*Please type or print legibly with a blue pen.*

# PROJECT APPLICATION

City of Monterey
Planning, Engineering, and
Environmental Compliance Division
City Hall – Planning Office
Monterey, CA 93940
(831) 646-3885
Fax: (831) 646-3408
http://www.monterey.org/planning

**Project Address:** 2 Portola Plaza

**Project Name:** CCL03387 - DT Monterey **Assessors Parcel Number** 001-567-019

**Applicant's Name:** James Phillips
**(name of person to receive all correspondence)**

**Business Name (if applicable):** AT&T Mobility/MasTec Network Solutions

**Applicant's Mailing Address:** 3443 Airport Road, Sacramento, CA 95834

**Phone:** (530) 333-5786 **E-Mail Address:** James.Phillips@MasTec.com

**Property Owner's Name:** Custom House, LP

**Property Owner's Business Name(if applicable):** Portola Hotel & Spa

**Property Owner's Mailing Address:** Two Portola Plaza Monterey, CA 93940

**Phone:** (831) 649-7890 **E-Mail Address:** jchicourat@portolahotel.com

**Project Description: (Use additional sheets as necessary.**

*****Note: Applicant must submit a letter of justification for Parking Adjustment, Variance, or Extension requests. *****

2/25/19
**Date**

**Signature of Applicant**

2/25/19
**Date**

**Signature of Property Owner**

**~~~~~~~~~~~~~~~~~~~~~~~~~~ BELOW TO BE COMPLETED BY STAFF ONLY ~~~~~~~~~~~~~~~~~~~~~~~~~~**

**PERMITS REQUIRED**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | ARC Commercial | | HPC | | Zoning | **Permit Number:** | |
| | ARC Residential | | Lot Line | | Stormwater Review | | |
| | ARC Signs | | Other | | | **Fee Due:** | |
| | Demo | | Subdivision | | | | |
| | EIR-PW | | Use | **Staff Initials:** | **Date Received:** | | |
| | General Plan | | Variance | | | | |
| | Home Occupation | | Wharf | | | | |

**SUBMITTED DOCUMENT**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ☐ **Application** | ☐ **Site Plan** | ☐ **Floor Plan** | ☐ **Elevation** | ☐ **Roof Plan** | ☐ **Sections** | ☐ **Plan Reductions 8.5x11** | ☐ **Other** |
| ☐ **Details** | ☐ **Colors** | ☐ **Exterior Lights** | ☐ **Photo** | ☐ **Letter** | ☐ Stormwater | ☐ **Plan Reductions 11x17** | |
| ☐ **ARC Neighborhood Compatibility Worksheet** | | | ☐ **Survey Map** | | | ☐ **Number of Full Sets** | |

**CEQA DETERMINATION: EXEMPT (Y/N):** _____ **ART. / SEC.:** _____

☐ Initial Study ☐ Negative Declaration ☐ Mitigated Negative Declaration ☐ Environmental Impact Report

**COMMENTS:**

REVIEWING BOARD: ☐ PC ☐ ARC ☐ HPC ☐ ZA ☐ Admin. Review ☐ Other _____

**Wet or Digital Signatures Required: Page 1 Project Application and Page 2 Indemnification Agreement. Digital signatures must comply with Govt. Code section 16.5 requirements.**

*Please type or print legibly with a blue pen.*

| | |
|---|---|
| | **CITY OF MONTEREY**<br><br>**INDEMNIFICATION AGREEMENT** |

*On June 2, 2020 (date) an application was submitted to the Planning, Engineering, and Environmental Compliance Division, on behalf of New Cingular Wireless PCS, LLC, a Delaware limited liability company (the Property Owner/Lessee). The project, which is the subject of the application, is described as AT&T Site CCL03387 (the "Project") and is located at the following address 2 Portola Plaza, Monterey, CA.*

1. *The Property Owner/Lessee agrees, as part of the application, to defend, indemnify, and hold harmless the City and its agents, officers, attorneys and employees from any claim, action, or proceeding (collectively referred to as "proceeding") brought against the City or its agents, officers, attorneys or employees to attack, set aside, void, or annul:*
   a. *Any approval of the above described application by City; and/or*
   b. *An action taken to provide related environmental clearance under the California Environmental Quality Act (CEQA) by its advisory agencies, appeal boards, or City Council.*

*The indemnification is intended to include but not be limited to damages, fees and/or costs awarded against the City, if any, and cost of suit, attorney's fees, and other costs, liabilities and expenses incurred in connection with such proceeding whether incurred by the Property Owner/Lessee, the City, and/or the parties initiating or bringing such proceeding other than that arising from the City's or gross negligence, willful misconduct, or criminal action.*

2. *The Property Owner/Lessee agrees to indemnify the City for all of the City's costs, fees, and damages incurred in enforcing the indemnification provisions of this Agreement.*

3. *The Property Owner/Lessee agrees to defend, indemnify and hold harmless the City, its agents, officers, employees and attorneys for all costs incurred in additional investigation or study of, or for supplementing, redrafting, revising, or amending any document (such as an EIR, negative declaration, specific plan, or general plan amendment) if made necessary by said proceeding and if the applicant desires to pursue such approvals and/or clearances, after initiation of the proceeding, which are conditioned on the approval of these documents.*

4. *In the event that the Property Owner/Lessee is required to defend the City in connection with such proceeding the City shall retain the right to reasonably approve:*
   a. *The counsel to so defend the City;*
   b. *All significant decisions concerning the manner in which the defense is conducted; and*
   c. *Any and all settlements, which approval shall not be unreasonably withheld.*

*The City shall also have the right not to participate in the defense, except that the City agrees to cooperate with the Property Owner/Lessee in the defense of the proceeding. If the City chooses to have counsel of its own defend any proceeding where the applicant has already retained counsel to defend the City in such matters, the fees and expenses of the counsel selected by the City shall be paid by the City. Notwithstanding the immediately preceding sentence, if the City Attorney's Office participates in the defense, all City Attorney fees and costs shall be paid by the Property Owner/ Lessee.*

5. *The defense and indemnification of city set forth herein shall remain in full force and effect throughout all stages of litigation including appeals of any lower court judgments rendered in the proceeding.*

**Signature** _____ **Date** 6/2/2020

**Wet or Digital Signatures Required: Page 1 Project Application and Page 2 Indemnification Agreement. Digital signatures must comply with Govt. Code section 16.5 requirements.**

## STATE-MANDATED REGULATIONS

| PROJECT ADDRESS, or, LOCATION: | 2 Portola Plaza | SUBMITTAL DATE: | |
|---|---|---|---|

### STORM WATER - DEVELOPMENT DESIGN REGULATIONS
**(Purpose = Water Quality/Environmental Protection)**

| | | | | |
|---|---|---|---|---|
| SW.1 | Will the project **create, add, or replace impervious surface**[1] area? | Yes | No | Not Sure |
| SW.2 | Will this be **2,500 square feet or more** of new and/or replaced impervious surface area, collectively over the entire site? | Yes | No | Not Sure |

[1] **Impervious surface:** A hard, non-vegetated surface that prevents or significantly limits the entry of water into the soil mantle, as would occur under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, buildings, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, oiled or macadam, decomposed granite, or other surfaces which similarly impede the natural infiltration of storm water.

**For Office Use Only (City review):**

### WATER EFFICIENT LANDSCAPE[2] REGULATIONS
**(Purpose = Landscape Water Use Efficiency)**

| | | | | |
|---|---|---|---|---|
| L.1 | Is this a **new construction**[3] project (residential or nonresidential) with an aggregate landscape area **equal to 500 square feet or more?** | Yes | No | Not Sure |
| L.2 | Is this a **redevelopment project** (residential or nonresidential) that includes a **rehabilitated landscape**[4] with an aggregate landscape area **equal to 2,500 square feet or more?** | Yes | No | Not Sure |

[2] **Landscape area:** Any planting areas, turf areas, and water features in a landscape design plan subject to the Maximum Applied Allowance calculation. It does not include footprints of buildings and structures, sidewalks, driveways, parking lots, other previous or non-previous hardscapes, and other non-irrigated areas designated for non-development

[3] **New construction:** A new building with a landscape or other new landscape, such as a park, playground, or greenbelt without an associated building, that requires a permit, plan check, or design review.

[4] **Rehabilitated Landscape**: Any re-landscaping project that requires a permit, plan check, or design review, and the modified landscape area is equal to or greater than 2,500 square feet.

**For Office Use Only (City review):**

MasTec
Network Solutions

**LICENSE NO. 984138**
**3443 Airport Road, Sacramento, CA 95834**
**PHONE: (916) 783-6400**

June 2, 2020

City of Monterey – Planning Division
580 Pacific Street
Monterey, CA 93940
(831) 646-3885

RE: **AT&T Mobility – Minor Modification to Existing Wireless Facility**

| | |
|---|---|
| APPLICANT: | AT&T Mobility<br>2600 Camino Ramon<br>San Ramon, CA 94583 |
| PROPERTY OWNER: | Custom House, LP<br>Portola Hotel & Spa<br>2 Portola Plaza<br>Monterey, CA 93940 |
| AGENT FOR OWNER/APPLICANT: | MasTec Network Solutions<br>Contact: James Phillips<br>Phone: (530) 333-5786<br>Email: James.Phillips@MasTec.com |
| SITE ADDRESS: | 2 Portola Plaza, Monterey, CA 93940 |
| APN: | 001-567-019 |
| Previous Resolutions: | UP 10-179, UP 16-391 |

**REQUEST**

AT&T Mobility is respectfully requesting that the proposed modifications at an existing wireless facility be reviewed for Planning Entitlements and Architectural Approval.

**Purpose of Modification**

**The purpose for the AT&T Modification of an Existing Wireless Facility is to install FirstNet Technology and increase capacity in the Existing 4G Network.**

**2. Description of Changes**

AT&T WIRELESS PROPOSES TO MODIFY AN EXISTING WIRELESS INSTALLATION. THE SCOPE WILL CONSIST OF THE FOLLOWING:

- REMOVE (9) EXISTING AT&T PANEL ANTENNAS
- REMOVE (3) EXISTING RRUS–12+A2 @ EQUIPMENT & ANTENNA LEVEL
- REMOVE (3) EXISTING RRUS–12 @ EQUIPMENT LEVEL
- REMOVE (2) EXISTING DUS–41 UNITS @ EQUIPMENT LEVEL
- REMOVE DECOMMISSIONED "LINK BALANCE" TO FREE UP SURGE PROTECTION ONLY
- EXPAND EXISTING WALL MOUNT 'H' FRAME
- RELOCATE ANTENNA POSITIONS TO ENSURE 8' SEPARATION FROM EDGE TO EDGE OF ANTENNAS MATCH EXISTING MOUNTS (2) PER SECTOR (3) SECTORS
- INSTALL (9) NEW AT&T PANEL ANTENNAS
- INSTALL (3) NEW AT&T RRUS 4478 B5 @ EQUIPMENT & ANTENNA LEVEL
- INSTALL (3) NEW AT&T RRUS B14 4478 @ EQUIPMENT & ANTENNA LEVEL
- INSTALL (3) NEW AT&T RRUS 4415 B25 @ EQUIPMENT & ANTENNA LEVEL
- INSTALL (3) NEW AT&T RRUS 4426 B66 @ EQUIPMENT & ANTENNA LEVEL
- INSTALL (3) NEW AT&T RRUS E2 @ EQUIPMENT LEVEL
- INSTALL (3) NEW AT&T DIPLEXERS @ ANTENNA LEVEL
- INSTALL (1) NEW AT&T TMA @ ANTENNA LEVEL FOR WCS
- INSTALL (2) NEW AT&T DC6 SURGE SUPPRESSOR (1) ALPHA SECTOR (1) BETA SECTOR
- INSTALL (1) NEW AT&T DC–12 SURGE SUPPRESSOR @ EQUIPMENT LEVEL IN (E) DC ONLY RACK
- INSTALL (2) NEW AT&T 5216 UNITS @ EQUIPMENT LEVEL
- INSTALL (1) NEW AT&T XMU UNIT @ EQUIPMENT LEVEL
- INSTALL (1) NEW AT&T RRH POLE @ EQUIPMENT LEVEL
- INSTALL (8) NEW AT&T 1/2 COAX LINES FOR SECTOR 'C'
- INSTALL (4) NEW AT&T 6X8 DC TRUNKS TO FOLLOW EXISTING COAX RUNS
- INSTALL (2) NEW AT&T 18 PAIR FIBER TRUNKS TO FOLLOW EXISTING COAX RUNS
- INSTALL (3) NEW AT&T PORT PLATES (FIELD VERIFY PLACEMENT)
- INSTALL (1) NEW AT&T STRING OF 155 AH MARATHON BATTERIES
- INSTALL NEW FRP EXTENSION COORDINATED BETWEEN MASTEC CM & AT&T CM FRP PREVIOUSLY PROCURED AND IS CURRENTLY BEING STORED

**3. Specification Sheets - attached**

**4. Structural Calculations - attached**

**5. Height of Each Piece of Equipment – Page A-4, S-1, S-2, D-1, D-2**

**6. Description of Concealment Elements – AT&T proposes to remove the Existing FRP Screen Walls and Replace with New FRP Screen Walls to conceal the newly proposed antennas. These New FRP Screen Walls will be painted to match the existing facility and provide a more uniform roof line to the Portola Hotel and Spa. Please see the attached Photo Simulations for reference.**

**7. Description of Ground Disturbance – No Ground Disturbance is necessary for the proposed project.**

**11. Description of Cabinets – No New Cabinets are necessary for the proposed project.**

**8. Description of Lighting – No proposed Lighting is necessary for the proposed project.**

**<u>9. Description of Security Plan</u> – Access Point from Stairs to Rooftop Door:**

**Access Point from the Roof Door Pathway:**

**Access Point from Pathway to AT&T Equipment Room Door:**

**<u>10. Location of Mock Up</u> – The Mock Up has been deemed unnecessary by the Planning Department.**

**C. RF Emissions Report – attached**

**D. Construction CDS and Photo Simulations – attached**

**E. Noise Emissions – The Radio Equipment being removed is being replaced by Similar New Radio Equipment and will remain in the Existing AT&T Equipment Room. According to Ericsson, the manufacturer of the radio equipment, from section 3.4 of the RRU32 Product Manual, the Radio Equipment does not generate noise:**

| | |
|---|---|
| 3.4 | Acoustic Noise<br><br>The RRU does not generate acoustic noise. |

**The Existing Cabinets are not being altered and will not generate any additional noise.**

**F. Visual Impact – Photo Simulations Attached**

**G. Structural Calculations – attached**

**H. Previous Approvals - UP 10-179, UP 16-391**

**I. RF Statement – See attached ATT RF Statement**

**J. Construction Drawings and Photo Simulations - attached**

**K. Inventory of Existing Site – See attached list**

**L. N/A**

**M. Five Year Plan - AT&T 5 YEAR FACILITIES PLAN - Existing Sites (April, 2020)**
**Due to evolving technology, it is not reasonably foreseeable for AT&T to know with certainty which WTS sites will actually be built five years into the future. Building is predicated on capital funding, and this report includes those sites that are currently funded. Each identified site is a prediction based on currently available information but does not reflect a comprehensive plan. AT&T reserves its right to not build, or to build sites in lieu of, those identified and each site is independent and subject to change. "The information contained in this report is based on the records AT&T keeps in the normal course of business. AT&T is continually adjusting its wireless network to meet its customers' expectations, and, as a result, there may be instances where the data in this report differs from the facilities in the field."**

**N. Effects – The Existing Antennas are very dated and small. The New Antennas are current technology and provide a much higher efficiency that is required for the FirstNet Network.**

**O. Federal Law to Approve – Understood**

**<u>P. Evidence of Notice</u> – Notice will be provided to all person entitled upon review of the application.**

If you have any questions or concerns, please contact me either by phone at (530) 333-5786 or by email at James.Phillips@MasTec.com.

**Sincerely,**

*James Phillips*

**James Phillips**
***Project Manager – Northern California***

MasTec
Network Solutions

**3443 Airport Road, Sacramento, CA 95834**
**Mobile: (530) 333-5786**
**Email: James.Phillips@MasTec.com**
**www.mastecnetworksolutions.com**

November 22, 2016

James Phillips
AT&T Mobility
1755 Creekside Oaks Dr., Ste. 110
Sacramento, CA 95833

RE: 2 Portola Plaza – Use Permit Application 16-391

Dear Mr. Phillips,

On November 3, 2016, the Zoning Administrator adopted a Resolution approving the above-referenced project. The final Resolution is enclosed. Please remember that compliance with the Conditions of Approval is required as indicated on the enclosed Resolution.

Please give me a call at 831-646-3758 if you require any additional information or clarification on any issue pertaining to this project.

Sincerely,

Todd Bennett
Senior Associate Planner

TB:jl

c: Custom House Hotel Co. Ltd., 2 Portola Plaza, Monterey, CA 93940

e: James Phillips, AT&T Mobility
Janine Chicourrat, Portola Hotel & Spa

# RESOLUTION NO. Z16-038

## A RESOLUTION OF THE ZONING ADMINISTRATOR

### APPROVING APPLICATION 16-391 TO ALLOW MODIFICATIONS TO AN EXISTING PERSONAL WIRELESS SERVICE (PWS) FACILITY AT 2 PORTOLA PLAZA

WHEREAS, James Phillips, agent for AT&T, submitted an application requesting approval for modifications to an existing PWS facility (Municipal Code Section 38-112.4);

WHEREAS, the project includes the removal and replacement of six panel antennas, and the addition of three remote radio units (RRUs) and associated cabling;

WHEREAS, the project site is zoned VAF (Visitor Accommodation Facility), and is designated Commercial in the General Plan;

WHEREAS, City Municipal Code Section 38-112.4 establishes the review process for proposed modifications to an existing PWS facility;

WHEREAS, the modifications meet the definition of an "exempt facility" as determined by the Federal Communications Commission and the project is therefore subject to the review process detailed in Municipal Code Section 38-112.4(D)(1)(a);

WHEREAS, the modifications to the existing PWS facility are in accord with the objectives and purposes of Zoning Code Section 38-112.4 because the modifications are not classified as a new PWS facility;

WHEREAS, notice is hereby given that decisions of the Zoning Administrator are appealable to the Planning Commission within 10 days of the date of this action pursuant to Monterey City Code section 38-206; and,

WHEREAS, the City of Monterey Planning Office determined the project is exempt from the California Environmental Quality Act (CEQA) Guidelines (Article 19, Section 15304, Class 4) because the project proposes minor modifications to an existing PWS facility to support increased cellular communications demand.

Furthermore, the project does not qualify for any of the exceptions to the categorical exemptions found at CEQA Guidelines Section 15300.2.

Exception a - Location. Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located - a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply in all instances, except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies. The existing facility is located on a developed, urban site. There are no potential issues related to an environmental resource of hazardous or critical concern.

Exception b - Cumulative Impact. All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant. The application is to modify an existing facility with no expansion of the existing

supporting structure, and does not propose the installation of a new facility and therefore will not have a cumulative impact.

Exception c - Significant Effect. A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances. The modifications to the existing facility will not have a significant impact on the environment, and due to FCC regulations, significant impacts related to health concerns cannot be considered as part of the project evaluation.

Exception d - Scenic Highways. A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified Environmental Impact Report (EIR). The proposed project is not located adjacent to, or visible from a scenic highway.

Exception e - Hazardous Waste Sites. A categorical exemption shall not be used for a project located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code. The project will not include land recognized or listed as a hazardous waste site.

Exception f - Historical Resources. A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource. The proposed project location is not listed as a historical resource, and the project will not cause an adverse change in the significance of any adjacent or nearby historic resource.

NOW, THEREFORE, BE IT RESOLVED BY THE ZONING ADMINISTRATOR OF THE CITY OF MONTEREY that it hereby approves Use Permit Application 16-391 for modifications to an existing PWS facility located at 2 Portola Plaza, as previously described, subject to the following Conditions of Approval:

**CONDITIONS OF APPROVAL:**

1. That a copy of these Conditions of Approval be added to the first page of the plans to be submitted in conjunction with the necessary building permits.

2. That the project be constructed and maintained as illustrated on the submitted plan sets and accompanying text documents dated August 15, 2016.

3. Architectural Review is not required for this project.

4. That all construction shall be subject to the allowable Construction Hours as detailed in Municipal Code Section 38-112.2.

5. That the applicant shall meet all requirements of the City of Monterey's Permits and Inspection Services Department.

PASSED AND ADOPTED BY THE ZONING ADMINISTRATOR OF THE CITY OF MONTEREY this 3st day of November, 2016.

**APPROVED**

Todd Bennett

Zoning Administrator

# CCL03387 - LTE 4C
# PA#: MRSFR030323
# FA#: 10088165
# DT MONTEREY
# 2 PORTOLA PLAZA
# MONTEREY, CA 93940
# MODIFICATION OF TELECOMMUNICATION SITE

at&t
Your world. Delivered.

## CONSTRUCTION DRAWING

IF USING 11"X17" PLOT, DRAWINGS WILL BE HALF SCALE

## APPLICABLE CODES

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES.

- CALIFORNIA ADMINISTRATIVE CODE (INCL TITLE 24 & 25)
- 2013 CALIFORNIA BUILDING CODE
- CITY/COUNTY ORDINANCES
- BUILDING OFFICIALS & CODE ADMINISTRATORS (BOCA)
- 2013 MECHANICAL CALIFORNIA CODE
- ANSI/EIA-222-F LIFE SAFETY CODE NFPA-101
- 2013 CALIFORNIA PLUMBING CODE
- 2013 CALIFORNIA ELECTRICAL CODE
- 2013 LOCAL BUILDING CODE

## GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS REQUIREMENTS ARE NOT REQUIRED IN ACCORDANCE WITH THE 2010 CALIFORNIA BUILDING CODE. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED

## SITE INFORMATION

| | |
|---|---|
| PROPERTY OWNER: | CUSTOM HOUSE HOTEL COMPANY, LTD.<br>2 PORTOLA PLAZA<br>MONTEREY, CA 93940 |
| APPLICANT/ ADDRESS: | AT&T MOBILITY<br>2600 CAMINO RAMON<br>SAN RAMON, CA 94583 |
| LATITUDE: | 36° 36' 6.81084" N |
| LONGITUDE: | 121° 53' 40.08516 W |
| LAT/LONG TYPE: | NAD-83 |
| GROUND ELEVATION: | 25'-0" AMSL |
| ZONING JURISDICTION: | MONTEREY COUNTY |
| CURRENT ZONING: | P-C |
| ASSESSOR'S PARCEL NO.: | 001-567-019-000 |
| PROPOSED USE: | UNMANNED TELECOMMUNICATIONS FACILITY |
| TYPE OF CONSTRUCTION: | TYPE 11B |
| OCCUPANCY GROUP: | S-2 |

## PROJECT TEAM


**CLIENT REPRESENTATIVE:**
MASTEC NETWORK SOLUTIONS
1320 WILLOW PASS RD., STE. 500
CONCORD, CA 94520
CONTACT: CHRISTOPHER DOWELL
PH: (415) 233-5185
EMAIL:
christopher.dowell@mastec.com

**SITE ACQUISITION:**
SHORE 2 SHORE WIRELESS INC.
124 AMAYA DR.
FOLSOM CA. 95630
CONTACT: CHRIS HATCH
PH: (916) 467-7894
EMAIL: chris@s2swireless.com
CONTACT: CARL JONES
PH: (916) 738-2275
EMAIL: carl@s2swireless.com

**AT&T CONSTRUCTION MANAGER:**
AT&T MOBILITY
5555 E. OLIVE AVE
FRESNO, CA 93727
CONTACT: JOE REISSMANN
SR CONTRACT SOURCING SPECIALIST
OFFICE: (559) 454-5604
CELL: (559) 250-3723

**ENGINEER:**
M.SQUARED ENGINEERS
1387 CALLE AVANZADO
SAN CLEMENTE, CA 92673
CONTACT: MICHAEL MONTELLO
www.msquaredengineers.com

**PROJECT MANAGER:**
MASTEC NETWORK SOLUTIONS
NORTHERN CALIFORNIA
CONTACT: MIKE ADDAMO
PH: (916) 806-6022
EMAIL: mike.addamo@mastec.com

**CONSTRUCTION MANAGER:**
MASTEC NETWORK SOLUTIONS
1755 CREEKSIDE OAKS DR, STE 110
SACRAMENTO, CA 95833
CONTACT: LUIS HERNANDEZ
EMAIL:
luis.hernandez-solelo@mastec.com

**RF ENGINEER:**
AT&T MOBILITY
2600 CAMINO RAMON
SAN RAMON, CA 94583
CONTACT: SYED AHSAN MASHHOOD
EMAIL: sm0587@att.com


## LOCATION MAP

### VICINITY MAP

### LOCAL MAP

## DRIVING DIRECTIONS

DIRECTIONS FROM AT&T OFFICE:

GET ON I-680 S FROM CAMINO RAMON AND BOLLINGER CANYON RD
TURN RIGHT ONTO CAMINO RAMON
TURN RIGHT ONTO BOLLINGER CANYON RD
MERGE ONTO I-680 S VIA THE RAMP TO SAN JOSE
FOLLOW I-680 S AND US-101 S TO CA-156 W IN PRUNEDALE.
TAKE THE EXIT TOWARD MONTEREY/PENINSULA FROM US-101 S
MERGE ONTO I-680 S
TAKE THE EXIT ONTO US-101 S TOWARD LOS ANGELES
TAKE THE EXIT TOWARD MONTEREY/PENINSULA
MERGE ONTO CA-156 W
FOLLOW CA-1 S TO DEL MONTE AVE IN MONTEREY.
TAKE THE DEL MONTE AVE EXIT FROM CA-1 S
CONTINUE ONTO CA-1 S
EXIT ONTO DEL MONTE AVE TOWARD PACIFIC GROVE
FOLLOW DEL MONTE AVE TO PORTOLA PLAZA
TURN RIGHT ONTO PORTOLA PLAZA
TURN LEFT TO STAY ON PORTOLA PLAZA
DESTINATION WILL BE ON THE RIGHT

## DRM INFORMATION

| | | | |
|---|---|---|---|
| SITE NO: CCL03387 | LTE: 4C | | ZONE: |
| SITE TYPE: ROOFTOP | | | |
| ANTENNAS PER SECTOR: 3 ANTENNAS | #SECTORS: 3 SECTORS | | #TOTAL 9 ANTENNAS |
| RRU'S LOCATION: TOP | | | |
| ANTENNA HEIGHT: 2'-0" | RAD CENTER: 70'-0" AGL | | TIP HEIGHT 71'-0" AGL |

| | SECTOR "A" | SECTOR "B" | SECTOR "C" |
|---|---|---|---|
| GSM/UMTS | 70° | 260° | 180° |
| LTE | 70° | 260° | 180° |

| | | | |
|---|---|---|---|
| FRP: | NO | BOM: | YES |
| MS30 | LEASING FC= | MS80 | RF FC= |
| MS40 | ZONING FC= | CIVIL COM FC= | |

## PROJECT DESCRIPTION

AT&T WIRELESS PROPOSES TO MODIFY AN EXISTING WIRELESS INSTALLATION. THE SCOPE WILL CONSIST OF THE FOLLOWING:

- SWAP (6) EXISTING AT&T 2' PANEL ANTENNAS AND ANTENNA PIPE MOUNTS AND
- INSTALL (6) NEW AT&T 2'-0" PANEL ANTENNAS AND 1.5"ø ANTENNA PIPE MOUNTS (SM0587)
- INSTALL (2) NEW AT&T RRUS-32 WCS @ ANTENNA LEVEL
- INSTALL (1) NEW AT&T RRUS-32 WCS @ EQUIPMENT LEVEL
- INSTALL (1) NEW AT&T XMU INSIDE EXISTING 6801 CHASSIS WITH 2ND DUS41

*USE EXISTING LTE 3C DC2s FOR LTE 4C POWER AND FIBER
*CONNECT BOTH FIBERS FOR LTE 3C TO THE DUS41s/XMU
*INTEGRATE ALL LTE CARRIERS FOR ALPHA TO 1ST DUS41, BETA & GAMMA TO 2ND DUS41/XMU
*REMOVE AND REPLACE EXISTING FRP COVER AT ANTENNA LOCATION

## DRAWING INDEX


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## APPROVALS

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS & AUTHORIZE THE SUBCONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT & MAY IMPOSE CHANGES OR MODIFICATIONS.

AT&T RF ENGINEER: _____ DATE: _____
AT&T OPERATIONS: _____ DATE: _____
SITE ACQUISITION: _____ DATE: _____
CONSTRUCTION MANAGER: _____ DATE: _____
PROPERTY OWNER: _____ DATE: _____
ZONING: _____ DATE: _____
PROJECT MANAGER: _____ DATE: _____

## DO NOT SCALE DRAWINGS

SUBCONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS & FIELD CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

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| PROJECT NO: | - |
| DRAWN BY: | MJM |
| CHECKED BY: | MM |

| REV | DATE | DESCRIPTION |
|---|---|---|
| D | 08/19/2016 | 100% CD'S PER REDLINES |
| A | 07/11/2016 | 90% CD'S FOR REVIEW |


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


CCL03387
DT MONTEREY
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MONTEREY, CA 93940
ROOFTOP

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1


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City of Monterey
PEEC DIVISION

## GENERAL CONSTRUCTION NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:
   GENERAL CONTRACTOR – GENERAL CONTRACTOR
   SUBCONTRACTOR – CONTRACTOR (CONSTRUCTION)
   OWNER – AT&T
2. ALL SITE WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS AND AT&T PROJECT SPECIFICATIONS.
3. GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL VISIT THE SITE AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE NEW WORK AND SHALL MAKE PROVISIONS. GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS, DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
4. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. GENERAL CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAT&T, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF WORK.
5. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
6. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
7. PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY. UNLESS OTHERWISE NOTED, DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS THE MINIMUM REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS. SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH THE WORK. DETAILS ARE INTENDED TO SHOWN DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF WORK AND PREPARED BY THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH WORK.
8. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
9. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE SPACE FOR APPROVAL BY THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING.
10. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL OSHA REQUIREMENTS AND THE LOCAL JURISDICTION.
11. GENERAL CONTRACTOR SHALL COORDINATE WORK AND SCHEDULE WORK ACTIVITIES WITH OTHER DISCIPLINES.
12. ERECTION SHALL BE DONE IN A WORKMANLIKE MANNER BY COMPETENT EXPERIENCED WORKMAN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST ACCEPTED PRACTICE. ALL MEMBERS SHALL BE LAID PLUMB AND TRUE AS INDICATED ON THE DRAWINGS.
13. SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED MATERIALS APPROVED BY LOCAL JURISDICTION. SUBCONTRACTOR SHALL KEEP AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DEBRIS.
14. WORK PREVIOUSLY COMPLETED IS REPRESENTED BY LIGHT SHADED LINES AND NOTES. THE SCOPE OF WORK FOR THIS PROJECT IS REPRESENTED BY DARK SHADED LINES AND NOTES. SUBCONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR OF ANY EXISTING CONDITIONS THAT DEVIATE FROM THE DRAWINGS PRIOR TO THE BEGINNING CONSTRUCTION.
15. SUBCONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CONSTRUCTION MANAGER 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
16. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
17. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
18. GENERAL CONTRACTOR SHALL COORDINATE AND MAINTAIN ACCESS FOR ALL TRADES AND SUBCONTRACTORS TO THE SITE AND/OR BUILDING.
19. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY OF THE SITE FOR THE DURATION OF CONSTRUCTION, UNTIL JOB COMPLETION.
20. THE GENERAL CONTRACTOR SHALL MAINTAIN IN GOOD CONDITION ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES.
21. THE GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL PROVIDE PORTABLE FIRE EXTINGUISHERS WITH A RATING OF NOT LESS THAN 2-A OT 2-A:10-BC AND SHALL BE WITHIN 75 FEET OF TRAVEL DISTANCE TO ALL PORTIONS OF WHERE THE WORK IS BEING COMPLETED DURING CONSTRUCTION.
22. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY THE ARCHITECT/ENGINEER. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS SHALL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION, B) CONFINED SPACE, C) ELECTRICAL SAFETY, D) TRENCHING & EXCAVATION.
23. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED, CAPPED, PLUGGED OR OTHERWISE DISCONNECTED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, AS DIRECTED BY THE RESPONSIBLE ARCHITECT/ENGINEER, AND SUBJECT TO THE APPROVAL OF THE OWNER AND/OR LOCAL UTILITIES.
24. THE AREAS OF THE OWNER'S PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION.
25. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE FEDERAL AND LOCAL JURISDICTION FOR EROSION AND SEDIMENT CONTROL.
26. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUNDING. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
27. THE SUBGRADE SHALL BE BROUGHT TO A SMOOTH UNIFORM GRADE AND COMPACTED TO 95 PERCENT STANDARD PROCTOR DENSITY UNDER PAVEMENT AND STRUCTURES AND 80 PERCENT STANDARD PROCTOR DENSITY IN OPEN SPACE. ALL TRENCHES IN PUBLIC RIGHT OF WAY SHALL BE BACKFILLED WITH FLOWABLE FILL OR OTHER MATERIAL PRE-APPROVED BY THE LOCAL JURISDICTION.
28. ALL NECESSARY RUBBISH, STUMPS, DEBRIS, STICKS, STONES, AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LAWFUL MANNER.
29. ALL BROCHURES, OPERATING AND MAINTENANCE MANUALS, CATALOGS, SHOP DRAWINGS, AND OTHER DOCUMENTS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR AT COMPLETION OF CONSTRUCTION AND PRIOR TO PAYMENT.
30. SUBCONTRACTOR SHALL SUBMIT A COMPLETE SET OF AS-BUILT REDLINES TO THE GENERAL CONTRACTOR UPON COMPLETION OF PROJECT AND PRIOR TO FINAL PAYMENT.
31. SUBCONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION.
32. THE NEW FACILITY WILL BE UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SEWER SERVICE, AND IS NOT FOR HUMAN HABITAT (NO HANDICAP ACCESS REQUIRED).
33. OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION, APPROXIMATELY 2 TIMES PER MONTH, BY AT&T TECHNICIANS.
34. NO OUTDOOR STORAGE OR SOLID WASTE CONTAINERS ARE NEW.
35. ALL MATERIAL SHALL BE FURNISHED AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST REVISION AT&T MOBILITY GROUNDING STANDARD "TECHNICAL SPECIFICATION FOR CONSTRUCTION OF GSM/GPRS WIRELESS SITES" AND "TECHNICAL SPECIFICATION FOR FACILITY GROUNDING". IN CASE OF A CONFLICT BETWEEN THE CONSTRUCTION SPECIFICATION AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN.
36. SUBCONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR CONSTRUCTION. IF SUBCONTRACTOR CANNOT OBTAIN A PERMIT, THEY MUST NOTIFY THE GENERAL CONTRACTOR IMMEDIATELY.
37. SUBCONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
38. INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM SITE VISITS AND/OR DRAWINGS PROVIDED BY THE SITE OWNER. CONTRACTORS SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
39. NO WHITE STROBIC LIGHTS ARE PERMITTED. LIGHTING IF REQUIRED, WILL MEET FAA STANDARDS AND REQUIREMENTS.
40. ALL COAXIAL CABLE INSTALLATIONS TO FOLLOW MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
41. NO NOISE, SMOKE, DUST, OR VIBRATIONS WILL RESULT FROM THIS FACILITY. (DISREGARD THIS NOTE IF THIS SITE HAS A GENERATOR)
42. NO ADDITIONAL PARKING TO BE NEW. EXISTING ACCESS AND PARKING TO REMAIN, UNLESS NOTED OTHERWISE.
43. NO LANDSCAPING IS NEW AT THIS SITE, UNLESS NOTED OTHERWISE.

## ELECTRICAL NOTES:

1. ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ANY/ALL ELECTRICAL WORK INDICATED, ANY/ALL CONSTRUCTION SHALL BE IN ACCORDANCE W/DRAWINGS AND ANY/ALL APPLICABLE SPECIFICATIONS. IF ANY PROBLEMS ARE ENCOUNTERED BY COMPLYING WITH THESE REQUIREMENTS, CONTRACTOR SHALL NOTIFY "CONSTRUCTION MANAGER" AS SOON AS POSSIBLE, AFTER THE DISCOVERY OF THE PROBLEMS, AND SHALL NOT PROCEED WITH THAT PORTION OF WORK, UNTIL THE "CONSTRUCTION MANAGER" HAS DIRECTED THE CORRECTIVE ACTIONS TO BE TAKEN.
2. ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE HIMSELF WITH ANY/ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATION INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. ALL EXISTING CONDITIONS OF ELECTRICAL EQUIP., LIGHT FIXTURES, ETC., THAT ARE PART OF THE FINAL SYSTEM, SHALL BE VERIFIED BY THE CONTRACTOR, PRIOR TO THE SUBMITTING OF HIS BID. FAILURE TO COMPLY WITH THIS PARAGRAPH WILL IN NO WAY RELIEVE CONTRACTOR OF PERFORMING ALL WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM.
3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC AND ALL CODES AND LOCAL ORDINANCES OF THE LOCAL POWER & TELEPHONE COMPANIES HAVING JURISDICTION AND SHALL INCLUDE BUT NOT BE LIMITED TO:
   C – NATIONAL FIRE CODES
   A. UL – UNDERWRITERS LABORATORIES
   B. NEC – NATIONAL ELECTRICAL CODE
   C. NEMA – NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
   D. OSHA – OCCUPATIONAL SAFETY AND HEALTH ACT
   E. SBC – STANDARD BUILDING CODE
4. DO NOT SCALE ELECTRICAL DRAWINGS. REFER TO SITE PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT, AND CONFIRM WITH "CONSTRUCTION MANAGER" ANY SIZES AND LOCATIONS WHEN NEEDED.
5. EXISTING SERVICES: CONTRACTOR SHALL NOT INTERRUPT EXISTING SERVICES WITHOUT WRITTEN PERMISSION OF THE OWNER.
6. CONTRACTOR SHALL PAY FOR ANY/ALL PERMITS, FEES, INSPECTIONS AND TESTING. CONTRACTOR IS TO OBTAIN PERMITS AND APPROVED SUBMITTALS PRIOR TO THE WORK BEGINNING OR ORDERING EQUIPMENT.
7. THE TERM "PROVIDE" USED IN CONSTRUCTION DOCUMENTS AND SPECIFICATIONS, INDICATES THAT THE CONTRACTOR SHALL FURNISH AND INSTALL.
8. CONTRACTOR SHALL CONFIRM WITH LOCAL UTILITY COMPANY ANY/ALL REQUIREMENTS SUCH AS THE: LUG SIZE RESTRICTIONS, CONDUIT ENTRY, SIZE OF TRANSFORMERS, SCHEDULED DOWNTIME FOR THE OWNERS' CONFIRMATION, ETC., ANY/ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER, PRIOR TO BEGINNING ANY WORK.
9. MINIMUM WIRE SIZE SHALL BE #12 AWG, NOT INCLUDING CONTROL WIRING, UNLESS NOTED OTHERWISE. ALL CONDUCTORS SHALL BE COPPER WITH THWN INSULATION.
10. OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET/DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
11. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF THE CONSTRUCTION. CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
12. ELECTRICAL SYSTEM SHALL BE AS COMPLETELY AND EFFECTIVELY GROUNDED, AS REQUIRED BY SPECIFICATIONS, SET FORTH BY AT&T.
13. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS, WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND SUBJECT TO REGULATORY INSPECTION AND APPROVAL BY CONSTRUCTION MANAGER.
14. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
15. CONTRACTOR SHALL GUARANTEE ANY/ALL MATERIALS AND WORK FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE.
16. THE CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ANY ADDITIONAL CHARGE AND SHALL INCLUDE THE REPLACEMENT OR THE REPAIR OF ANY OTHER PHASE OF THE INSTALLATION, WHICH MAY HAVE BEEN DAMAGED THEREIN.
17. ADEQUATE AND REQUIRED LIABILITY INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LOSS AND ANY/ALL PROPERTY DAMAGE FOR THE DURATION OF WORK.
18. PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES AND DEVICES FOR ALL OUTLETS AS INDICATED.
19. 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".
20. MATERIALS, PRODUCTS AND EQUIPMENT, 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, NEMA AND IEEE.
21. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR MANUFACTURES CATALOG INFORMATION OF ANY/ALL LIGHTING FIXTURES, SWITCHES AND ALL OTHER ELECTRICAL ITEMS FOR APPROVAL BY THE CONSTRUCTION MANAGER PRIOR TO INSTALLATION.
22. ANY CUTTING OR PATCHWORK DEEMED NECESSARY FOR ELECTRICAL WORK IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY AND SHALL BE INCLUDED IN THE COST FOR WORK AND PERFORMED TO THE SATISFACTION OF THE "CONSTRUCTION MANAGER" UPON FINAL ACCEPTANCE.
23. THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS WITH ONLY TYPEWRITTEN DIRECTORIES. ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
24. DISCONNECT SWITCHES SHALL BE H.P. RATED HEAVY-DUTY, QUICK-MAKE AND QUICK-BREAK ENCLOSURES, AS REQUIRED BY EXPOSURE TYPE.
25. ALL CONNECTIONS SHALL BE MADE WITH A PROTECTIVE COATING OF AN ANTI-OXIDE COMPOUND SUCH AS "NO-OXIDE A" BY DEARBORNE CHEMICAL CO. COAT ALL WIRE SURFACES BEFORE CONNECTING. EXPOSED COPPER SURFACES, INCLUDING GROUND BARS, SHALL BE TREATED – NO SUBSTITUTIONS.
26. RACEWAYS: CONDUIT SHALL BE SCHEDULE 40 PVC MEETING OR EXCEEDING NEMA TC2 – 1990. CONTRACTOR SHALL PLUG AND CAP EACH END OF SPARE AND EMPTY CONDUITS AND PROVIDE TWO SEPARATE PULL STRINGS – 200 LBS TEST POLYETHYLENE CORD. ALL CONDUIT BENDS SHALL BE A MINIMUM OF 2 FT. RADIUS. RGS CONDUITS WHEN SPECIFIED, SHALL MEET UL-6 FOR GALVANIZED STEEL. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID CONDUIT. COAT ALL THREADS WITH "BRITE ZINC" OR "COLD GALV".
27. SUPPORT OF ALL ELECTRICAL WORK SHALL BE AS REQUIRED BY NEC.
28. CONDUCTORS: CONTRACTOR SHALL USE 98% CONDUCTIVITY COPPER WITH TYPE THWN INSULATION, 600 VOLT, COLOR CODED. USE SOLID CONDUCTORS FOR WIRE UP TO AND INCLUDING NO. 8 AWG. USE STRANDED CONDUCTORS FOR WIRE ABOVE NO. 8 AWG.
29. CONNECTORS FOR POWER CONDUCTORS: CONTRACTOR SHALL USE PRESSURE TYPE INSULATED TWIST-ON CONNECTORS FOR NO. 10 AWG AND SMALLER. USE SOLDERLESS MECHANICAL TERMINAL LUGS FOR NO. 8 AWG AND LARGER.
30. SERVICE: 240/120V, SINGLE PHASE, 3 WIRE CONNECTION AVAILABLE FROM UTILITY COMPANY. OWNER OR OWNERS AGENT WILL APPLY FOR POWER.
31. TELEPHONE SERVICE: CONTRACTOR SHALL PROVIDE EMPTY CONDUITS WITH PULL STRINGS AS INDICATED ON DRAWINGS.
32. ELECTRICAL AND TELCO RACEWAYS TO BE BURIED A MINIMUM OF 2' DEPTH.
33. CONTRACTOR SHALL PLACE TWO LENGTHS OF WARNING TAPE AT A DEPTH OF 12" BELOW GROUND AND DIRECTLY ABOVE ELECTRICAL AND TELCO SERVICE CONDUITS. CAUTIONS TAPE TO READ "CAUTION BURIED ELECTRIC" OR "BURIED TELECOMM".
34. ALL BOLTS SHALL BE STAINLESS STEEL.

