

**Before the Zoning Administrator
in and for the County of Monterey, State of California**

In the matter of the application of:

CALTRANS (AT&T) (PLN170058)

RESOLUTION NO. 17 - 029

Resolution by the Monterey County Zoning
Administrator:

- 1) Finding the project exempt from CEQA per Section 15301 of the CEQA Guidelines; and
- 2) Approving a Design Approval to allow replacement of two (2) panel antennas and one (1) conduit riser; installation of one (1) pole riser, two (2) H-Frame (bracket), two (2) Remote Radio Units, one (1) cabinet, and 6-foot high wood fence to an existing wireless communications facility.

[State Route 1 and Riley Ranch Road, within the State Route 1 (Highway 1) right-of-way, Carmel Area Land Use Plan (APN: 000-000-000-000)]

The Caltrans (AT&T) application (PLN170058) came on for a public hearing before the Monterey County Zoning Administrator on May 11, 2017. Having considered all the written and documentary evidence, the administrative record, the staff report, oral testimony, and other evidence presented, the Zoning Administrator finds and decides as follows:

FINDINGS

1. **FINDING:** **CONSISTENCY / HEALTH AND SAFETY / NO VIOLATIONS / SITE SUITABILITY / DESIGN** - The proposed project and/or use, as conditioned, is consistent with the policies of the Carmel Area Land Use Plan (LUP) and other County health, safety, and welfare ordinances related to land use development. The site is physically suitable for the development proposed, and no violations exist on the property. The design of the proposed project assures protection of the public viewshed, is consistent with neighborhood character, and assures visual integrity without imposing undue restrictions on private property.
EVIDENCE:
 - a) AT&T proposes minor equipment additions and upgrades, including replacement of existing equipment and installation of an equipment enclosure with a 6-foot high wood fence, to an existing wireless communications facility. As proposed, the two 4-foot panel antennas on the utility pole would be replaced with two 6-foot panel antennas. The project also includes replacement of 1 conduit riser, and installation of 1 pole riser, H-Frame brackets, Remote Radio Units, cabinet, and an equipment enclosure with a 6-foot high wood fence.
 - b) The existing wireless facility/project site is located within the Caltrans right-of-way on State Route 1 (Highway 1) across from Riley Ranch Road, Carmel (Assessor's Parcel Number 000-000-000-

- 000), Carmel Area Land Use Plan, Coastal Zone. The project site area does not have a zoning classification (i.e., unclassified).
- c) The County approved the existing wireless communications facility in 2003 (Board of Supervisors Resolution No. 03-179; RMA-Planning File No. DA020480), and the County has approved subsequent modifications to the site (RMA-Planning File No. DA080285). Applicable conditions of approval from DA020480 are incorporated herein by reference.
 - d) No conflicts were found to exist. The County received communications from interested members of the public during the course of project review indicating inconsistencies with the text, policies, and regulations in the applicable plans and Monterey County Code (MCC); however, the County finds that the project is consistent with the text, policies, and regulations in the applicable documents.
 - e) Pursuant to MCC, administrative Design Approvals are considered and determined by the Director of Planning, unless an interested party requests a public hearing for the proposed project. After noticing for administrative review, the County received two requests for public hearing (attached as Exhibit D to the April 27, 2017, staff report to the Zoning Administrator). Therefore, this item was set for public hearing and consideration before the Zoning Administrator.
 - f) The concerns expressed by the public involve possible impacts to visual resources, safety, and noise. These concerns are addressed below in Evidences g, h, and i.
 - g) Noise. The commenter expressed concern regarding existing and potential noise from the proposed development. The existing ground equipment does generate a “buzzing” sound that remains audible up to approximately 15 feet from the equipment. Beyond 15 feet, the sound generated from the ground equipment is obscured by wind and vehicle traffic on Highway 1. The facility is surrounded by open space parkland and rural residential uses, and the nearest residence is over 200 feet from the facility. The proposed fence enclosure would further attenuate any noise generated from the ground equipment. See also Finding No. 2, Evidence c.
 - h) Safety. The commenter expressed concern regarding radiation levels from the facility, and stated the posted signs warn of “...unacceptable levels of (FCC) non-compliant radiation.” The project planner conducted a site inspection on March 30, 2017, and determined the facility signage regarding emissions are precautionary warning signs posted at all regulated wireless sites as required by federal law, and are not posted at this site due to unusual circumstances. The Applicant submitted an Electromagnetic Energy Exposure Report (LIB170125), which indicated that this facility is compliant with applicable requirements and guidelines of the Federal Communications Commission (FCC). Regarding lateral access, the subject utility pole and equipment are approximately 14 to 17 feet from the edge of pavement, and approximately 17 to 20 feet from the southbound lane of travel on Highway 1; therefore, adequate space remains for bicycle and pedestrian access and travel along the highway without risking radiation exposure from the facility. See

also Finding No. 1, Evidence m; Finding No. 2, Evidence d; and Finding No. 5, Evidence b.

