINIOR OFFICE TOR MY EXPLANMENT OF MA MESONING TO MA ABSOLVING STREET ON MAY EXPLANMENT OF MA MESONING STREET ON THE PRESENCE FOR MAN EXPLANMENT OF MA MESONING STREET OF MASSONING CAN CONTACT THE TAKEN STRING STREET OF MASSONING CAN CONTACT THE TAKEN STREET THE TAKEN STREET OF TAKEN STREET THE TAKEN STREET THE TAKEN STREET THE TAKEN STREET TH

THE STREET LOST POLE MAST HANG A RADOME SHROLD NESTALLED AT THE STREET LOST POLE MAST HANG A RADOME SHROLD NESTALLED AT THE STREET LOST POLE MAST HANG A RADOME THAT THE STREET WAS THE RESTALL THAT THE SHROLD OR A PART OF THE SHROLD ON A PART OF THE SHROLD STREET SHROLD STREET PART OF THE SHROLD ON A THE SHROLD STREET PART OF THE SHROLD STRE

3. A 2-WER (-HOT -HUTDRA), 120 VOI SHOUT-PHASE SERVICE MUST BE MONTALLED FROM THE PEASE SPECIFED SPLICE BOX (D. FALE) A CHARLED A CHARLE

NOTE: N VERY LIMITED LOCATIONS IF AN EXISTING PORE 2-WRIE SINGLE-PHASE 240 OCH SECREMONET STREATE IS ALVALMEL FOR SILART POLE WETER WAY BE CONFECTED. THESE LOCATIONS ARE NOT COMMON.

4. CAUTION: DO NOT INSTALL A 3-MRE 1-PHASE 120/240 VOLT SERVICE AS THIS IS THE WORRECT WINNG AND VOLTAGE FOR THE SAMETPOLE WETERING APPLICATION.

5. THE AVERTHAL CADALINACINOS LOURIERIT. AND STREET LIGHT MUST BE POWERD FROW THE SAME CASTOGER OWNED SERVICE. A SCOULD OR SEPARATE CUSTOMER OWNED SERVICE IS NOT ALLOWED.

6. DISCOMMECT SHITCH REQUIREMENTS. A DISCOMMECT SHITCH MUST BE INSTITUTED MON URE TALL OF THE POLICHMEN REQUIREMENTS BELICH, EST THE SHITCH MUST BE REAULY ACCESSBLE AT ALL THRES. THE SHITCH WILL BE USED AS PART OF THE NORMAL OR EMERGENCY SHUTTOWN PROTOCOCAS REQUIRED IN CALIFORNIA PUBLIC UTILITY COMMISSION (CPUC) CENERAL ORDER 95, RULE 94.

62 THE SIMTCH SHALL DE-ENERGZE ALL POMER SUPPLIES, INCLUDING BACK-UP
POMER, AND ANY COMMUNICATION EQUIPMENT EMITTING FALLON PRECUENCES
(PN) SIGH AGE MUST BE A TIT ACHED TO THE SIMTCH IDENTIFYING WHAT
EQUIPMENT IT WILL DE-ENERGAZE
A THE SIMTCH MUST HAVE THE PROPER PROPERTY.

6.3 THE SHARTON METRY NOT BE-ENERGEZ (TURN OFF) THE STREET LUGHT(S) OR THE POLES SHART WETRE SET HE SHOLE LINE BOUNDER.

6.4 THE SHARTON WEST BE ATTACHED EXTERNALLY ON THE POLE LESS THAN 10 FEET AGONE CALDE. AS WEASHED TO THE TOP OF THE SHARTON PROCESSURE.

6.5 IF THE SPECIFIC RECURRENENTS ARE WETT THE SHATCH MAY BE LOCATED NODE. A PERMANENT AND DESCRIPTION THAT IS MASTILLED ARROWN THE BASE OF THE PROPERSY EDITION ONLY FOR A POLE.

ROCKING EDITION ONLY FOR A POLE.

ROCKING EDITION ONLY FOR A POLE.

ROCKING SHARTON THE SECOND THE SHATON WITH LOCKING DESCRIPTION OF THE SECOND SHARTON SHARTON THE SECOND SHARTON SHARTON THE SECOND SHARTON SHARTON THE SECOND SHARTON SHARTON

gg the switch Way not be installed inside the pole (except inside the pedestal), in a subsurface enclosure, or in a revoit lie location away frow the pole.