## GROUNDING NOTES:

1. COMPRESSION CONNECTIONS (2), 2 AWG BARE TINNED SOLID COPPER CONDUCTORS TO GROUNDING BAR. ROUTE CONDUCTORS TO BURIED GROUNDING RING AND PROVIDE PARALLEL EXOTHERMIC WELD.
2. EC SHALL USE PERMANENT MARKER TO DRAW THE LINES BETWEEN EACH SECTION AND LABEL EACH SECTION ("P", "A", "N", "I") WITH 1" HIGH LETTERS.
3. ALL HARDWARE 18-8 STAINLESS STEEL, INCLUDING LOCK WASHERS. COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING. ALL HARDWARE SHALL BE STAINLESS STEEL 3/8 INCH DIAMETER OR LARGER.
4. FOR GROUND BOND TO STEEL ONLY: INSERT A CADMIUM FLAT WASHER BETWEEN LUG AND STEEL. COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
5. NUT & WASHER SHALL BE PLACED ON THE FRONT SIDE OF THE GROUNDING BAR AND BOLTED ON THE BACK SIDE.
6. NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATION, AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED.
7. WHEN THE SCOPE OF WORK REQUIRES THE ADDITION OF A GROUNDING BAR TO AN EXISTING TOWER,THE SUBCONTRACTOR SHALL OBTAIN APPROVAL FROM THE TOWER OWNER PRIOR TO MOUNTING THE GROUNDING BAR TO THE TOWER.
8. ALL ELECTRICAL AND GROUNDING AT THE CELL SITE SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 780 (LATEST EDITION), AND MANUFACTURER.

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| REV | DATE | DESCRIPTION |
|---|---|---|
| C | 08/19/2016 | 100% CD'S PER REDLINES |
| A | 07/11/2016 | 90% CD'S FOR REVIEW |

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

CCL03387
DT MONTEREY
2 PORTOLA PLAZA
MONTEREY, CA 93940
ROOFTOP

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-1

## SITE WORK & DRAINAGE

### PART 1 – GENERAL

CLEARING, GRUBBING, STRIPPING, EROSION CONTROL, SURVEY, LAYOUT, SUBGRADE PREPARATION AND FINISH GRADING AS REQUIRED TO COMPLETE THE NEW WORK SHOWN IN THESE PLANS.

1.1 REFERENCES:
A. DOT (STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION–CURRENT EDITION).
B. ASTM (AMERICAN SOCIETY FOR TESTING AND MATERIALS).
C. OSHA (OCCUPATION SAFETY AND HEALTH ADMINISTRATION).

1.2 INSPECTION AND TESTING:
A. FIELD TESTING OF EARTHWORK COMPACTION AND CONCRETE CYLINDERS SHALL BE PERFORMED BY SUBCONTRACTORS INDEPENDENT TESTING LAB. THIS WORK TO BE COORDINATED BY THE SUBCONTRACTOR.
B. ALL WORK SHALL BE INSPECTED AND RELEASED BY THE GENERAL CONTRACTOR WHO SHALL CARRY OUT THE GENERAL INSPECTION OF THE WORK WITH SPECIFIC CONCERN TO PROPER PERFORMANCE OF THE WORK AS SPECIFIED AND/OR CALLED FOR ON THE DRAWINGS. IT IS THE SUBCONTRACTOR'S RESPONSIBILITY TO REQUEST TIMELY INSPECTIONS PRIOR TO PROCEEDING WITH FURTHER WORK THAT WOULD MAKE PARTS OF WORK INACCESSIBLE OR DIFFICULT TO INSPECT.

1.3 SITE MAINTENANCE AND PROTECTION:
A. PROVIDE ALL NECESSARY JOB SITE MAINTENANCE FROM COMMENCEMENT OF WORK UNTIL COMPLETION OF THE SUBCONTRACT.
B. AVOID DAMAGE TO THE SITE AND TO EXISTING FACILITIES, STRUCTURES, TREES, AND SHRUBS DESIGNATED TO REMAIN. TAKE PROTECTIVE MEASURES TO PREVENT EXISTING FACILITIES THAT ARE NOT DESIGNATED FOR REMOVAL FROM BEING DAMAGED BY THE WORK.
C. KEEP SITE FREE OF ALL PONDING WATER.
D. PROVIDE EROSION CONTROL MEASURES IN ACCORDANCE WITH STATE DOT AND EPA REQUIREMENTS.
E. PROVIDE AND MAINTAIN ALL TEMPORARY FENCING, BARRICADES, WARNING SIGNALS AND SIMILAR DEVICES NECESSARY TO PROTECT AGAINST THEFT FROM PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION. REMOVE ALL SUCH DEVICES UPON COMPLETION OF THE WORK.
F. EXISTING UTILITIES: DO NOT INTERRUPT EXISTING UTILITIES SERVING FACILITIES OCCUPIED BY THE OWNER OR OTHERS, EXCEPT WHEN PERMITTED IN WRITING BY THE ENGINEER AND THEN ONLY AFTER ACCEPTABLE TEMPORARY UTILITY SERVICES HAVE BEEN PROVIDED.

* PROVIDE A MINIMUM 48–HOUR NOTICE TO THE ENGINEER AND RECEIVE WRITTEN NOTICE TO PROCEED BEFORE INTERRUPTING ANY UTILITY SERVICE.

### PART 2 – PRODUCTS

2.1 SUITABLE BACKFILL: ASTM D2321 (CLASS I, II, III OR IVA) FREE FROM FROZEN LUMPS, REFUSE,STONES OR ROCKS LARGER THAN 3 INCHES IN ANY DIMENSION OR OTHER MATERIAL THAT MAY MAKE THE INORGANIC MATERIAL UNSUITABLE FOR BACKFILL.
2.2 NON–POROUS GRANULAR EMBANKMENT AND BACKFILL: ASTM D2321 (CLASS III, IVA OR IVB) COARSE AGGREGATE FREE FROM FROZEN LUMPS, REFUSE, STONES OR ROCKS LARGER THAN 3 INCHES IN ANY DIMENSION OR OTHER MATERIAL THAT MAY MAKE THE INORGANIC MATERIAL UNSUITABLE FOR BACKFILL.
2.3 POROUS GRANULAR EMBANKMENT AND BACKFILL: ASTM D2321 (CLASS IA, IB OR II) COARSE AGGREGATE FREE FROM FROZEN LUMPS, REFUSE, STONES OR ROCKS LARGER THAN 3 INCHES IN ANY DIMENSION OR OTHER MATERIAL THAT MAY MAKE THE INORGANIC MATERIAL UNSUITABLE FOR BACKFILL.
2.4 SELECT STRUCTURAL FILL: GRANULAR FILL MATERIAL MEETING THE REQUIREMENTS OF ASTM E850–95, FOR USE AROUND AND UNDER STRUCTURES WHERE STRUCTURAL FILL MATERIAL ARE REQUIRED.
2.5 GRANULAR BEDDING AND TRENCH BACKFILL: WELL–GRADED SAND MEETING THE GRADATION REQUIREMENTS OF ASTM D2487 (SE OR SW–SM).
2.6 COARSE AGGREGATE FOR ACCESS ROAD SUBBASE COURSE SHALL CONFORM TO ASTM D2940.
2.7 UNSUITABLE MATERIAL: HIGH AND MODERATELY PLASTIC SILTS AND CLAYS (LL>45), MATERIAL CONTAINING REFUSE, FROZEN LUMPS, DEMOLISHED BITUMINOUS MATERIAL, VEGETATIVE MATTER, WOOD, STONES IN EXCESS OF 3 INCHES IN ANY DIMENSION, AND DEBRIS AS DETERMINED BY THE CONSTRUCTION MANAGER. TYPICAL THESE WILL BE SOILS CLASSIFIED BY ASTM AS PT, MH, CH, OH, ML, AND OL.
2.8 GEOTEXTILE FABRIC: MIRAFI 500X OR APPROVED EQUAL.
2.9 PLASTIC MARKING TAPE: SHALL BE ACID AND ALKALI RESISTANT POLYETHYLENE FILM SPECIFICALLY MANUFACTURED FOR MARKING AND LOCATING UNDERGROUND UTILITIES, 6 INCHES WIDE WITH A MINIMUM THICKNESS OF 0.004 INCH. TAPE SHALL HAVE MINIMUM STRENGTH OF 1500 PSI IN BOTH DIRECTIONS AND MANUFACTURED WITH INTEGRAL CONDUCTORS, FOIL BACKING OR OTHER MEANS TO ENABLE DETECTION BY A METAL DETECTOR WHEN BURIED UP TO 3 FEET DEEP. THE METALLIC CORE OF THE TAPE SHALL BE ENCASED IN A PROTECTIVE JACKET OR PROVIDED WITH OTHER MEANS TO PROTECT IT FROM CORROSION. TAPE COLOR SHALL BE RED FOR ELECTRIC UTILITIES AND ORANGE FOR TELECOMMUNICATION UTILITIES.

### PART 2 – EXECUTION

3.1 GENERAL:

A. BEFORE STARTING GENERAL SITE PREPARATION ACTIVITIES, INSTALL EROSION AND SEDIMENT CONTROL MEASURES. THE WORK AREA SHALL BE CONSTRUCTED AND MAINTAINED IN SUCH CONDITION THAT IN THE EVENT OF RAIN THE SITE WILL BE DRAINED AT ANY TIME.
B. BEFORE ALL SURVEY, LAYOUT, STAKING, AND MARKING, ESTABLISH AND MAINTAIN ALL LINES, GRADES, ELEVATIONS AND BENCHMARKS NEEDED FOR EXECUTION OF THE WORK.
C. CLEAR AND GRUB THE AREA WITHIN THE LIMITS OF THE SITE. REMOVE TREES, BRUSH, STUMPS,RUBBISH AND OTHER DEBRIS AND VEGETATION RESTING ON OR PROTRUDING THROUGH THE SURFACE OF THE SITE AREA TO BE CLEARED.

1. REMOVE THE FOLLOWING MATERIALS TO A DEPTH OF NO LESS THAN 12 INCHES BELOW THE ORIGINAL GROUND SURFACE: ROOTS, STUMPS, AND OTHER DEBRIS, BRUSH, AND REFUSE EMBEDDED IN OR PROTRUDING THROUGH THE GROUND SURFACE. RAKE, DISK OR PLOW THE AREA TO A DEPTH OF NO LESS THAN 6 INCHES, AND REMOVE TO A DEPTH OF 12 INCHES ALL ROOTS AND OTHER DEBRIS THEREBY EXPOSED.
2. REMOVE TOPSOIL MATERIAL COMPLETELY FROM THE SURFACE UNTIL THE SOIL NO LONGER MEETS THE DEFINITION OF TOPSOIL. AVOID MIXING TOPSOIL WITH SUBSOIL OR OTHER UNDESIRABLE MATERIALS.
3. EXCEPT WHERE EXCAVATION TO GREATER DEPTH IS INDICATED, FILL DEPRESSIONS RESULTING FROM CLEARING, GRUBBING AND DEMOLITION WORK COMPLETELY WITH SUITABLE FILL.
D. REMOVE FROM THE SITE AND DISPOSE IN AN AUTHORIZED LANDFILL ALL DEBRIS RESULTING FROM CLEARING AND GRUBBING OPERATIONS. BURNING WILL NOT BE PERMITTED.
E. PRIOR TO EXCAVATING, THOROUGHLY EXAMINE THE AREA TO BE EXCAVATED AND/OR TRENCHED TO VERIFY THE LOCATIONS OF FEATURES INDICATED ON THE DRAWINGS AND TO ASCERTAIN THE EXISTENCE AND LOCATION OF ANY STRUCTURE, UNDERGROUND STRUCTURE, OR OTHER ITEM NOT SHOWN THAT MIGHT INTERFERE WITH THE NEW CONSTRUCTION. NOTIFY THE CONSTRUCTION MANAGER OF ANY OBSTRUCTIONS THAT WILL PREVENT ACCOMPLISHMENT OF THE WORK AS INDICATED ON THE DRAWINGS.
F. SEPARATE AND STOCK PILE ALL EXCAVATED MATERIALS SUITABLE FOR BACKFILL. ALL EXCESS EXCAVATED AND UNSUITABLE MATERIALS SHALL BE DISPOSED OF OFF–SITE IN A LEGAL MANNER.

3.2 BACKFILL:
A. AS SOON AS PRACTICAL, AFTER COMPLETING CONSTRUCTION OF THE RELATED STRUCTURE, INCLUDING EXPIRATION OF THE SPECIFIED MINIMUM CURING PERIOD FOR CAST–IN–PLACE CONCRETE, BACKFILL THE EXCAVATION WITH APPROVED MATERIAL TO RESTORE THE REQUIRED FINISHED GRADE.
1. PRIOR TO PLACING BACKFILL AROUND STRUCTURES, ALL FORMS SHALL BE REMOVED AND THE EXCAVATION CLEANED OF ALL TRASH, DEBRIS, AND UNSUITABLE MATERIALS.
2. BACKFILL BY PLACING AND COMPACTING SUITABLE BACKFILL MATERIAL OR SELECT GRANULAR BACKFILL MATERIAL WHEN REQUIRED IN UNIFORM HORIZONTAL LAYERS OF NO GREATER THAN 8–INCHES LOOSE THICKNESS AND COMPACTED. WHERE HAND OPERATED COMPACTORS ARE USED, THE FILL MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED 4 INCHES IN LOOSE DEPTH AND COMPACTED.
3. WHENEVER THE DENSITY TESTING INDICATES THAT THE CONTRACTOR HAS NOT OBTAINED THE SPECIFIED DENSITY, THE SUCCEEDING LAYER SHALL NOT BE PLACED UNTIL THE SPECIFICATION REQUIREMENTS ARE MET UNLESS OTHERWISE AUTHORIZED BY THE GEOTECHNICAL ENGINEER. THE CONTRACTOR SHALL TAKE WHATEVER APPROPRIATE ACTION IS NECESSARY, SUCH AS DISKING AND DRYING, ADDING WATER, OR INCREASING THE COMPACTIVE EFFORT TO MEET THE MINIMUM COMPACTION REQUIREMENTS.
B. THOROUGHLY COMPACT EACH LAYER OF BACKFILL TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE STANDARD PROCTOR TEST, ASTM D 698.

3.3 TRENCH EXCAVATION:

A. UTILITY TRENCHES SHALL BE EXCAVATED TO THE LINES AND GRADES SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE GENERAL CONTRACTOR. PROVIDE SHORING, SHEETING AND BRACING AS REQUIRED TO PREVENT CAVING OR SLOUGHING OF THE TRENCH WALLS. EXTEND THE TRENCH WIDTH A MINIMUM OF 6 INCHES BEYOND THE OUTSIDE EDGE OF THE OUTERMOST CONDUIT.

B. WHEN SOFT YIELDING, OR OTHERWISE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, BACKFILL AT THE REQUIRED TRENCH TO A DEPTH OF NO LESS THAN 12 INCHES BELOW THE REQUIRED ELEVATION AND BACKFILL WITH GRANULAR BEDDING MATERIAL.

3.4 TRENCH BACKFILL:
A. PROVIDE GRANULAR BEDDING MATERIAL IN ACCORDANCE WITH THE DRAWINGS AND THE UTILITY REQUIREMENTS.
B. NOTIFY THE GENERAL CONTRACTOR 24 HOURS IN ADVANCE OF BACKFILLING.
C. CONDUCT UTILITY CHECK TESTS BEFORE BACKFILLING. BACKFILL AND COMPACT TRENCH BEFORE ACCEPTANCE TESTING.
D. PLACE GRANULAR TRENCH BACKFILL UNIFORMLY ON BOTH SIDES OF THE CONDUITS IN 6–INCH UNCOMPACTED LIFTS UNTIL 12 INCHES OVER THE CONDUITS. SOUDLY RAM AND TAMP BACKFILL INTO SPACE AROUND CONDUITS.
E. PROTECT CONDUIT FROM LATERAL MOVEMENT, IMPACT DAMAGE, OR UNBALANCED LOADING.
F. ABOVE THE CONDUIT EMBEDMENT ZONE, PLACE AND COMPACT SATISFACTORY BACKFILL MATERIAL IN 8–INCH MAXIMUM LOOSE THICKNESS LIFTS TO RESTORE THE REQUIRED FINISHED SURFACE GRADE.
G. COMPACT FINAL TRENCH BACKFILL TO A DENSITY EQUAL TO OR GREATER THAN THAT OF THE EXISTING UNDISTURBED MATERIAL IMMEDIATELY ADJACENT TO THE TRENCH BUT NO LESS THAN A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE STANDARD PROCTOR TEST, ASTM D 698.

3.5 AGGREGATE ACCESS ROAD:
A. CLEAR, GRUB, STRIP AND EXCAVATE FOR THE ACCESS ROAD TO THE LINES AND GRADES INDICATED ON THE DRAWINGS. SCARIFY TO A DEPTH OF 6 INCHES AND PROOF–ROLL. ALL HOLES, RUTS, SOFT PLACES AND OTHER DEFECTS SHALL BE CORRECTED.
B. THE ENTIRE SUBGRADE SHALL BE COMPACTED TO NOT LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE STANDARD PROCTOR TEST, ASTM D 1557.
C. AFTER PREPARATION OF THE SUBGRADE IS COMPLETE THE GEOTEXTILE FABRIC (MIRAFI 500X) SHALL BE INSTALLED TO THE LIMITS INDICATED ON THE DRAWINGS BY ROLLING THE FABRIC OUT LONGITUDINALLY ALONG THE ROADWAY. THE FABRIC SHALL NOT BE DRAGGED ACROSS THE SUBGRADE. PLACE THE ENTIRE ROLL IN A SINGLE OPERATION, ROLLING OUT AS SMOOTHLY AS POSSIBLE.
1. OVERLAPS PARALLEL TO THE ROADWAY WILL BE PERMITTED AT THE CENTERLINE AND AT LOCATIONS BEYOND THE ROADWAY SURFACE WIDTH (I.E. WITHIN THE SHOULDER WIDTH) ONLY. NO LONGITUDINAL OVERLAPS SHALL BE LOCATED BETWEEN THE CENTERLINE AND THE SHOULDER. PARALLEL OVERLAPS SHALL BE A MINIMUM OF 3 FEET WIDE.
2. TRANSVERSE (PERPENDICULAR TO THE ROADWAY) OVERLAPS AT THE END OF A ROLL SHALL OVERLAP IN THE DIRECTION OF THE AGGREGATE PLACEMENT (PREVIOUS ROLL ON TOP) AND SHALL HAVE A MINIMUM LENGTH OF 3 FEET.
3. ALL OVERLAPS SHALL BE PINNED WITH STAPLES OR NAILS A MINIMUM OF 10 INCHES LONG TO INSURE POSITIONING DURING PLACEMENT OF AGGREGATE. PIN LONGITUDINAL SEAMS AT 25 FOOT CENTERS AND TRANSVERSE SEAMS EVERY 5 FEET.
D. THE AGGREGATE BASE AND SURFACE COURSES SHALL BE CONSTRUCTED IN LAYERS NOT MORE THAN 4 INCH (COMPACTED) THICKNESS. AGGREGATE TO BE PLACED ON GEOTEXTILE FABRIC SHALL BE END–DUMPED ON THE FABRIC FROM THE FREE END OF THE FABRIC OR OVER PREVIOUSLY PLACED AGGREGATE. THE FIRST LIFT SHALL BE BLADED DOWN TO A THICKNESS OF 8 INCHES PRIOR TO COMPACTION. AT NO TIME SHALL EQUIPMENT, EITHER TRANSPORTING THE AGGREGATE OR GRADING THE AGGREGATE, BE PERMITTED ON THE ROADWAY WITH LESS THAN 4 INCHES OF MATERIAL COVERING THE FABRIC.
E. THE AGGREGATE SHALL BE IMMEDIATELY COMPACTED TO NOT LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE PROCTOR TEST, ASTM D 1557 WITH A TAMPING ROLLER, OR WITH A PNEUMATIC–TIRED ROLLER, OR WITH A VIBRATORY MACHINE OR ANY COMBINATION OF THE ABOVE. THE TOP LAYER SHALL BE GIVEN A FINAL ROLLING WITH A THREE–WHEEL OR TANDEM ROLLER.

3.6 FINISH GRADING:
A. PERFORM ALL GRADING TO PROVIDE POSITIVE DRAINAGE AWAY FROM STRUCTURES AND SMOOTH, EVEN SURFACE DRAINAGE OF THE ENTIRE AREA WITHIN THE LIMITS OF CONSTRUCTION. GRADING SHALL BE COMPATIBLE WITH ALL SURROUNDING TOPOGRAPHY AND STRUCTURES.
B. UTILIZE SATISFACTORY FILL MATERIAL RESULTING FROM THE EXCAVATION WORK IN THE CONSTRUCTION OF FILLS, EMBANKMENTS AND FOR REPLACEMENT OF REMOVED UNSUITABLE MATERIALS.
C. ACHIEVE FINISHED GRADE BY PLACING A MINIMUM OF 4 INCHES OF 1/2" – 3/4" CRUSHED STONE ON TOP SOIL STABILIZER FABRIC.
D. REPAIR ALL ACCESS ROADS AND SURROUNDING AREAS USED DURING THE COURSE OF THIS WORK TO THEIR ORIGINAL CONDITION.

3.7 ASPHALT PAVING ROAD:
A. DIVISION 600 – KDOT FLEXIBLE PAVEMENT. (UPDATE PER LOCAL DOT)
B. SECTION 403 – MODOT ASPHALT CONCRETE PAVEMENT

## ENVIRONMENTAL NOTES

1. ALL WORK PERFORMED SHALL BE DONE IN ACCORDANCE WITH ISSUED PERMITS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF FINES AND PROPER CLEAN UP FOR AREAS IN VIOLATION.
2. CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS DURING CONSTRUCTION FOR PROTECTION OF ADJACENT PROPERTIES, ROADWAYS AND WATERWAYS AND SHALL BE MAINTAINED IN PLACE THROUGH FINAL JURISDICTIONAL INSPECTION & RELEASE OF SITE.
3. CONTRACTOR SHALL INSTALL/CONSTRUCT ALL NECESSARY SEDIMENT/SILT CONTROL FENCING AND PROTECTIVE MEASURES WITHIN THE LIMITS OF SITE DISTURBANCE PRIOR TO CONSTRUCTION.
4. NO SEDIMENT SHALL BE ALLOWED TO EXIT THE PROPERTY. THE CONTRACTOR IS RESPONSIBLE FOR TAKING ADEQUATE MEASURES FOR CONTROLLING EROSION. ADDITIONAL SEDIMENT CONTROL FENCING MAY BE REQUIRED IN ANY AREAS SUBJECT TO EROSION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY INSPECTIONS AND ANY REPAIRS OF ALL SEDIMENT CONTROL MEASURES INCLUDING SEDIMENT REMOVAL AS NECESSARY.
6. CLEARING OF VEGETATION AND TREE REMOVAL SHALL BE ONLY AS PERMITTED AND BE HELD TO A MINIMUM. ONLY TREES NECESSARY FOR CONSTRUCTION OF THE FACILITIES SHALL BE REMOVED.
7. SEEDING AND MULCHING AND/OR SODDING OF THE SITE WILL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER COMPLETION OF THE PROJECT FACILITIES AFFECTING LAND DISTURBANCE.
8. CONTRACTOR SHALL PROVIDE ALL EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY LOCAL, COUNTY AND STATE CODES AND ORDINANCES TO PROTECT EMBANKMENTS FROM SOIL LOSS AND TO PREVENT ACCUMULATION OF SOIL AND SILT IN STREAMS AND DRAINAGE PATHS LEAVING THE CONSTRUCTION AREA. THIS MAY INCLUDE SUCH MEASURES AS SILT FENCES, STRAW BALE SEDIMENT BARRIERS, AND CHECK DAMS.
9. RIP RAP OF SIZES INDICATED SHALL CONSIST OF CLEAN, HARD, SOUND, DURABLE, UNIFORM IN QUALITY STONE FREE OF ANY DETRIMENTAL QUANTITY OF SOFT, FRIABLE, THIN, ELONGATED OR LAMINATED PIECES, DISINTEGRATED MATERIAL, ORGANIC MATTER, OIL, ALKALI, OR OTHER DELETERIOUS SUBSTANCES.

## STRUCTURAL STEEL NOTES

1. ALL STEEL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION. STEEL SECTIONS SHALL BE IN ACCORDANCE WITH ASTM AS INDICATED BELOW:
   W–SHAPES: ASTM A992, 50 KSI
   ANGLES, BARS CHANNELS: ASTM A36, 36 KSI
   HSS SECTIONS: ASTM 500, 46 KSI
   PIPE SECTIONS, ASTM A53–F, 35 KSI
2. ALL EXTERIOR EXPOSED STEEL AND HARDWARE SHALL BE HOT DIPPED GALVANIZED.
3. BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE 3/4"ø CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
4. NON–STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. ASTM A307 BOLTS UNLESS NOTED OTHERWISE.
5. FIELD MODIFICATIONS ARE TO BE COATED WITH ZINC ENRICHED PAINT.


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SHEET TITLE
GENERAL NOTES

SHEET NUMBER
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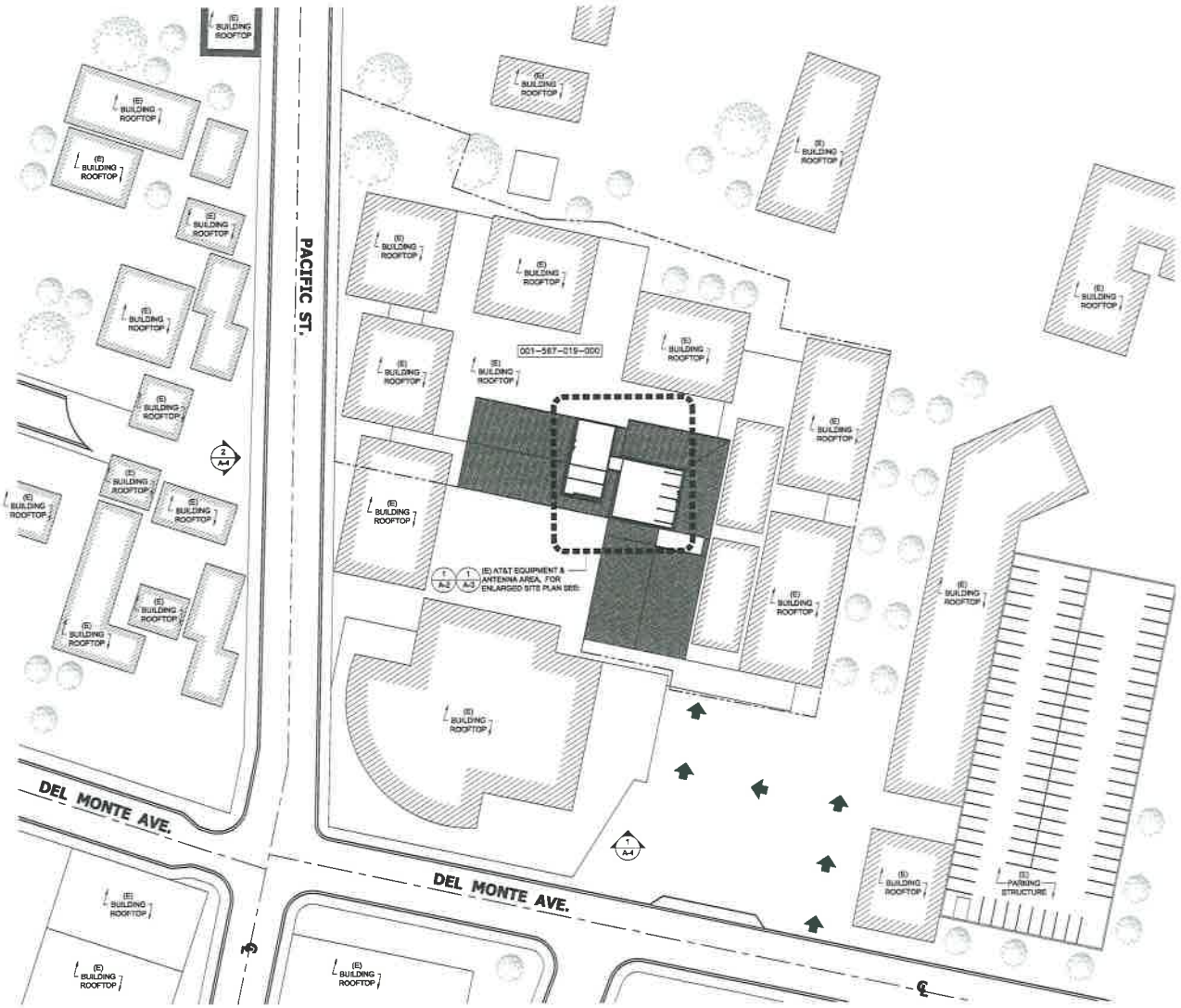
NOTES:

1. THE WIRELESS COMMUNICATION FACILITY COMPLIES WITH FEDERAL STANDARDS FOR RADIO FREQUENCY IN ACCORDANCE WITH THE TELECOMMUNICATION ACT OF 1996 AND SUBSEQUENT AMENDMENTS AND ANY OTHER REQUIREMENTS IMPOSED BY STATE OR FEDERAL REGULATORY AGENCIES
2. NO EXISTING PARKING STALLS ARE BEING ADDED OR REMOVED AS PART OF THE NEW INSTALLATION
3. THESE DRAWINGS WERE PRODUCED WITHOUT THE BENEFIT OF A CURRENT LAND SURVEY. ALL PROPERTY LINES, EASEMENTS, SETBACKS, AND EXISTING CONDITIONS ARE APPROXIMATE AND SHALL BE VERIFIED PRIOR TO START OF CONSTRUCTION.
4. NO GRADING WORK IS INCLUDED IN THIS SCOPE OF WORK ON THIS PAGE.




## SITE PLAN

24"x36" SCALE: 1" = 40'-0"
11"x17" SCALE: 1" = 80'-0"

40' 20' 0' 40'

1

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NOTES:

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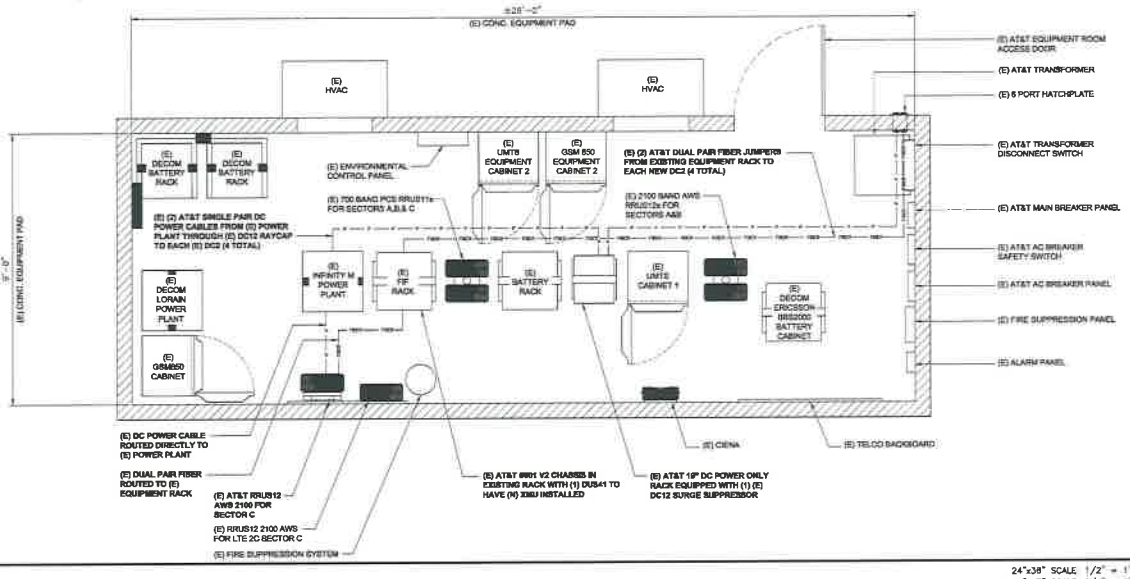


## EXISTING EQUIPMENT LAYOUT

24"x36" SCALE: 1/2" = 1'-0"
11"x17" SCALE: 1/4" = 1'-0"

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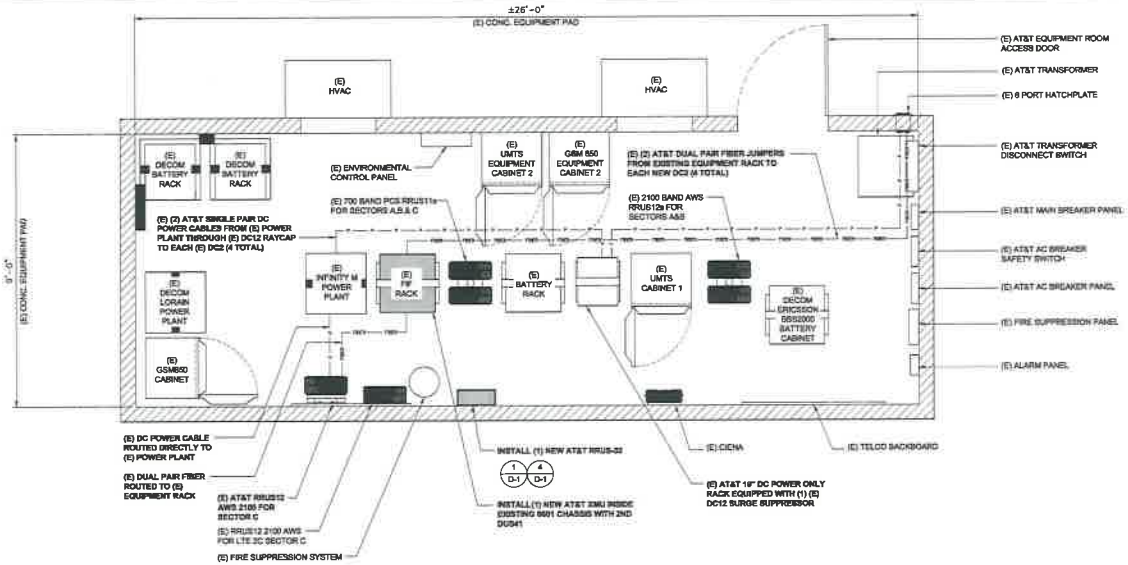


## PROPOSED EQUIPMENT LAYOUT

24"x36" SCALE: 1/2" = 1'-0"
11"x17" SCALE: 1/4" = 1'-0"

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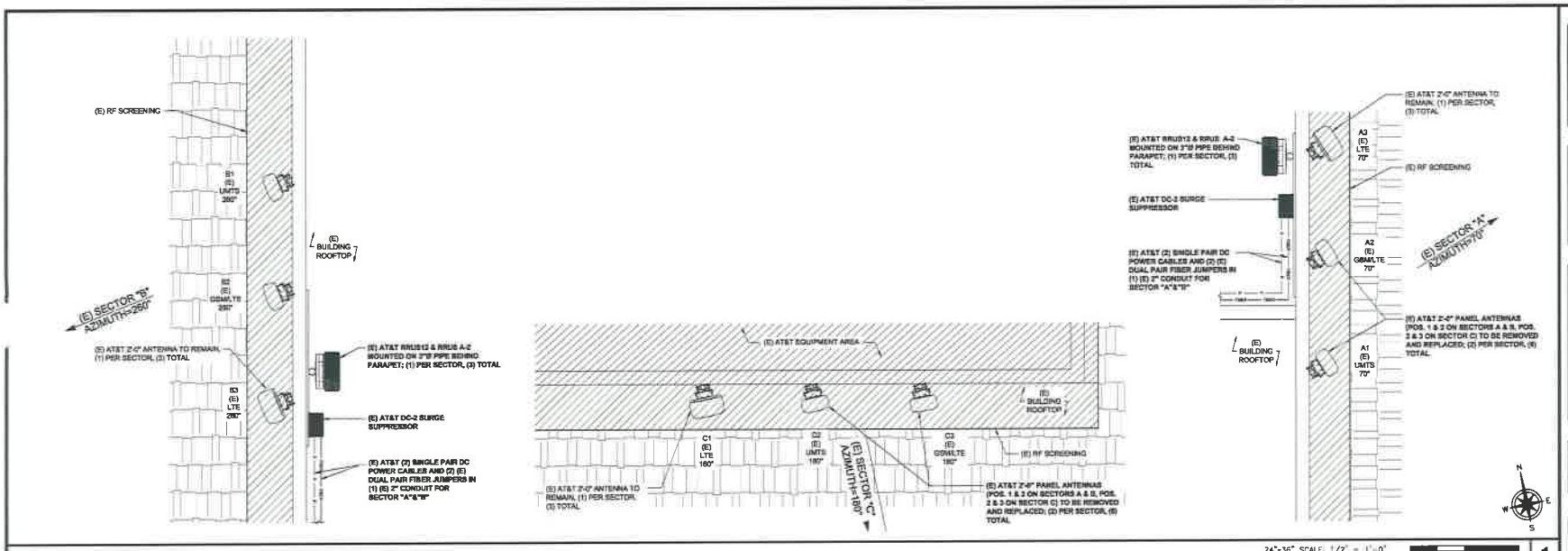



## EXISTING ANTENNA LAYOUT

24"x36" SCALE: 1/2" = 1'-0"
11"x17" SCALE: 1/4" = 1'-0"

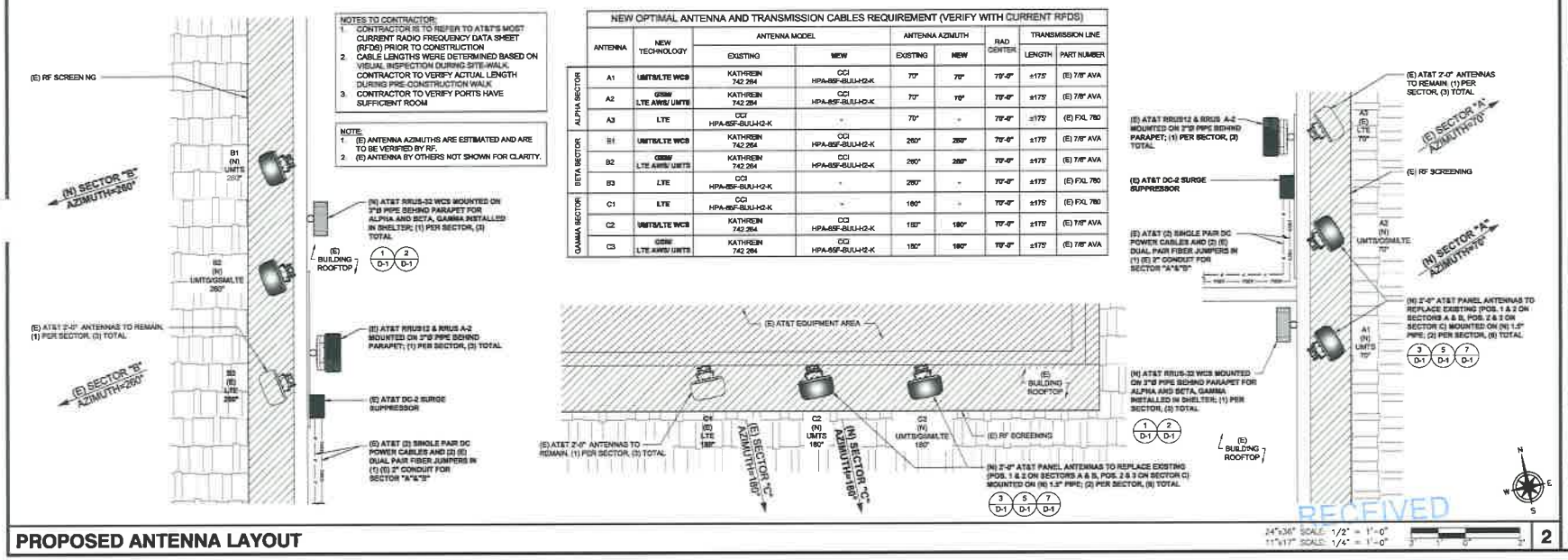
1

NOTES TO CONTRACTOR:
1. CONTRACTOR IS TO REFER TO AT&T'S MOST CURRENT RADIO FREQUENCY DATA SHEET (RFDS) PRIOR TO CONSTRUCTION
2. CABLE LENGTHS WERE DETERMINED BASED ON VISUAL INSPECTION DURING SITE-WALK. CONTRACTOR TO VERIFY ACTUAL LENGTH DURING PRE-CONSTRUCTION WALK
3. CONTRACTOR TO VERIFY PORTS HAVE SUFFICIENT ROOM

NOTE:
1. (E) ANTENNA AZIMUTHS ARE ESTIMATED AND ARE TO BE VERIFIED BY RF.
2. (E) ANTENNA BY OTHERS NOT SHOWN FOR CLARITY.