- i) Visual Resources/Viewshed. The commenter expressed concern regarding potential visual impacts to the surrounding viewshed, and recommended the distribution poles be removed and transmission cables be buried from Monastery Beach to Riley Ranch Road to improve the viewshed. The commenter asserted this is a “long-standing community request”.

The project would involve minor equipment changes to an existing facility visible within the viewshed and common public viewing area of Highway 1. The site’s existing ground equipment consists of several cabinets mounted on a large H-Frame bracket which is unscreened from the traveling public on Highway 1. The proposed 6-foot high fence enclosure would screen both existing and new ground equipment from view, and the natural wood material would blend with the surrounding environment of trees and vegetation. The project planner conducted a site inspection on March 30, 2017, to evaluate the visual impacts of the existing development, and to verify that the proposed project minimizes development within the public viewshed when viewed from a common public viewing area. The proposed natural wood enclosure would improve the visual setting, and the replaced and new pole-mounted equipment would not create a significant adverse visual impact. The County finds that the project, as proposed, is consistent with applicable policies of the Carmel Area LUP regarding Visual Resources, minimizes visual impacts, and assures protection of the public viewshed. See also Finding No. 2, Evidences a and b; Finding No. 3 and supporting evidence; Finding No. 4, Evidence d; and Finding No. 5, Evidence e.

Although the County encourages re-routing and/or undergrounding of transmission lines (Carmel Area LUP Policy 2.2.4.11), the comment regarding removal of distribution poles and burying of transmission lines from Monastery Beach to Riley Ranch Road is outside the scope of the subject project and the immediate purview of Monterey County.

- j) Design. Pursuant to MCC Chapter 20.44, the proposed project site and surrounding area are designated as a Design Control Zoning District (“D” zoning overlay), which regulates the location, size, configuration, materials, and colors of structures and fences to assure the protection of the public viewshed and neighborhood character. The Applicant proposes to paint the pole-mounted equipment dark brown to match the existing equipment and blend with the utility pole. The ground equipment would be screened by natural wood fencing that would blend with background trees and vegetation. The proposed exterior finishes would blend with the surrounding environment. As proposed, the project assures protection of the public viewshed, is consistent with neighborhood character, and assures visual integrity. See also Finding No. 3 and supporting evidence.

- k) Cultural Resources. The project site is within an area of high sensitivity for prehistoric cultural resources; however, the entire project site has been disturbed by previous hardscape development, and there is no evidence that any cultural resources would be disturbed (Carmel Area Land Use Plan Policy 2.8.2). The potential for inadvertent impacts to cultural resources is limited and will be controlled by application of the County's standard project condition (Condition No. 3) which requires the contractor to stop work if previously unidentified resources are discovered.
- l) The project has been reviewed for site suitability by RMA-Planning. The project planner reviewed the application materials and plans, as well as the County's GIS database, to verify that the proposed project on the subject site conforms to the applicable plans, and that the site is suitable for the proposed development. The project will not have an adverse effect on the health, safety, and welfare of persons either residing or working in the neighborhood.
- m) The following technical report has been prepared:
 - Electromagnetic Energy Exposure Report (LIB170125), prepared by OSC Engineering, Inc., San Diego, California, February 10, 2017.

County staff has independently reviewed this report and concurs with its conclusions.
- n) Monterey County RMA-Planning and RMA-Building Services records were reviewed, and the County is not aware of any violations existing on subject property.
- o) Pursuant to the LUAC Procedure Guidelines adopted by the Monterey County Board of Supervisors, administrative (i.e., projects not requiring a public hearing) design approvals are not normally sent to the LUACs for review. However, due to the requests for a public hearing, the project was referred to the Carmel Unincorporated/Highlands Land Use Advisory Committee (LUAC) for review. The LUAC reviewed the proposed project at a duly-noticed public meeting on April 17, 2017, and voted 3 – 0 to recommend approval provided the enclosure fence be natural wood and no more than 6 feet in height. Both these recommendations have been proposed by the Applicant.
- p) The application, plans, and supporting materials submitted by the project applicant to Monterey County RMA-Planning for the proposed development found in project file PLN170058.