6.7 PROVISIONS FOR LOCKING THE DISCONNECT SHITCH IN THE OFF POSTICION ARE REQUIRED.
7. POEDS MUST HAVE SIGN AGE THAT HEET FCC GUIDELINES FOR THE ATTEMAS AND COMMUNICATION EQUIPMENT EMITTING RF TRANSMISSION, SITES SHALL BE SIGNED ACCORDING TO FCC GUIDELINES.

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L5 ENGINEERING INC.

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MOBILITIE ID:

DRAWN BY:

M44 CALLE AMANECER, STEE SAN CLEMENTE, CA 92673 WWW.LEAFCC-LLC.COM PHONE: (949) 388-0192

06/26/2018 VECT#: U2314-056-181 VECTOR	ROFESSIONAL B.S. PROCK	MEER JOHN DOWN	CIVIL CIVIL	HULLS AND PROPERTY OF THE PARTY
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SF90XS0Y5C 9CAB013427 OAKLAND, CA 94601 (E) 28-6" STEEL LIGHT POLE

SHEET TITLE
GENERAL NOTES

SHEET NUMBER



Mobilitie, LLC 2955 Red Hill Ave. Ste. 200 Costa Mesa, CA 92626 USA Tel: 714.415.4500 www.mobilitie.com

Alternative Site Analysis

Proposed Small Cell Wireless Facility

Applicant: Mobilitie, LLC

Site ID: 9CAB013427/SF90XS0Y5C

Nearest Site Address: Public Right of Way near 569 Howard St., Oakland, CA 94601

Latitude/Longitude: 37.7679, -122.222322

Mobilitie considered alternative sites on other street lights and utility poles in this area, but found them to not to be as desirable when taking into consideration coverage goals, constructability, geographic topography of the surrounding area, and potential visual impact in the surrounding area. The proposed location is desirable because of the limited obstructions in the area, allowing our antenna to effectively propagate a signal. Furthermore, the proposed location is the optimal solution for providing maximum coverage to the surrounding area identified. Additionally, by locating on an existing street light with equipment concealed, visual impact in the surrounding area is minimized.

Mobilitie is a privately held, CLEC (Competitive Local Exchange Carrier) regulated by the California Public Utilities Commission (CPUC) to provide telephone related services. By proposing this location on an existing street light in the public right of way, Mobilitie is proposing an appropriate co-location to existing infrastructure according to our rights under the CPUC.

The alternative locations that Mobilitie considered include, but are not limited to, the sites listed below:

Alternate 1 (37.768180, -122.222901) / At the intersection of Alameda and Howard Street: This wooden utility pole is located just west of our proposal. The existence of a power riser running up this pole precludes it from being used there because there is not enough usable space on the pole for our facility.

Alternate 2 (37.767388, -122.221555) / Near 572 High Street: This wooden utility pole is located approximately 280 ft. southwest of our proposal. The existence of a power riser running up this pole precludes it from being used there because there is not enough usable space on the pole for our facility.

Radio Frequency- Electromagnetic Energy-EME Measurements & Compliance Report

Site ID:

9CAB013427

Site Name:

9CAB013427

Market/Region:

California

Address:

HOWARD ST., S. OF ALAMEDA AVE.

OAKLAND, CA 94601

Latitude:

37.7679

Longitude:

-122.222322

Site Type:

Light Pole

Compliance Status:

Proposed equipment at the site is compliant with FCC guidelines for General Population environments

Prepared for:

Mobilitie, LLC 2220 University Drive, Newport Beach, CA 92660

> By ATG LLC

Date:09/06/2017



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1 Executive Summary

Purpose of Report

ATG LLC's RF Engineering has conducted radio frequency electromagnetic energy (RF-EME) modeling for Mobilitie LLC's site 9CAB013427 located at HOWARD ST., S. OF ALAMEDA AVE. OAKLAND, CA to determine RF-EME exposure levels from the carrier's proposed wireless communications equipment.