NEW OPTIMAL ANTENNA AND TRANSMISSION CABLES REQUIREMENT (VERIFY WITH CURRENT RFDS)

| | ANTENNA | NEW TECHNOLOGY | ANTENNA MODEL | | ANTENNA AZIMUTH | | RAD CENTER | TRANSMISSION LINE | |
|---|---|---|---|---|---|---|---|---|---|
| | | | EXISTING | NEW | EXISTING | NEW | | LENGTH | PART NUMBER |
| ALPHA SECTOR | A1 | UMTS/LTE WCS | KATHREIN 742 264 | CCI HPA-65F-BUU-H2-K | 70° | 70° | 70'-0" | ±175' | (E) 7/8" AVA |
| | A2 | GSM/ LTE AWS/ UMTS | KATHREIN 742 264 | CCI HPA-65F-BUU-H2-K | 70° | 70° | 70'-0" | ±175' | (E) 7/8" AVA |
| | A3 | LTE | CCI HPA-65F-BUU-H2-K | - | 70° | - | 70'-0" | ±175' | (E) FXL 780 |
| BETA SECTOR | B1 | UMTS/LTE WCS | KATHREIN 742 264 | CCI HPA-65F-BUU-H2-K | 260° | 260° | 70'-0" | ±175' | (E) 7/8" AVA |
| | B2 | GSM/ LTE AWS/ UMTS | KATHREIN 742 264 | CCI HPA-65F-BUU-H2-K | 260° | 260° | 70'-0" | ±175' | (E) 7/8" AVA |
| | B3 | LTE | CCI HPA-65F-BUU-H2-K | - | 260° | - | 70'-0" | ±175' | (E) FXL 780 |
| GAMMA SECTOR | C1 | LTE | CCI HPA-65F-BUU-H2-K | - | 160° | - | 70'-0" | ±175' | (E) FXL 780 |
| | C2 | UMTS/LTE WCS | KATHREIN 742 264 | CCI HPA-65F-BUU-H2-K | 160° | 160° | 70'-0" | ±175' | (E) 7/8" AVA |
| | C3 | GSM/ LTE AWS/ UMTS | KATHREIN 742 264 | CCI HPA-65F-BUU-H2-K | 160° | 160° | 70'-0" | ±175' | (E) 7/8" AVA |




## PROPOSED ANTENNA LAYOUT

24"x36" SCALE: 1/2" = 1'-0"
11"x17" SCALE: 1/4" = 1'-0"

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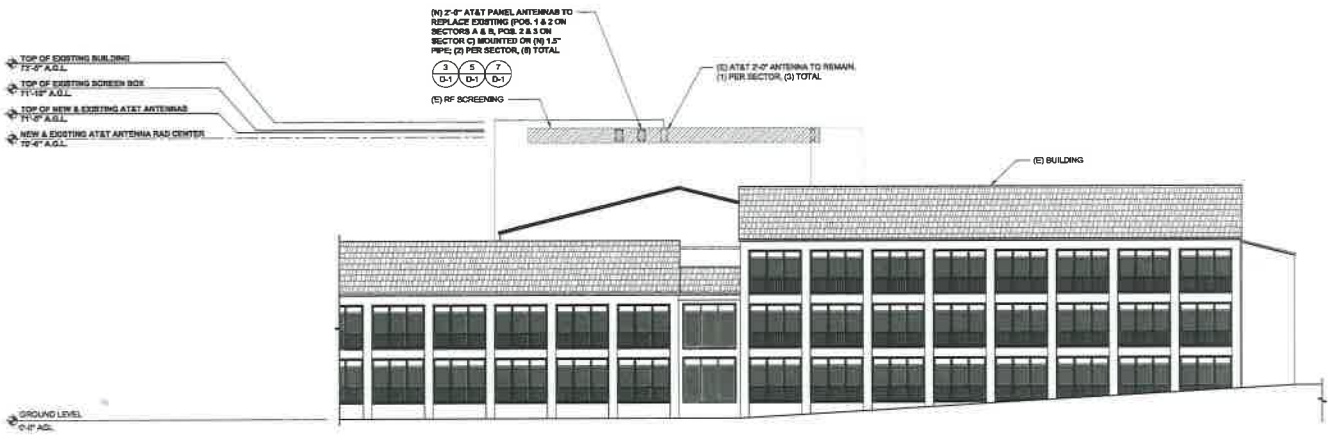
ANTENNA LAYOUT

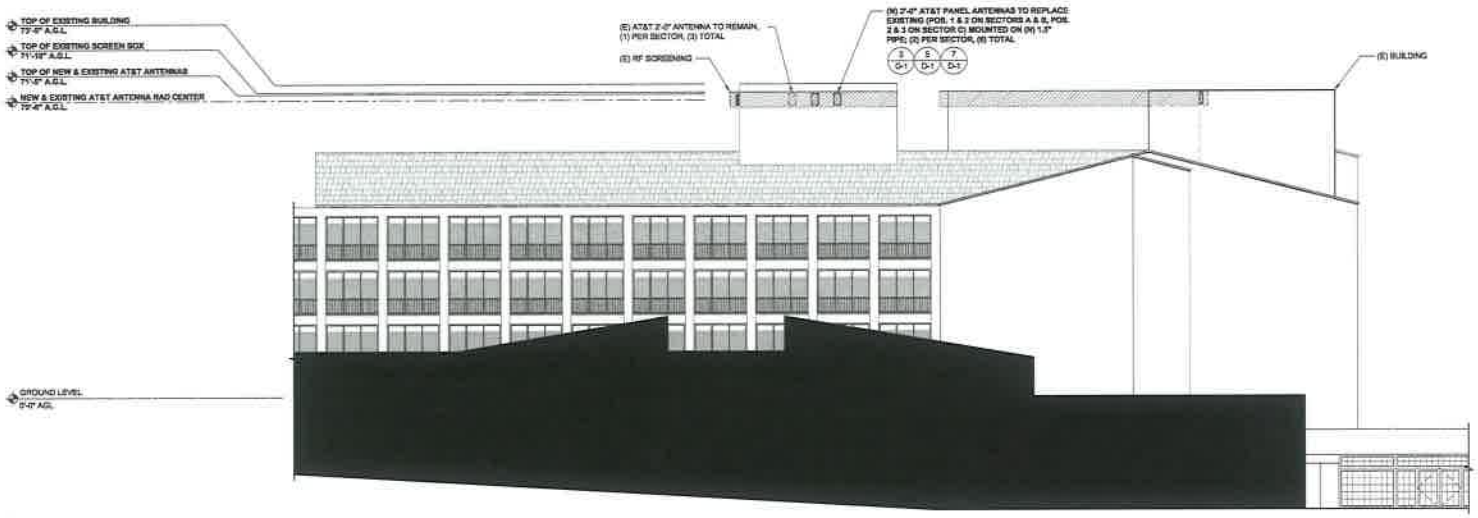
SHEET NUMBER
A-3




## PROPOSED WEST ELEVATION

24"x36" SCALE: 3/16" = 1'-0"
11"x17" SCALE: 3/32" = 1'-0"

1




## PROPOSED SOUTH ELEVATION

24"x36" SCALE: 3/16" = 1'-0"
11"x17" SCALE: 3/32" = 1'-0"

2

at&t Mobility

MasTec Network Solutions
8100 BROKEN SOUND PARKWAY NW
SUITE NO. 6
BOCA RATON, FLORIDA 33487

m.squared ENGINEERS
1387 CALLE AVANZADO
SAN CLEMENTE, CA 92673
(619) 997-4012

| | |
|---|---|
| PROJECT NO: | - |
| DRAWN BY: | MJM |
| CHECKED BY: | MM |

| REV | DATE | DESCRIPTION |
|---|---|---|
| 0 | 08/19/2016 | 100% CD'S PER REDLINES |
| A | 07/11/2016 | 90% CD'S FOR REVIEW |

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

CCL03387
DT MONTEREY
2 PORTOLA PLAZA
MONTEREY, CA 93940
ROOFTOP

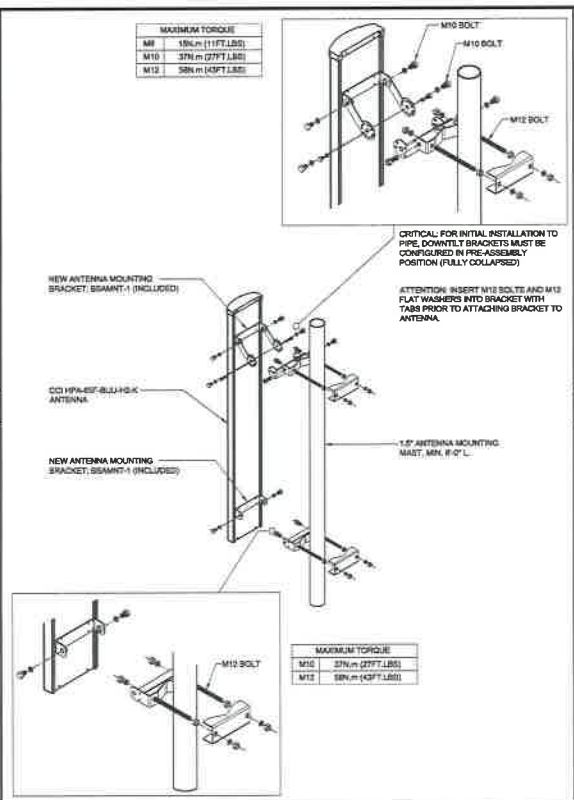
SHEET TITLE
ELEVATIONS

SHEET NUMBER
A-4

RECEIVED
SEP 15 2016
City of Monterey
PEEC DIVISION

## NOT USED | 9

## NOT USED | 8

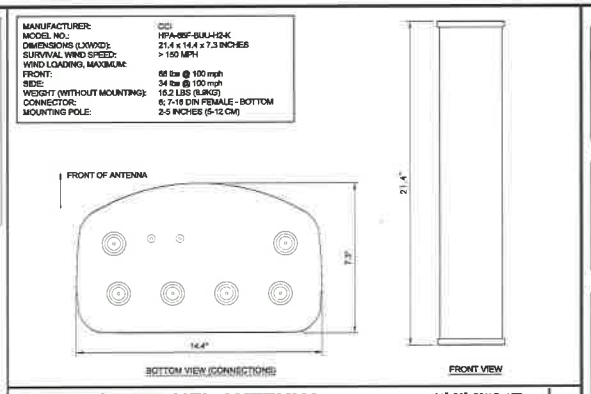



| MAXIMUM TORQUE | |
|---|---|
| M8 | 15N.m (11FT.LBS) |
| M10 | 37N.m (27FT.LBS) |
| M12 | 58N.m (43FT.LBS) |

| MAXIMUM TORQUE | |
|---|---|
| M10 | 37N.m (27FT.LBS) |
| M12 | 58N.m (43FT.LBS) |

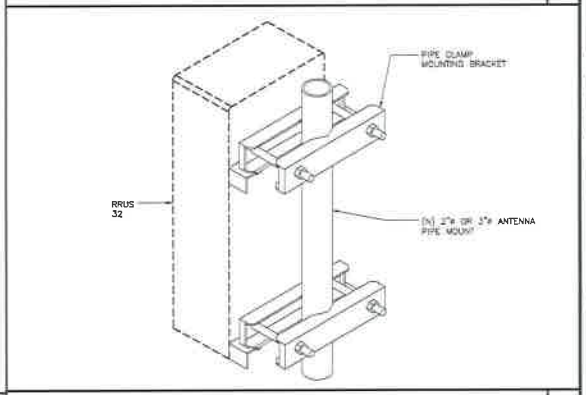
## NEW ANTENNA MOUNTING DETAIL | 5

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

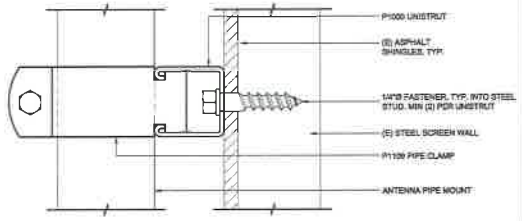



## 2' HEXPORT PANEL ANTENNA | 3

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

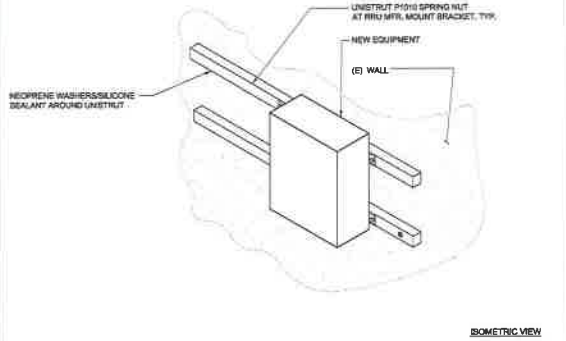



## RRUS-32 MTG. @ STD. PIPE MOUNT | 2



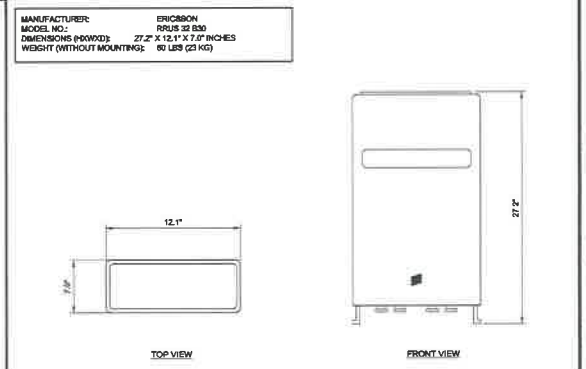

## PIPE TO UNISTRUT DETAIL | 7

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




## EQUIPMENT WALL MOUNT | 4

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




## RRUS 32 | 1

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

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MasTec Network Solutions
6100 BROKEN SOUND PARKWAY NW
SUITE NO. 5
BOCA RATON, FLORIDA 33487

m.squared ENGINEERS
1387 CALLE AVANZADO
SAN CLEMENTE, CA 92673
(619) 997-4012

| | |
|---|---|
| PROJECT NO: | - |
| DRAWN BY: | MJM |
| CHECKED BY: | MM |

| REV | DATE | DESCRIPTION |
|---|---|---|
| 0 | 08/19/2016 | 100% CD'S PER REQUIRES |
| A | 07/11/2016 | 90% CD'S FOR REVIEW |

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CCL03387
DT MONTEREY
2 PORTOLA PLAZA
MONTEREY, CA 93940
ROOFTOP

SHEET TITLE
DETAILS

SHEET NUMBER
D-1

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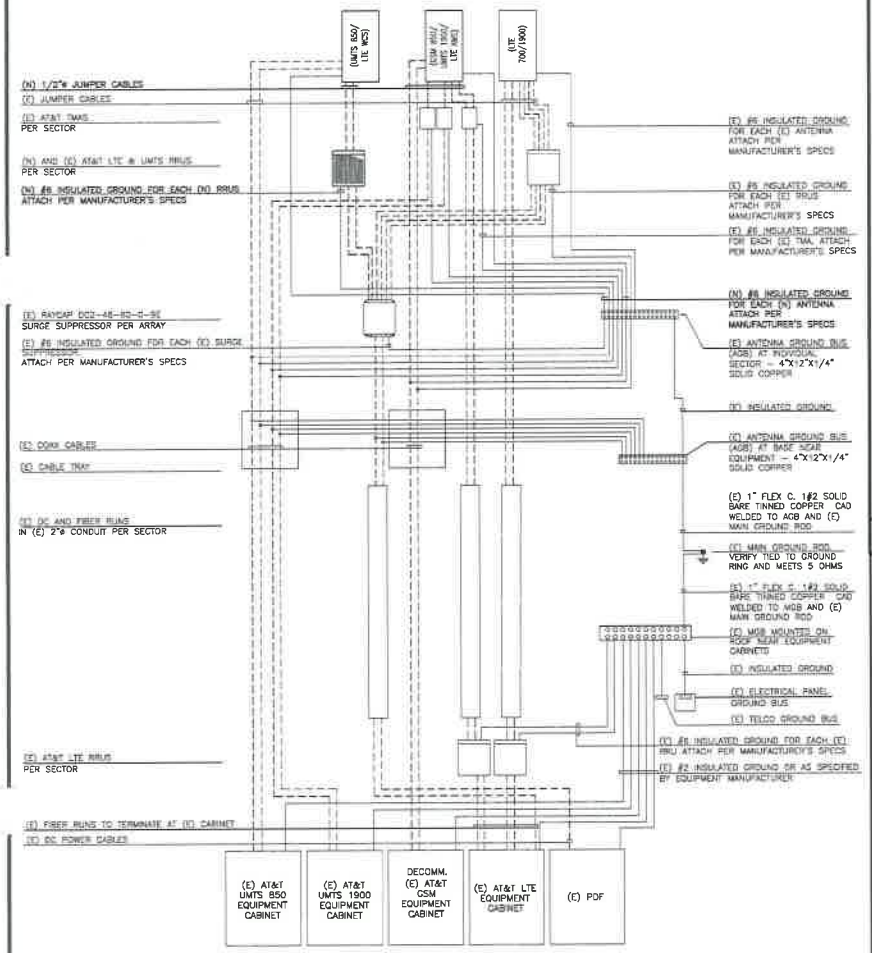
City of Monterey
PEEC DIVISION



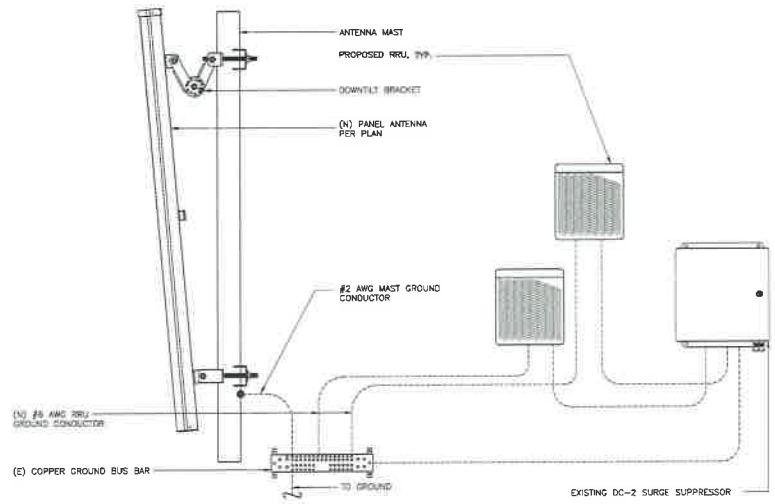

GENERAL NOTES:

1. SPLICE GROUND CONNECTIONS.
2. FOLLOW COAXIAL CABLE MANUFACTURES RECOMMENDATIONS, TYP.
3. ALL INSULATED GROUND WIRES TO BE STRANDED, AWG WIRE UNLESS NOTED OTHERWISE.
4. THIS IS TYPICAL FOR ONE SECTOR OF ANTENNAS. SEE PLANS FOR NUMBER OF SECTORS.
5. NUMBER OF COAX IS DIAGRAMATIC.
6. EXISTING DIPLEXER'S AND EXISTING TMA'S NOT SHOWN FOR CLARITY.

## COAX & GROUNDING SYSTEM SCHEMATIC

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

3



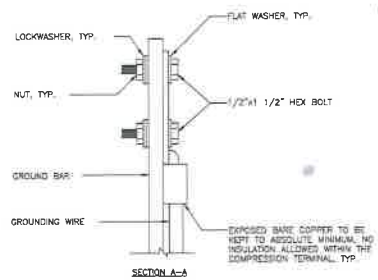

## ANTENNA/RRU GROUNDING

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

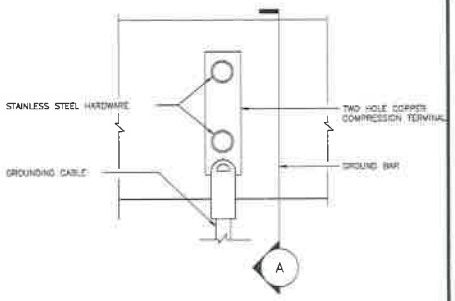
2

NOTES:

1. "DOUBLING UP" OR "STACKING" OF CONNECTIONS IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS AND TO BE APPLIED PRIOR TO ADDING HARDWARE.




SECTION A–A




## TYPICAL GROUND BAR CONNECTION

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

1


at&t Mobility

MasTec Network Solutions
6100 BROKEN SOUND PARKWAY NW
SUITE NO. 6
BOCA RATON, FLORIDA 33487

m.squared ENGINEERS
1387 CALLE AVANZADO
SAN CLEMENTE, CA 92673
(619) 997-4012


| | |
|---|---|
| PROJECT NO: | – |
| DRAWN BY: | MJM |
| CHECKED BY: | MM |

| REV | DATE | DESCRIPTION |
|---|---|---|
| 0 | 08/19/2016 | 100% CD'S PER REDLINES |
| A | 07/11/2016 | 90% CD'S FOR REVIEW |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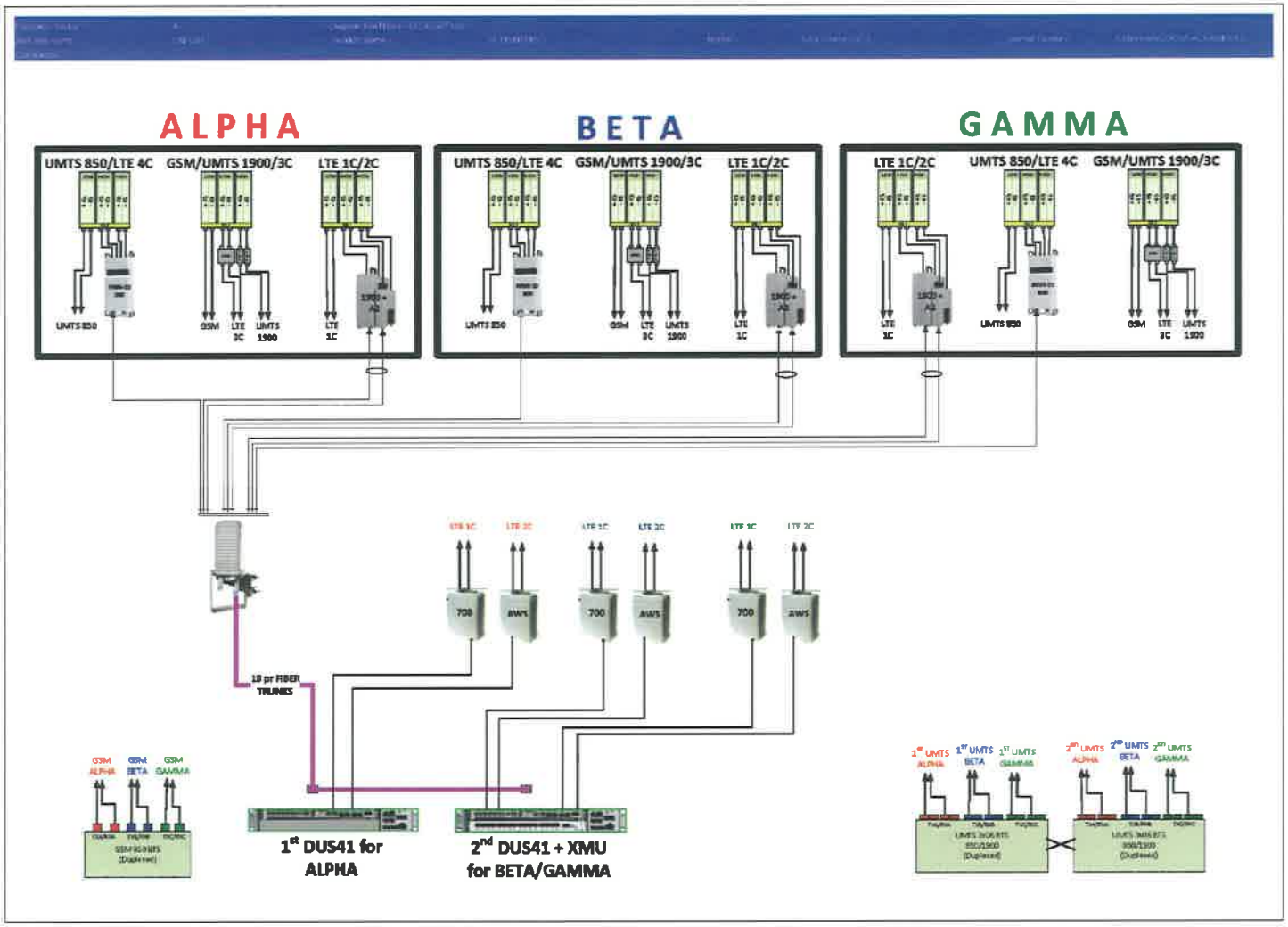
CCL03387
DT MONTEREY
2 PORTOLA PLAZA
MONTEREY, CA 93940
ROOFTOP

SHEET TITLE
GROUNDING DETAILS

SHEET NUMBER
G-1


SEP 15 2016
City of Monterey
PEEC DIVISION




**PLUMBING DIAGRAM**

1

at&t Mobility

MasTec Network Solutions
6100 BROKEN SOUND PARKWAY NW
SUITE NO. 5
BOCA RATON, FLORIDA 33487

m.squared ENGINEERS
1387 CALLE AVANZADO
SAN CLEMENTE, CA 92673
(619) 997-4012

| | |
|---|---|
| PROJECT NO: | - |
| DRAWN BY: | MJM |
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| REV | DATE | DESCRIPTION |
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CCL03387
DT MONTEREY
2 PORTOLA PLAZA
MONTEREY, CA 93940
ROOFTOP

SHEET TITLE
PLUMBING DIAGRAM

SHEET NUMBER
**RF-1**

RECEIVED
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City of Monterey
PEEC DIVISION

CITY OF MONTEREY

# PLANNING PERMIT

RECEIVED
FEB 28 2011
City of Monterey
PEEC DIVISION

February 22, 2011

Valerie Tallerico
Trillium Consulting
7901 Stoneridge Drive, Suite 503
Pleasanton, CA 94588

Subject Property: 2 Portola Plaza
Permit Number and Type: Application 11-003 to Re-open Use Permit 10-179

In the matter of the above-described application, on February 10, 2011, the Zoning Administrator of the City of Monterey approved the granting of the above noted permit subject to the Conditions of Approval set forth on the back of this Permit.

**Within ten (10) days, please return to the City of Monterey Planning, Engineering, and Environmental Compliance Division the original permit signed and dated by the applicant and the property owner** (if other than you). Retain the white copy for your records.

**Qualifications**

1. Signatures - The permit shall not become effective until signed and dated by both the applicant and the property owner and returned to the City of Monterey Planning office.

2. Nullification - The permit shall become null and void if not exercised or extended within twenty-four (24) months of the date of granting hereof. **It is the applicant's responsibility to track the 24-month expiration date and to request any extensions prior to that date. No renewal notice will be sent.**

3. Revocation - The permit shall be subject to revocation for failure to comply with all Conditions of Approval stated on the back of this form.

If you have any questions, please feel free to contact us.

**Applicant's Signature**

2/23/11
**Date**

**Property Owner's Signature**

2/24/2011
**Date**

Enclosures

c: Custom House Hotel Company, 2 Portola Plaza, Monterey, CA 93940
Permit and Inspection Services (Copy of Permit and Site Plans)
Code Enforcement (Copy of Permit Only)

**2 PORTOLA PLAZA**
**(AT & T WIRELESS)**
**APPLICATION 11-003 TO RE-OPEN USE PERMIT 10-179**

## CONDITIONS OF APPROVAL

1. **Planning, Engineering, and Environmental Compliance Division Condition.** That the Use Permit is approved as shown on the January 6, 2011 site plan, elevations and photo-simulations.

2. **Planning, Engineering, and Environmental Compliance Division Condition.** That all development on the project property shall be constructed and thereafter maintained in accordance with the conditions of this permit.

3. **Permit and Inspection Services Division Condition.** The applicant shall comply with all the requirements of the Permit and Inspection Services Division.

4. **Planning, Engineering, and Environmental Compliance Division Condition.** The expanded visual screen shall have a seamless appearance when viewed from ground level, shall be painted to match the existing exterior color of the building, and shall be repaired and or replaced as needed due to aging, weather damage or other natural force or environmental factor.

5. **Planning, Engineering, and Environmental Compliance Division Condition.** This project does not require an application to, or review by, the Architectural Review Committee (ARC) as proposed.

6. **Permit Expiration Condition.** This permit shall become null and void if not exercised or extended within twenty-four (24) months of the date of granting by the Zoning Administrator. It is the applicant's responsibility to track the 24-month expiration date. No renewal notice will be sent to the applicant.

Zoning Administrator
February 10, 2011

# at&t
Your world. Delivered.

# DOWNTOWN MONTEREY
## SF0607
2 PORTOLA PLAZA
MONTEREY, CA 93940


PROPRIETARY INFORMATION

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PTS PACIFIC TELECOM SERVICES, LLC


RECEIVED
JAN 06 2011
City of Monterey
PREC DIVISION


DOWNTOWN MONTEREY
SF0607
2 PORTOLA PLAZA
MONTEREY, CA 93940

## PROJECT INFORMATION

**PROJECT DESCRIPTION:**
AT&T PROPOSES TO MODIFY AN EXISTING UNSTAFFED TELECOMMUNICATIONS FACILITY BY REMOVING (9) EXISTING PANEL ANTENNAS AND REPLACING THEM WITH (12) NEW PANEL ANTENNAS (6) RRU'S AND (3) DC2 SURGE BOXES; ALONG WITH THE ADDITION OF (42) 7/8" DIAMETER COAX LINES (1) 19" RACK AND (1) NEW INDOOR EQUIPMENT CABINET.

**APPLICANT:**
AT&T
4430 ROSEWOOD DRIVE
BLDG 3, FLOOR 6
PLEASANTON, CA 94588

**CODE INFORMATION:**
ZONING CLASSIFICATION: P-C PLANNED COMMUNITY
CONSTRUCTION TYPE: I-B
OCCUPANCY: S-2
JURISDICTION: MONTEREY COUNTY
CURRENT USE: TELECOMMUNICATIONS FACILITY
PROPOSED USE: TELECOMMUNICATIONS FACILITY

**SITE LOCATION: (BASED ON NAD 83):**
LATITUDE: 36.60139° N
LONGITUDE: 121.8925° W
TOP OF STRUCTURE AGL: 74'-10" TOP OF BUILDING
BASE OF STRUCTURE AMSL: 25'-0"

**PARCEL NUMBER(S):**
001-567-015-000

**PROPERTY OWNER:**
CUSTOM HOUSE HOTEL COMPANY, LTD.
TWO PORTOLA PLAZA
MONTEREY, CA 93940
CONTACT: TBD
PHONE: TBD

**TEAM LEAD:**
ERICSSON, INC.
6160 STONERIDGE MALL ROAD
SUITE 400
PLEASANTON, CA 94588
CONTACT: DICK M. DE LA ROSA
PHONE: (925) 737-5901

**SITE ACQUISITION MANAGER:**
ERICSSON, INC.
6160 STONERIDGE MALL ROAD
SUITE 400
PLEASANTON, CA 94588
CONTACT: STEVE STORY
PHONE: (925) 737-5946

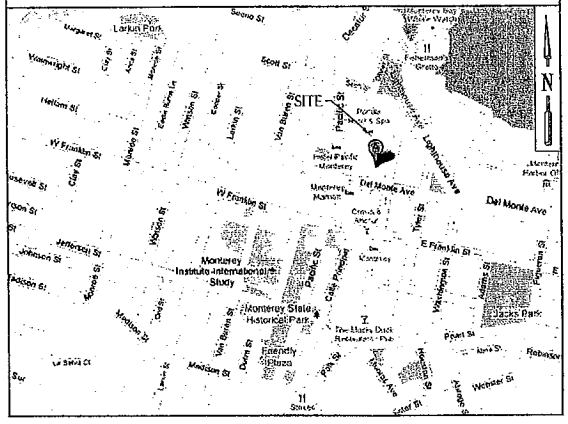
**SITE ACQUISITION:**
TRILLIUM TELECOM SERVICES, LLC
5912 BOLSA AVENUE, SUITE 202
HUNTINGTON BEACH, CA 92649
CONTACT: TOM JOHNSON
PH: (714) 206-2879

**PERMITTING:**
TRILLIUM TELECOM SERVICES, LLC
5912 BOLSA AVENUE, SUITE 202
HUNTINGTON BEACH, CA 92649
CONTACT: TOM JOHNSON
PH: (714) 206-2879

**CONSTRUCTION MANAGER:**
ERICSSON, INC.
6160 STONERIDGE MALL ROAD
SUITE 400
PLEASANTON, CA 94588
CONTACT: STEVE STORY
PH: (925) 737-5946

**GENERAL INFORMATION:**
1. PARKING REQUIREMENTS ARE UNCHANGED.
2. TRAFFIC IS UNAFFECTED.

## VICINITY MAP




## DRAWING INDEX

| SHEET | DESCRIPTION |
|---|---|
| T-1 | TITLE SHEET |
| G-1 | GENERAL NOTES |
| A-1 | SITE PLAN |
| A-2 | ROOF PLAN |
| A-3 | ENLARGED ROOF PLAN |
| A-4 | EXISTING & PROPOSED EQUIPMENT PLAN |
| A-5 | EXISTING & PROPOSED SOUTH ELEVATION |
| A-6 | EXISTING & PROPOSED WEST ELEVATION |
| A-7 | EXISTING & PROPOSED EAST ELEVATION |

## CODE COMPLIANCE

2007 BUILDING STANDARDS ADMINISTRATION CODE
– PART 1, TITLE 24, C.C.R.
2007 CALIFORNIA BUILDING CODE (CBC)
– PART 2, TITLE 24, C.C.R.
2006 INTERNATIONAL BUILDING CODE (IBC)
– VOLUMES 1–3 & CALIFORNIA AMENDMENTS
2007 CALIFORNIA ELECTRICAL CODE (CEC)
– PART 3, TITLE 24, C.C.R.
2005 NATIONAL ELECTRICAL CODE (NEC)
– INCLUDING 2007 CALIFORNIA AMENDMENTS
2007 CALIFORNIA MECHANICAL CODE (CMC)
– PART 4, TITLE 24, C.C.R.
2006 INTERNATIONAL MECHANICAL CODE (IMC)
– INCLUDING 2007 CALIFORNIA AMENDMENTS
2007 CALIFORNIA PLUMBING CODE (CPC)
– PART 5, TITLE 24, C.C.R.
2006 INTERNATIONAL PLUMBING CODE (IPC)
– INCLUDING 2007 CALIFORNIA AMENDMENTS
2007 CALIFORNIA ENERGY CODE (CEC)
– PART 6, TITLE 24, C.C.R.
2004 ASME A17.1 SAFETY CODE
– FOR ELEVATORS AND ESCALATORS
2007 CALIFORNIA FIRE CODE (CFC)
– PART 9, TITLE 24, C.C.R.
2006 INTERNATIONAL FIRE CODE (IFC)
– INCLUDING 2007 CALIFORNIA AMENDMENTS
2007 CALIFORNIA REFERENCED STANDARDS
– PART 12, TITLE 24, C.C.R.
– TITLE 19, C.C.R.
PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
ANSI/EIA/TIA-222-G STANDARDS FOR BROADCAST STRUCTURES, LOCAL CODES AND ORDINANCES.

IN THE EVENT OF A CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL.