2. **FINDING:**

WIRELESS COMMUNICATION FACILITIES – The proposed changes to the existing wireless communications facility will not significantly affect any designated public viewing area, scenic corridor or any identified environmentally sensitive area or resources. The site is adequate for the proposed development, and the applicant has demonstrated that it is the most adequate for the provision of services as required by the Federal Communications Commission. The proposed upgrades to the wireless communication facility comply with all the applicable requirements of Monterey County Code (MCC) Section 20.64.310. The subject site on which the wireless communication facility is built is in compliance with all

rules and regulations pertaining to zoning uses, subdivisions and any other provisions of Title 20. The existing telecommunication facility does not create a hazard for aircraft in flight.

- EVIDENCE:**
- a) The proposed project consists of the replacement of existing equipment, and installation of new equipment and an enclosure, to an existing wireless communications facility. As proposed, the project will not result in a significant increase of the development footprint, and will not result in visual impacts or ridgeline development. See also Finding Nos. 1, 3, 4, and 5, and supporting evidence.
 - b) Pursuant to the requirements in MCC Section 20.64.310, the County analyzed potential visual impacts which could result from the changes to the facility, and finds that the proposed facility upgrades, although visible from Highway 1 and common public viewing areas, would not significantly affect any designated public viewing area or scenic corridor. Additionally, conditions from the originating entitlement have been incorporated by reference that would reduce the visual impacts in the event of technological advances, and require removal and restoration of the site in case of termination of use. See also Finding No. 3 and supporting evidence, and Finding No. 5, Evidence e.
 - c) Noise. Noise is an existing impact. Sources of noise in the immediate project vicinity include vehicle traffic on Highway 1, wind, and facility ground equipment. The facility is surrounded by open space parkland and rural residential uses, and the nearest residence is over 200 feet from the facility.

The project planner conducted a site inspection on March 30, 2017, to evaluate the noise impacts of the existing development. Noise from the existing ground equipment is minimal, and audible up to approximately 15 feet from the facility. Beyond 15 feet, the sound generated from the ground equipment is obscured by wind and vehicle traffic. The ground equipment does not produce noise levels that exceed Monterey County noise exposure limits, and noise mitigation measures are not warranted. In addition, the proposed enclosure would further attenuate any noise generated from the existing or proposed ground equipment. See also Finding No. 1, Evidence g.

- d) Safety (Electromagnetic Radiation Emissions). This is also an existing impact. The Applicant submitted an Electromagnetic Energy Exposure Report (LIB170125) (see also Finding No. 1, Evidence m). The report indicated that this facility is compliant with applicable requirements and guidelines of the Federal Communications Commission (FCC), and that there are no physical or environmental impacts resulting from radio frequency emissions that would be detrimental to public health and safety. The facility signage regarding emissions are precautionary warning signs posted as required by federal law. See also Finding No. 1, Evidence h.
- e) The project is consistent with MCC Chapter 20.85, Airport Approach Zoning, and does not require review by the Monterey County Airport Land Use Commission.

- f) The project does not penetrate a FAR Part 77 Imaginary Surface. The project site is located approximately 6.3 miles from the Monterey Peninsula Airport, the nearest airport. If deemed necessary by the FCC, warning lights would be located on top of the structure to prevent conflict with any aircraft when visibility is limited.

3. **FINDING:** **VIEWSHED DEVELOPMENT** – The subject project minimizes development within the viewshed in accordance with the applicable goals and policies of the Carmel Area Land Use Plan (LUP) and Monterey County Zoning Ordinance (Title 20), and will not create a substantially adverse visual impact when viewed from a common public viewing area.