The Federal Communications Commission (FCC) has developed Maximum Permissible Exposure (MPE) limits for general public and occupational exposures to RF-EME. This report summarizes the results of RF-EME modeling in relation to relevant FCC compliance standards for limiting human exposure to RF-EME. The details of FCC defined exposure limits are provided in Appendix A of this report.

Analysis results included in this report are based on drawings dated June 14th, 2017.

Statement of Compliance

Predictive modeling conducted using the original equipment manufacturers (OEMs) specifications for radio and antenna performance along with the supplied construction drawings dated June 14th, 2017, indicate there will be no exposure due to the carrier's proposed equipment on accessible ground-level walking surface at this site that exceeds the FCC's general public exposure limits.

Proposed equipment at the site is compliant with FCC guidelines for general population environments.

2 Maximum Permissible Exposure (MPE) Modeling Results for Proposed Site

The predictive modeling was conducted using the RoofView 5.0 suite of analysis tools. The modeling was conducted with the antennas operating at 100% capacity, all antenna channels transmitting simultaneously and the radio transmitters operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are more conservative (higher) than the actual signal levels would be during normal operations. The modeling calculations were made for an area 40'x 40' area with the equipment at the center.

Table 1: Maximum Permissible Exposure-Summary

Location	% of FCC General Public/Uncontrolled Exposure Limit	% of FCC Occupational/Controlled Exposure Limit	Power Density (mW/cm²)	Compliance Status
6ft above ground level	2.9	0.58	0.029	Compliant

3 Antenna Inventory

The Antenna Inventory shows all transmitting antennas on the site (see Table 2). This inventory was used by ATG to perform the software modeling of RF emissions. The inventory conforms with the submitted construction drawings which identifies the proposed mounting location of each antenna at the site. The exposure level is calculated for a person of height 6ft standing right below the devices at ground level.

Carrier/Operator Frequency (MHz) **Transmitter** count BeamWidth (deg) ! (6 ff. above Ground) Antenna Type Aperture (ft.) **Antenna ID Technology Bain dBd** Horizontal \mathbf{g} 7 Alpha 2496 1 Mobilitie Omni LTE 6.35 2 172.58 AW3477-S 2.56 360 20.3 Wireless LTE 2 Mobilitie Relay 2496 LTE 1.93 9.85 **Airspan** iR460 1.1 1 35 10.5 BH

Table 2: Antenna Inventory

The table below details the operating power and Effective Radiated Power (ERP) for each carrier and frequency used in the modeling.

Frequency (MHz)	Power per Transmitter (Watts)	# of Transmitters	ERP (watts)				
2496 (Omni)	20	2	172.58				
2496 (UE Relay)	0.2	1	1.93				

4 Modeling Summary and Assumptions

4.1 General Model Assumptions

The modeling was conducted using the antenna and radio maximum power values, while operating at full power with 100% duty cycle.

The site has been modeled with these assumptions to calculate the maximum RF energy density. ATG believes this to be a worst case analysis, based on data supplied by the OEMs and client. If actual power density measurements were made, ATG believes the real time measurements would indicate levels below those shown in the report.

5 Preparer Certification

I, Preparer, state that:

- I am an employee of ATG LLC that provides RF-EME safety and compliance services to the wireless communications industry.
- I have successfully completed 100s of RF-EME exposure studies and reports for various carriers.
- I am aware of the potential hazards from RF-EME exposures that would be classified "occupational" or "general public" under the FCC regulations.
- I am familiar with the FCC rules and regulations as well as OSHA regulations both in general and as they apply to RF-EME exposure.
- I have reviewed all the data related to the site and incorporated it into this study and Compliance Report such that the information contained in this report is true and accurate to the best of my knowledge.

Ahmed Saadallah

Ahmed Saadallah (RF Engineer)

Appendix A

Federal Communications Commission (FCC) Requirements

This appendix summarizes the policies, guidelines and requirements that were adopted by the FCC on August 1, 1996, amending Part 1 of Title 47 of the Code of Federal Regulations, and further amended by action of the Commission on August 25, 1997 (see 47 CFR Sections 1.1307(b), 1.1310, 2.1091 and 2.1093, as amended). Commission actions granting construction permits, licenses to transmit or renewals thereof, equipment authorizations or modifications in existing facilities, require the preparation of an Environmental Assessment (EA), as described in 47 CFR Section 1.1311, if the particular facility, operation or transmitter would cause human exposure to levels of radiofrequency (RF) electromagnetic fields in excess of these limits.