## DRIVING DIRECTIONS

START FROM REGIONAL OFFICE:

| | |
|---|---|
| DEPART ROSEWOOD DR TOWARD OLD SANTA RITA RD | 0.5 MILES |
| TURN LEFT ONTO SANTA RITA RD | 0.4 MILES |
| TAKE RAMP RIGHT FOR I-580 WEST / ARTHUR H BREED FWY TOWARD OAKLAND | 2.6 MILES |
| TAKE RAMP RIGHT FOR I-680 SOUTH / SINCLAIR FWY TOWARD SAN JOSE | 29.7 MILES |
| TAKE RAMP RIGHT FOR US-101 SOUTH / BAYSHORE FWY TOWARD LOS ANGELES | 48.9 MILES |
| AT EXIT 338, TAKE RAMP RIGHT FOR SR-156 WEST TOWARD MONTEREY PENINSULA VALERO ON THE CORNER | 0.5 MILES |
| KEEP STRAIGHT ONTO SR-156 | 6.0 MILES |
| KEEP STRAIGHT ONTO SR-1 SOUTH / CABRILLO HWY | 11.8 MILES |
| AT EXIT 402B, TAKE RAMP RIGHT FOR DEL MONTE AVE TOWARD PACIFIC GROVE / DEL MONTE AVE | 2.1 MILES |
| PASS VALERO IN | 1.5 MI |
| ARRIVE AT 2 PORTOLA PLAZA, MONTEREY, CA 93940 | |

| APPROVAL | DATE | SIGNATURE | APPROVAL | DATE | SIGNATURE |
|---|---|---|---|---|---|
| RF ENGINEER: | | | LANDLORD: | | |
| RF MANAGER: | | | SITE ACQUISITION: | | |
| OPPS MANAGER: | | | ZONING AGENT: | | |
| CONSTR MANAGER: | | | PROJECT MANAGER | | |
| NSB MANAGER: | | | CONSTR MANAGER: | | |
| TRANSPORT: | | | | | |
| EQUIP ENGINEER: | | | | | |
| COMPLIANCE: | | | | | |

REVIEWERS SHALL CLEARLY PLACE INITIALS ADJACENT TO EACH REDLINE NOTE AS DRAWINGS ARE BEING REVIEWED

## ABBREVIATIONS

| | | | | | |
|---|---|---|---|---|---|
| A/C | AIR CONDITIONING | HORZ | HORIZONTAL | PLYWD | PLYWOOD |
| AGL | ABOVE GROUND LEVEL | HR | HOUR | PROJ | PROJECT |
| APPROX | APPROXIMATELY | HT | HEIGHT | PROP | PROPERTY |
| | | HVAC | HEATING VENTILATION AIR CONDITIONING | PT | PRESSURE TREATED |
| BLDG | BUILDING | | | REQ | REQUIRED |
| BLK | BLOCKING | | | RM | ROOM |
| | | | | SHT | SHEET |
| CLG | CEILING | ID | INSIDE DIAMETER | SIM | SIMILAR |
| CLR | CLEAR | IN | INCH | SPEC | SPECIFICATION |
| CONC | CONCRETE | INFO | INFORMATION | SF | SQUARE FOOT |
| CONST | CONSTRUCTION | INSUL | INSULATION | SS | STAINLESS STEEL |
| CONT | CONTINUOUS | INT | INTERIOR | STL | STEEL |
| | | IBC | INTERNATIONAL BUILDING CODE | STRUCT | STRUCTURAL |
| DBL | DOUBLE | | | STD | STUD |
| DIA | DIAMETER | | | SUSP | SUSPENDED |
| DIAG | DIAGONAL | LBS | POUNDS | | |
| DN | DOWN | MAX | MAXIMUM | THRU | THROUGH |
| DET | DETAIL | MECH | MECHANICAL | TNNG | TINNED |
| DWG | DRAWING | MTL | METAL | TYP | TYPICAL |
| | | MFR | MANUFACTURE | | |
| EA | EACH | MGR | MANAGER | UNO | UNLESS NOTED OTHERWISE |
| ELEV | ELEVATION | MIN | MINIMUM | | |
| ELEC | ELECTRICAL | MISC | MISCELLANEOUS | VERT | VERTICAL |
| EQ | EQUAL | RO | ROUGH OPENING | VIF | VERIFY IN FIELD |
| EQUIP | EQUIPMENT | | | | |
| EXT | EXTERIOR | NA | NOT APPLICABLE | W/ | WITH |
| | | NIC | NOT IN CONTRACT | W/O | WITHOUT |
| FIN | FINISH | NTS | NOT TO SCALE | WP | WATER PROOF |
| FLUOR | FLOURESCENT | | | | |
| FLR | FLOOR | OC | ON CENTER | | |
| FT | FOOT | OD | OUTSIDE DIAMETER | | |
| GA | GAUGE | | | | |
| GALV | GALVANIZED | | | | |
| GC | GENERAL CONTRACTOR | | | | |
| GRND | GROUND | | | | |
| GYP BD | GYPSUM WALL BOARD | | | | |

## PROJECT TEAM

**PROJECT ARCHITECT**
THOMAS HOLLAND, AIA
PACIFIC TELECOM SERVICES, LLC
3825 HOPYARD ROAD, SUITE 182
PLEASANTON, CA 94588
CONTACT: JAMES VACCARO
PH: (415) 608-3670
EMAIL: JVACCARO@PTSWA.COM

**PROJECT CONSULTANT**
ERICSSON INC.
6160 STONEBRIDGE MALL ROAD
SUITE 400
PLEASANTON, CA 94588

**PROJECT CONSULTANT:**
TRILLIUM TELECOM SERVICES, LLC
5912 BOLSA AVENUE, SUITE 202
HUNTINGTON BEACH, CA 92649
CONTACT: TOM JOHNSON
PH: (714) 206-2879

REVISIONS

| NO. | DATE | DESCRIPTION | INITIAL |
|---|---|---|---|
| 1 | 08/30/10 | ISSUED FOR 90% REVIEW | AV |
| 2 | 09/03/10 | ISSUED FOR 100% | JV |
| 3 | 10/14/10 | REVISED FOR 100% | WJR |
| 4 | 10/29/10 | REVISED FOR 100% | BDC |
| 5 | 11/29/10 | REVISED FOR 100% | BDC |

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1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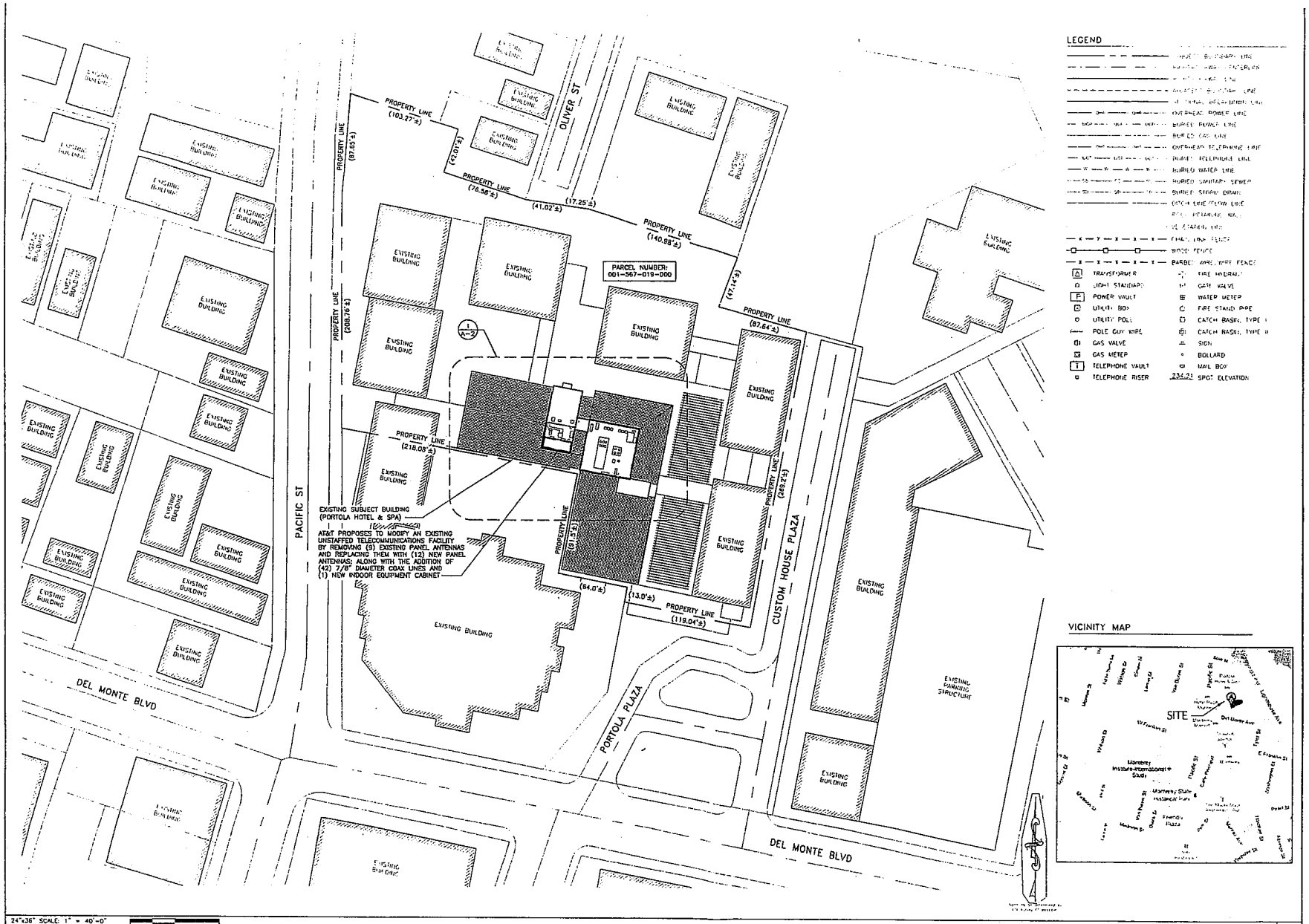


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| 4 | 10/20/10 | REVISED FOR 100ZD | DDE |
| 5 | 11/19/10 | REVISED FOR 100ZD | DDE |

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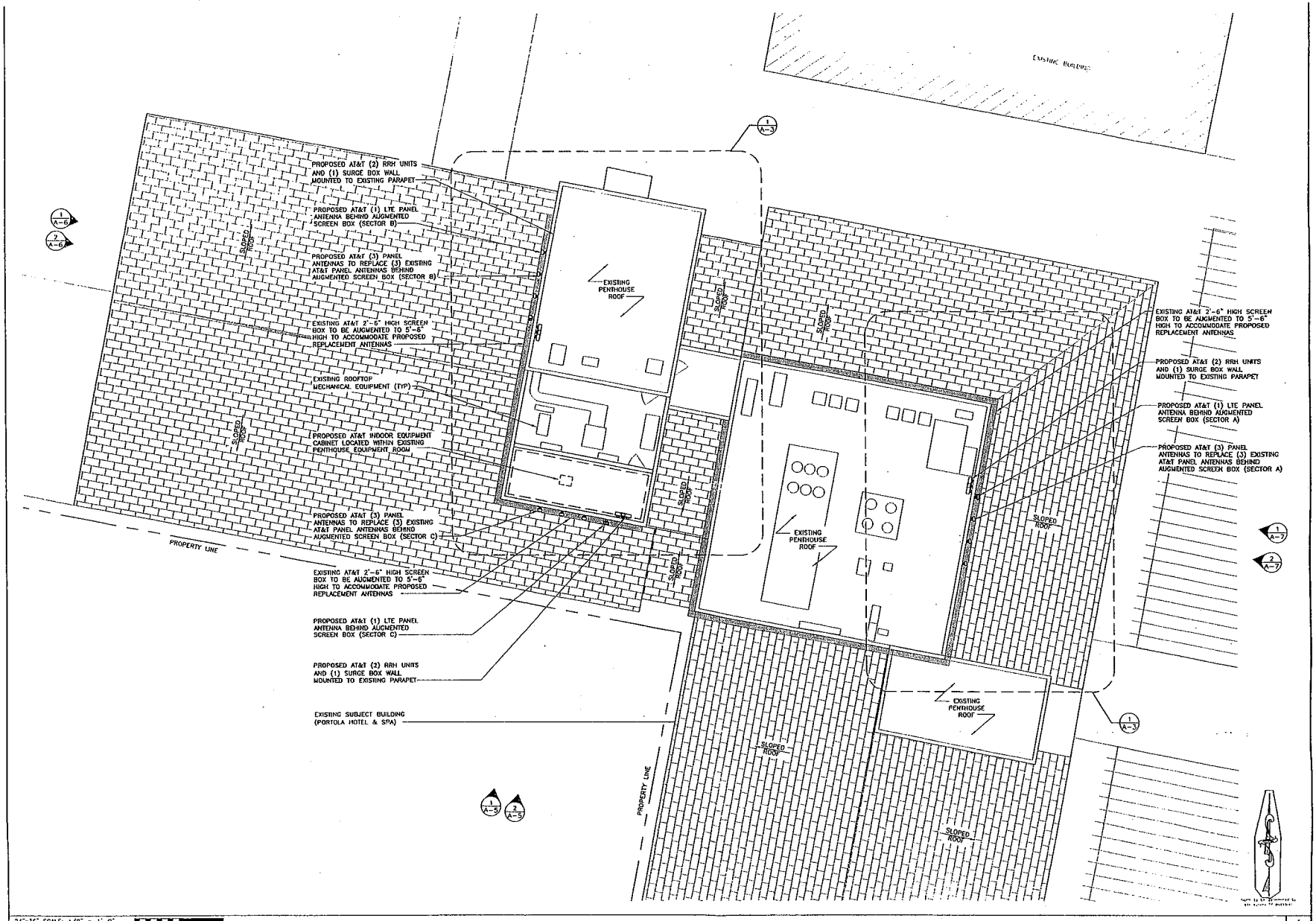
SHEET TITLE
SITE PLAN

SHEET NUMBER
A-1




24"x36" SCALE: 1/8" = 1'-0"
11"x17" SCALE: 1/16" = 1'-0"

ROOF PLAN 1

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| 5 | 11/8/10 | REVISED FOR 100% | DDE |

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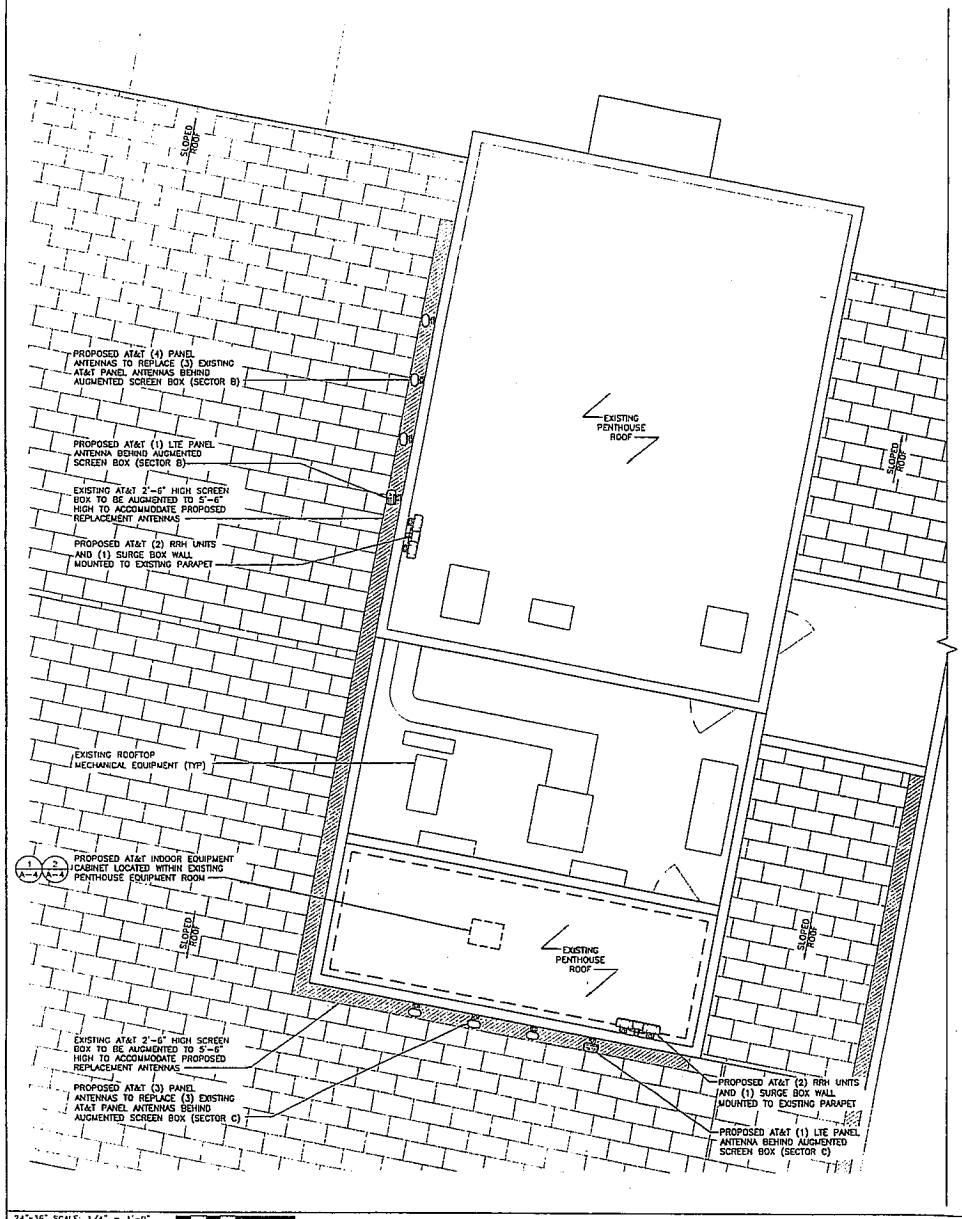
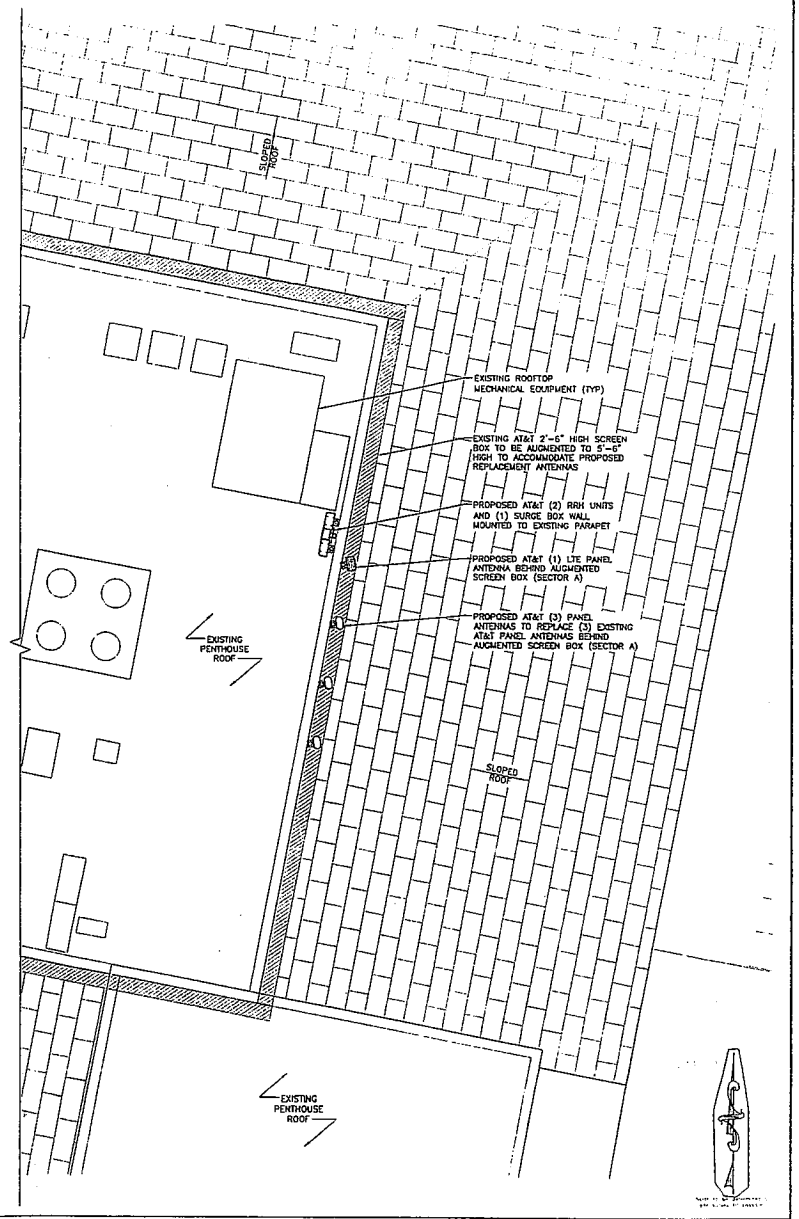
SHEET TITLE
ROOF PLAN

SHEET NUMBER
A-2




24"x36" SCALE: 1/4" = 1'-0"
11"x17" SCALE: 1/8" = 1'-0"

ENLARGED ROOF PLAN 1

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| 3 | 10/18/10 | REVISED FOR 100% | W.M |
| 4 | 10/20/10 | REVISED FOR 100% | BDC |
| 5 | 11/29/10 | REVISED FOR 100% | BDC |

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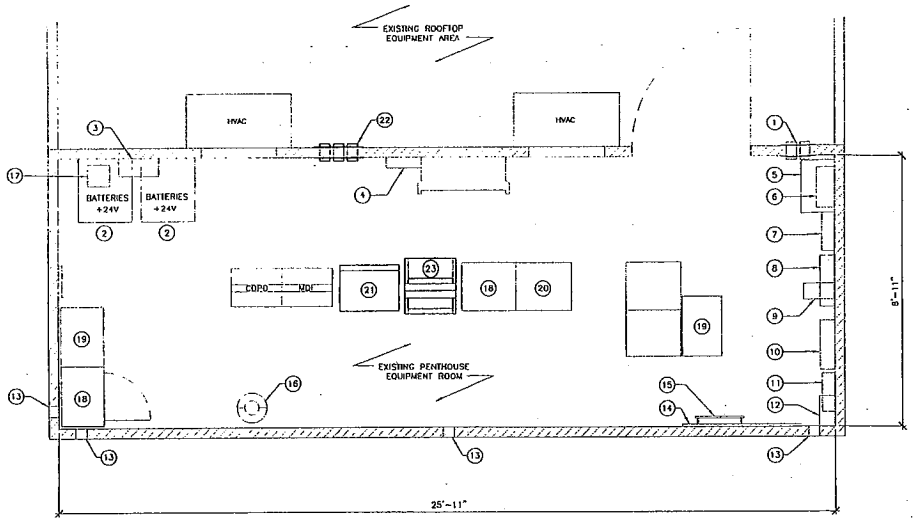
SHEET TITLE
ENLARGED ROOF PLAN

SHEET NUMBER
A-3

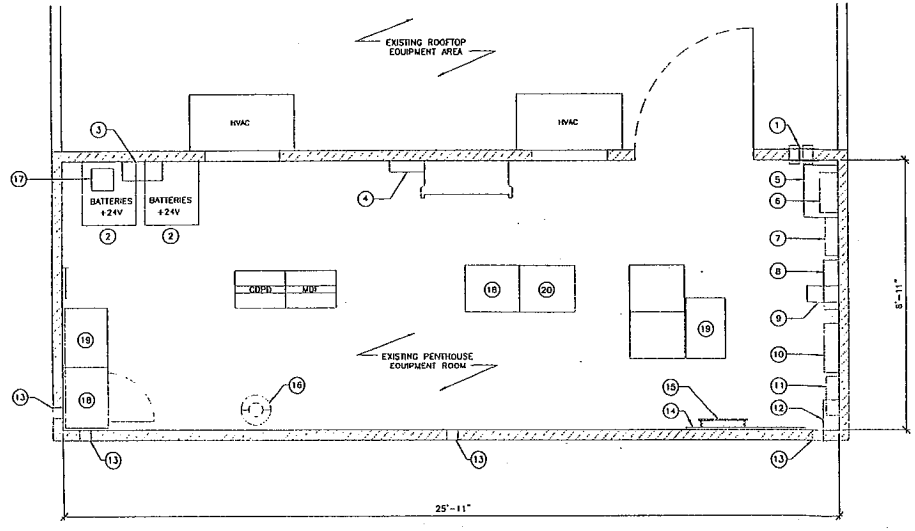



NOTES:

1. EXISTING WAVEGUIDE PORT
2. EXISTING BATTERY STRING
3. EXISTING BATTERY DISCONNECT
4. EXISTING ENVIRONMENTAL CONTROL PANEL
5. EXISTING TRANSFORMER
6. EXISTING TRANSFORMER DISCONNECT SWITCH
7. EXISTING TRANSFORMER MAIN BREAKER PANEL
8. EXISTING AC BREAKER SAFETY SWITCH
9. EXISTING SURGE ARRESTOR
10. EXISTING AC BREAKER PANEL
11. EXISTING FIRE SUPPRESSION PANEL
12. EXISTING ALARM PANEL
13. EXISTING SINGLE ANTENNA CABLE ENTRY PORT
14. EXISTING 4' X 4' TELCO BOARD
15. EXISTING 20" GROUND BAR
16. EXISTING FIRE SUPPRESSION
17. EXISTING DC POWER INVERTER MOUNTED TO CABLE LADDER
18. EXISTING ERICSSON RBS 2206 BTS CABINET
19. EXISTING ERICSSON BBU 2000
20. EXISTING ERICSSON RBS 3206 BTS CABINET
21. PROPOSED ERICSSON RBS 2206 BTS CABINET
22. PROPOSED (6) PORT WAVEGUIDE PORT
23. PROPOSED 19" RACK TO HOUSE 6601

24"x36" SCALE: 1/2" = 1'-0"
11"x17" SCALE: 1/4" = 1'-0"

PROPOSED EQUIPMENT ROOM LAYOUT | 2




NOTES:

1. EXISTING WAVEGUIDE PORT
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3. EXISTING BATTERY DISCONNECT
4. EXISTING ENVIRONMENTAL CONTROL PANEL
5. EXISTING TRANSFORMER
6. EXISTING TRANSFORMER DISCONNECT SWITCH
7. EXISTING TRANSFORMER MAIN BREAKER PANEL
8. EXISTING AC BREAKER SAFETY SWITCH
9. EXISTING SURGE ARRESTOR
10. EXISTING AC BREAKER PANEL
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18. EXISTING ERICSSON RBS 2206 BTS CABINET
19. EXISTING ERICSSON BBU 2000
20. EXISTING ERICSSON RBS 3206 BTS CABINET

24"x36" SCALE: 1/2" = 1'-0"
11"x17" SCALE: 1/4" = 1'-0"

EXISTING EQUIPMENT ROOM LAYOUT | 1

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| 5 | 11/29/10 | REVISED FOR 100% | BDC |

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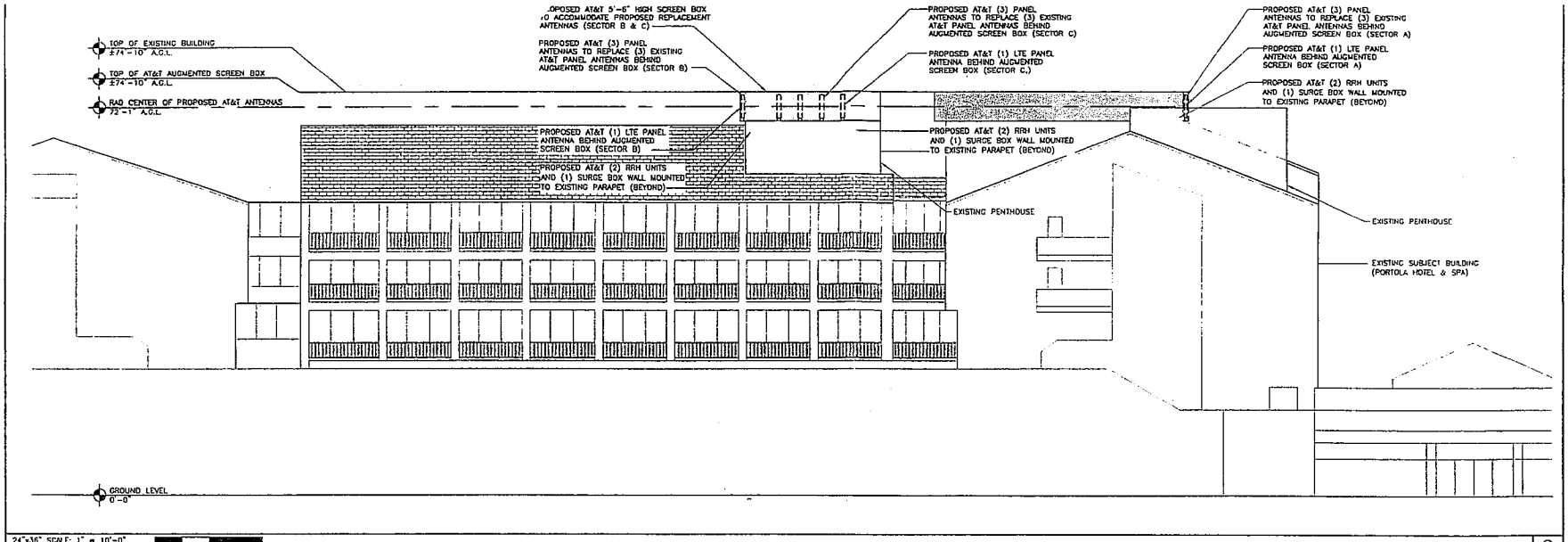
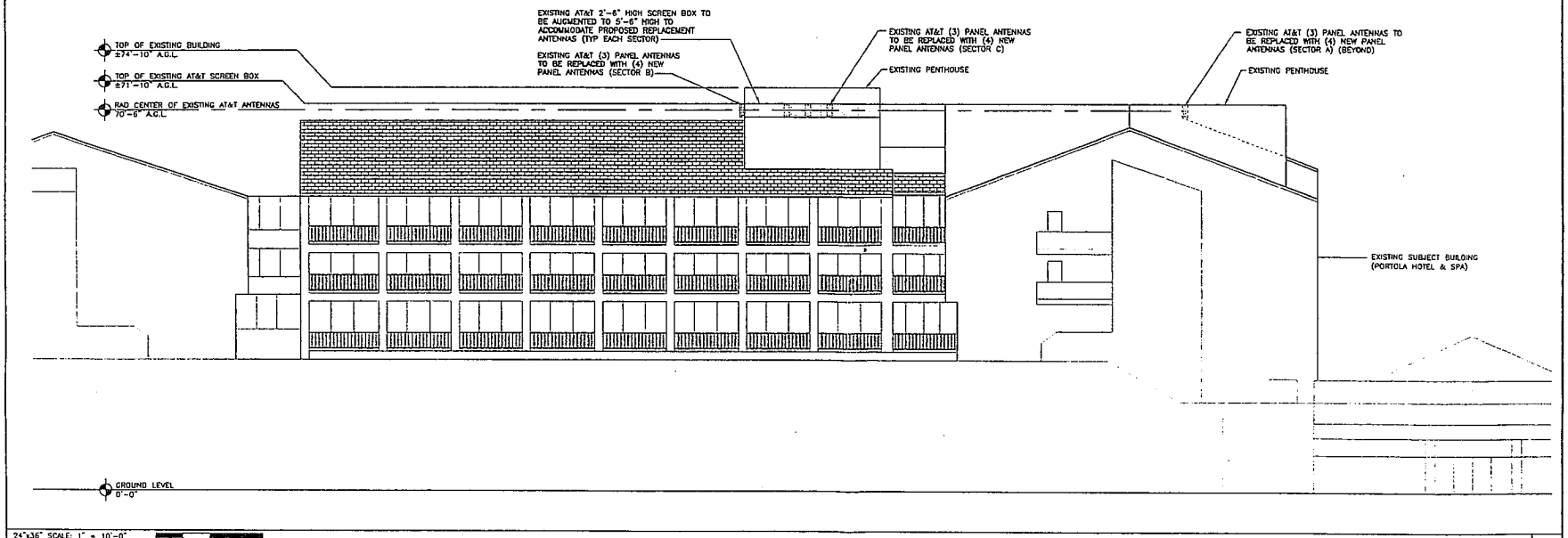
SHEET TITLE
EXISTING & PROPOSED EQUIPMENT PLAN

SHEET NUMBER
A-4




24"x36" SCALE: 1" = 10'-0"
11"x17" SCALE: 1" = 20'-0"
10' 5' 0' 10'

PROPOSED SOUTH ELEVATION | 2




24"x36" SCALE: 1" = 10'-0"
11"x17" SCALE: 1" = 20'-0"
10' 5' 0' 10'

EXISTING SOUTH ELEVATION | 1

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| 3 | 10/14/10 | REVISED FOR 100ZD | WJP |
| 4 | 10/20/10 | REVISED FOR 100ZD | BDL |
| 5 | 11/29/10 | REVISED FOR 100ZD | BDL |

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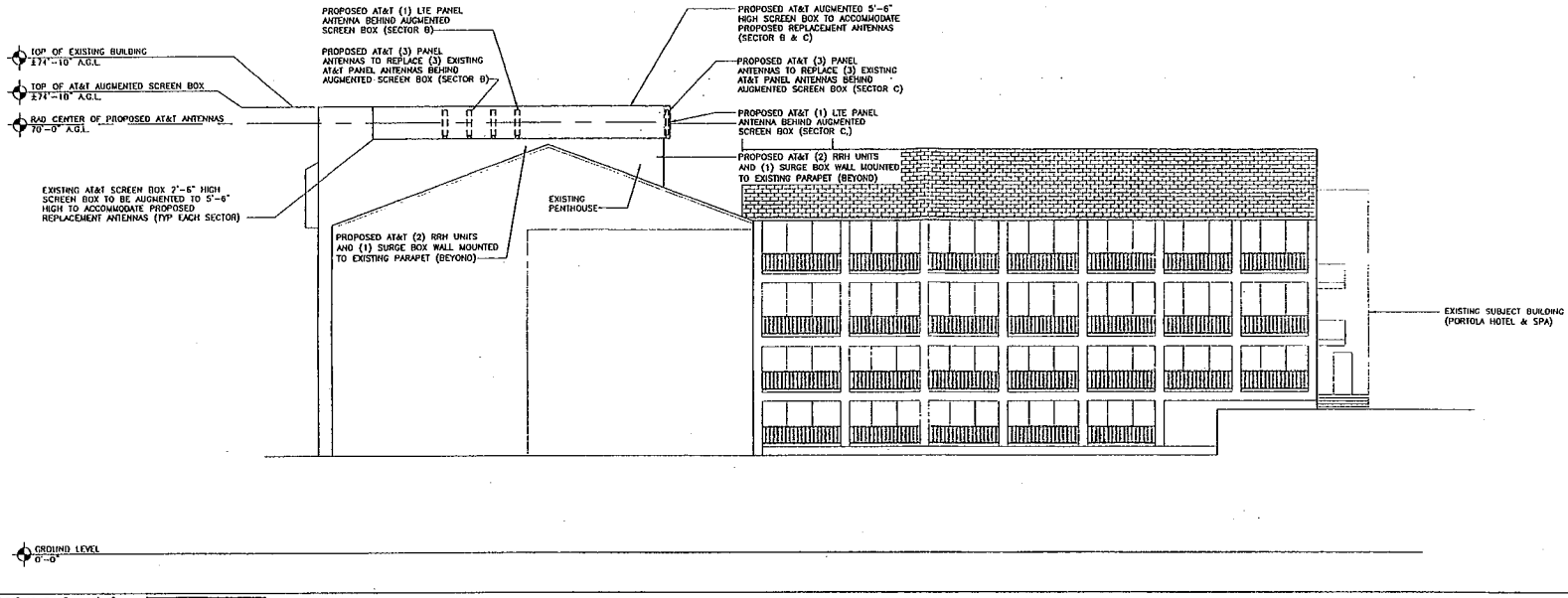
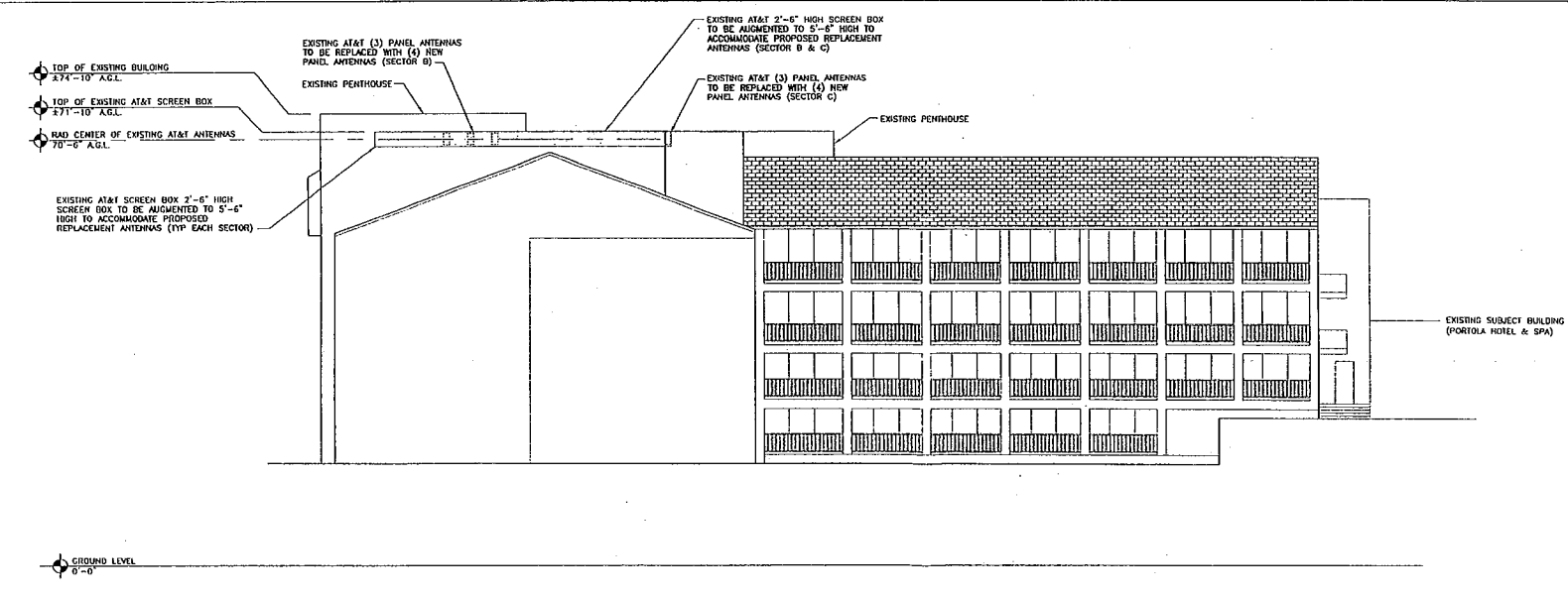
SHEET TITLE
EXISTING & PROPOSED SOUTH ELEVATION

SHEET NUMBER
A-5




PROPOSED WEST ELEVATION | 2




EXISTING WEST ELEVATION | 1

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| 3 | 10/18/10 | REVISED FOR 100ZD | WJR |
| 4 | 10/20/10 | REVISED FOR 100ZD | BDE |
| 5 | 11/21/10 | REVISED FOR 100ZD | BDE |

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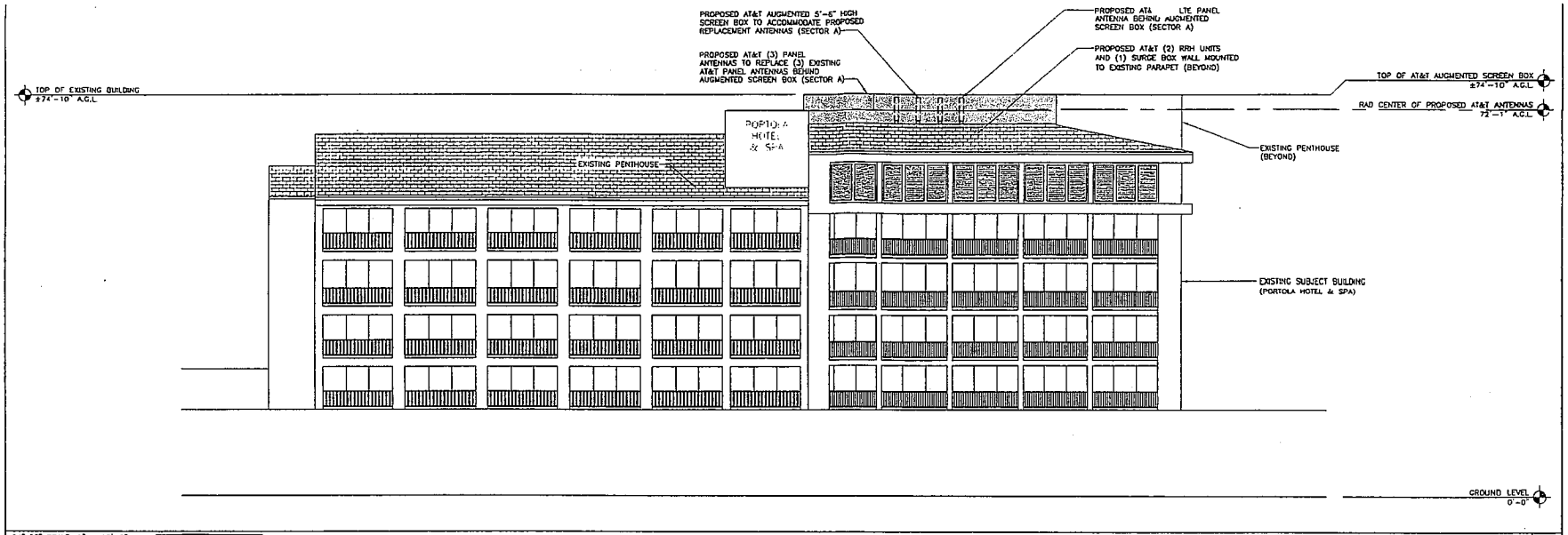
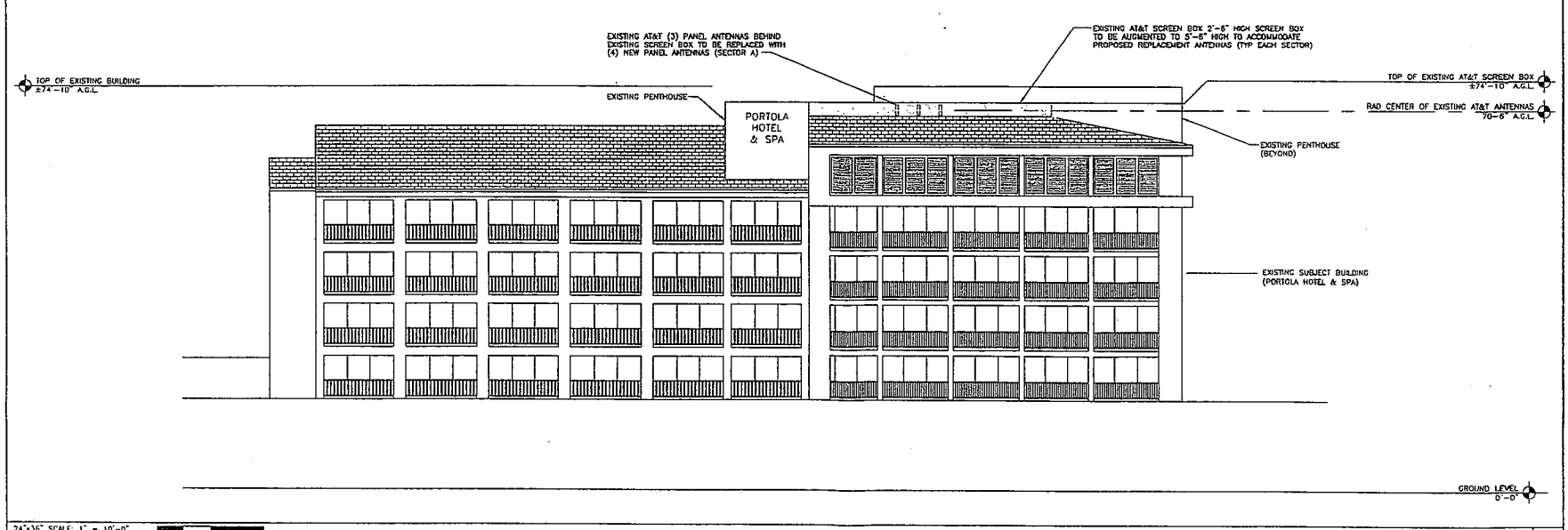
SHEET TITLE
EXISTING & PROPOSED WEST ELEVATION

SHEET NUMBER
A-6




PROPOSED EAST ELEVATION | 2




EXISTING EAST ELEVATION | 1

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| 5 | 11/29/10 | REVISED FOR 100ZO | DDC |

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SHEET TITLE
EXISTING & PROPOSED EAST ELEVATION

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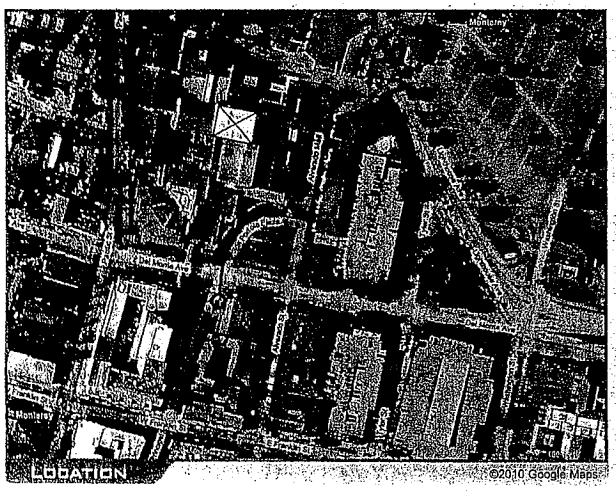
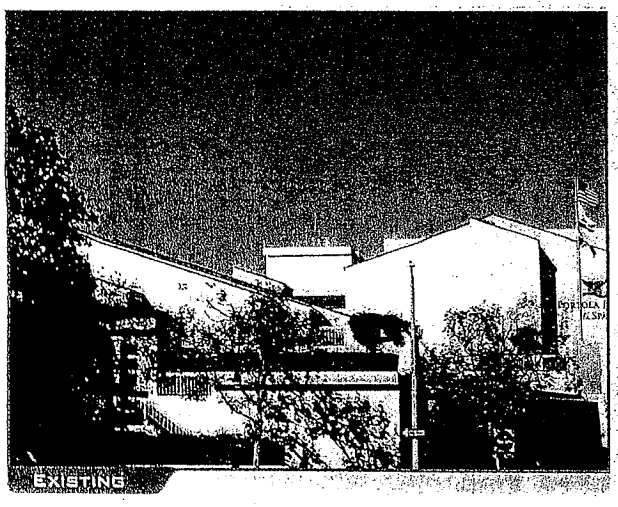
AEsims.com
877 9AE sims



LOCATION


EXISTING

PROPOSED LOOKING NORTH FROM CALLE PRINCIPAL

ACCURACY OF PHOTO SIMULATION BASED UPON INFORMATION PROVIDED BY PROJECT APPLICANT.

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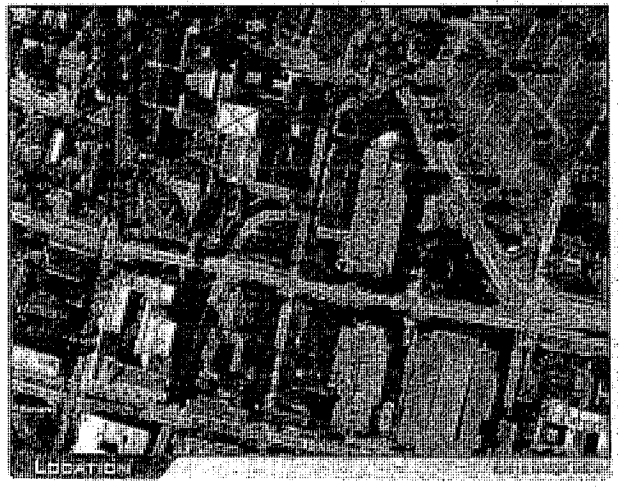
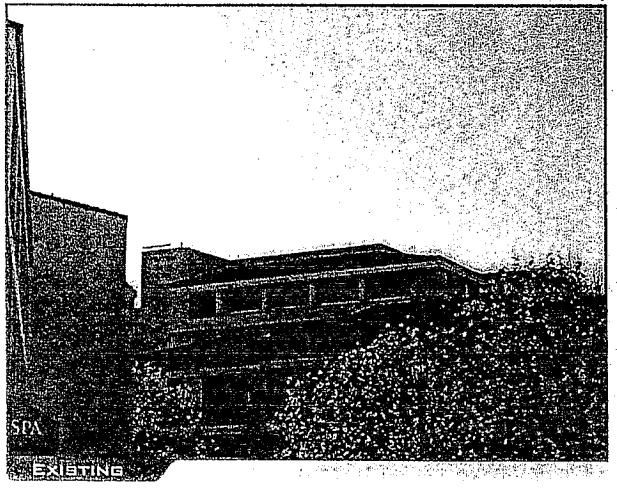
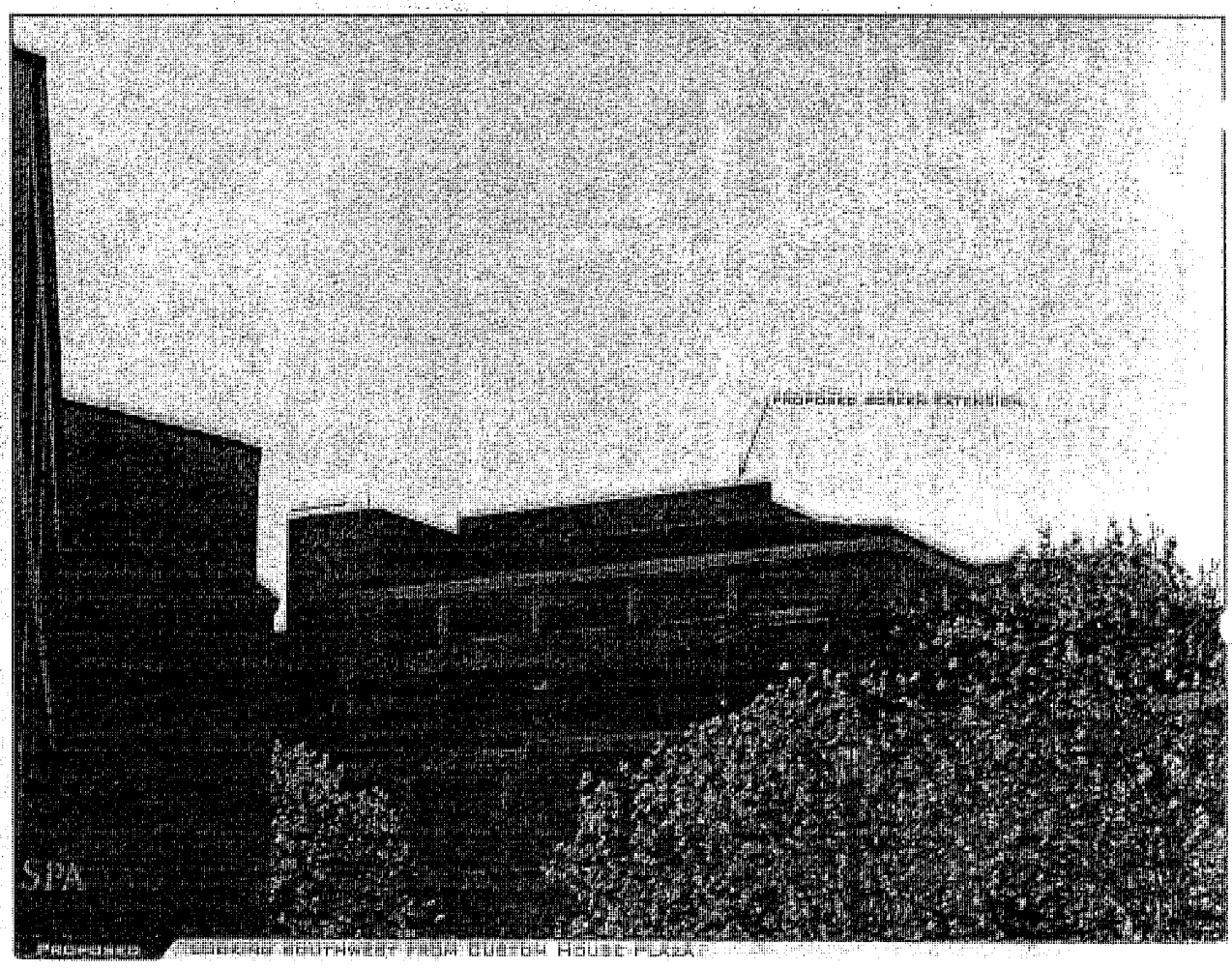



ACCURACY OF PHOTO SIMULATION BASED UPON INFORMATION PROVIDED BY PROJECT APPLICANT.

# Structural Analysis
# AT&T – 5C/6C/7C/BBU XMU/4TXRX

**April 1, 2019**

| | |
|---|---|
| Site Name | DT MONTEREY |
| Site Number | CCL03387 |
| Client | MASTEC |
| Proposed Carrier | AT&T |
| Site Location | 2 PORTOLA PLAZA<br>MONTEREY, CA 93940<br>36.601892 N NAD83<br>-121.894468 W NAD83 |
| Structure Type | Rooftop |
| Structural Usage Ratio | **21.0%** |
| Overall Result | **Pass** |

Upon reviewing the results of this analysis, it is our opinion that the structure does meet the specified IBC/ASCE/TIA code requirements. The antenna and RRU mounts are therefore deemed adequate to support the existing and proposed loading as listed in this report.

REGISTERED PROFESSIONAL ENGINEER
MICHAEL B.
No. C 83930
Exp. 9-30-19
CIVIL
STATE OF CALIFORNIA

1387 Calle Avanzado. San Clemente, CA 92673 949-391-6824

## Summary of Contents

Introduction
- Opening Statement
- Project Description
- Criteria
- Conclusion

Calculations

Appendix A
- Design Tables & Resources Used

## Assumptions and Limitations

Our structural calculations are completed assuming all information provided to M SQUARED WIRELESS is accurate and applicable to this site. For the purposes of calculations, we assume an overall structure condition of "like new" and all members and connections to be free of corrosion and/or structural defects. The structure owner and/or contractor shall verify the structure's condition prior to installation of any proposed equipment. If actual conditions differ from those described in this report M SQUARED WIRELESS should be notified immediately to complete a revised evaluation.

Our evaluation is completed using standard TIA, AISC, ACI, and ASCE methods and procedures. Our structural results are proprietary and should not be used by others as their own. M SQUARED WIRELESS is not responsible for decisions made by others that are or are not based on our supplied assumptions and conclusions.

## INTRODUCTION

At the request of **AT&T**, M SQUARED WIRELESS has performed a structural analysis for the proposed modifications. All supporting documents have been obtained from the client and are assumed to be accurate and applicable at this site. The equipment mounts were analyzed using Risa3D version 17.0.

## Supporting Documentation

| | |
|---|---|
| **Antenna Loading** | M SQUARED WIRELESS, Construction Drawings, Dated: 06/21/18 |
| **Previous Analysis** | M SQUARED WIRELESS, Mount Analysis, Dated: 09/29/16 |

## Analysis Code Requirements

| | |
|---|---|
| Wind Speed | 91 mph (Vult) |
| Wind Speed w/ ice | 30 mph (3-Second Gust) w/ 0” ice |
| TIA Revision | ANSI/TIA-222-H |
| Adopted IBC | 2018 IBC / 2019 CBC |
| Structure Class | 2 |
| Exposure Category | C |
| Topographic Category | 1 |
| Calculated Crest Height | 33 |

## CONCLUSION

Upon reviewing the results of this analysis, it is our opinion that the structure does meet the specified IBC/ASCE/TIA code requirements. The antenna and RRU mounts are therefore deemed adequate to support the existing and proposed loading as listed in this report.

## Existing and Reserved Loading

| Mount Height (ft) | Qty. | Appurtenance | Mount Type | Carrier |
|---|---|---|---|---|
| 70.0 | 9 | CCI HPA-65F-BUU-H2 | Pipe Mount | AT&T |
| | 2 | RRUs 12 + A2 | | |
| | 2 | RRUs 32 B2 | | |
| | 2 | DC2 Surge | | |
| Equipment Room | 1 | RRUs 12 | | |
| | 2 | RRUs 12 + A2 | Uni-Strut | |
| | 1 | RRUs 12 | | |

## To Be Removed Loading

| Mount Height (ft) | Qty. | Appurtenance | Mount Type | Carrier |
|---|---|---|---|---|
| 70.0 | 9 | CCI HPA-65F-BUU-H2 | - | AT&T |
| | 2 | RRUs 12 + A2 | | |
| Equipment Room | 1 | RRUs 12 | | |
| | 2 | RRUs 12 + A2 | | |
| | 1 | RRUs 12 | | |

## Proposed Loading

| Mount Height (ft) | Qty. | Appurtenance | Mount Type | Carrier |
|---|---|---|---|---|
| 70.0 | 9 | Commscope NNHH-65A-R4 | 2” Std. Pipe Mount | AT&T |
| | 2 | RRUs 4415 B25 | | |
| | 2 | RRUs 4426 B66 | | |
| | 2 | RRUs 4478 B14 | | |
| | 2 | RRUs 4478 B5 | | |
| | 2 | Diplexers | | |
| | 1 | WCS TMA | | |
| | 2 | Raycap DC6-48-60-0-8C-EV | | |
| Equipment Room | 3 | RRUs E2 | 3” Std. Pipe | |
| | 1 | RRUs 4478 B14 | | |
| | 1 | RRUs 4478 B5 | | |
| | 1 | RRUs 4426 B66 | Uni-Strut | |
| | 1 | RRUs 4415 B25 | | |
| | 1 | Diplexer | | |

## Final Configuration

| Mount Height (ft) | Qty. | Appurtenance | Mount Type | Carrier |
|---|---|---|---|---|
| 70.0 | 9 | Commscope NNHH-65A-R4 | 2” Std. Pipe Mount | AT&T |
| | 2 | RRUs 32 B2 | | |
| | 2 | RRUs 4415 B25 | | |
| | 2 | RRUs 4426 B66 | | |
| | 2 | RRUs 4478 B14 | | |
| | 2 | RRUs 4478 B5 | | |
| | 2 | Diplexers | | |
| | 1 | WCS TMA | | |
| | 2 | DC2 Surge | | |
| | 2 | Raycap DC6-48-60-0-8C-EV | | |
| Equipment Room | 3 | RRUs E2 | 3” Std. Pipe | |
| | 1 | RRUs 4478 B14 | | |
| | 1 | RRUs 4478 B5 | | |
| | 1 | RRUs 4426 B66 | Uni-Strut | |
| | 1 | RRUs 4415 B25 | | |
| | 1 | Diplexer | | |

## Structure Usages

| | |
|---|---|
| 5/8” Kwik Bolt TZ | .210 |
| PIPE_3.0 | .093 |
| PIPE_1.5 | .040 |
| P1000 Unistrut | .027 |

**RATING= 21.0%**

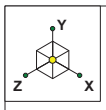
| | | | |
|---|---|---|---|
| Site Name: | CCL03387 | Design Wind Velocity: | 91 |
| Client: | Mastec | Wind Centerline: | 70 |
| Carrier: | AT&T | Exposure Category: | C |
| Date: | 4/1/2019 | Code | TIA-222-H |

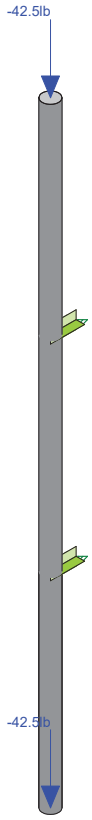
| | | | |
|---|---|---|---|
| Shape = | Round | | |
| Ca = | 1.2 | | |
| qz = | 23.6 | Fp = | 0.49 |
| F = | 28.3 | | |

| Appurtenance Name | Quantity | Weight (lbs) | Wind Force F-norm (lbs) | Wind Force F-perp (lbs) | Seismic Force F-norm (lbs) | Seismic Force F-perp (lbs) |
|---|---|---|---|---|---|---|
| Commscope NNHH-65A-R4 | 3.0 | 85.0 | 157.9 | 102.8 | 41.4 | 41.4 |
| Commscope NNHH-65A-R4 | 3.0 | 85.0 | 157.9 | 102.8 | 41.4 | 41.4 |
| Commscope NNHH-65A-R4 | 3.0 | 85.0 | 157.9 | 102.8 | 41.4 | 41.4 |
| RRUs 32 B2 | 2.0 | 53.0 | 64.8 | 39.4 | 25.8 | 25.8 |
| RRUs 4415 B25 | 2.0 | 50.0 | 43.5 | 24.7 | 24.4 | 24.4 |
| RRUs 4426 B66 | 2.0 | 55.0 | 38.8 | 17.1 | 26.8 | 26.8 |
| RRUs 4478 B14 | 2.0 | 60.0 | 39.0 | 21.8 | 29.2 | 29.2 |
| RRUs 4478 B5 | 2.0 | 65.0 | 43.5 | 25.0 | 31.7 | 31.7 |
| Diplexers | 2.0 | 25.0 | 5.0 | 10.2 | 12.2 | 12.2 |
| WCS TMA | 1.0 | 25.0 | 14.0 | 4.6 | 12.2 | 12.2 |
| DC2 Surge | 2.0 | 16.0 | 20.9 | 12.7 | 7.8 | 7.8 |
| Raycap DC6-48-60-0-8C-EV | 2.0 | 27.0 | 27.0 | 27.0 | 13.2 | 13.2 |

Envelope Only Solution

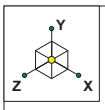
| | | |
|---|---|---|
| M SQUARED WIRELESS | CCL03387 | E Pipe Mount |
| | | Apr 1, 2019 at 10:01 AM |
| | | CCL03387 Pipe Mount.r3d |

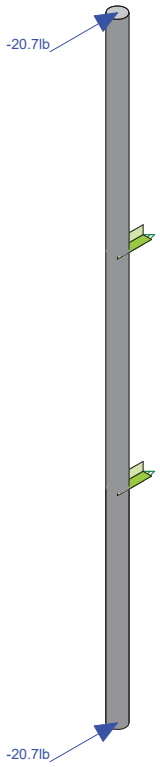



Loads: BLC 1, Self Weight
Envelope Only Solution

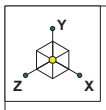
| | | |
|---|---|---|
| M SQUARED WIRELESS | CCL03387 | E Pipe Mount |
| | | Apr 1, 2019 at 10:02 AM |
| | | CCL03387 Pipe Mount.r3d |

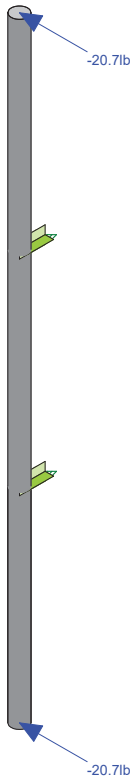



Loads: BLC 8, Seismic Load AZI 000
Envelope Only Solution

| | | |
|---|---|---|
| M SQUARED WIRELESS | CCL03387 | E Pipe Mount |
| | | Apr 1, 2019 at 10:02 AM |
| | | CCL03387 Pipe Mount.r3d |




Loads: BLC 9, Seismic Load AZI 090
Envelope Only Solution

| | | |
|---|---|---|
| M SQUARED WIRELESS | CCL03387 | E Pipe Mount |
| | | Apr 1, 2019 at 10:02 AM |
| | | CCL03387 Pipe Mount.r3d |

## Member Primary Data

| | Label | I Joint | J Joint | K Joint | Rotate(deg) | Section/Shape | Type | Design List | Material | Design Rules |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | M1 | N7 | N8 | | | 1.5" Std Pipe | None | None | A53 Gr.B | Typical |
| 2 | M2 | N11 | N9 | | | RIGID | None | None | RIGID | Typical |
| 3 | M3 | N12 | N10 | | | RIGID | None | None | RIGID | Typical |

## Hot Rolled Steel Properties

| | Label | E [ksi] | G [ksi] | Nu | Therm (\1E... | Density[lb/i... | Yield[ksi] | Ry | Fu[ksi] | Rt |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A992 | 29000 | 11154 | .3 | .65 | .284 | 50 | 1.1 | 65 | 1.1 |
| 2 | A36 Gr.36 | 29000 | 11154 | .3 | .65 | .284 | 36 | 1.5 | 58 | 1.2 |
| 3 | A572 Gr.50 | 29000 | 11154 | .3 | .65 | .284 | 50 | 1.1 | 65 | 1.1 |
| 4 | A500 Gr.B RND | 29000 | 11154 | .3 | .65 | .305 | 42 | 1.4 | 58 | 1.3 |
| 5 | A500 Gr.B Rect | 29000 | 11154 | .3 | .65 | .305 | 46 | 1.4 | 58 | 1.3 |
| 6 | A53 Gr.B | 29000 | 11154 | .3 | .65 | .284 | 35 | 1.6 | 60 | 1.2 |
| 7 | A1085 | 29000 | 11154 | .3 | .65 | .284 | 50 | 1.4 | 65 | 1.3 |
| 8 | FRP | 2800 | 425 | .33 | 7 | .07 | 12 | 1.5 | 30 | 1.2 |

## Cold Formed Steel Properties

| | Label | E [ksi] | G [ksi] | Nu | Therm (\1E5 F) | Density[lb/in^3] | Yield[ksi] | Fu[ksi] |
|---|---|---|---|---|---|---|---|---|
| 1 | A653 SS Gr33 | 29500 | 11346 | .3 | .65 | .284 | 33 | 45 |
| 2 | A653 SS Gr50/1 | 29500 | 11346 | .3 | .65 | .284 | 50 | 65 |
| 3 | A304 SS | 29500 | 11346 | .29 | .65 | .289 | 31.2 | 73.2 |

## Basic Load Cases

| | BLC Description | Category | X Gravity | Y Gravity | Z Gravity | Joint | Point | Distributed | Area(Me... | Surface(P... |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Self Weight | DL | | -1 | | | 2 | | | |
| 2 | Wind Load AZI 000 | WLZ | | | | | | | 1 | |
| 3 | Wind Load AZI 090 | WLX | | | | | | | 1 | |
| 4 | Ice Weight | OL1 | | | | | | | | |
| 5 | Wind + Ice Load AZI ... | OL2 | | | | | | | | |
| 6 | Wind + Ice Load AZI ... | OL3 | | | | | | | | |
| 7 | Service Live 1 | LL | | | | | | | | |
| 8 | Seismic Load AZI 000 | ELZ | | | | | 2 | | | |
| 9 | Seismic Load AZI 090 | ELX | | | | | 2 | | | |
| 10 | Maintenance Load | None | | | | | | | | |
| 11 | BLC 2 Transient Area... | None | | | | | | 1 | | |
| 12 | BLC 3 Transient Area... | None | | | | | | 3 | | |

## Load Combinations

| | Description | So... | P... | S... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.4D | Yes | Y | | DL | 1.4 | | | | | | | | | | | | | | | | | | |
| 2 | 1.2D + 1W AZI 000 | Yes | Y | | DL | 1.2 | W... | 1 | | | | | | | | | | | | | | | | |
| 3 | 1.2D + 1W AZI 030 | Yes | Y | | DL | 1.2 | W... | .866 | W... | .5 | | | | | | | | | | | | | | |
| 4 | 1.2D + 1W AZI 060 | Yes | Y | | DL | 1.2 | W... | .5 | W... | .866 | | | | | | | | | | | | | | |
| 5 | 1.2D + 1W AZI 090 | Yes | Y | | DL | 1.2 | | | W... | 1 | | | | | | | | | | | | | | |
| 6 | 1.2D + 1W AZI 120 | Yes | Y | | DL | 1.2 | W... | -.5 | W... | .866 | | | | | | | | | | | | | | |
| 7 | 1.2D + 1W AZI 150 | Yes | Y | | DL | 1.2 | W... | -.866 | W... | .5 | | | | | | | | | | | | | | |
| 8 | 1.2D + 1W AZI 180 | Yes | Y | | DL | 1.2 | W... | -1 | | | | | | | | | | | | | | | | |
| 9 | 1.2D + 1W AZI 210 | Yes | Y | | DL | 1.2 | W... | -.866 | W... | -.5 | | | | | | | | | | | | | | |
| 10 | 1.2D + 1W AZI 240 | Yes | Y | | DL | 1.2 | W... | -.5 | W... | -.866 | | | | | | | | | | | | | | |
| 11 | 1.2D + 1W AZI 270 | Yes | Y | | DL | 1.2 | | | W... | -1 | | | | | | | | | | | | | | |
| 12 | 1.2D + 1W AZI 300 | Yes | Y | | DL | 1.2 | W... | .5 | W... | -.866 | | | | | | | | | | | | | | |

## Load Combinations (Continued)

| | Description | So.. | P... | S... | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac... |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 1.2D + 1W AZI 330 | Yes | Y | | DL | 1.2 | W... | .866 | W... | -.5 | | | | | | | | | | | | | | |
| 14 | 0.9D + 1W AZI 000 | Yes | Y | | DL | .9 | W... | 1 | | | | | | | | | | | | | | | | |
| 15 | 0.9D + 1W AZI 030 | Yes | Y | | DL | .9 | W... | .866 | W... | .5 | | | | | | | | | | | | | | |
| 16 | 0.9D + 1W AZI 060 | Yes | Y | | DL | .9 | W... | .5 | W... | .866 | | | | | | | | | | | | | | |
| 17 | 0.9D + 1W AZI 090 | Yes | Y | | DL | .9 | | | W... | 1 | | | | | | | | | | | | | | |
| 18 | 0.9D + 1W AZI 120 | Yes | Y | | DL | .9 | W... | -.5 | W... | .866 | | | | | | | | | | | | | | |
| 19 | 0.9D + 1W AZI 150 | Yes | Y | | DL | .9 | W... | -.866 | W... | .5 | | | | | | | | | | | | | | |
| 20 | 0.9D + 1W AZI 180 | Yes | Y | | DL | .9 | W... | -1 | | | | | | | | | | | | | | | | |
| 21 | 0.9D + 1W AZI 210 | Yes | Y | | DL | .9 | W... | -.866 | W... | -.5 | | | | | | | | | | | | | | |
| 22 | 0.9D + 1W AZI 240 | Yes | Y | | DL | .9 | W... | -.5 | W... | -.866 | | | | | | | | | | | | | | |
| 23 | 0.9D + 1W AZI 270 | Yes | Y | | DL | .9 | | | W... | -1 | | | | | | | | | | | | | | |
| 24 | 0.9D + 1W AZI 300 | Yes | Y | | DL | .9 | W... | .5 | W... | -.866 | | | | | | | | | | | | | | |
| 25 | 0.9D + 1W AZI 330 | Yes | Y | | DL | .9 | W... | .866 | W... | -.5 | | | | | | | | | | | | | | |
| 26 | 1.2D + 1.0Di | Yes | Y | | DL | 1.2 | OL1 | 1 | | | | | | | | | | | | | | | | |
| 27 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | 1 | | | | | | | | | | | | | | |
| 28 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | .866 | OL3 | .5 | | | | | | | | | | | | |
| 29 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | .5 | OL3 | .866 | | | | | | | | | | | | |
| 30 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | | | OL3 | 1 | | | | | | | | | | | | |
| 31 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | -.5 | OL3 | .866 | | | | | | | | | | | | |
| 32 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | -.866 | OL3 | .5 | | | | | | | | | | | | |
| 33 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | -1 | | | | | | | | | | | | | | |
| 34 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | -.866 | OL3 | -.5 | | | | | | | | | | | | |
| 35 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | -.5 | OL3 | -.866 | | | | | | | | | | | | |
| 36 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | | | OL3 | -1 | | | | | | | | | | | | |
| 37 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | .5 | OL3 | -.866 | | | | | | | | | | | | |
| 38 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | .866 | OL3 | -.5 | | | | | | | | | | | | |
| 39 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | .115 | | | | | | | | | | | | | | |
| 40 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | .099 | W... | .057 | | | | | | | | | | | | |
| 41 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | .057 | W... | .099 | | | | | | | | | | | | |
| 42 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | | | W... | .115 | | | | | | | | | | | | |
| 43 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | -.057 | W... | .099 | | | | | | | | | | | | |
| 44 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | -.099 | W... | .057 | | | | | | | | | | | | |
| 45 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | -.115 | | | | | | | | | | | | | | |
| 46 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | -.099 | W... | -.057 | | | | | | | | | | | | |
| 47 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | -.057 | W... | -.099 | | | | | | | | | | | | |
| 48 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | | | W... | -.115 | | | | | | | | | | | | |
| 49 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | .057 | W... | -.099 | | | | | | | | | | | | |
| 50 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | .099 | W... | -.057 | | | | | | | | | | | | |
| 51 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | 1 | | | | | | | | | | | | | | | | |
| 52 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | .866 | ELX | .5 | | | | | | | | | | | | | | |
| 53 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | .5 | ELX | .866 | | | | | | | | | | | | | | |
| 54 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | | | ELX | 1 | | | | | | | | | | | | | | |
| 55 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | -.5 | ELX | .866 | | | | | | | | | | | | | | |
| 56 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | -.866 | ELX | .5 | | | | | | | | | | | | | | |
| 57 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | -1 | | | | | | | | | | | | | | | | |
| 58 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | -.866 | ELX | -.5 | | | | | | | | | | | | | | |
| 59 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | -.5 | ELX | -.866 | | | | | | | | | | | | | | |
| 60 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | | | ELX | -1 | | | | | | | | | | | | | | |
| 61 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | .5 | ELX | -.866 | | | | | | | | | | | | | | |
| 62 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | .866 | ELX | -.5 | | | | | | | | | | | | | | |
| 63 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | 1 | | | | | | | | | | | | | | | | |
| 64 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | .866 | ELX | .5 | | | | | | | | | | | | | | |
| 65 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | .5 | ELX | .866 | | | | | | | | | | | | | | |
| 66 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | | | ELX | 1 | | | | | | | | | | | | | | |
| 67 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | -.5 | ELX | .866 | | | | | | | | | | | | | | |
| 68 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | -.866 | ELX | .5 | | | | | | | | | | | | | | |
| 69 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | -1 | | | | | | | | | | | | | | | | |

## Load Combinations (Continued)

| | Description | So.. | P... | S... | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac... |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 70 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | -.866 | ELX | -.5 | | | | | | | | | | | | | | |
| 71 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | -.5 | ELX | -.866 | | | | | | | | | | | | | | |
| 72 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | | | ELX | -1 | | | | | | | | | | | | | | |
| 73 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | .5 | ELX | -.866 | | | | | | | | | | | | | | |
| 74 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | .866 | ELX | -.5 | | | | | | | | | | | | | | |

## Envelope Joint Reactions

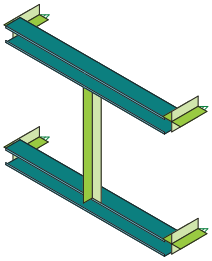
| | Joint | | X [lb] | LC | Y [lb] | LC | Z [lb] | LC | MX [lb-ft] | LC | MY [lb-ft] | LC | MZ [lb-ft] | LC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N9 | max | 20.7 | 66 | 70.352 | 57 | 20.7 | 51 | 32.624 | 69 | 5.175 | 66 | 41.363 | 66 |
| 2 | | min | -20.7 | 60 | 34.955 | 63 | -20.7 | 69 | -58.913 | 51 | -5.175 | 60 | -41.363 | 72 |
| 3 | N10 | max | 20.7 | 66 | 70.352 | 51 | 20.7 | 63 | 32.698 | 63 | 5.175 | 66 | 41.474 | 60 |
| 4 | | min | -20.7 | 60 | 34.955 | 69 | -20.7 | 57 | -59.062 | 57 | -5.175 | 60 | -41.474 | 54 |
| 5 | Totals: | max | 41.4 | 66 | 140.703 | 62 | 41.4 | 63 | | | | | | |
| 6 | | min | -41.4 | 60 | 69.91 | 63 | -41.4 | 57 | | | | | | |

## Envelope AISI S100-12: LRFD Cold Formed Steel Code Checks

| Member | Shape | Code ... | Loc[in] | LC | Shear .. | Loc[in] | Dir | LC | phi*Pn[lb] | phi*Tn[lb] | phi*Mny... | phi*Mnz... | Cb | Cmyy | Cmzz | Eqn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No Data to Print ... | | | | | | | | | | | | | | | | |

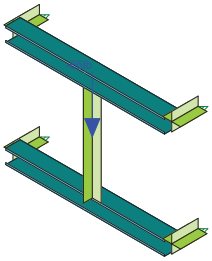
## Hot Rolled Steel Section Sets

| | Label | Shape | Type | Design List | Material | Design Rules | A [in2] | Iyy [in4] | Izz [in4] | J [in4] |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | L3x3x4 | L3X3X4 | None | None | A36 Gr.36 | Typical | 1.44 | 1.23 | 1.23 | .031 |
| 2 | 1.5" Std Pipe | PIPE_1.5 | None | None | A53 Gr.B | Typical | .749 | .293 | .293 | .586 |



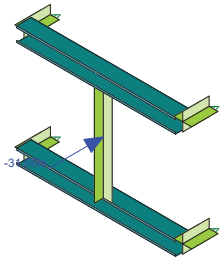
Envelope Only Solution

| | | |
|---|---|---|
| M SQUARED WIRELESS | CCL03387 | RRU Wall Mount |
| | | Apr 1, 2019 at 10:23 AM |
| | | CCL03387 Unistrut.r3d |



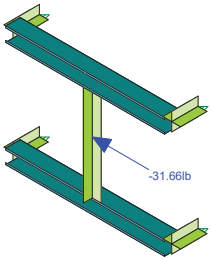
Loads: BLC 1, Self Weight
Envelope Only Solution

| | | |
|---|---|---|
| M SQUARED WIRELESS | CCL03387 | RRU Wall Mount |
| | | Apr 1, 2019 at 10:23 AM |
| | | CCL03387 Unistrut.r3d |




Loads: BLC 8, Seismic Load AZI 000
Envelope Only Solution

| | | |
|---|---|---|
| M SQUARED WIRELESS | CCL03387 | RRU Wall Mount |
| | | Apr 1, 2019 at 10:23 AM |
| | | CCL03387 Unistrut.r3d |




Loads: BLC 9, Seismic Load AZI 090
Envelope Only Solution

| | | |
|---|---|---|
| M SQUARED WIRELESS | CCL03387 | RRU Wall Mount |
| | | Apr 1, 2019 at 10:24 AM |
| | | CCL03387 Unistrut.r3d |

## Member Primary Data

| | Label | I Joint | J Joint | K Joint | Rotate(deg) | Section/Shape | Type | Design List | Material | Design Rules |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | M1 | N10 | N7 | | | P1000 Unistrut | None | None | A304 SS | Typical |
| 2 | M2 | N10 | N8 | | | RIGID | None | None | RIGID | Typical |
| 3 | M3 | N7 | N9 | | | RIGID | None | None | RIGID | Typical |
| 4 | M4 | N15 | N12 | | | P1000 Unistrut | None | None | A304 SS | Typical |
| 5 | M5 | N15 | N13 | | | RIGID | None | None | RIGID | Typical |
| 6 | M6 | N12 | N14 | | | RIGID | None | None | RIGID | Typical |
| 7 | M7 | N16 | N11 | | | RIGID | None | None | RIGID | Typical |

## Cold Formed Steel Properties

| | Label | E [ksi] | G [ksi] | Nu | Therm (\1E5 F) | Density[lb/in^3] | Yield[ksi] | Fu[ksi] |
|---|---|---|---|---|---|---|---|---|
| 1 | A653 SS Gr33 | 29500 | 11346 | .3 | .65 | .284 | 33 | 45 |
| 2 | A653 SS Gr50/1 | 29500 | 11346 | .3 | .65 | .284 | 50 | 65 |
| 3 | A304 SS | 29500 | 11346 | .29 | .65 | .289 | 31.2 | 73.2 |

## Basic Load Cases

| | BLC Description | Category | X Gravity | Y Gravity | Z Gravity | Joint | Point | Distributed | Area(Me... | Surface(P... |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Self Weight | DL | | -1 | | | 1 | | | |
| 2 | Wind Load AZI 000 | WLZ | | | | | 1 | | 1 | |
| 3 | Wind Load AZI 090 | WLX | | | | | 1 | | 1 | |
| 4 | Ice Weight | OL1 | | | | | | | | |
| 5 | Wind + Ice Load AZI ... | OL2 | | | | | | | | |
| 6 | Wind + Ice Load AZI ... | OL3 | | | | | | | | |
| 7 | Service Live 1 | LL | | | | | | | | |
| 8 | Seismic Load AZI 000 | ELZ | | | | | 1 | | | |
| 9 | Seismic Load AZI 090 | ELX | | | | | 1 | | | |
| 10 | Maintenance Load | None | | | | | | | | |
| 11 | BLC 2 Transient Area... | None | | | | | | 3 | | |
| 12 | BLC 3 Transient Area... | None | | | | | | 5 | | |

## Load Combinations

| | Description | So... | P... | S... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.4D | Yes | Y | | DL | 1.4 | | | | | | | | | | | | | | | | | | |
| 2 | 1.2D + 1W AZI 000 | Yes | Y | | DL | 1.2 | W... | 1 | | | | | | | | | | | | | | | | |
| 3 | 1.2D + 1W AZI 030 | Yes | Y | | DL | 1.2 | W... | .866 | W... | .5 | | | | | | | | | | | | | | |
| 4 | 1.2D + 1W AZI 060 | Yes | Y | | DL | 1.2 | W... | .5 | W... | .866 | | | | | | | | | | | | | | |
| 5 | 1.2D + 1W AZI 090 | Yes | Y | | DL | 1.2 | | | W... | 1 | | | | | | | | | | | | | | |
| 6 | 1.2D + 1W AZI 120 | Yes | Y | | DL | 1.2 | W... | -.5 | W... | .866 | | | | | | | | | | | | | | |
| 7 | 1.2D + 1W AZI 150 | Yes | Y | | DL | 1.2 | W... | -.866 | W... | .5 | | | | | | | | | | | | | | |
| 8 | 1.2D + 1W AZI 180 | Yes | Y | | DL | 1.2 | W... | -1 | | | | | | | | | | | | | | | | |
| 9 | 1.2D + 1W AZI 210 | Yes | Y | | DL | 1.2 | W... | -.866 | W... | -.5 | | | | | | | | | | | | | | |
| 10 | 1.2D + 1W AZI 240 | Yes | Y | | DL | 1.2 | W... | -.5 | W... | -.866 | | | | | | | | | | | | | | |
| 11 | 1.2D + 1W AZI 270 | Yes | Y | | DL | 1.2 | | | W... | -1 | | | | | | | | | | | | | | |
| 12 | 1.2D + 1W AZI 300 | Yes | Y | | DL | 1.2 | W... | .5 | W... | -.866 | | | | | | | | | | | | | | |
| 13 | 1.2D + 1W AZI 330 | Yes | Y | | DL | 1.2 | W... | .866 | W... | -.5 | | | | | | | | | | | | | | |
| 14 | 0.9D + 1W AZI 000 | Yes | Y | | DL | .9 | W... | 1 | | | | | | | | | | | | | | | | |
| 15 | 0.9D + 1W AZI 030 | Yes | Y | | DL | .9 | W... | .866 | W... | .5 | | | | | | | | | | | | | | |
| 16 | 0.9D + 1W AZI 060 | Yes | Y | | DL | .9 | W... | .5 | W... | .866 | | | | | | | | | | | | | | |
| 17 | 0.9D + 1W AZI 090 | Yes | Y | | DL | .9 | | | W... | 1 | | | | | | | | | | | | | | |
| 18 | 0.9D + 1W AZI 120 | Yes | Y | | DL | .9 | W... | -.5 | W... | .866 | | | | | | | | | | | | | | |
| 19 | 0.9D + 1W AZI 150 | Yes | Y | | DL | .9 | W... | -.866 | W... | .5 | | | | | | | | | | | | | | |
| 20 | 0.9D + 1W AZI 180 | Yes | Y | | DL | .9 | W... | -1 | | | | | | | | | | | | | | | | |

## Load Combinations (Continued)

| | Description | So.. | P... | S... | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac... |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | 0.9D + 1W AZI 210 | Yes | Y | | DL | .9 | W... | -.866 | W... | -.5 | | | | | | | | | | | | | | |
| 22 | 0.9D + 1W AZI 240 | Yes | Y | | DL | .9 | W... | -.5 | W... | -.866 | | | | | | | | | | | | | | |
| 23 | 0.9D + 1W AZI 270 | Yes | Y | | DL | .9 | | | W... | -1 | | | | | | | | | | | | | | |
| 24 | 0.9D + 1W AZI 300 | Yes | Y | | DL | .9 | W... | .5 | W... | -.866 | | | | | | | | | | | | | | |
| 25 | 0.9D + 1W AZI 330 | Yes | Y | | DL | .9 | W... | .866 | W... | -.5 | | | | | | | | | | | | | | |
| 26 | 1.2D + 1.0Di | Yes | Y | | DL | 1.2 | OL1 | 1 | | | | | | | | | | | | | | | | |
| 27 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | 1 | | | | | | | | | | | | | | |
| 28 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | .866 | OL3 | .5 | | | | | | | | | | | | |
| 29 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | .5 | OL3 | .866 | | | | | | | | | | | | |
| 30 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | | | OL3 | 1 | | | | | | | | | | | | |
| 31 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | -.5 | OL3 | .866 | | | | | | | | | | | | |
| 32 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | -.866 | OL3 | .5 | | | | | | | | | | | | |
| 33 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | -1 | | | | | | | | | | | | | | |
| 34 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | -.866 | OL3 | -.5 | | | | | | | | | | | | |
| 35 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | -.5 | OL3 | -.866 | | | | | | | | | | | | |
| 36 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | | | OL3 | -1 | | | | | | | | | | | | |
| 37 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | .5 | OL3 | -.866 | | | | | | | | | | | | |
| 38 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | .866 | OL3 | -.5 | | | | | | | | | | | | |
| 39 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | .115 | | | | | | | | | | | | | | |
| 40 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | .099 | W... | .057 | | | | | | | | | | | | |
| 41 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | .057 | W... | .099 | | | | | | | | | | | | |
| 42 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | | | W... | .115 | | | | | | | | | | | | |
| 43 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | -.057 | W... | .099 | | | | | | | | | | | | |
| 44 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | -.099 | W... | .057 | | | | | | | | | | | | |
| 45 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | -.115 | | | | | | | | | | | | | | |
| 46 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | -.099 | W... | -.057 | | | | | | | | | | | | |
| 47 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | -.057 | W... | -.099 | | | | | | | | | | | | |
| 48 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | | | W... | -.115 | | | | | | | | | | | | |
| 49 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | .057 | W... | -.099 | | | | | | | | | | | | |
| 50 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | .099 | W... | -.057 | | | | | | | | | | | | |
| 51 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | 1 | | | | | | | | | | | | | | | | |
| 52 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | .866 | ELX | .5 | | | | | | | | | | | | | | |
| 53 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | .5 | ELX | .866 | | | | | | | | | | | | | | |
| 54 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | | | ELX | 1 | | | | | | | | | | | | | | |
| 55 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | -.5 | ELX | .866 | | | | | | | | | | | | | | |
| 56 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | -.866 | ELX | .5 | | | | | | | | | | | | | | |
| 57 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | -1 | | | | | | | | | | | | | | | | |
| 58 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | -.866 | ELX | -.5 | | | | | | | | | | | | | | |
| 59 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | -.5 | ELX | -.866 | | | | | | | | | | | | | | |
| 60 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | | | ELX | -1 | | | | | | | | | | | | | | |
| 61 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | .5 | ELX | -.866 | | | | | | | | | | | | | | |
| 62 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | .866 | ELX | -.5 | | | | | | | | | | | | | | |
| 63 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | 1 | | | | | | | | | | | | | | | | |
| 64 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | .866 | ELX | .5 | | | | | | | | | | | | | | |
| 65 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | .5 | ELX | .866 | | | | | | | | | | | | | | |
| 66 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | | | ELX | 1 | | | | | | | | | | | | | | |
| 67 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | -.5 | ELX | .866 | | | | | | | | | | | | | | |
| 68 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | -.866 | ELX | .5 | | | | | | | | | | | | | | |
| 69 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | -1 | | | | | | | | | | | | | | | | |
| 70 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | -.866 | ELX | -.5 | | | | | | | | | | | | | | |
| 71 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | -.5 | ELX | -.866 | | | | | | | | | | | | | | |
| 72 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | | | ELX | -1 | | | | | | | | | | | | | | |
| 73 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | .5 | ELX | -.866 | | | | | | | | | | | | | | |
| 74 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | .866 | ELX | -.5 | | | | | | | | | | | | | | |