The potential hazard associated with the RF electromagnetic fields is discussed in OET Bulletin No. 65. This document can be obtained on the FCC website. (https://transition.fcc.gov/Bureaus/Engineering Technology/Documents/bulletins/oet65/oet65.pdf)

As per FCC guidelines there are two separate tiers of exposure limits that are based upon occupational/controlled exposure limits (for workers) and general public/uncontrolled exposure limits for members of the general public.

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. Limits for occupational/controlled exposure also apply in situations when an individual is transient through а location occupational/controlled limits apply provided he or she is made 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

General public/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 and not be made fully aware of the potential for exposure or cannot exercise control over their exposure.

The FCC's MPE limits for field strength and power density are given in Table 1 (and in 47 CFR § 1.1310) Figure 1 is a graphical representation of the limits for plane-wave (farfield) equivalent power density versus frequency. The FCC's limits are generally applicable to all facilities, operations and transmitters regulated by the Commission, and compliance is expected with the appropriate guidelines. The power density limits vary by frequency to take into account the different types of equipment that may be in operation at a particular facility and are "time-averaged" limits to reflect different durations resulting from controlled and uncontrolled exposures.

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm²)	Averaging Time E ² , H ² or S (minutes)			
0.3-3.0	614	1.63	(100)*	6			
3.0-30	1842/f	4.89/f	(900/f²)*	6			
30-300	61.4	0.163	1.0	6			
300-1500			f/300	6			
1500-100,000			5	6			

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm²)	Averaging Time E ² , H ² or S (minutes)		
0.3-1.34	614	1.63	(100)*	30		
1.34-30	824/f	2.19/f	$(180/f^2)^*$	30		
30-300	27.5	0.073	0.2	30		
300-1500			f/1500	30		
1500-100,000			1.0	30		

f = frequency in MHz

f = frequency in MHz *Plane-wave equivalent power density **Table 1**

^{*}Plane-wave equivalent power density

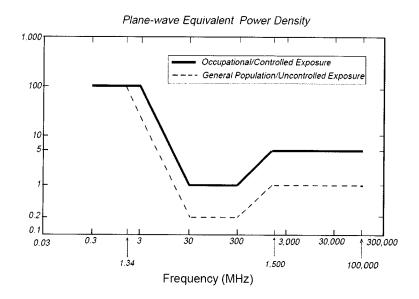


Figure 1. FCC Limits for Maximum Permissible Exposure (MPE)

FCC Compliance Requirement

In general, as specified in 47 C.F.R. 1.1307(b), as amended, when the FCC's guidelines are exceeded in an accessible area due to the emissions from multiple fixed transmitters the following policy applies. Actions necessary to bring the area into compliance with the guidelines are the shared responsibility of all licensees whose transmitter's contribution to the RF environment at the non-complying area exceeds 5% of the exposure limit (that applies to their particular transmitter) in terms of power density or the square of the electric or magnetic field strength.

For non-compliant sites, Occupational Safety and Health Administration (OSHA) set recommendations to make the sites compliant. The document can be found in the link: https://www.osha.gov/dte/library/radiation/nir.stds 20021011/nir_stds 20021011.ppt

Appendix B

Glossary of Terms

- 1. *Electromagnetic Field (energy density)* the electromagnetic energy contained in an infinitesimal volume divided by that volume.
- 2. Exposure Exposure occurs whenever and wherever a person is subjected to electric, magnetic or electromagnetic fields other than those originating from physiological processes in the body and other natural phenomena.
- 3. General Population / Uncontrolled Exposure applies to human exposure to RF fields when the general public is 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 always fall under this category when exposure is not employment-related.
- 4. Maximum Permissible Exposure (MPE) the rms and peak electric and magnetic field strength, their squares, or the plane-wave equivalent power densities associated with these fields to which a person may be exposed without harmful effect and with an acceptable safety factor.
- 5. Occupational / Controlled Exposure applies to human exposure to RF fields when 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/controlled limits.
- 6. Power Density (S) Power per unit area normal to the direction of propagation, usually expressed in units of watts per square meter (W/m²) or, for convenience, units such as milliwatts per square centimeter (mW/cm²) or microwatts per square centimeter (µW/cm²).