## Envelope Joint Reactions

| | Joint | | X [lb] | LC | Y [lb] | LC | Z [lb] | LC | MX [lb-ft] | LC | MY [lb-ft] | LC | MZ [lb-ft] | LC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N8 | max | 7.915 | 66 | 24.548 | 60 | 14.226 | 14 | -3.049 | 66 | 5.039 | 19 | 8.987 | 62 |
| 2 | | min | -7.915 | 60 | 12.197 | 66 | -14.226 | 8 | -6.137 | 60 | -5.039 | 13 | 4.465 | 63 |
| 3 | N9 | max | 7.915 | 66 | 24.548 | 54 | 14.226 | 14 | -3.049 | 72 | 5.039 | 15 | -4.465 | 74 |
| 4 | | min | -7.915 | 60 | 12.197 | 72 | -14.226 | 8 | -6.137 | 54 | -5.039 | 9 | -8.987 | 51 |
| 5 | N13 | max | 7.915 | 66 | 24.548 | 60 | 14.226 | 14 | -3.049 | 66 | 5.039 | 19 | 8.987 | 62 |
| 6 | | min | -7.915 | 60 | 12.197 | 66 | -14.226 | 8 | -6.137 | 60 | -5.039 | 13 | 4.465 | 63 |
| 7 | N14 | max | 7.915 | 66 | 24.548 | 54 | 14.226 | 14 | -3.049 | 72 | 5.039 | 15 | -4.465 | 74 |
| 8 | | min | -7.915 | 60 | 12.197 | 72 | -14.226 | 8 | -6.137 | 54 | -5.039 | 9 | -8.987 | 51 |
| 9 | Totals: | max | 31.66 | 66 | 98.191 | 62 | 56.904 | 14 | | | | | | |
| 10 | | min | -31.66 | 60 | 48.787 | 63 | -56.904 | 8 | | | | | | |

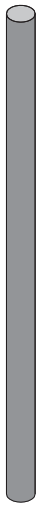
## Envelope AISI S100-12: LRFD Cold Formed Steel Code Checks

| | Member | Shape | Code ... | Loc[in] | LC | Shear .. | Loc[in] | Dir | LC | phi*Pn[lb] | phi*Tn[lb] | phi*Mny... | phi*Mnz... | Cb | Cmyy | Cmzz | Eqn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | M1 | P1000 U... | .027 | 0 | 8 | .013 | 18 | y | 62 | 12718.4... | 13466.6... | 365.828 | 585.635 | 1.941 | .85 | .85 | C5.2.2-2 |
| 2 | M4 | P1000 U... | .027 | 0 | 8 | .013 | 0 | y | 62 | 12718.4... | 13466.6... | 365.828 | 585.635 | 1.941 | .85 | .85 | C5.2.2-2 |

| | | | |
|---|---|---|---|
| Site Name: | CCL03387 | Design Wind Velocity: | 91 |
| Client: | Mastec | Wind Centerline: | 70 |
| Carrier: | AT&T | Exposure Category: | C |
| Date: | 4/1/2019 | Code | TIA-222-H |

| | | | |
|---|---|---|---|
| Shape = | Round | | |
| Ca = | 1.2 | | |
| qz = | 23.6 | Fp = | 0.49 |
| F = | 28.3 | | |

| Appurtenance Name | Quantity | Weight (lbs) | Wind Force F-norm (lbs) | Wind Force F-perp (lbs) | Seismic Force F-norm (lbs) | Seismic Force F-perp (lbs) |
|---|---|---|---|---|---|---|
| RRUs E2 | 3.0 | 52.0 | 74.3 | 30.0 | 25.3 | 25.3 |
| RRUs 4478 B14 | 1.0 | 60.0 | 39.0 | 21.8 | 29.2 | 29.2 |
| RRUs 4478 B5 | 1.0 | 65.0 | 43.5 | 25.0 | 31.7 | 31.7 |
| RRUs 4426 B66 | 1.0 | 55.0 | 38.8 | 17.1 | 26.8 | 26.8 |
| RRUs 4415 B25 | 1.0 | 50.0 | 43.5 | 24.7 | 24.4 | 24.4 |
| Diplexer | 1.0 | 25.0 | 5.0 | 10.2 | 12.2 | 12.2 |

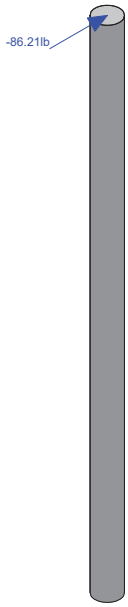


Envelope Only Solution

| | | |
|---|---|---|
| M SQUARED WIRELESS | CCL03387 | N RRU Mount |
| | | Apr 1, 2019 at 10:29 AM |
| | | CCL03387 Pipe Mount cantilever.r3d |

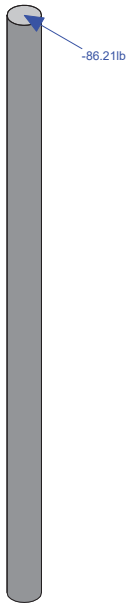
Loads: BLC 1, Self Weight
Envelope Only Solution

| | | |
|---|---|---|
| M SQUARED WIRELESS | CCL03387 | N RRU Mount |
| | | Apr 1, 2019 at 10:30 AM |
| | | CCL03387 Pipe Mount cantilever.r3d |




Loads: BLC 8, Seismic Load AZI 000
Envelope Only Solution

| | | |
|---|---|---|
| M SQUARED WIRELESS | CCL03387 | N RRU Mount |
| | | Apr 1, 2019 at 10:32 AM |
| | | CCL03387 Pipe Mount cantilever.r3d |




Loads: BLC 9, Seismic Load AZI 090
Envelope Only Solution

| | | |
|---|---|---|
| M SQUARED WIRELESS | CCL03387 | N RRU Mount |
| | | Apr 1, 2019 at 10:33 AM |
| | | CCL03387 Pipe Mount cantilever.r3d |

## Member Primary Data

| | Label | I Joint | J Joint | K Joint | Rotate(deg) | Section/Shape | Type | Design List | Material | Design Rules |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | M1 | N8 | N7 | | | 3" Std Pipe | Beam | None | A53 Gr.B | Typical |

## Hot Rolled Steel Properties

| | Label | E [ksi] | G [ksi] | Nu | Therm (\1E... | Density[k/ft... | Yield[ksi] | Ry | Fu[ksi] | Rt |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A992 | 29000 | 11154 | .3 | .65 | .49 | 50 | 1.1 | 65 | 1.1 |
| 2 | A36 Gr.36 | 29000 | 11154 | .3 | .65 | .49 | 36 | 1.5 | 58 | 1.2 |
| 3 | A572 Gr.50 | 29000 | 11154 | .3 | .65 | .49 | 50 | 1.1 | 65 | 1.1 |
| 4 | A500 Gr.B RND | 29000 | 11154 | .3 | .65 | .527 | 42 | 1.4 | 58 | 1.3 |
| 5 | A500 Gr.B Rect | 29000 | 11154 | .3 | .65 | .527 | 46 | 1.4 | 58 | 1.3 |
| 6 | A53 Gr.B | 29000 | 11154 | .3 | .65 | .49 | 35 | 1.6 | 60 | 1.2 |
| 7 | A1085 | 29000 | 11154 | .3 | .65 | .49 | 50 | 1.4 | 65 | 1.3 |

## Cold Formed Steel Properties

| | Label | E [ksi] | G [ksi] | Nu | Therm (\1E5 F) | Density[k/ft^3] | Yield[ksi] | Fu[ksi] |
|---|---|---|---|---|---|---|---|---|
| 1 | A653 SS Gr33 | 29500 | 11346 | .3 | .65 | .49 | 33 | 45 |
| 2 | A653 SS Gr50/1 | 29500 | 11346 | .3 | .65 | .49 | 50 | 65 |

## Basic Load Cases

| | BLC Description | Category | X Gravity | Y Gravity | Z Gravity | Joint | Point | Distributed | Area(Me... | Surface(P... |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Self Weight | DL | | -1 | | | 3 | | | |
| 2 | Wind Load AZI 000 | WLZ | | | | | | | 1 | |
| 3 | Wind Load AZI 090 | WLX | | | | | | | 1 | |
| 4 | Ice Weight | OL1 | | | | | | | | |
| 5 | Wind + Ice Load AZI ... | OL2 | | | | | | | 1 | |
| 6 | Wind + Ice Load AZI ... | OL3 | | | | | | | 1 | |
| 7 | Service Live 1 | LL | | | | | | | | |
| 8 | Seismic Load AZI 000 | ELZ | | | | | 3 | | | |
| 9 | Seismic Load AZI 090 | ELX | | | | | 3 | | | |
| 10 | BLC 2 Transient Area... | None | | | | | | 1 | | |
| 11 | BLC 3 Transient Area... | None | | | | | | 1 | | |
| 12 | BLC 5 Transient Area... | None | | | | | | 1 | | |
| 13 | BLC 6 Transient Area... | None | | | | | | 1 | | |

## Load Combinations

| | Description | So... | P... | S... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.4D | Yes | Y | | DL | 1.4 | | | | | | | | | | | | | | | | | | |
| 2 | 1.2D + 1W AZI 000 | Yes | Y | | DL | 1.2 | W... | 1 | | | | | | | | | | | | | | | | |
| 3 | 1.2D + 1W AZI 030 | Yes | Y | | DL | 1.2 | W... | .866 | W... | .5 | | | | | | | | | | | | | | |
| 4 | 1.2D + 1W AZI 060 | Yes | Y | | DL | 1.2 | W... | .5 | W... | .866 | | | | | | | | | | | | | | |
| 5 | 1.2D + 1W AZI 090 | Yes | Y | | DL | 1.2 | | | W... | 1 | | | | | | | | | | | | | | |
| 6 | 1.2D + 1W AZI 120 | Yes | Y | | DL | 1.2 | W... | -.5 | W... | .866 | | | | | | | | | | | | | | |
| 7 | 1.2D + 1W AZI 150 | Yes | Y | | DL | 1.2 | W... | -.866 | W... | .5 | | | | | | | | | | | | | | |
| 8 | 1.2D + 1W AZI 180 | Yes | Y | | DL | 1.2 | W... | -1 | | | | | | | | | | | | | | | | |
| 9 | 1.2D + 1W AZI 210 | Yes | Y | | DL | 1.2 | W... | -.866 | W... | -.5 | | | | | | | | | | | | | | |
| 10 | 1.2D + 1W AZI 240 | Yes | Y | | DL | 1.2 | W... | -.5 | W... | -.866 | | | | | | | | | | | | | | |
| 11 | 1.2D + 1W AZI 270 | Yes | Y | | DL | 1.2 | | | W... | -1 | | | | | | | | | | | | | | |
| 12 | 1.2D + 1W AZI 300 | Yes | Y | | DL | 1.2 | W... | .5 | W... | -.866 | | | | | | | | | | | | | | |
| 13 | 1.2D + 1W AZI 330 | Yes | Y | | DL | 1.2 | W... | .866 | W... | -.5 | | | | | | | | | | | | | | |
| 14 | 0.9D + 1W AZI 000 | Yes | Y | | DL | .9 | W... | 1 | | | | | | | | | | | | | | | | |
| 15 | 0.9D + 1W AZI 030 | Yes | Y | | DL | .9 | W... | .866 | W... | .5 | | | | | | | | | | | | | | |

## Load Combinations (Continued)

| | Description | So.. | P... | S... | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac... |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 0.9D + 1W AZI 060 | Yes | Y | | DL | .9 | W... | .5 | W... | .866 | | | | | | | | | | | | | | |
| 17 | 0.9D + 1W AZI 090 | Yes | Y | | DL | .9 | | | W... | 1 | | | | | | | | | | | | | | |
| 18 | 0.9D + 1W AZI 120 | Yes | Y | | DL | .9 | W... | -.5 | W... | .866 | | | | | | | | | | | | | | |
| 19 | 0.9D + 1W AZI 150 | Yes | Y | | DL | .9 | W... | -.866 | W... | .5 | | | | | | | | | | | | | | |
| 20 | 0.9D + 1W AZI 180 | Yes | Y | | DL | .9 | W... | -1 | | | | | | | | | | | | | | | | |
| 21 | 0.9D + 1W AZI 210 | Yes | Y | | DL | .9 | W... | -.866 | W... | -.5 | | | | | | | | | | | | | | |
| 22 | 0.9D + 1W AZI 240 | Yes | Y | | DL | .9 | W... | -.5 | W... | -.866 | | | | | | | | | | | | | | |
| 23 | 0.9D + 1W AZI 270 | Yes | Y | | DL | .9 | | | W... | -1 | | | | | | | | | | | | | | |
| 24 | 0.9D + 1W AZI 300 | Yes | Y | | DL | .9 | W... | .5 | W... | -.866 | | | | | | | | | | | | | | |
| 25 | 0.9D + 1W AZI 330 | Yes | Y | | DL | .9 | W... | .866 | W... | -.5 | | | | | | | | | | | | | | |
| 26 | 1.2D + 1.0Di | Yes | Y | | DL | 1.2 | OL1 | 1 | | | | | | | | | | | | | | | | |
| 27 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | 1 | | | | | | | | | | | | | | |
| 28 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | .866 | OL3 | .5 | | | | | | | | | | | | |
| 29 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | .5 | OL3 | .866 | | | | | | | | | | | | |
| 30 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | | | OL3 | 1 | | | | | | | | | | | | |
| 31 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | -.5 | OL3 | .866 | | | | | | | | | | | | |
| 32 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | -.866 | OL3 | .5 | | | | | | | | | | | | |
| 33 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | -1 | | | | | | | | | | | | | | |
| 34 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | -.866 | OL3 | -.5 | | | | | | | | | | | | |
| 35 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | -.5 | OL3 | -.866 | | | | | | | | | | | | |
| 36 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | | | OL3 | -1 | | | | | | | | | | | | |
| 37 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | .5 | OL3 | -.866 | | | | | | | | | | | | |
| 38 | 1.2D + 1.0Di + 1.0Wi ... | Yes | Y | | DL | 1.2 | OL1 | 1 | OL2 | .866 | OL3 | -.5 | | | | | | | | | | | | |
| 39 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | .115 | | | | | | | | | | | | | | |
| 40 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | .099 | W... | .057 | | | | | | | | | | | | |
| 41 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | .057 | W... | .099 | | | | | | | | | | | | |
| 42 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | | | W... | .115 | | | | | | | | | | | | |
| 43 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | -.057 | W... | .099 | | | | | | | | | | | | |
| 44 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | -.099 | W... | .057 | | | | | | | | | | | | |
| 45 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | -.115 | | | | | | | | | | | | | | |
| 46 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | -.099 | W... | -.057 | | | | | | | | | | | | |
| 47 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | -.057 | W... | -.099 | | | | | | | | | | | | |
| 48 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | | | W... | -.115 | | | | | | | | | | | | |
| 49 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | .057 | W... | -.099 | | | | | | | | | | | | |
| 50 | 1.2D + 1.5L + 1.0WL ... | Yes | Y | | DL | 1.2 | LL | 1.5 | W... | .099 | W... | -.057 | | | | | | | | | | | | |
| 51 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | 1 | | | | | | | | | | | | | | | | |
| 52 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | .866 | ELX | .5 | | | | | | | | | | | | | | |
| 53 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | .5 | ELX | .866 | | | | | | | | | | | | | | |
| 54 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | | | ELX | 1 | | | | | | | | | | | | | | |
| 55 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | -.5 | ELX | .866 | | | | | | | | | | | | | | |
| 56 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | -.866 | ELX | .5 | | | | | | | | | | | | | | |
| 57 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | -1 | | | | | | | | | | | | | | | | |
| 58 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | -.866 | ELX | -.5 | | | | | | | | | | | | | | |
| 59 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | -.5 | ELX | -.866 | | | | | | | | | | | | | | |
| 60 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | | | ELX | -1 | | | | | | | | | | | | | | |
| 61 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | .5 | ELX | -.866 | | | | | | | | | | | | | | |
| 62 | (1.2+0.2Sds) + 1.0 E ... | Yes | Y | | DL | 1.4... | ELZ | .866 | ELX | -.5 | | | | | | | | | | | | | | |
| 63 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | 1 | | | | | | | | | | | | | | | | |
| 64 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | .866 | ELX | .5 | | | | | | | | | | | | | | |
| 65 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | .5 | ELX | .866 | | | | | | | | | | | | | | |
| 66 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | | | ELX | 1 | | | | | | | | | | | | | | |
| 67 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | -.5 | ELX | .866 | | | | | | | | | | | | | | |
| 68 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | -.866 | ELX | .5 | | | | | | | | | | | | | | |
| 69 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | -1 | | | | | | | | | | | | | | | | |
| 70 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | -.866 | ELX | -.5 | | | | | | | | | | | | | | |
| 71 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | -.5 | ELX | -.866 | | | | | | | | | | | | | | |
| 72 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | | | ELX | -1 | | | | | | | | | | | | | | |

## Load Combinations (Continued)

| | Description | So... | P... | S... | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac... |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | .5 | ELX | -.866 | | | | | | | | | | | | | | |
| 74 | (0.9-0.2Sds) + 1.0E ... | Yes | Y | | DL | .697 | ELZ | .866 | ELX | -.5 | | | | | | | | | | | | | | |

## Envelope Joint Reactions

| | Joint | | X [lb] | LC | Y [lb] | LC | Z [lb] | LC | MX [lb-ft] | LC | MY [lb-ft] | LC | MZ [lb-ft] | LC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N7 | max | 86.21 | 66 | 307.611 | 62 | 86.21 | 63 | 521.057 | 51 | 0 | 74 | 521.057 | 60 |
| 2 | | min | -86.21 | 60 | 152.841 | 63 | -86.21 | 57 | -521.057 | 57 | 0 | 1 | -521.057 | 54 |
| 3 | Totals: | max | 86.21 | 66 | 307.611 | 62 | 86.21 | 63 | | | | | | |
| 4 | | min | -86.21 | 60 | 152.841 | 63 | -86.21 | 57 | | | | | | |

## Envelope AISC 14th(360-10): LRFD Steel Code Checks

| | Member | Shape | Code ... | Loc[in] | LC | Shear ... | Loc[in] | Dir | LC | phi*Pnc [... | phi*Pnt [l... | phi*Mn y... | phi*Mn z... | Cb | Eqn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | M1 | PIPE_3.0 | .093 | 72 | 60 | .004 | 0 | | 60 | 53775.839 | 65205 | 5748.75 | 5748.75 | 1.... | H1-1b |

## Envelope AISI S100-12: LRFD Cold Formed Steel Code Checks

| Member | Shape | Code ... | Loc[in] | LC | Shear ... | Loc[in] | Dir | LC | phi*Pn[lb] | phi*Tn[lb] | phi*Mny... | phi*Mnz... | Cb | Cmyy | Cmzz | Eqn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No Data to Print ... | | | | | | | | | | | | | | | | |

| | | | |
|---|---|---|---|
| Company: | M SQUARED WIRELESS | Page: | 1 |
| Specifier: | | Project: | CCL03387 |
| Address: | | Sub-Project I Pos. No.: | RRU Pipe Mount |
| Phone I Fax: | \| | Date: | 4/1/2019 |
| E-Mail: | | | |

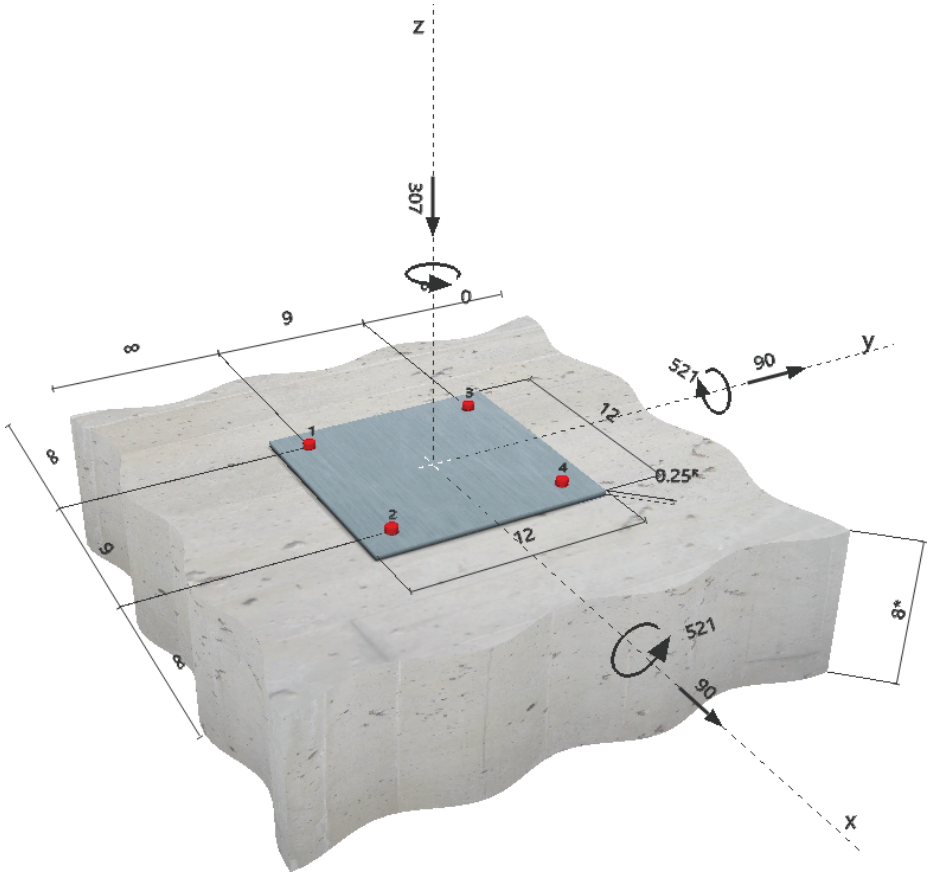
**Specifier's comments:**

## 1 Input data

| | |
|---|---|
| **Anchor type and diameter:** | **Kwik Bolt TZ - SS 304 5/8 (3 1/8)** |
| Effective embedment depth: | $h_{ef}$ = 3.125 in., $h_{nom}$ = 3.563 in. |
| Material: | AISI 304 |
| Evaluation Service Report: | ESR-1917 |
| Issued I Valid: | 4/1/2018 \| 5/1/2019 |
| Proof: | Design method ACI 318 / AC193 |
| Stand-off installation: | $e_b$ = 0.000 in. (no stand-off); t = 0.250 in. |
| Anchor plate: | $l_x$ x $l_y$ x t = 12.000 in. x 12.000 in. x 0.250 in.; (Recommended plate thickness: not calculated |
| Profile: | no profile |
| Base material: | cracked concrete, 2500, $f_c'$ = 2,500 psi; h = 8.000 in. |
| Reinforcement: | tension: condition B, shear: condition B; no supplemental splitting reinforcement present<br>edge reinforcement: none or < No. 4 bar |
| Seismic loads (cat. C, D, E, or F) | yes (D.3.3.6) |

R - The anchor calculation is based on a rigid anchor plate assumption.

**Geometry [in.] & Loading [lb, ft.lb]**





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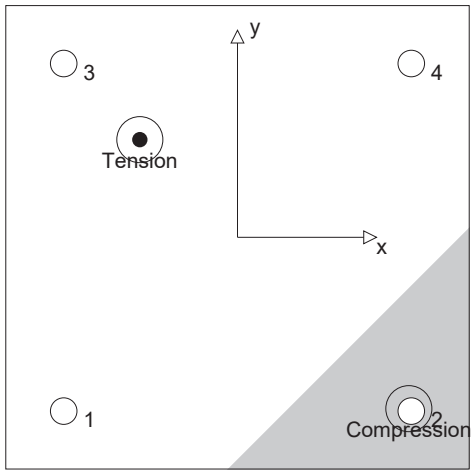
| | | | |
|---|---|---|---|
| Company: | M SQUARED WIRELESS | Page: | 2 |
| Specifier: | | Project: | CCL03387 |
| Address: | | Sub-Project I Pos. No.: | RRU Pipe Mount |
| Phone I Fax: | \| | Date: | 4/1/2019 |
| E-Mail: | | | |

## 2 Load case/Resulting anchor forces

Load case: Design loads




**Anchor reactions [lb]**

Tension force: (+Tension, -Compression)

| Anchor | Tension force | Shear force | Shear force x | Shear force y |
|---|---|---|---|---|
| 1 | 154 | 32 | 23 | 23 |
| 2 | 0 | 32 | 23 | 23 |
| 3 | 394 | 32 | 23 | 23 |
| 4 | 154 | 32 | 23 | 23 |

max. concrete compressive strain: 0.04 [‰]
max. concrete compressive stress: 155 [psi]
resulting tension force in (x/y)=(-2.529/2.529): 702 [lb]
resulting compression force in (x/y)=(4.437/-4.437): 1,009 [lb]

Anchor forces are calculated based on the assumption of a rigid anchor plate.

## 3 Tension load

| | Load $N_{ua}$ [lb] | Capacity $\phi N_n$ [lb] | Utilization $\beta_N = N_{ua}/\phi N_n$ | Status |
|---|---|---|---|---|
| Steel Strength* | 394 | 5,589 | 8 | OK |
| Pullout Strength* | N/A | N/A | N/A | N/A |
| Concrete Breakout Strength** | 702 | 1,798 | 40 | OK |

* anchor having the highest loading **anchor group (anchors in tension)

### 3.1 Steel Strength

$N_{sa}$ = ESR value refer to ICC-ES ESR-1917
$\phi N_{sa} \geq N_{ua}$ ACI 318-08 Eq. (D-1)

**Variables**

| $A_{se,N}$ [in.$^2$] | $f_{uta}$ [psi] |
|---|---|
| 0.16 | 115,000 |

**Calculations**

| $N_{sa}$ [lb] |
|---|
| 18,630 |

**Results**

| $N_{sa}$ [lb] | $\phi_{steel}$ | $\phi_{nonductile}$ | $\phi N_{sa}$ [lb] | $N_{ua}$ [lb] |
|---|---|---|---|---|
| 18,630 | 0.750 | 0.400 | 5,589 | 394 |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### 3.2 Concrete Breakout Strength

$N_{cbg} = \left(\frac{A_{Nc}}{A_{Nc0}}\right) \psi_{ec,N}\, \psi_{ed,N}\, \psi_{c,N}\, \psi_{cp,N}\, N_b$ — ACI 318-08 Eq. (D-5)

$\phi\ N_{cbg} \geq N_{ua}$ — ACI 318-08 Eq. (D-1)

$A_{Nc}$ see ACI 318-08, Part D.5.2.1, Fig. RD.5.2.1(b)

$A_{Nc0} = 9\, h_{ef}^2$ — ACI 318-08 Eq. (D-6)

$\psi_{ec,N} = \left(\frac{1}{1 + \frac{2\, e_N'}{3\, h_{ef}}}\right) \leq 1.0$ — ACI 318-08 Eq. (D-9)

$\psi_{ed,N} = 0.7 + 0.3 \left(\frac{c_{a,min}}{1.5 h_{ef}}\right) \leq 1.0$ — ACI 318-08 Eq. (D-11)

$\psi_{cp,N} = \mathrm{MAX}\left(\frac{c_{a,min}}{c_{ac}}, \frac{1.5 h_{ef}}{c_{ac}}\right) \leq 1.0$ — ACI 318-08 Eq. (D-13)

$N_b = k_c\, \lambda\, \sqrt{f_c'}\, h_{ef}^{1.5}$ — ACI 318-08 Eq. (D-7)

**Variables**

| $h_{ef}$ [in.] | $e_{c1,N}$ [in.] | $e_{c2,N}$ [in.] | $c_{a,min}$ [in.] | $\psi_{c,N}$ |
|---|---|---|---|---|
| 3.125 | 1.029 | 1.029 | ∞ | 1.000 |

| $c_{ac}$ [in.] | $k_c$ | $\lambda$ | $f_c'$ [psi] |
|---|---|---|---|
| 7.000 | 17 | 1 | 2,500 |

**Calculations**

| $A_{Nc}$ [in.$^2$] | $A_{Nc0}$ [in.$^2$] | $\psi_{ec1,N}$ | $\psi_{ec2,N}$ | $\psi_{ed,N}$ | $\psi_{cp,N}$ | $N_b$ [lb] |
|---|---|---|---|---|---|---|
| 256.64 | 87.89 | 0.820 | 0.820 | 1.000 | 1.000 | 4,696 |

**Results**

| $N_{cbg}$ [lb] | $\phi_{concrete}$ | $\phi_{seismic}$ | $\phi_{nonductile}$ | $\phi\ N_{cbg}$ [lb] | $N_{ua}$ [lb] |
|---|---|---|---|---|---|
| 9,220 | 0.650 | 0.750 | 0.400 | 1,798 | 702 |


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# 4 Shear load

| | Load $V_{ua}$ [lb] | Capacity $\phi V_n$ [lb] | Utilization $\beta_V = V_{ua}/\phi V_n$ | Status |
|---|---|---|---|---|
| Steel Strength* | 32 | 2,431 | 2 | OK |
| Steel failure (with lever arm)* | N/A | N/A | N/A | N/A |
| Pryout Strength** | 127 | 7,576 | 2 | OK |
| Concrete edge failure in direction ** | N/A | N/A | N/A | N/A |

* anchor having the highest loading **anchor group (relevant anchors)

## 4.1 Steel Strength

$V_{sa,eq}$ = ESR value refer to ICC-ES ESR-1917

$\phi\ V_{steel} \geq V_{ua}$ ACI 318-08 Eq. (D-2)

### Variables

| $A_{se,V}$ [in.$^2$] | $f_{uta}$ [psi] |
|---|---|
| 0.16 | 115,000 |

### Calculations

| $V_{sa}$ [lb] |
|---|
| 9,350 |

### Results

| $V_{sa}$ [lb] | $\phi_{steel}$ | $\phi_{nonductile}$ | $\phi\ V_{sa}$ [lb] | $V_{ua}$ [lb] |
|---|---|---|---|---|
| 9,350 | 0.650 | 0.400 | 2,431 | 32 |

## 4.2 Pryout Strength

$V_{cpg} = k_{cp}\left[\left(\frac{A_{Nc}}{A_{Nc0}}\right)\psi_{ec,N}\,\psi_{ed,N}\,\psi_{c,N}\,\psi_{cp,N}\,N_b\right]$ ACI 318-08 Eq. (D-31)

$\phi\ V_{cpg} \geq V_{ua}$ ACI 318-08 Eq. (D-2)

$A_{Nc}$ see ACI 318-08, Part D.5.2.1, Fig. RD.5.2.1(b)

$A_{Nc0} = 9\,h_{ef}^2$ ACI 318-08 Eq. (D-6)

$\psi_{ec,N} = \left(\frac{1}{1+\frac{2\,e'_N}{3\,h_{ef}}}\right) \leq 1.0$ ACI 318-08 Eq. (D-9)

$\psi_{ed,N} = 0.7 + 0.3\left(\frac{c_{a,min}}{1.5h_{ef}}\right) \leq 1.0$ ACI 318-08 Eq. (D-11)

$\psi_{cp,N} = \mathrm{MAX}\left(\frac{c_{a,min}}{c_{ac}}, \frac{1.5h_{ef}}{c_{ac}}\right) \leq 1.0$ ACI 318-08 Eq. (D-13)

$N_b = k_c\,\lambda\,\sqrt{f'_c}\,h_{ef}^{1.5}$ ACI 318-08 Eq. (D-7)

### Variables

| $k_{cp}$ | $h_{ef}$ [in.] | $e_{c1,N}$ [in.] | $e_{c2,N}$ [in.] | $c_{a,min}$ [in.] |
|---|---|---|---|---|
| 2 | 3.125 | 0.000 | 0.000 | ∞ |

| $\psi_{c,N}$ | $c_{ac}$ [in.] | $k_c$ | $\lambda$ | $f'_c$ [psi] |
|---|---|---|---|---|
| 1.000 | 7.000 | 17 | 1 | 2,500 |

### Calculations

| $A_{Nc}$ [in.$^2$] | $A_{Nc0}$ [in.$^2$] | $\psi_{ec1,N}$ | $\psi_{ec2,N}$ | $\psi_{ed,N}$ | $\psi_{cp,N}$ | $N_b$ [lb] |
|---|---|---|---|---|---|---|
| 337.64 | 87.89 | 1.000 | 1.000 | 1.000 | 1.000 | 4,696 |

### Results

| $V_{cpg}$ [lb] | $\phi_{concrete}$ | $\phi_{seismic}$ | $\phi_{nonductile}$ | $\phi\ V_{cpg}$ [lb] | $V_{ua}$ [lb] |
|---|---|---|---|---|---|
| 36,077 | 0.700 | 0.750 | 0.400 | 7,576 | 127 |


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## 5 Combined tension and shear loads

| $\beta_N$ | $\beta_V$ | $\zeta$ | Utilization $\beta_{N,V}$ [%] | Status |
|---|---|---|---|---|
| 0.390 | 0.017 | 5/3 | 21 | OK |

$\beta_{NV} = \beta_N^{\zeta} + \beta_V^{\zeta} <= 1$

## 6 Warnings

- The anchor design methods in PROFIS Anchor require rigid anchor plates per current regulations (ETAG 001/Annex C, EOTA TR029, etc.). This means load re-distribution on the anchors due to elastic deformations of the anchor plate are not considered - the anchor plate is assumed to be sufficiently stiff, in order not to be deformed when subjected to the design loading. PROFIS Anchor calculates the minimum required anchor plate thickness with FEM to limit the stress of the anchor plate based on the assumptions explained above. The proof if the rigid anchor plate assumption is valid is not carried out by PROFIS Anchor. Input data and results must be checked for agreement with the existing conditions and for plausibility!
- Condition A applies when supplementary reinforcement is used. The Φ factor is increased for non-steel Design Strengths except Pullout Strength and Pryout strength. Condition B applies when supplementary reinforcement is not used and for Pullout Strength and Pryout Strength. Refer to your local standard.
- Refer to the manufacturer's product literature for cleaning and installation instructions.
- Checking the transfer of loads into the base material and the shear resistance are required in accordance with ACI 318 or the relevant standard!
- An anchor design approach for structures assigned to Seismic Design Category C, D, E or F is given in ACI 318-08 Appendix D, Part D.3.3.4 that requires the governing design strength of an anchor or group of anchors be limited by ductile steel failure. If this is NOT the case, Part D.3.3.5 requires that the attachment that the anchor is connecting to the structure shall be designed so that the attachment will undergo ductile yielding at a load level corresponding to anchor forces no greater than the controlling design strength. In lieu of D.3.3.4 and D.3.3.5, the minimum design strength of the anchors shall be multiplied by a reduction factor per D.3.3.6.
  An alternative anchor design approach to ACI 318-08, Part D.3.3 is given in IBC 2009, Section 1908.1.9. This approach contains "Exceptions" that may be applied in lieu of D.3.3 for applications involving "non-structural components" as defined in ASCE 7, Section 13.4.2.
  An alternative anchor design approach to ACI 318-08, Part D.3.3 is given in IBC 2009, Section 1908.1.9. This approach contains "Exceptions" that may be applied in lieu of D.3.3 for applications involving "wall out-of-plane forces" as defined in ASCE 7, Equation 12.11-1 or Equation 12.14-10.
- It is the responsibility of the user when inputting values for brittle reduction factors ($\phi_{nonductile}$) different than those noted in ACI 318-08, Part D.3.3.6 to determine if they are consistent with the design provisions of ACI 318-08, ASCE 7 and the governing building code.
  Selection of $\phi_{nonductile}$ = 1.0 as a means of satisfying ACI 318-08, Part D.3.3.5 assumes the user has designed the attachment that the anchor is connecting to undergo ductile yielding at a force level <= the design strengths calculated per ACI 318-08, Part D.3.3.3.

# Fastening meets the design criteria!


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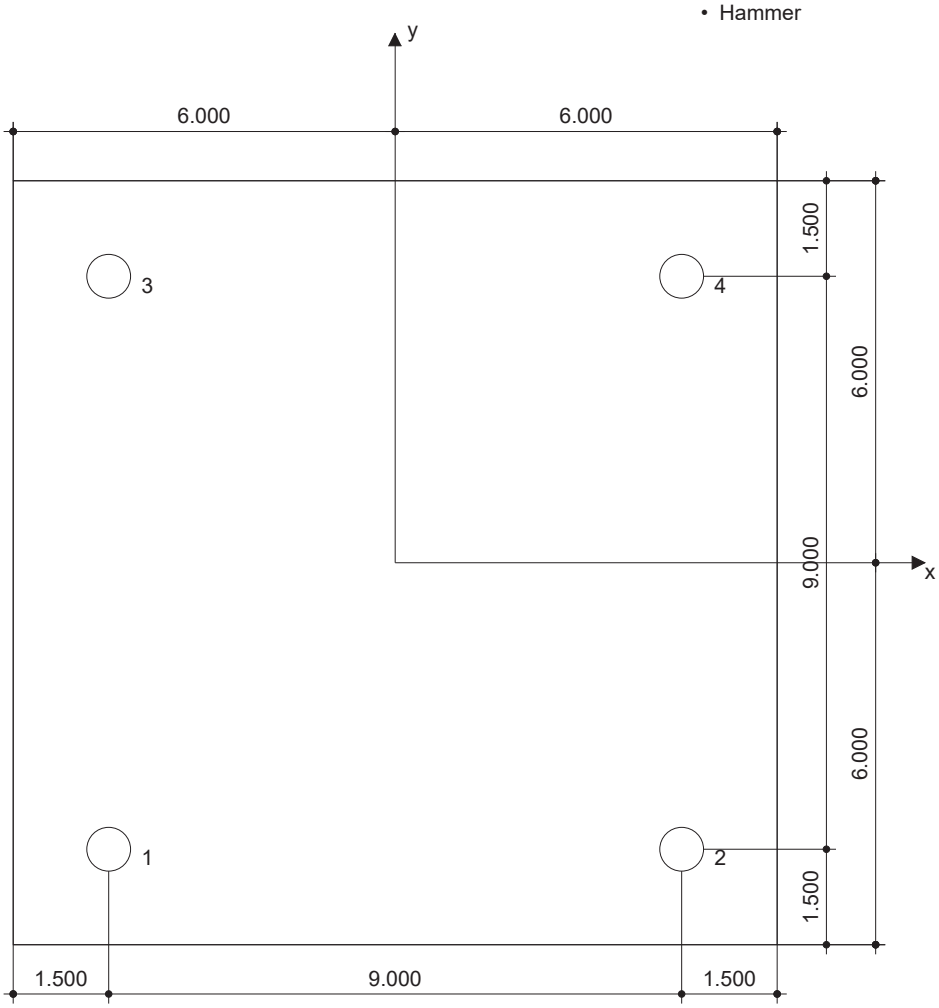
| | | | |
|---|---|---|---|
| Company: | M SQUARED WIRELESS | Page: | 6 |
| Specifier: | | Project: | CCL03387 |
| Address: | | Sub-Project I Pos. No.: | RRU Pipe Mount |
| Phone I Fax: | \| | Date: | 4/1/2019 |
| E-Mail: | | | |

# 7 Installation data

Anchor plate, steel: -
Profile: no profile
Hole diameter in the fixture: $d_f$ = 0.688 in.
Plate thickness (input): 0.250 in.
Recommended plate thickness: not calculated
Drilling method: Hammer drilled
Anchor type and diameter: Kwik Bolt TZ - SS 304 5/8 (3 1/8)
Installation torque: 60.000 ft.lb
Hole diameter in the base material: 0.625 in.
Hole depth in the base material: 3.750 in.
Minimum thickness of the base material: 5.000 in.
Cleaning: Manual cleaning of the drilled hole according to instructions for use is required.

## 7.1 Recommended accessories

| Drilling | Cleaning | Setting |
|---|---|---|
| • Suitable Rotary Hammer<br>• Properly sized drill bit | • Manual blow-out pump | • Torque controlled cordless impact tool (Hilti Safeset System)<br>• Torque wrench<br>• Hammer |




**Coordinates Anchor in.**

| Anchor | x | y | $c_{-x}$ | $c_{+x}$ | $c_{-y}$ | $c_{+y}$ |
|---|---|---|---|---|---|---|
| 1 | -4.500 | -4.500 | - | - | - | - |
| 2 | 4.500 | -4.500 | - | - | - | - |
| 3 | -4.500 | 4.500 | - | - | - | - |
| 4 | 4.500 | 4.500 | - | - | - | - |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## 8 Remarks; Your Cooperation Duties

- Any and all information and data contained in the Software concern solely the use of Hilti products and are based on the principles, formulas and security regulations in accordance with Hilti's technical directions and operating, mounting and assembly instructions, etc., that must be strictly complied with by the user. All figures contained therein are average figures, and therefore use-specific tests are to be conducted prior to using the relevant Hilti product. The results of the calculations carried out by means of the Software are based essentially on the data you put in. Therefore, you bear the sole responsibility for the absence of errors, the completeness and the relevance of the data to be put in by you. Moreover, you bear sole responsibility for having the results of the calculation checked and cleared by an expert, particularly with regard to compliance with applicable norms and permits, prior to using them for your specific facility. The Software serves only as an aid to interpret norms and permits without any guarantee as to the absence of errors, the correctness and the relevance of the results or suitability for a specific application.
- You must take all necessary and reasonable steps to prevent or limit damage caused by the Software. In particular, you must arrange for the regular backup of programs and data and, if applicable, carry out the updates of the Software offered by Hilti on a regular basis. If you do not use the AutoUpdate function of the Software, you must ensure that you are using the current and thus up-to-date version of the Software in each case by carrying out manual updates via the Hilti Website. Hilti will not be liable for consequences, such as the recovery of lost or damaged data or programs, arising from a culpable breach of duty by you.


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**APPENDIX A**

Design Tables & Resources

## Seismic Loads

Latitude and longitude were determined from existing as-builts, AT&T records, and confirmed using GoogleEarth. Design spectral acceleration parameters were optained using NSHMP Hazard, a program by USGS for determining seismic values within the continental US. Input data and program output are provided at the end of this report.

| | | |
|---|---|---|
| Latitude: | 36.601892 | º |
| Longitude: | -121.8945 | º |

| | | | | |
|---|---|---|---|---|
| $S_s$ = | 1.522 | Site Class: | D | |
| $F_a$ = | 1.00 | Occupancy Category: | II | |
| $S_{MS}$ = | 1.522 | Importance Factor, I: | 1.00 | |
| $S_{DS}$ = | 1.015 | Seismic Design Catagory | D | |
| $S_1$ = | 0.558 | Amplification Factor, $a_p$: | 1.0 | |
| $F_v$ = | 1.50 | Response Factor, $R_p$: | 2.5 | |
| $S_{M1}$ = | 0.837 | z = | 1.0 | ft |
| $S_{D1}$ = | 0.558 | h = | 1.0 | ft |

Telecommunication cabinets and radio equipment are non-structural components to be designed under the provisions of ASCE 7-10 chapter 13.

(ASCE 7-10 13.3-3) $F_{p,\min} = 0.3 S_{DS} I_p W_p = 0.304\ w_p$

(ASCE 7-10 13.3-1) $F_p = \dfrac{0.4 a_p S_{DS} W_p}{\left(\dfrac{R_p}{I_p}\right)}\left(1 + 2\dfrac{z}{h}\right) = 0.487\ w_p$

(ASCE 7-10 13.3-2) $F_{p,\max} = 1.6 S_{DS} I_p W_p = 1.623\ w_p$

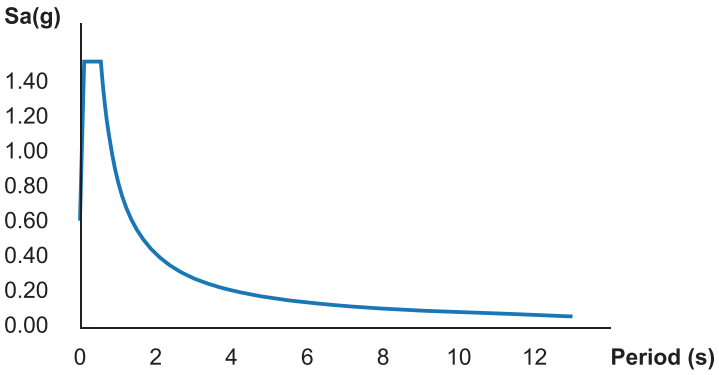
**Use $F_p$ = 0.487 $w_p$**

# Hazards by Location

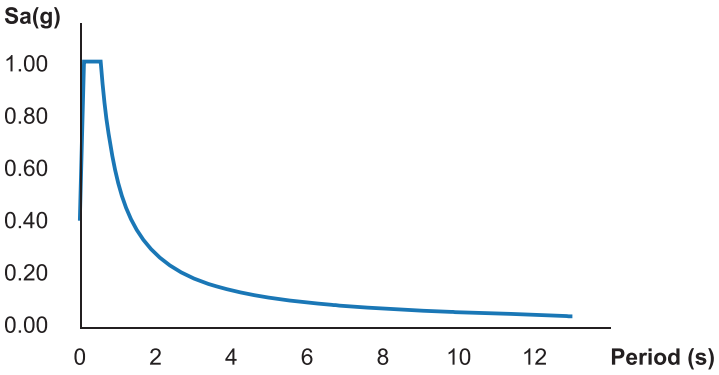
## Search Information

| | |
|---|---|
| **Coordinates:** | 36.601892, -121.894468 |
| **Elevation:** | 33 ft |
| **Timestamp:** | 2019-03-26T22:56:02.485Z |
| **Hazard Type:** | Seismic |
| **Reference Document:** | ASCE7-10 |
| **Risk Category:** | II |
| **Site Class:** | D |

### MCER Horizontal Response Spectrum




### Design Horizontal Response Spectrum




## Basic Parameters

| Name | Value | Description |
|---|---|---|
| $S_S$ | 1.522 | $MCE_R$ ground motion (period=0.2s) |
| $S_1$ | 0.558 | $MCE_R$ ground motion (period=1.0s) |
| $S_{MS}$ | 1.522 | Site-modified spectral acceleration value |
| $S_{M1}$ | 0.837 | Site-modified spectral acceleration value |
| $S_{DS}$ | 1.015 | Numeric seismic design value at 0.2s SA |
| $S_{D1}$ | 0.558 | Numeric seismic design value at 1.0s SA |

## Additional Information

| Name | Value | Description |
|---|---|---|
| SDC | D | Seismic design category |
| $F_a$ | 1 | Site amplification factor at 0.2s |
| $F_v$ | 1.5 | Site amplification factor at 1.0s |
| $CR_S$ | 0.962 | Coefficient of risk (0.2s) |

| | | |
|---|---|---|
| $CR_1$ | 0.954 | Coefficient of risk (1.0s) |
| PGA | 0.592 | $MCE_G$ peak ground acceleration |
| $F_{PGA}$ | 1 | Site amplification factor at PGA |
| $PGA_M$ | 0.592 | Site modified peak ground acceleration |
| $T_L$ | 12 | Long-period transition period (s) |
| SsRT | 1.522 | Probabilistic risk-targeted ground motion (0.2s) |
| SsUH | 1.583 | Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years) |
| SsD | 2.326 | Factored deterministic acceleration value (0.2s) |
| S1RT | 0.558 | Probabilistic risk-targeted ground motion (1.0s) |
| S1UH | 0.585 | Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years) |
| S1D | 0.973 | Factored deterministic acceleration value (1.0s) |
| PGAd | 0.894 | Factored deterministic acceleration value (PGA) |

*The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.*

## Disclaimer

Hazard loads are provided by the U.S. Geological Survey Seismic Design Web Services.

While the information presented on this website is believed to be correct, ATC and its sponsors and contributors assume no responsibility or liability for its accuracy. The material presented in the report should not be used or relied upon for any specific application without competent examination and verification of its accuracy, suitability and applicability by engineers or other licensed professionals. ATC does not intend that the use of this information replace the sound judgment of such competent professionals, having experience and knowledge in the field of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the results of the report provided by this website. Users of the information from this website assume all liability arising from such use. Use of the output of this website does not imply approval by the governing building code bodies responsible for building code approval and interpretation for the building site described by latitude/longitude location in the report.

# Hazards by Location

## Search Information

**Coordinates:** 36.601892, -121.894468

**Elevation:** 33 ft

**Timestamp:** 2019-03-26T22:55:44.735Z

**Hazard Type:** Wind

### ASCE 7-16

| | |
|---|---|
| MRI 10-Year | 63 mph |
| MRI 25-Year | 70 mph |
| MRI 50-Year | 74 mph |
| MRI 100-Year | 78 mph |
| Risk Category I | 86 mph |
| Risk Category II | 91 mph |
| Risk Category III | 98 mph |
| Risk Category IV | 102 mph |

### ASCE 7-10

| | |
|---|---|
| MRI 10-Year | 72 mph |
| MRI 25-Year | 79 mph |
| MRI 50-Year | 85 mph |
| MRI 100-Year | 91 mph |
| Risk Category I | 100 mph |
| Risk Category II | 110 mph |
| Risk Category III-IV | 115 mph |

### ASCE 7-05

| | |
|---|---|
| ASCE 7-05 Wind Speed | 85 mph |

*The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.*

## Disclaimer

Hazard loads are interpolated from data provided in ASCE 7 and rounded up to the nearest whole integer. Per ASCE 7, islands and coastal areas outside the last contour should use the last wind speed contour of the coastal area – in some cases, this website will extrapolate past the last wind speed contour and therefore, provide a wind speed that is slightly higher. NOTE: For queries near wind-borne debris region boundaries, the resulting determination is sensitive to rounding which may affect whether or not it is considered to be within a wind-borne debris region.

Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.

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this website does not imply approval by the governing building code bodies responsible for building code approval and interpretation for the building site described by latitude/longitude location in the report.

AT&T Mobility Supplemental Radio Frequency Statement
2 Portola Plaza Monterey, CA

I am the AT&T radio frequency engineer assigned to the proposed wireless communications facility at the Portola Hotel & Spa, 2 Portola Plaza, Monterey, CA ("Property"). Based on my personal knowledge of the Property and with AT&T's wireless network, as well as my review of AT&T's records with respect to the Property and its wireless communications facilities in the surrounding area, I have concluded that the work associated with this permit request is needed to address significant service coverage gap in a large portion of Downtown Monterey, especially impacting the area roughly bordered by Del Monte Avenue to the south, the wharfs and Monterey Harbor to the north and east and Lighthouse Avenue to the west. This portion of the downtown area includes numerous businesses and tourist destinations, including Old Fisherman's Wharf. In addition to being a busy location year-round, this area experiences significant increases in visitors and mobile traffic during peak seasons.

AT&T has experienced an estimated 470,000% increase in mobile data use on its network since the release of the iPhone in 2007. AT&T forecasts its customers' growing demand for mobile data services to continue. The increased volume of data travels to and from customers' wireless devices and AT&T's wireless infrastructure over limited airwaves — radio frequency spectrum that AT&T licenses from the Federal Communications Commission.

Spectrum is a finite resource and there are a limited number of airwaves capable and available for commercial use. To ensure service quality, AT&T must knit together its spectrum assets to address customers' existing usage and forecasted demand for wireless services, and it must use its limited spectrum in an efficient manner.

AT&T uses high-band (i.e., 2300 MHz, 2100 MHz, and 1900 MHz) and low-band (i.e., 850 MHz and 700 MHz) spectrum to provide wireless service. Each spectrum band has different propagation characteristics and signal quality may vary due to noise or interference based on network characteristics at a given location. To address this dynamic environment, AT&T deploys multiple layers of its licensed spectrum and strives to bring its facilities closer to the customer. The geographic area covered by a given site is determined by factors such as site elevation, local topography and customer usage patterns for the area. Sites must also be located with reference to other sites in the network to provide seamless mobile connectivity while also avoiding interference with one another.

The primary issue that is causing AT&T's significant service coverage gap in this portion of Monterey is that a set of antennas and radio units (known as a "sector") on the existing macro facility at the Property is at capacity causing wireless services to be degraded. Specifically, the northeast-facing

(alpha) sector of existing macro Site CCL03387 is overloaded and performing poorly. This sector consists of three antennas and four radio units (also referred to as "carriers"), including one 20 MHz carrier and three 10 MHz carriers, for a total of 50 MHz of bandwidth. The sector is experiencing very high utilization, well above thresholds that trigger the need to add capacity. This, in turn, is resulting in blocked voice calls and data sessions as well as poor data speeds. These problems have reached a critical point that requires the work associated with this permit request , especially as AT&T forecasts bandwidth demand to continue an upward trend.

Because it takes approximately two years to bring a new cell site on air, and this site will soon reach exhaustion, AT&T cannot wait until capacity is completely exhausted in an area before it upgrades its network. Just as no reasonable business would wait until its customers are leaving before it fixes identifiable issues, AT&T is committed to a significant capital investment at the proposed site to ensure consistent and exceptional service quality for its customers. Consequently, current usage and forecasted demand affect current network management and design. The proposed modification at the Property will not only alleviate existing network capacity constraints, but it will also help address forecasts for continued increased usage and future peak demand periods.

I have a bachelor's degree in Electronics and Communications Engineering from De La Salle University, and have worked as an engineering expert in the wireless communications industry for more than 10 years.

Michael D. Quinto

4/21/2020

AT&T Mobility Services LLC
Network, Planning & Engineering
RAN Design & RF Engineering
April 2020

**Bret McComb, P.E.**
**Precision Design & Drafting, Inc**
**11768 Atwood Rd, Suite 20**
**Auburn, CA 95603**
**(530) 823-6546**
**Fax (530) 823-8783**

# AT&T SFO 0607
# FRP Screen & Anchorage Engineering

**17 November 2011**

2010 California Building Code

Site Latitude: 36.607° N
Site Longitude: -121.895° E
Snow Load: 0 psf
Elevation: 32'
Occupancy Category: III
Wind Exposure: C


| Subject | Page(s) |
|---|---|
| Wind Loads | 1 |
| FRP Load & Member Analysis | 2-4 |
| FRP Properties | 5-6 |
| Anchorage Properties | 7-8 |

PRECISION DESIGN & Draftings INC.

**Project:** at&t SFO0607

Date: 11/17/2011
Analysis by: JS

***WIND FOR MECHANICAL NONSTRUCTURAL COMPONENT:***

**Side Wind**
Attaches to: Masonry

| | | | |
|---|---|---|---|
| Occupancy Category: | III | | |
| Wind Importance Factor I: | 1.15 | | *2010 CBC Table 1604.5* |
| Wind Force Applicable: | Yes | | *ASCE 7-05 Table 6-1* |
| Basic Wind Speed $V_{3S}$: | 85 | *mph* | *2010 CBC Figure 1609* |
| Exposure Category: | C | | *2010CBC §1609.4.2 - 1609.4.3* |
| Rooftop Mounting: | Yes | | |
| Building Height, $h_b$: | 74 | *ft* | |
| Building Length, B: | 150 | *ft* | |

*ASCE 7-05 Table 6-2*

| Exposure | α | $z_g$: | $z_{min}$ |
|---|---|---|---|
| B | 7 | 1200 | 30 |
| C | 9.5 | 900 | 15 |
| D | 11.5 | 700 | 7 |

Equipment CG, z: 72 *ft*

α: 9.5 $z_g$: 900 *ft*

Exposure Coefficient $K_z = 2.01(z/z_g)^{2/\alpha}$: 1.18 *ASCE 7-05 Table 6-3*

| | | | |
|---|---|---|---|
| Topographic Factor $K_{zt}$: | 1.00 | | *ASCE 7-05 § 6.5.7.2* |
| Directionality Factor $K_d$: | 0.90 | | *ASCE 7-05 Table 6-4* |
| Gust Factor G: | 0.85 | | *ASCE 7-05 § 6.5.8* |
| Velocity Pressure $q_z = .00256K_zK_{zt}K_dV^2I$: | 22.61 | *psf* | *ASCE 7-05 Equation 6-15* |

*ASCE 7-05 Figure 6-21*

| Normal to Wind | H/D 1 | 7 | 25 |
|---|---|---|---|
| $C_f$ | 1.3 | 1.4 | 2.0 |

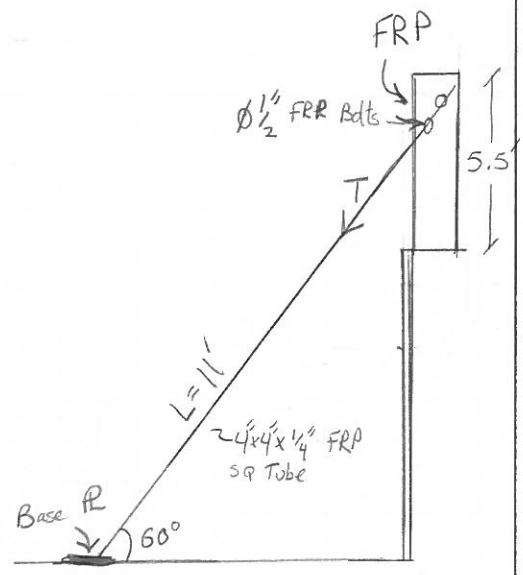
h/D Cabinet: 1.00

Force Coefficient $C_f$: 1.30

| | | | |
|---|---|---|---|
| Wind Pressure = $q_zGC_f$: | 24.98 | *psf* | |
| Wind Force Coefficient, ψ: | 1.00 | | *ASCE 7-05 Section 6.5.15.1* |
| Design Wind Pressure, $\psi q_zGC_f$: | 24.98 | *psf* | |
| Maximum Wind Area, $A_w$: | 9.00 | $ft^2$ | |
| $F_w = \psi\ q_zGC_fA_f$: | 225 | *lb* | *ASCE 7-05 Equation 6-28 and Section 6.5.15.1* |

FRP Wind Area: $(8')(5.5') = \underline{44\ ft^2}$

$\underline{F_w = \pm 1099\ lb}$ see page 1




$\Sigma M_A = 0 = F_w(5.5') - T\cos 60°(5')$

$\Rightarrow \boxed{T = \underline{2418\ lb} = \text{Demand on Base PL.}}$

Buckling Check: 4"x4"x1/4" FRP Sq Tube

$$F_{cr} = \frac{\pi^2 EI}{(KL)^2}$$ ; $E = 2.8 \times 10^6$ psi, $I = 8.82\ in^4$, $K = 1.0$, $L = 11(12) = 132$ in

$A = 3.74\ in^2$

$$F_{cr} = \frac{\pi^2 (2.8e6)(8.82)}{132^2} = \boxed{\underline{13988\ lb}\ \text{Capacity} \gg 2418\ \text{Demand} \therefore \text{OK}}$$

Slenderness: $\frac{L}{r}$ must $\leq 300$ ; $r = \sqrt{\frac{I}{A}} = \sqrt{\frac{8.82}{3.74}} = 1.535$ in

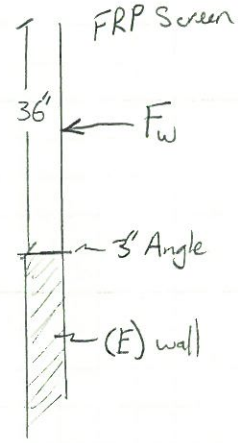
$$\frac{11 \cdot 12}{1.535} = \boxed{86 \leq 300 \therefore \text{OK}}$$

Fastener Capacity: Ø1/2" FRP Bolt, Shear Capacity $= \underline{F_v = 2400\ lb/bolt}$

$$N_b(F_v) = 2(2400) = \boxed{4800\ lb > 2418\ lb \therefore \text{OK}}$$

TOPS 35502

Wind Pressure: 24.98 psf




FRP Area = (3)(1) = 3 ft²/ft

$F_w$ = 75 lb/ft

$M_w = 75\left(\frac{3'}{2}\right) = \underline{113 \text{ lb-ft/ft} = \text{Demand}}$

Tension force:

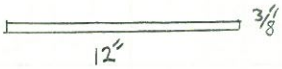
$T = \dfrac{M_w}{\left(\frac{3''}{2}\right)} = \underline{904 \text{ lb/ft}}$ Anchorage Demand

Anchorage Capacity:

ø 3/8" Kwik Bolt (SS) TZ, Pull out Capacity = <u>1155 lb</u>

$\frac{1155}{904} = 15.3''$ ∴ use (1) TZ, staggered @ 12" OC

FRP Capacity: $M = S_y S_x$ ; $S_y = 10$ ksi ; $S_x = \frac{bh^2}{6}$




$S = \frac{12(3/8)^2}{6} = .281 \text{ in}^3$

$M = 10000(.281) = \underline{281 \text{ ft-lb}}$ Capacity > 113 ft-lb Demand ∴ OK

Wind Pressure = 24.95 psf

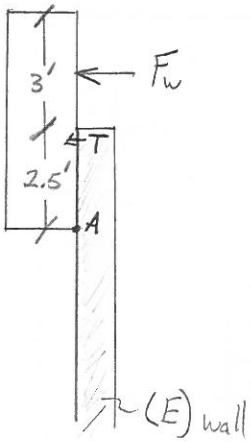
Effective Bay Area = (3)(4) = 12 ft²

$F_w$ = 300 lb

$\Sigma M_A = 0 = F_w(5.5) - (2.5-1)(T)$

$T = \frac{1100 \text{ lb}}{2} = 550^{\text{lb}}$ per top anchor

Minimum (2) ϕ 3/8" SS TZ per bay






TOPS 35502

# TYPICAL COUPON PROPERTIES

Below are test results for typical coupon properties of Bedford Reinforced Plastics' structural fiberglass profiles (Standard, Fire Retardant, & Vinylester shapes). Properties are derived per the ASTM test method shown. Synthetic surfacing veil and ultraviolet inhibitors are standard.

| | | ENGLISH | | METRIC | |
|---|---|---|---|---|---|
| **MECHANICAL PROPERTIES** | **ASTM** | **Units** | **Value** | **Units** | **Value** |
| Tensile Stress, LW | D-638 | psi | 30,000 | *MPa* | *206.8* |
| Tensile Stress, CW | D-638 | psi | 7,000 | *MPa* | *48.2* |
| Tensile Modulus, LW | D-638 | $10^6$ psi | 2.5 | *GPa* | *17.2* |
| Tensile Modulus, CW | D-638 | $10^6$ psi | .8 | *GPa* | *5.5* |
| Compressive Stress, LW | D-695 | psi | 30,000 | *MPa* | *206.8* |
| Compressive Stress, CW | D-695 | psi | 15,000 | *MPa* | *103.4* |
| Compressive Modulus, LW | D-695 | $10^6$ psi | 2.5 | *GPa* | *17.2* |
| Compressive Modulus,CW | D-695 | $10^6$ psi | 1.0 | GPa | 6.9 |
| Flexural Stress, LW | D-790 | psi | 30,000 | *MPa* | *206.8* |
| Flexural Stress, CW | D-790 | psi | 10,000 | *MPa* | *68.9* |
| Flexural Modulus, LW | D-790 | $10^6$ psi | 1.8 | *GPa* | *12.4* |
| Flexural Modulus, CW | D-790 | $10^6$ psi | .8 | *GPa* | *5.5* |
| Modulus of Elasticity, E | Full Section | $10^6$ psi | 2.8 | *GPa* | *19.3* |
| Shear Modulus | — — | $10^6$ psi | 0.450 | *GPa* | *3.1* |
| Short Beam Shear | D-2344 | psi | 4,500 | *MPa* | *31.0* |
| Punch Shear | D-732 | psi | 10,000 | *MPa* | *68.9* |
| Notched Izod Impact, LW | D-256 | ft.-lbs./in. | 25 | *J/mm* | *1.33* |
| Notched Izod Impact, CW | D-256 | ft.-lbs./in. | 4 | *J/mm* | *.21* |
| **PHYSICAL PROPERTIES** | **ASTM** | **Units** | **Value** | **Units** | **Value** |
| Barcol Hardness | D-2583 | — - | 45 | — - | *45* |
| 24 Hour Water Absorbtion | D-570 | % max. | 0.45 | *% max.* | *0.45* |
| Density | D-792 | lbs./in.$^3$ | .062-.070 | *g/cc* | *1.72-1.94* |
| Coefficient of Thermal Expansion, LW | D-696 | $10^6$ in./in./°F | 7 | $10^6$ *cm/cm/°C* | *12* |
| **ELECTRICAL PROPERTIES** | **ASTM** | **Units** | **Value** | **Units** | **Value** |
| Arc Resistance, LW | D-495 | seconds | 120 | *seconds* | *120* |
| Dielectric Strength, LW | D-149 | kv./in. | 35 | *kv./mm* | *1.37* |
| Dielectric Strength, PF | D-149 | volts/mil. | 200 | *volts/mil.* | *200* |
| Dielectric Constant, PF | D-150 | @60hz | 5 | *@60hz* | *5* |

*Fire Retardant Polyester and Fire Retardant Vinylester Structural Profiles:*

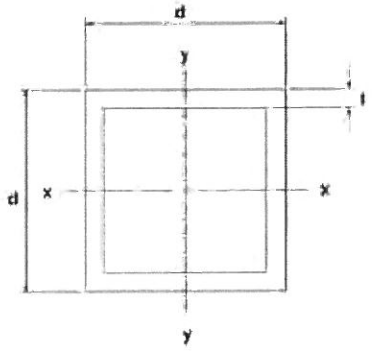
| **FLAMMABILITY PROPERTIES** | **ASTM** | **Units** | **Value** |
|---|---|---|---|
| Tunnel Test | E-84 | Flame Spread | 25 max. |
| Flammability | D-635 | — — | Nonburning |
| UL | 94 | VO | |
| NBS Smoke Chamber | E-662 | Smoke Density 600-700 | |

LW = Lengthwise CW = Crosswise PF = Perpendicular to Laminate Face

# SQUARE TUBE

| SECTION DIMENSIONS | | | | SECTION PROPERTIES | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| d=d$_f$,in | t,in | A, in$^2$ | Wt, Lbs/ft | I, in$^4$ | S, in$^3$ | r, in | J, in$^4$ | d$_w$ | a$_w$ |
| in. | in. | in$^2$ | lb./ft. | in.$^4$ | in$^3$ | in. | in.$^4$ | in$^3$ | in. |
| *mm.* | *mm.* | *mm.$^2$* | *kg./m* | *mm.$^4$* | *mm.$^3$* | *mm.* | *mm.$^4$* | *mm.$^3$* | *mm.* |
| 1.5 | 1/4 | 1.25 | 0.98 | 0.34 | 0.45 | 0.52 | 0.41 | 1 | 0.50 |
| *38.10* | *6.35* | *806.25* | *1.45* | *140911.54* | *7396.91* | *13.22* | *169364.83* | *25.40* | *322.50* |
| 1 | 1/8 | 0.44 | 0.34 | 0.06 | 0.11 | 0.36 | 0.07 | 0.75 | 0.19 |
| *25.40* | *3.18* | *282.19* | *0.51* | *23711.08* | *1867.01* | *9.17* | *30498.37* | *19.05* | *120.94* |
| 1 | 1/4 | 0.75 | 0.59 | 0.08 | 0.16 | 0.32 | 0.08 | 0.5 | 0.25 |
| *25.40* | *6.35* | *483.75* | *0.87* | *32518.05* | *2560.47* | *8.20* | *32924.52* | *12.70* | *161.25* |
| 1 1/4 | 1/8 | 0.56 | 0.44 | 0.12 | 0.19 | 0.46 | 0.16 | 1 | 0.25 |
| *31.75* | *3.18* | *362.81* | *0.65* | *49996.50* | *3149.38* | *11.74* | *66672.16* | *25.40* | *161.25* |
| 1 1/4 | 1/4 | 1 | 0.78 | 0.18 | 0.28 | 0.42 | 0.2 | 0.75 | 0.38 |
| *31.75* | *6.35* | *645.00* | *1.16* | *73707.57* | *4642.98* | *10.69* | *83246.20* | *19.05* | *241.88* |
| 1 1/2 | 1/8 | 0.69 | 0.54 | 0.22 | 0.29 | 0.56 | 0.3 | 1.25 | 0.31 |
| *38.10* | *3.18* | *443.44* | *0.80* | *90915.04* | *4772.43* | *14.32* | *123983.52* | *31.75* | *201.56* |
| 1 1/2 | 1/4 | 1.25 | 0.98 | 0.34 | 0.45 | 0.52 | 0.41 | 1 | 0.5 |
| *38.10* | *6.35* | *806.25* | *1.45* | *140911.54* | *7396.91* | *13.22* | *169364.83* | *25.40* | *322.50* |
| 1 3/4 | 1/8 | 0.81 | 0.63 | 0.36 | 0.41 | 0.67 | 0.5 | 1.5 | 0.38 |
| *44.45* | *3.18* | *524.06* | *0.94* | *149718.51* | *6736.47* | *16.90* | *207309.81* | *38.10* | *241.88* |
| 1.75 | 1/4 | 1.5 | 1.17 | 0.58 | 0.66 | 0.62 | 0.72 | 1.25 | 0.63 |
| *44.45* | *6.35* | *967.50* | *1.74* | *240633.55* | *10827.13* | *15.77* | *301024.21* | *31.75* | *403.13* |
| 2 | 1/8 | 0.94 | 0.73 | 0.55 | 0.55 | 0.77 | 0.77 | 1.75 | 0.44 |
| *50.80* | *3.18* | *604.69* | *1.09* | *229658.71* | *9041.66* | *19.49* | *321528.54* | *44.45* | *282.19* |
| 2 | 1/4 | 1.75 | 1.37 | 0.91 | 0.91 | 0.72 | 1.17 | 1.5 | 0.75 |
| *50.80* | *6.35* | *1128.75* | *2.03* | *379377.21* | *14936.07* | *18.33* | *487973.94* | *38.10* | *483.75* |
| 2 | 3/8 | 2.44 | 1.9 | 1.13 | 1.13 | 0.68 | 1.31 | 1.25 | 0.94 |
| *50.80* | *9.53* | *1572.19* | *2.83* | *470292.25* | *18515.39* | *17.29* | *544188.24* | *31.75* | *604.69* |
| 2 1/4 | 1/8 | 1.06 | 0.83 | 0.80 | 0.71 | 0.87 | 1.13 | 2.00 | 0.50 |
| *57.15* | *3.18* | *685.31* | *1.23* | *333987.44* | *11688.07* | *22.07* | *471517.33* | *50.80* | *322.50* |
| 2.25 | 1/4 | 2.00 | 1.56 | 1.35 | 1.2 | 0.82 | 1.78 | 1.75 | 0.88 |
| *57.15* | *6.35* | *1290.00* | *2.32* | *563646.15* | *19725.09* | *20.90* | *739966.22* | *44.45* | *564.38* |
| 3 | 1/8 | 1.44 | 1.12 | 1.98 | 1.32 | 1.17 | 2.85 | 2.75 | 0.69 |
| *76.20* | *3.18* | *927.19* | *1.67* | *825822.90* | *21675.08* | *29.84* | *1184880.57* | *69.85* | *443.44* |
| 3 | 1/4 | 2.75 | 2.15 | 3.49 | 2.33 | 1.13 | 4.77 | 2.50 | 1.25 |
| *76.20* | *6.35* | *1773.75* | *3.20* | *1454640.63* | *38179.43* | *28.63* | *1983736.35* | *63.50* | *806.25* |
| 3.5 | 1/4 | 3.25 | 2.54 | 5.76 | 3.29 | 1.33 | 7.97 | 3.00 | 1.50 |
| *88.90* | *6.35* | *2096.25* | *3.78* | *2395496.12* | *53891.77* | *33.80* | *3316956.92* | *76.20* | *967.50* |
| 4 | 3/8 | 5.44 | 4.24 | 12.04 | 6.02 | 1.49 | 16.19 | 3.25 | 2.44 |
| *101.60* | *9.53* | *3507.19* | *6.32* | *5009811.60* | *98618.05* | *37.79* | *6738104.51* | *82.55* | *1572.19* |
| 4 | 1/4 | 3.75 | 2.93 | 8.83 | 4.41 | 1.53 | 12.36 | 3.50 | 1.75 |
| *101.60* | *6.35* | *2418.75* | *4.36* | *3674539.30* | *72333.24* | *38.97* | *5144456.63* | *89.90* | *1128.75* |
| 6 | 3/8 | 8.44 | 6.58 | 44.69 | 14.9 | 2.3 | 62.57 | 5.25 | 3.94 |
| *152.40* | *9.53* | *5442.19* | *9.81* | *18602355.19* | *244124.69* | *58.46* | *26043811.71* | *133.35* | *2539.69* |

***ENGLISH**
***METRIC***



# 4.3.4 Kwik Bolt TZ Expansion Anchor

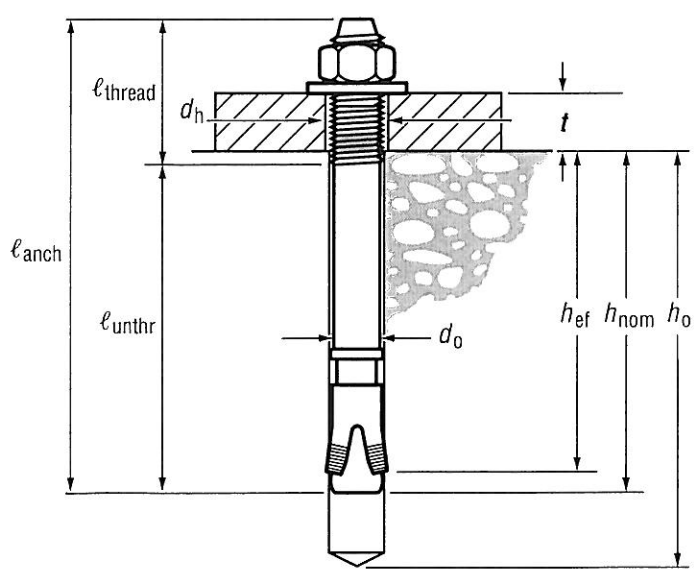
## 4.3.4.3 Technical Data

### Table 1 — Kwik Bolt TZ Specification Table

| SETTING INFORMATION | Symbol | Units | Nominal anchor diameter (in.) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 3/8 | | | 1/2 | | | 5/8 | | | | 3/4 | | | |
| Anchor O.D. | $d_o$ | in. | 0.375 | | | 0.5 | | | 0.625 | | | | 0.75 | | | |
| | | (mm) | (9.5) | | | (12.7) | | | (15.9) | | | | (19.1) | | | |
| Nominal bit diameter | $d_{bit}$ | in. | 3/8 | | | 1/2 | | | 5/8 | | | | 3/4 | | | |
| Effective min. embedment | $h_{ef}$ | in. | 2 | | | 2 | | 3-1/4 | 3-1/8 | | | 4 | 3-3/4 | | | 4-3/4 |
| | | (mm) | (51) | | | (51) | | (83) | (79) | | | (102) | (95) | | | (121) |
| Min. hole depth | $h_o$ | in. | 2-5/8 | | | 2-5/8 | | 4 | 3-3/4 | | | 4-3/4 | 4-5/8 | | | 5-3/4 |
| | | (mm) | (67) | | | (67) | | (102) | (95) | | | (121) | (117) | | | (146) |
| Min. thickness of fixture[1] | $t_{min}$ | in. | 1/4 | | | 3/4 | | 1/4 | 3/8 | | | 3/4 | 1/8 | | | 1-5/8 |
| | | (mm) | (6) | | | (19) | | (6) | (9) | | | (19) | (3) | | | (41) |
| Max. thickness of fixture | $t_{max}$ | in. | 2-1/4 | | | 4 | | 2-3/4 | 5-5/8 | | | 4-3/4 | 4-5/8 | | | 3-5/8 |
| | | (mm) | (57) | | | (101) | | (70) | (143) | | | (121) | (117) | | | (92) |
| Installation torque | $T_{inst}$ | ft-lb | 25 | | | 40 | | | 60 | | | | 110 | | | |
| | | (Nm) | (34) | | | (54) | | | (81) | | | | (149) | | | |
| Min. dia. of hole in fixture | $d_h$ | in. | 7/16 | | | 9/16 | | | 11/16 | | | | 13/16 | | | |
| | | (mm) | (11.1) | | | (14.3) | | | (17.5) | | | | (20.6) | | | |
| Available anchor lengths | $\ell_{anch}$ | in. | 3 | 3-3/4 | 5 | 3-3/4 | 4-1/2 | 5-1/2 | 7 | 4-3/4 | 6 | 8-1/2 | 10 | 5-1/2 | 8 | 10 |
| | | (mm) | (76) | (95) | (127) | (95) | (114) | (140) | (178) | (121) | (152) | (216) | (254) | (140) | (203) | (254) |
| Threaded length including dog point | $\ell_{thread}$ | in. | 7/8 | 1-5/8 | 2-7/8 | 1-5/8 | 2-3/8 | 3-3/8 | 4-7/8 | 1-1/2 | 2-3/4 | 5-1/4 | 6-3/4 | 1-1/2 | 4 | 6 |
| | | (mm) | (22) | (41) | (73) | (41) | (60) | (86) | (178) | (38) | (70) | (133) | (171) | (38) | (102) | (152) |
| Unthreaded length | $\ell_{unthr}$ | in. | 2-1/8 | | | 2-1/8 | | | 3-1/4 | | | | 4 | | | |
| | | (mm) | (54) | | | (54) | | | (83) | | | | (102) | | | |
| Installation embedment | $h_{nom}$ | in. | 2-1/4 | | | 2-3/8 | | 3-5/8 | 3-5/8 | | | 4-1/2 | 4-3/8 | | | 5-3/8 |
| | | (mm) | (57) | | | (60) | | (92) | (92) | | | (114) | (111) | | | (137) |

1 The minimum thickness of the fastened part is based on use of the anchor at minimum embedment and is controlled by the length of thread. If a thinner fastening thickness is required, increase the anchor embedment to suit.

### Figure 1 — Kwik Bolt TZ installed



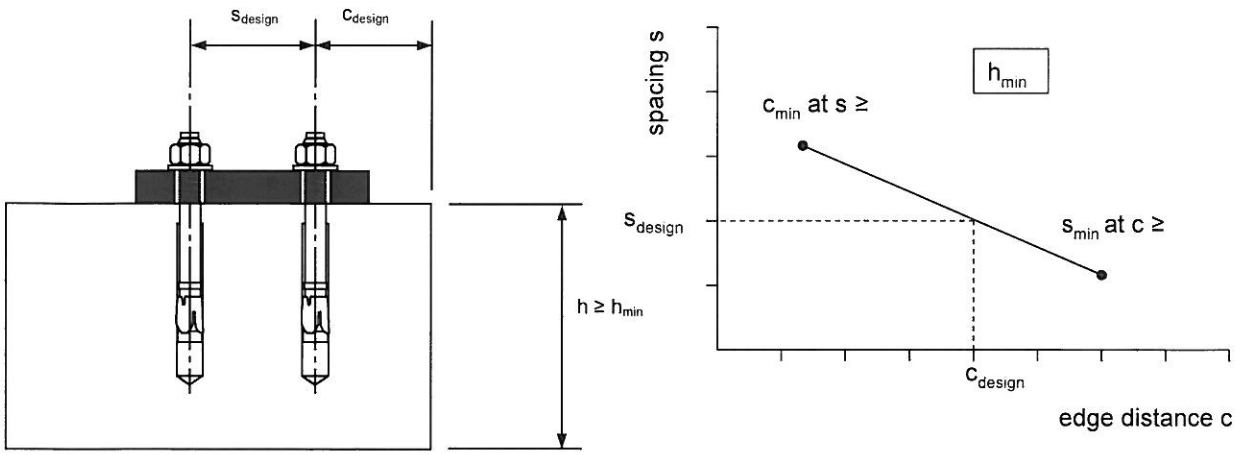



**FIGURE 4—INTERPOLATION OF MINIMUM EDGE DISTANCE AND ANCHOR SPACING**

**TABLE 5—MEAN AXIAL STIFFNESS VALUES β FOR KB-TZ CARBON AND STAINLESS STEEL ANCHORS IN NORMAL-WEIGHT CONCRETE ($10^3$pounds/in.)[1]**

| Concrete condition | carbon steel KB-TZ, all diameters | stainless steel KB-TZ, all diameters |
|---|---|---|
| uncracked concrete | 700 | 120 |
| cracked concrete | 500 | 90 |

[1]Mean values shown, actual stiffness may vary considerably depending on concrete strength, loading and geometry of application.

**TABLE 6—EXAMPLE ALLOWABLE STRESS DESIGN VALUES FOR ILLUSTRATIVE PURPOSES**

| Nominal Anchor diameter (in.) | Embedment depth (in.) | Allowable tension (lbf) | |
|---|---|---|---|
| | | Carbon Steel | Stainless Steel |
| | | $f'_c$ = 2500 psi | |
| | | Carbon Steel | Stainless Steel |
| 3/8 | 2 | 1105 | 1155 |
| 1/2 | 2 | 1490 | 1260 |
| | 3-1/4 | 2420 | 2530 |
| 5/8 | 3-1/8 | 2910 | 2910 |
| | 4 | 4015 | 4215 |
| 3/4 | 3-3/4 | 3635 | 3825 |
| | 4-3/4 | 4690 | 5290 |

For **SI:** 1 lbf = 4.45 N, 1 psi = 0.00689 MPa 1 psi = 0.00689 MPa. 1 inch = 25.4 mm.