Appendix C

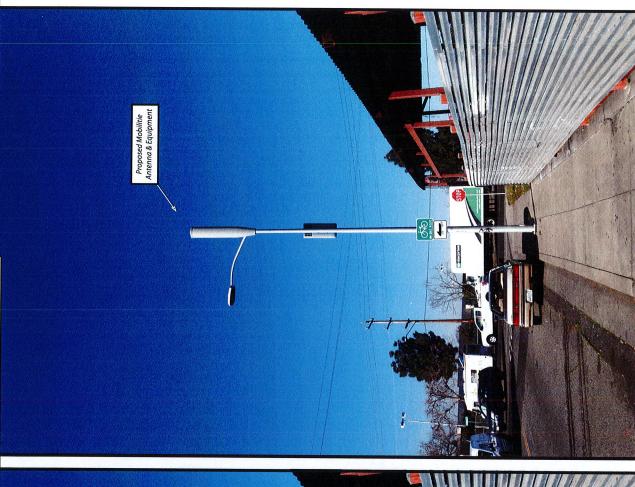
RoofView Export File

The below file shows the Antenna information that has been used to calculate the MPE levels using RoofView 5. RoofView is a powerful, Excel based software analysis tool for evaluating radiofrequency (RF) field levels at telecommunications sites that are produced by antennas of the type commonly used in the cellular, paging, SMR, PCS and conventional two-way radio communication services

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StartMa	Definition																				
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StartSet	ingsData																				
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StartAnt	ennaData	It is advis	able to pro	vide an ID	(ant 1) for	all antenna	as														
		(MHz)	Trans	Trans	Coax	Coax	Other	Input	Calc			(ft)	(ft)	(ft)		(ft)	dBd	BWdth	Uptime	ON	
ID	Name	Freq	Power	Count	Len	Type	Loss	Power	Power	Mfg	Model	х	Υ	Z	Туре	Aper	Gain	Pt Dir	Profile	flag	
	1 Mobilitie	2496						40	40	Alpha Wir	AW3477-5	20	20	20.3	VC	2.5	6.35	360		ON•	
	2 Mobilitie	2496						0.2	0.2	Airspan	iR460	20	20	10.5	VC	1.1	9.85	35		ON•	
StartSyn	bolData																				
Sym	Map Mark	Roof X	Roof Y	Map Labe	Description	n (notes f	or this tabl	e only)													

Existing









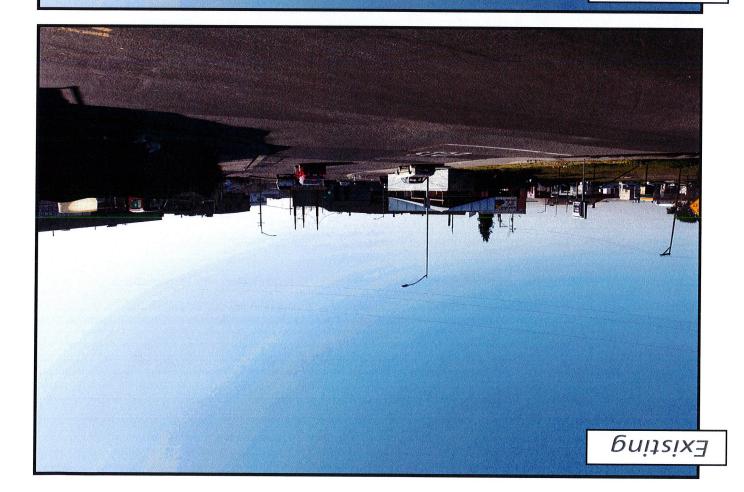
9CAB013427/SF90XS0YSC
Howard Street & Alameda Avenue , Oakland, CA
Photosims Produced on 6-22-2017





Desodorq

Antenna & Equipment



Rose, Aubrey

From:

James Singleton <jsingleton@mobilitie.com> Wednesday, July 11, 2018 6:07 PM

Sent:

To:

Rose, Aubrey

Subject:

Re: PLN18093 - 569 High Street

Installed signage