[1]Single anchors with static tension load only.
[2]Concrete determined to remain uncracked for the life of the anchorage.
[3]Load combinations from ACI 318 Section 9.2 (no seismic loading).
[4]30% dead load and 70% live load, controlling load combination 1.2D + 1.6 L.
[5]Calculation of the weighted average for α = 0.3*1.2 + 0.7*1.6 = 1.48.
[6]$f'_c$ = 2,500 psi (normal weight concrete).
[7]$c_{a1} = c_{a2} \geq c_{ac}$
[8]$h \geq h_{min}$
[9]Values are for Condition B where supplementary reinforcement in accordance with ACI 318 D.4.4 is not provided

## Use Permit Application – Personal Wireless Facility Submittal Checklist

All applicants for a wireless communications facility shall complete this Submittal Checklist and attach all required documentation as described herein. ***Applications that are not offered as an eligible facilities request pursuant to Section 6409 of the Spectrum Act (47 U.S.C. § 1455) ("EFR") are subject to the City's requirement to construct a mock-up facility and the Mock-Up Standards below.***

Applicants shall submit a paper copy of all required materials at the Planning Office (580 Pacific Street) and also shall submit electronic, searchable copies of the same to montereyplanning@monterey.org. You are hereby notified that the electronic materials shall be posted online for public viewing.

Any questions about the Submittal Checklist or the application process for wireless communication facilities should be directed to the Planning Office at (831) 646-3885.

*Please note that each application for a Personal Wireless Facility in addition must include a complete Planning Project Application, available online at http://monterey.org/Portals/0/Forms/Planning/Planning-Project-Application.pdf. Wet or digital signatures are required. Digital signatures must comply with Cal. Gov. Code section 16.5. You may also be required to submit additional applications with this application as prescribed in the application form and discussed below.*

### Process

All wireless permit applications shall be submitted to the City at a prescheduled appointment with the Community Development Director, as defined in the City Code, Sec. 38-112.4(K).

**Initial Property Owner Notification.** Prior to the pre-scheduled application submittal appointment, the applicant shall obtain an initial draft public notice and list of property owners within 150 feet from each corner of the site and 300 feet of the site boundaries from City staff. In accordance with City Code Sec. 38-112.4.E.1.a, the applicant shall mail the initial project notice to all property owners on the list and provide proof of mailing the notice as part of the application materials submitted to the City at the prescheduled appointment described above.

During the application submittal appointment, or thereafter, the Community Development Director shall review the application materials and determine whether the application is complete. If the application is found to be complete, the Community Development Director shall refer the application to the Planning Commission, and may conduct further review

and submit recommendations to the Planning Commission. If the application is not complete, the Community Development Director shall issue in writing a denial of the application without prejudice to refiling, specifying the reasons for the denial--unless the omissions are corrected at the prescheduled appointment, or the Community Development Director determines that permitting submission of additional materials will not prevent the City from conducting, or the public from participating in, a timely review of the application.

If the applicant contends that there are any additional permits or authorizations that must be acted upon by the same date (or sooner) than the City must act upon the application for a wireless permit, the application must contain *any and all such* additional

authorizations, agreements, or permit application(s) needed to actually deploy the facility ("Ancillary Applications") as well as all associated fees. (Traffic control plans may be one example.) If the applicant agrees that there are no additional permits that must be acted upon by the same date (or sooner) than the City must act upon the application for a wireless permit, the applicant may file for other required authorizations, agreements and permits later. Without such an agreement, any application submitted without the Ancillary Applications and fees will be deemed incomplete, without the Ancillary Applications will be deemed denied, unless the omissions are corrected at the prescheduled appointment, or the Community Development Director determines that permitting submission of additional materials will not prevent the City from conducting, or the public from participating in, a timely review of the application.

The information required by Attachment A or B (as applicable) should be provided in an indexed hard copy with page numbers, with each required section appropriately tabbed, and with subparts clearly identified. The electronic version should similarly include an index with hyperlinks, with sections and subparts clearly identified, and it should be word searchable (although we understand some graphic materials may not be searchable). The goal is to permit the City to quickly determine whether or not the application is complete, and failure to submit in a proper format will be considered the failure to submit a complete form.

**A. Project Location**

Street Address 2 Portola Plaza

(For ROW, Closest Cross Streets): Pacific Street

Description of Location at Address (NE Corner of Roof/NE Corner of Intersection)
Cell Site located on Rooftop of Portola Hotel

GPS Coordinates 36.6018919, -121.8944681

If on existing utility pole or replacing an existing utility pole, pole number N/A

**B. Application Submittal Date**

Date of Application Submittal:_____

**C. Fees**

The Application Fee ☐ is attached hereto ☐ was submitted on _____

The Other Fee ☐ is attached hereto ☐ was submitted on _____

## D. Contact Information

*Applicant[s] [Applicant[s] must be the person or persons seeking approval, and must include the person or persons responsible for ensuring compliance with requirements of the application, and authorized to make the representations in the application]*

Applicant Name: AT&T Mobility - JAMES PHILLIPS (Agent for AT&T)

Address: AT&T Mobility - JAMES PHILLIPS (Agent for AT&T)

Phone Number: 530-333-5786

Email: JAMES.PHILLIPS@MASTEC.COM

*Facility Owner/Operator [identify separately each person who will own any part of the Facility, and each person who will provide wireless services via the facility. Add sheets as necessary]*

*Identify number of Owner/operators* 1

Owner/Operator Name: AT&T MOBILITY

Address: 5001 EXECUTIVE PARKWAY 4W750S, SAN RAMON, CA 94583

Phone Number: 916-996-4874

Email: NS2950@ATT.COM

*Person Responsible for Answering Questions Regarding this Application*

Name: NS2950@ATT.COM

Title/Employer: PROJECT MANAGER - MASTEC NETWORK SOLUTIONS, INC (AT&T REP)

Address: PROJECT MANAGER - MASTEC NETWORK SOLUTIONS, INC (AT&T REP)

Phone Number: 530-333-5786

Email: JAMES.PHILLIPS@MASTEC.COM

**E. Required Information [Where an Attachment is Required, label the Attachment "Section E, Question_, [Description of Attachment]"]**

1. Is the proposed wireless communications facility to be used for the provision of "personal wireless services" as defined by 47 U.S.C. Section 332(c)(7)(C)(i), on a sole or comingled basis?

☐ No. Specify the type(s) of wireless communications services to be provided using the proposed facility: _____

☒ Yes. Specify the type(s) of personal wireless services: EXISTING AT&T WIRELESS FACILITY

2. Is the proposed wireless communications facility part of a distributed antenna system ("DAS")?

☒ No.
☐ Yes. [*All applications for wireless communications facilities comprising the DAS must be submitted contemporaneously*.]

If you answered "yes" to this question:

☐ I am simultaneously filing applications for all facilities comprising the DAS network.
☐ I am not submitting applications for all facilities comprising the DAS network.

3. Is the proposed wireless communications facility to be attached to a structure owned or controlled by the City of Monterey?

☒ No.
☐ Yes.

If you answered "yes" to this question select one of the following:

☐ I have a master lease or other agreement with the City for use of the facility. [If you check this box, provide the document.
☐ I have no lease or other agreement, but I am applying/have applied for one. [If you check this box, the application must be provided, along with payment or proof of payment of required fees.]
☐ I have no lease or other agreement, and have not applied for a lease or other agreement. [If you check this box, we must deny this application unless you agree, by signing below, that you will apply for, or otherwise obtain separately that lease or other agreement; that you agree that any deadline for action on that application will not begin to run until the complete application is submitted; and agree that any time for action on this application is tolled until and unless a complete application for a lease or other agreement is applied for, or the lease or other agreement is obtained.][1]

---

[1]We encourage informal discussions with respect to use of City-owned or controlled facilities. If an application is filed, and applicant contends we must act on the application within 60 days, there can be no

Agreed:_____

4. Is the proposed wireless communications facility in a Coastal Zone?

☐ No.
☒ Yes.

If you answered yes to this question, please check one of the following:

☒ I do not require a Coastal Permit. [If you check this box, explain why by separate attachment.]
☐ I have the required permit. [If you check this box, attach the required permit.]
☐ I have no Coastal Permit, but I am applying/have applied for one. [If you check this box, the application must be provided.]

☐ I have no Coastal Permit, and have not applied for one. [If you check this box, we must deny this application, unless you agree, by signing below, that you will apply separately for the that permit; that any deadline for action on the application will not begin to run until the complete application is submitted; and that no work may be undertaken should this wireless application be granted, or granted subject to conditions, until and unless that permit is obtained.]

Agreed:_____

5. Based on the work proposed in connection with this project, identify all Ancillary Applications that will be required for any work within the boundaries of the City of Monterey in order to deploy the wireless facilities which you contend must be issued (absent agreement or exceptional circumstances) no later than by the same time the City must take action on the wireless application. It is your responsibility to review City Code and regulations and other state or FCC regulations applicable to the deployment of the wireless facility within the City of Monterey and identify every Ancillary Application that will be sought in conjunction with that deployment. The failure to conduct the investigation and to accurately identify all Ancillary Applications will be grounds for denying the application, or for declaring it incomplete. For example, if the wireless facility would be placed on a structure where historical review would be required at the state, federal or local level, the applications required for that review must be identified. Please check whether the work proposed will require:

a) ____Building Permit
b) ____Electrical Permit

_____

negotiations on any lease or agreement, and given the deadlines for action on applications under rules the FCC purported to adopt on September 26, we cannot draft, negotiate, and obtain approval of agreements within that period.

c) ____ Traffic Control Permit
d) ____Excavation Permit
e) ____Architectural Review Permit
f) ____Other [identify] _____

Alternatively, rather than identifying all Ancillary Permissions now, you may agree as follows by signing below: "I agree that, except for those applications identified and submitted in response to question 6, I will apply separately for any and all required Ancillary Applications; any deadlines for action on any Ancillary Applications will run from the date of those applications, and not from the date of this application; and that no work may be undertaken should this wireless application be granted, or granted subject to conditions, until and unless the same are obtained."

Agreed: James Phillips

6. Please provide an attachment that identifies that Ancillary Application you seek now, and with respect to that Ancillary Application, includes the following, completed checklist:

☐ I have the required permit [If you check this box, attach the required permit]
☐ I have no permit, but I am applying/have applied for one. [If you check this box, the application must be provided and all fees or proof of fee payment provided.]

7. Is the proposed wireless communications facility in a High Hazard Zone ("HHZ") (as demarcated on the current version of the California Public Utility Commission Fire-Threat Map).

☒ No.
☐ Yes.

If you answered yes to this question, please answer the following:

a) Identify the structure or proposed structure on which the facility will be attached, and the owner of the structure._____
_____.

b) Check one of the following:

☐ The facility is being installed on a structure that applicant contends is, or will be, under the jurisdiction of General Order ("GO") 95 ("GO 95"), or GO 165, or GO 166. If you checked this box, attach sworn statements by a licensed professional engineer attesting to: (1) the specific HHZ in which the wireless facility will be located; (2) whether the structure has been inspected; (3) whether the structure, any existing facilities, and any planned structures and facilities would comply with standards for placement on structures in an HHZ; and (4) whether all required Fire Prevention Plans are in place. If existing or proposed structures or facilities are or will be non-compliant in any respect, the application shall identify steps proposed to ensure the structure and existing and proposed facilities are compliant.

☐ The facility is NOT being installed on a structure that applicant contends is, or will be, under the jurisdiction of General Order ("GO") 95 ("GO 95"), or GO 165, or GO 166.

If you checked this box, submit a sworn statements by licensed professional engineer attesting to: (1) the specific HHZ in which the wireless facilities will be located, as demarcated on the current version of the California Public Utility Commission Fire-Threat Map; (2) a description of the steps the applicant has taken to reduce hazards to public safety, including fire safety hazards, that may be caused by the proposed wireless facility; and (3) the steps applicant proposes to take to maintain the safety of the wireless facility, which steps shall be at least as rigorous as if GO 95, 165, and GO 166 applied. (MCC 38-112.4.E.1(d))

8. Please check the applicable box and provide the information required below as an attachment to this Submittal Checklist, along with a written explanation identifying the facts relied upon to support the claimed treatment.

☒ Eligible Facilities Requests. Applicant asserts that the application qualifies as a Section 6409 "eligible facilities request" (as defined in 47 CFR § 1.40001(b)(3))[2], and, in addition to the materials required above, submits the information required in **Attachment A**. ***The applicable FCC shot clock is for sixty (60) days.***

☐ Collocation – Small Wireless Facility (Existing Structure). Applicant asserts application is being submitted for approval of a collocation (as defined by 47 C.F.R. § 1.6002(l)) of a Small Wireless Facility (as defined by 47 C.F.R. § 1.6002(g))[3] that qualifies for the 60-day shot clock in *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*, Declaratory Ruling and Report and Order, FCC-18-133 (rel. September 27, 2018), and, in addition to the materials

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[2] References to regulations include such regulations as may be amended from time to time.

[3] Pursuant to the FCC's rules, a "Small Wireless Facility" is a facility that meets the following conditions:
(1) The facilities—
(i) are mounted on structures 50 feet or less in height including their antennas as defined in section 1.1320(d), or
(ii) on structures no more than 10 percent taller than other adjacent structures, or
(iii) extend existing structures on which they are located to a height of more than 50 feet or by more than 10 percent, whichever is greater;
(2) Each antenna associated with the deployment, excluding associated antenna equipment (as defined in the definition of antenna in section 1.1320(d)), is no more than three cubic feet in volume;
(3) All other wireless equipment associated with the structure, including the wireless equipment associated with the antenna and any pre-existing associated equipment on the structure, is no more than 28 cubic feet in volume;
(4) The facilities do not require antenna structure registration under part 17 of this chapter;
(5)The facilities are not located on Tribal lands, as defined under 36 CFR 800.16(x); and
(6) The facilities do not result in human exposure to radiofrequency radiation in excess of the applicable safety standards specified in section 1.1307(b).

required above, submits the information required in **Attachment B**. ***The applicable FCC shot clock is ninety (90) days for applications submitted prior to January 14, 2018, and thereafter will be sixty (60) days.***

☐ Small Wireless Facility (New Structure). Applicant asserts application is being submitted for approval to deploy a Small Wireless Facility (as defined by 47 C.F.R. § 1.6002(l)) on a new structure, that qualifies for the 90-day shot clock in *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*, Declaratory Ruling and Report and Order, FCC-18-133 (rel. September 27, 2018), and, in addition to the materials required above, submits the information required in **Attachment B**. ***The applicable FCC shot clock is one hundred and fifty (150) days for application submitted prior to January 14, 2018, and thereafter will be for ninety (90) days.***

☐ Collocation or Modification – Substantial Change. Applicant asserts application is being submitted for approval of a collocation or modification that qualifies for the 90-day shot clock in *In re Petition for Declaratory Ruling*, 24 FCC Rcd. 13994 (2009) and *In the Matter of Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies, Report and Order*, 29 FCC Rcd. 12865 (2014), and, in addition to the materials required above, submits the information required in **Attachment B**. ***The applicable FCC shot clock is ninety (90) days.***

☐ Other Application Subject to FCC Shot Clocks. Applicant asserts application qualifies for the 150-day shot clock in *In re Petition for Declaratory Ruling*, 24 FCC Rcd. 13994 (2009) and *In the Matter of Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies*, Report and Order, 29 FCC Rcd. 12865 (2014), and, in addition to the materials required above, submits the information required in **Attachment B**. ***The applicable FCC shot clock is one-hundred and fifty (150) days.***

☐ Other Wireless Communications Facility Applications (none of the categories above apply). Applicant is required to submit the information required in **Attachment B.**

☐ Permit Extensions. If your application is for an extension of an existing Encroachment Permit for a wireless communication facility, please submit a copy of the original Permit, the information required in **Attachment C**.

## CERTIFICATION

I (we) hereby certify under penalty of perjury that (1) after diligent investigation, the information provided pursuant to this Submittal Checklist is true, accurate, and complete to the best of my (our) knowledge and belief, and that before commencing, during performance of, and (2) upon completion of the work proposed, the permitted wireless communication facility will comply with all applicable laws, regulation, practices or other requirements under federal, state or local law, including, but not limited to, building and electrical codes, the FCC's radio frequency emissions standards, and the requirements of the Americans with Disabilities Act.

James Phillips 6/11/2020

Applicant's Signature Date

James Phillips

Applicant's Printed Name

[Signature should be provided for each Applicant]

| **CITY USE ONLY** | Reviewed By: | Reviewed On Date: |
|---|---|---|
| Date Application Received: | Application determined Complete / Incomplete (circle one) on date (send notification by email on same date): | Application Approved / Disapproved (circle one) on date (send notification by email on same date): |
| Reasons for denial: | | |

# Attachment A – Application Submission Requirements for an Eligible Facilities Request

| | | | FOR CITY-USE ONLY | |
|---|---|---|---|---|
| | **REQUIREMENT** | **REFERENCE** | **COMPLETE Y/N** | **COMPLIANT Y/N** |
| A | Signed proof that applicant is authorized by the owner of the structure and/or property to install and operate the proposed wireless communication facility. | Under MCC 38-112.4.E.1, the Planning Department is responsible for developing and maintaining application submittal requirements for wireless facility permits. | | * |
| B | A project description letter summarizing why the applicant believes the facility is an eligible facilities request, which shall include:<br>1. A list of all facilities proposed to be installed (including antennas, cabinets and other associated equipment, power and fiber to the facility)<br>2. A description of all changes to be made to the existing base station and tower, which description will, among other things, identifying precisely what changes will be made to the supporting structure.<br>3. A description of all changes made to the facility from the date of the original installation (whether or not approved) and a description of the changes in height from January, 22, 2012.)<br>4. For each piece of equipment in the project, the manufacturer specification sheet(s); including the dimensions and weight of each piece of equipment;<br>5. The height of each element of the base station or tower, as measured from the ground as existing and as modified; and the horizontal length of any extensions from the supporting structure;<br>6. A description of any equipment cabinets that will be associated with the structure, their dimensions and locations on the supporting structure or on the ground.<br>7. A description of the concealment elements associated with the wireless communication facility, including but not limited to painting and shielding;<br>8. A description of any ground disturbance necessary to complete the proposed project<br>9. A description of the site and any deployment outside the site necessary to complete the proposed project.<br>10. A description of why this installation qualifies as a collocation within the meaning of the FCC rules.<br><br>**The application letter may cross-reference responsive information provided as part of the site plans provided.** | MCC 38-112.4.D.2(a)(i) | | |
| C | A report signed by a California licensed professional engineer with expertise in radio communications facilities and the calculation of radio frequency emissions that affirms, under penalty of perjury, that the proposed installation will be compliant with the FCC's standards. The report must also contain the following:<br>1. A description of each of the proposed antennas , including the height above grade, power and the directionality of each antenna (e.g., omni, directional, etc.).<br>2. The frequency, modulation and class of service.<br>3. A clear identification of areas, both vertically and horizontally, where exposure levels will exceed FCC standards for general public and occupational exposures. Please note that applicant's analysis must show that it has appropriately taken cumulative exposures into account, and should show exposures based on "worst case" scenarios.<br>4. A certification that the facility will comply with all applicable standards for radio frequency emissions, including cumulative effects, and a description of the manner in which the radio frequency emissions for the facility were calculated and the results of those calculations. Individual and cumulative emissions should be evaluated.<br>5. If the certification of the facility as currently installed, or as proposed to be modified, is subject to conditions designed to limit general public or occupational exposure, identify those | MCC 38-112.4.E.1<br>MCC 38-112.4.D.2(a)(i)<br>MCC 38-112BB1cycl@!.4.C | | |

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| | conditions, and demonstrate that they have been satisfied, or describe when they will be satisfied. | | | |
| D | General site information and plans as follows:<br>1. Two full-sized plan sets (24" x 36"); One reduced-size set in 11"x17", unless all details are legible in 8 ½" x 11".<br>2. Use a minimum 1/8" = 1' scale for Site Plans and 1/4" = 1' scale for all others.<br>3. Electronic copy of plans in PDF form with all details legible.<br>4. Include a north arrow on each plan sheet.<br>5. Title Block with applicant's name, owner's name, contact information, and accurate date<br>A. Lot Area and Lot Coverage<br>B. Floor Area Ratio (FAR) – Measure to outside of exterior walls, count stairs twice (if applicable)<br>C. Tree Removal<br>D. Grading Schedule<br>6. Elevations – Existing and proposed elevations of all proposed personal wireless service structures and appurtenances, and composite elevations from the street(s) showing the proposed project and all buildings on the site.<br>7. The dimensions of each wireless facility, including its height and width, as well as total height measured from the ground.<br>8. The dimensions of each of the following (if any) to be modified, as originally installed, and if different, as approved on February 22, 2012, and as currently installed: tower, support structure (whether a pole or building), antenna, equipment cabinets, radio units, and any other equipment to be placed on the node Applicant must provide a fully-dimensioned section drawing showing the information in this paragraph.<br>9. Depiction of fully-constructed proposed project, including improvements and location of existing and proposed wireless facilities. | MCC 38-112.4.E.1<br>MCC 38-112.4.D.2(a)(i) | | |
| F | Visual Impact demonstration – *Existing and Proposed* - Unless the application is for a like-for-like replacement, scale drawings and photo simulations, photomontages, story poles, elevations and/or other visual or graphic illustrations necessary to determine potential visual impact of the proposed project, and to show all elements of the facility. Visual impact demonstrations shall include accurate scale and color of the proposed facility, as it would be seen from surrounding properties. | MCC 38-112.4.E.1<br>MCC 38-112.4.D.2(a)(i) | | |
| G | A report signed by a California licensed professional engineer qualified in structural engineering, containing the following:<br>1. In the case of an attached wireless communication facility, documentation of the ability of the structure to accept the antennas, the proposed method of affixing the antennas and the precise point at which the antennas shall be mounted.<br>2. In the case of a wireless communication facility with a support structure (e.g. monopole), documentation that the structure is capable of supporting the antennas and complies with applicable laws and codes, as well as the structure's capacity for additional collocated antennas, and the precise point at which the antennas shall be mounted.<br>3. A certification that the structure(s) on which the wireless facility (including all accessory equipment, such as radios, cabinets, etc.) will be placed can safely support the wireless facility; and that all elements of the wireless facility comply with applicable safety standards | MCC 38-112.4.E.1(d), (e) | | |
| H | A copy of all approvals and/or permits for the tower or base station that is to be modified, and any subsequent modification permits, and of any required conditions (imposed by the City and/or third party) placed on the initial or subsequent permits.<br><br>A showing that the facility, as modified, will be in compliance with existing conditions, whether or not it is in compliance with conditions as of the date of application. There must be a plan submitted for correction of any non-compliance condition. The showing must include a noise report as prescribed by Attachment B., Section E, If there is no noise-producing equipment associated with the facility, it is sufficient for the report to affirm that. | MCC 38-112.4.E.1<br>MCC 38-112.4.D.2(a)(i) | | |

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| I | A copy of the initial property owner notice and proof that it was mailed to all property owners within 300 feet of the project site prior to the pre-scheduled application submittal appointment. | MCC 38-112.4.E.1.a<br>MCC 38-159 Notice and Public Hearing | | |

# Attachment B – All Non-EFR Applications

| | | | FOR CITY-USE ONLY | |
|---|---|---|---|---|
| | **REQUIREMENT** | **REFERENCE** | **COMPLETE Y/N** | **COMPLIANT Y/N** |
| A | Signed proof that applicant is authorized by the owner of the structure and/or property to install and operate the proposed wireless communication facility. | MCC 38-112.4.E.1 | | |
| B | A project description letter containing:<br>1. A list of all facilities proposed to be installed (including antennas, cabinets and other associated equipment, power and fiber to the facility).<br>2. If the change is to an existing base station that is not an eligible facilities request, or a change to an existing support structure, a description of all changes to be made to the existing base station and/or support structure;<br>3. For each piece of equipment in the project, the make, model, and manufacturer; the manufacturer specification sheet(s); and the corresponding volume, weight, and dimensions.<br>4. Wind loading calculations for the facility as installed;<br>5. The height of each piece of equipment in the project, as measured from the ground.<br>6. A description of the concealment elements associated with the wireless communication facility, including, but not limited to, painting and shielding.<br>7. A description of any ground disturbance necessary to complete the proposed project.<br>11. A description of any equipment cabinets that will be associated with the structure, their dimensions and locations on the supporting structure or on the ground.<br><br>8. A description of any lighting to be installed along with the facilities, including, but not limited to, the make, model, and manufacturer of each light to be installed; and the manufacturer's specification sheet(s).<br>9. A description of the security plan for the site, including an emergency contact person (and their contact information), and a description of the emergency breaker switch to be installed with the facilities with a copy of any corresponding instructions.<br>10. The location of the Mock Up of the proposed facility, as well as the date the Mock-Up was fully constructed.<br><br>**The application letter may cross-reference responsive information provided as part of the site plans provided** | MCC 38-112.4.E.1<br>MCC 38-112.4.E.1(b) | | |
| C | A report signed by a California licensed professional engineer qualified in analysis of radio communications facilities and the calculation of radio frequency emissions that affirms, under penalty of perjury, that the proposed installation will be compliant with the FCC's standards. The report must also contain the following:<br>1. A description of each of the proposed antennas and all related fixtures, structures, appurtenances and apparatus, including the height above grade, volume in total cubic feet, materials, lighting, and the directionality of each antenna (e.g., omni, directional, etc.).<br>2. The frequency, modulation and class of service.<br>3. A clear identification of areas, both vertically and horizontally, where exposure levels will exceed FCC standards for general public and occupational exposures. Please note that applicant's analysis must show that it has appropriately taken cumulative exposures into account, and should show exposures based on "worst case" scenarios.<br>4. A certification that the facility will comply with all applicable standards for radio frequency emissions, including cumulative effects, and a description of the manner in which the radio frequency emissions for the facility were calculated and the results of those calculations. Individual and cumulative emissions should be evaluated.<br>5. If the certification of the facility as currently installed, or as proposed to be modified, is subject to conditions designed to limit general public or occupational exposure, identify those | MCC 38-112.4.E.1<br>MCC 38-112.4.C | | |

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| | conditions, and demonstrate that they have been satisfied, or describe when they will be satisfied. | | | |
| D | General site information plans as follows:<br>1. Two full-sized plan sets (24" x 36"); One reduced-size set in 11"x17", unless all details are legible in 8 ½" x 11".<br>2. Electronic copy of plans in PDF form.<br>3. Use a minimum 1/8" = 1' scale for Site Plans and 1/4" = 1' scale for all others.<br>4. Include a north arrow on each plan sheet.<br>5. Title Block with applicant's name, owner's name, contact information, and accurate date<br>A. Lot Area and Lot Coverage<br>B. Floor Area Ratio (FAR) – Measure to outside of exterior walls, count stairs twice (if applicable)<br>C. Tree Removal<br>D. Grading Schedule<br>6. Elevations – Existing and proposed elevations of all proposed personal wireless service structures and appurtenances, and composite elevations from the street(s) showing the proposed project and all buildings on the site.<br>7. The dimensions of each piece of equipment making up the wireless facility, including its height and width, as well as its total height as measured from the ground. Applicant must provide a fully-dimensioned section drawing showing the information in this paragraph.<br>8. A depiction of the fully-constructed proposed project, including improvements and location of all proposed facilities and any existing on-site facilities. | MCC 38-112.4.E.1 | | |
| E | A report signed by a California licensed professional engineer qualified in analysis of noise emissions that affirms, under penalty of perjury, that the proposed installation will not generate noise that exceeds the applicable ambient noise limit in the zone where the proposed facility would be located. If the report finds that such noise limits would be exceeded, the report shall indicate mitigation measures that the applicant should take to comply with those limits. If there is no noise-producing equipment associated with the facility, it is sufficient for the report to affirm that. | MCC 38-112.4.E.1<br>MCC 38-122.4.F.4(e) | | |
| F | Visual Impact demonstration – *Existing and Proposed* - Unless the application is for a like-for-like replacement, scale drawings and photo simulations, photomontages, story poles, elevations and/or other visual or graphic illustrations necessary to determine potential visual impact of the proposed project, and to show all elements of the facility. Visual impact demonstrations shall include accurate scale and color of the proposed facility, as it would be seen from surrounding properties. | MCC 38-112.4.E.1 | | |
| G | A report signed by a California licensed professional engineer qualified in structural engineering, containing the following:<br>1. In the case of an attached wireless communication facility, documentation of the ability of the structure to accept the antennas, the proposed method of affixing the antennas and the precise point at which the antennas shall be mounted.<br>2. In the case of a wireless communication facility with a support structure (e.g. monopole), documentation that the structure is capable of supporting the antennas and complies with applicable laws and codes, as well as the structure's capacity for additional collocated antennas, and the precise point at which the antennas shall be mounted.<br>3. A certification that the structure(s) on which the wireless facility (including all accessory equipment, such as radios, cabinets, etc.) will be placed can safely support the wireless facility; and that all elements of the wireless facility comply with applicable safety standards. | MCC 38-112.4.E.1(e) | | |
| H | If the application is for modification of an existing wireless facility a copy of the original and past approvals or permits of the tower or base station that is to be modified, and any subsequent modification applications and permits, even if denied, and of any required conditions (imposed by the City and/or third party) placed on the initial or subsequent permits.<br><br>A showing that the facility, as modified, will be in compliance with existing conditions, whether or not it is in compliance with | MCC 38-112.4.E.1 | | |

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| | conditions as of the date of application. There must be a plan submitted for correction of any non-compliance condition. . | | | |
| I | A report signed by a California licensed professional engineer qualified in RF analysis providing and certifying the accuracy of signal coverage maps for the proposed communication facility. The report shall include the date(s) of when the data used to create the maps were generated. | MCC 38-112.4.E.1 | | |
| J | Photographs and scale drawings showing the proposed site prior to performance of the work proposed, and photo simulations and scale drawings showing the dimensions and locations of the wireless communication facility after the work is performed (multiple photographs should be submitted as required to show all facilities that will be visible at the site). | MCC 38-112.4.E.1 | | |
| K | Inventory of Existing Sites. Each application shall provide an inventory of all existing wireless service facilities it uses in providing service within the City including specific information about the location (latitude and longitude), height, and design of and areas served by each facility. Each application will also provide an inventory of existing towers in or within one-half mile of the borders of the City, and an inventory of all buildings, and poles and other structures (other than strand) supporting personal wireless facilities. | MCC 38-112.4.E.1 | | |
| L | Service Area. Identify the geographic service area for the proposed WSF by using coverage maps; describe the distance(s) between the proposed facility and existing WSF sites; describe how the proposed service area fits into and is necessary for the PWS provider's network; and identify any potential site consolidation opportunities. | MCC 38-112.4.E.1 | | |
| M | Five Year Facilities Plan. Provide a map with information about the PWS provider's plans for future WSF in the City. | MCC 38-112.4.E.1 | | |
| N | Indicate the effects, if any, the approval of the facility will have on any personal wireless service being provided, or which a wireless service provider who is required to use the facility will actually provide. Provide data supporting the claimed benefits, comparing services existing, and as projected after the approval. | MCC 38-112.4.E.1 | | |
| O | If it is contended that the City is required by federal law to approve the facility, applicant must submit the information it relies upon to support that claim, identifying (a) the legal standard it claims applies; and (b) the showings it relies upon for its claim; and (c) alternative legal standards that may apply that it claims to meet; and (d) the showings it relies upon for those claims. Applicants are cautioned that, should they choose not to submit with respect to items (c) and (d), and the City believes that applicant misapplies or uses the wrong legal standard, the application may be denied. For example, if the project is intended to close a significant gap in PWS and applicant can show it is the least intrusive means of doing so, the applicant is encouraged to prove the existence of the gap, and to provide information on alternative designs, locations and configurations considered (including undergrounding of elements of the wireless facility, for example), even if applicant believes that is not the correct legal standard.. | MCC 38-112.4.H,3 | | |
| P | A copy of the initial property owner notice and proof that it was mailed to all property owners within 300 feet of the project site prior to the pre-scheduled application submittal appointment. | MCC 38-112.4.E.1.a<br>MCC 38-159 Notice and Public Hearing | | |

## MOCK-UP STANDARDS – APPLICABLE TO ATTACHMENT B FACILITIES

The goal of the mock-up requirements is to provide the community with an accurate sense of the way in which the proposed facility will look when installed.

Applicant is therefore required to:

- To identify a vertical structure, accessible to the public and within City limits, of a height similar to the height of the structure to which the wireless facility will be attached, and to attach a mock-up to that facility; or

- To identify an existing installation of virtually identical dimensions that has been installed within the City.
- Install a mock-up at a site the City makes available, or on private property in an appropriately zoned commercial or industrial area accessible to the public.
- The applicant shall install a photo simulation of the existing site conditions and proposed structures at the project site as part of the application submittal. The photo simulation shall identify where more information is available at the City of Monterey Planning Office at 580 Pacific Street.

In complying with the mock-up requirements and these standards, the applicant is not required, and should not undertake any excavation in the rights of way or to install poles or towers in the rights of way, or similarly disruptive any public or municipal activities.

In complying with the mock-up requirements and these standards, the applicant is not required, and should not build mock-ups at the sites proposed for deployment where it is impractical or unsafe to do so, or would require removal or relocation of existing wires.

In complying with the mock-up requirements and these standards, the applicant is not required to build duplicative mock-ups.

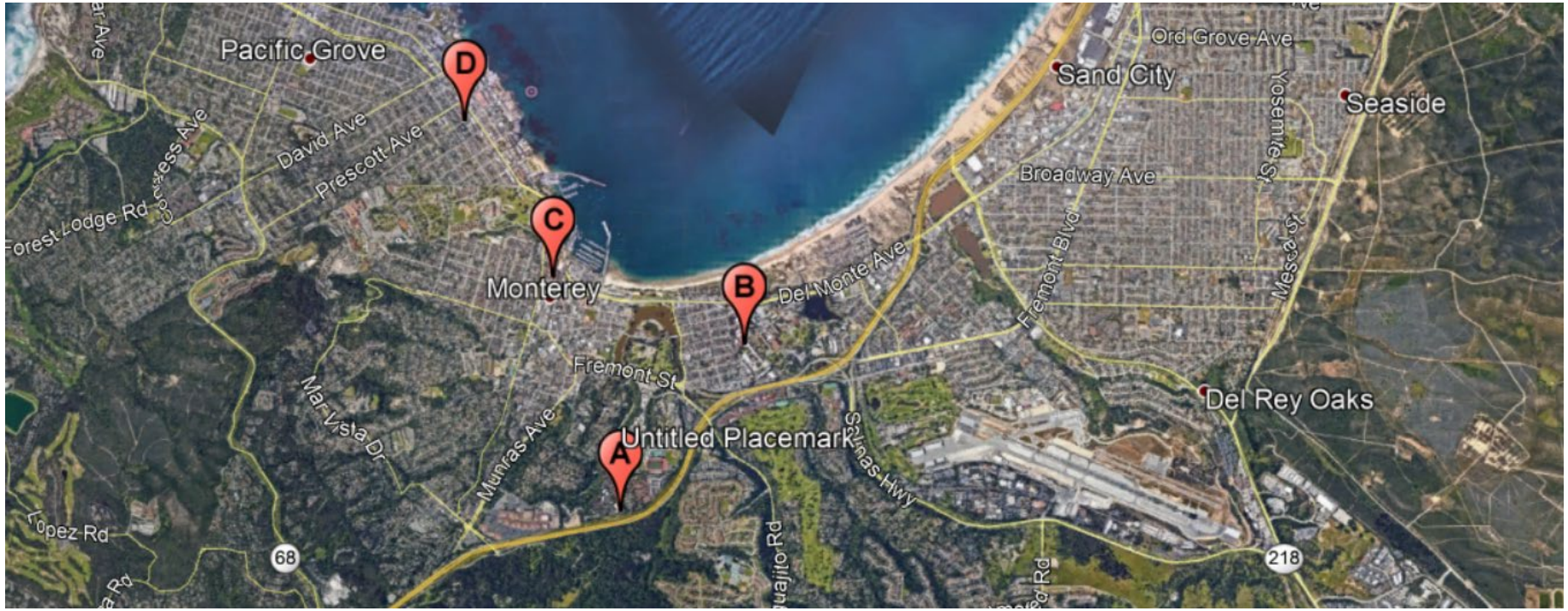
The mock up requirement may be waived by the Community Development Director for good cause and if a reasonable alternative is proposed.

## Attachment C – Permit Extension

| | | | FOR CITY-USE ONLY | |
|---|---|---|---|---|
| | **REQUIREMENT** | **REFERENCE** | **COMPLETE Y/N** | **COMPLIANT Y/N** |
| A | A copy of the expiring permit, and all prior permits. | MCC 38-112.4.E.1 | | *See Section III |
| B | A cover letter that shall include: the name of the holder of the original permit; the date the original permit (and any extension or modification) was granted, whether there have been any changes to the facility since the issuance of the original permit, and a signed statement certifying that the wireless communication facility is in compliance with the original permit and all applicable statutes, laws, rules, and regulations. | MCC 38-112.4.E.1 | | |
| C | A copy of all permissions required for the initial deployment, including third party permissions, and other documentation appropriate to evidence the permissions are still in effect. | MCC 38-112.4.E.1 | | |
| D | A copy of the initial property owner notice and proof that it was mailed to all property owners within 300 feet of the project site prior to the pre-scheduled application submittal appointment. | MCC 38-112.4.E.1.a<br>MCC 38-159 Notice and Public Hearing | | |

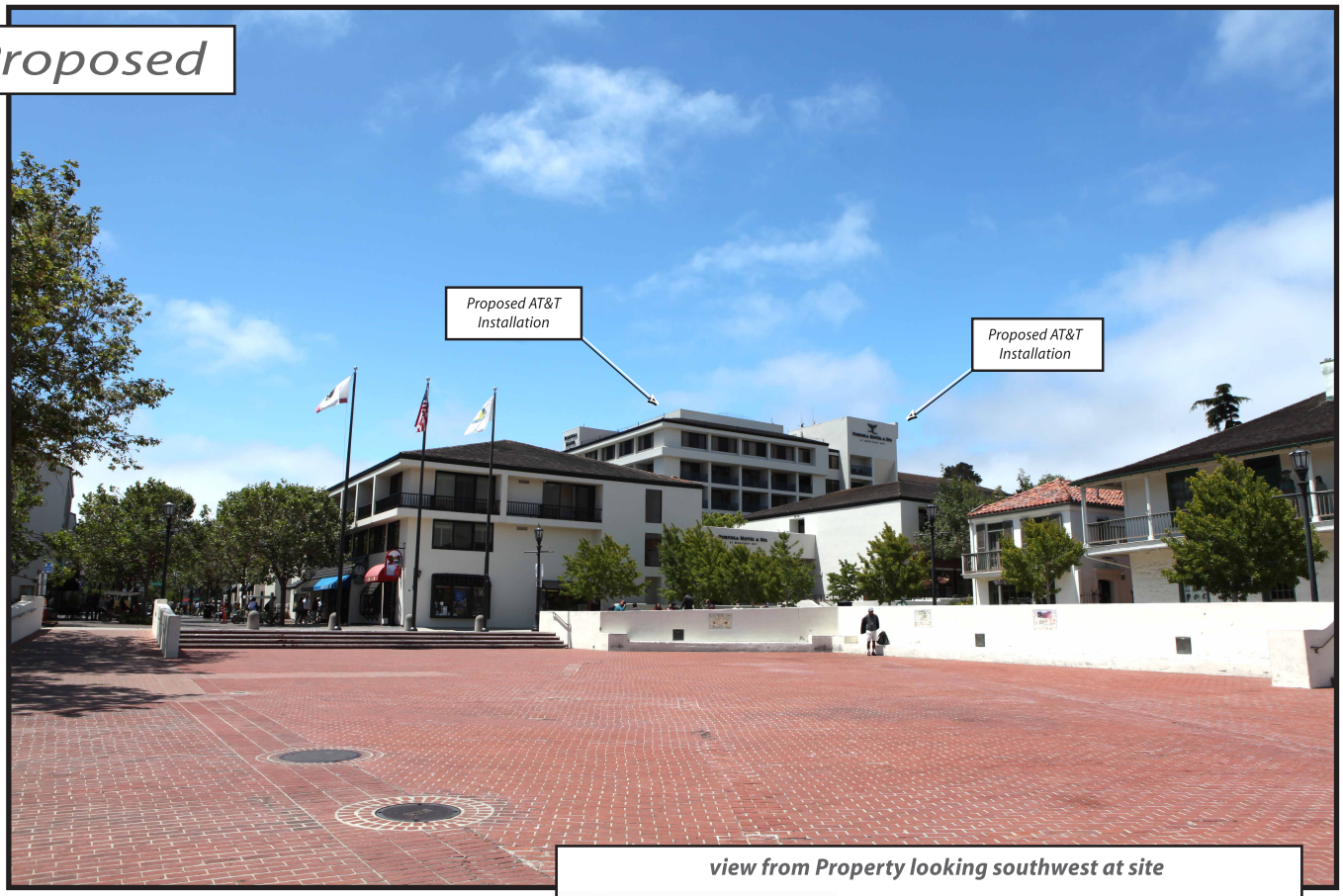
**AT&T Five Year Facilities Plan, April 2020**

| MAP | SITE ID | ADDRESS | UPGRADE PURPOSE |
|---|---|---|---|
| A) | CCL03418 | 200 Glenwood Circle | Add FirstNet emergency response system; upgrade existing facility (EXISTING) |
| B) | CCL02155 | 1 University Circle | New site to increase network coverage (NEW) |
| C) | CCL03387 | 2 Portola Plaza | Add FirstNet emergency response system; upgrade existing Facility (EXISTING) |
| D) | CCL03214 | 600 Hawthorne Street | Upgrade existing facility to increase network capacity (EXISTING) |



## Existing

## Proposed




***view from Property looking southwest at site***

AdvanceSim
Photo Simulation Solutions
Contact ( 925 ) 202-8507

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*view from Oliver Street looking south at site*

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## Existing

## Proposed

***view from Del Monte Avenue looking northeast at site***

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## Existing

## Proposed

***view from Del Monte Avenue looking northwest at site***

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