- EVIDENCE:**
- a) Visual Resource policies of the LUP are designed to protect the public viewshed, which is defined as areas visible from major public use areas including Highway 1 and Point Lobos State Reserve (LUP Map A, General Viewshed). Development visible from these areas is regulated to ensure minimum visual impact based on the visual policies. The overriding Key Policy for Visual Resources (Policy 2.2.2) states that “all future development within the viewshed must harmonize and be clearly subordinate to the natural scenic character of the area” and that it “must conform to the basic viewshed policy of minimum visibility.” Specific policies include minimizing visibility and using appropriate materials to screen development. Private views are not protected under the Carmel Area LUP or applicable MCC.
 - b) The project includes development visible within the Highway 1 viewshed. The existing pole and ground mounted equipment is already visible within the common public viewing area of Highway 1. The Applicant proposes to replace the pole-mounted panel antennas and add small relay units below the panel antennas. When mounted, the panel antennas would not extend above the height of the utility pole, which is lower than the height of a large tree in the immediate background. Also, the existing and additional ground equipment would be placed within an enclosure surrounded by natural wood fencing.
 - c) The project planner conducted a site inspection on March 30, 2017, to evaluate the visual impacts of the existing development, and to verify that the proposed project minimizes development within the public viewshed when viewed from a common public viewing area.
 - d) The replaced and new pole-mounted equipment would not create a significant adverse visual impact. In addition, the proposed enclosure would screen both existing and new ground equipment from view, thereby improving the visual setting, as well as attenuating any sound generated from the ground equipment. Per LUP Policy 2.2.3.6, the proposed fencing would be subordinate to and blend into the environment, using appropriate exterior materials of natural wood. Also, due to trees in the background, the proposed project would not visually obstruct views from a common public viewing area.
 - e) The project, as proposed, is consistent with applicable policies of the Carmel Area LUP regarding Visual Resources (Chapter 2.2), and minimizes visual impacts on the highly sensitive viewshed. As

proposed, the project will not create a substantially adverse visual impact when viewed from a common public viewing area.

- f) See also Finding No. 1, Evidence i; Finding No. 2, Evidences a and b; Finding No. 4, Evidence d; and Finding No. 5, Evidence e.

4. **FINDING:** **CEQA (Exempt):** - The project is categorically exempt from environmental review and no unusual circumstances were identified to exist for the proposed project.
- EVIDENCE:**
- a) California Environmental Quality Act (CEQA) Guidelines Section 15301 categorically exempts the minor alteration of existing public or private structures and facilities involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination.
 - b) The proposed project consists of the replacement of existing equipment, and installation of new equipment and enclosure, to an existing wireless communications facility. Therefore, the proposed development is consistent with CEQA Guidelines Section 15301.
 - c) None of the exceptions under CEQA Guidelines Section 15300.2 apply to this project. The project does not involve a designated historical resource, a hazardous waste site, unusual circumstances that would result in a significant effect, or development that would result in a cumulative significant impact.
 - d) The proposed project involves development located near or within view of State Route 1 (Highway 1), a designated scenic highway. However, as proposed, the project would not result in damage to scenic resources such as trees, historic buildings, rock outcroppings, or similar resources as described in CEQA Guidelines Section 15300.2. Furthermore, the proposed installation of wood fencing would screen the ground equipment, thereby improving the scenic quality of the vicinity surrounding the facility.
 - e) No adverse environmental effects were identified during staff review of the development application, nor during a site visit on March 30, 2017.
5. **FINDING:** **PUBLIC ACCESS** – The project is in conformance with the public access and recreation policies of the Coastal Act (specifically Chapter 3 of the Coastal Act of 1976, commencing with Section 30200 of the Public Resources Code) and applicable Local Coastal Program, and does not interfere with any form of historic public use or trust rights.
- EVIDENCE:**
- a) No access is required as part of the project as no substantial adverse impact on access, either individually or cumulatively, as described in Section 20.146.130 of the Monterey County Coastal Implementation Plan can be demonstrated.
 - b) The subject site is not described as an area where the applicable Local Coastal Program requires public access (Figure 3, Public Access, in the Carmel Area Land Use Plan), and lateral access would not be obstructed along State Route 1 (Highway 1). The subject utility pole and equipment are approximately 14 to 17 feet from the edge of pavement, and approximately 17 to 20 feet from the southbound lane of travel on Highway 1; therefore, adequate space remains for bicycle and pedestrian access and travel along the highway.

- c) No evidence or documentation has been submitted or found showing obstruction of historic public use or trust rights over this property.
- d) Staff conducted a site inspection on March 30, 2017, to verify that the proposed project would not impact public access.
- e) The Carmel Area Land Use Plan Policy 5.3.3.4.c protects public visual access and requires that structures and landscaping placed upon land west of Highway 1 shall be sited and designed to retain public views of the shoreline. The subject project site is located west of Highway 1; however, the proposed project would not obstruct public views of the shoreline from the Highway 1, nor obstruct public visual access.

6. **FINDING:** **APPEALABILITY** - The decision on this project may be appealed to the Board of Supervisors and not the California Coastal Commission.
- EVIDENCE:**
- a) Board of Supervisors. Pursuant to Sections 20.44.070 and 20.86.030 of the Monterey County Zoning Ordinance (Title 20), an appeal may be made to the Board of Supervisors by any public agency or person aggrieved by a decision of an Appropriate Authority other than the Board of Supervisors.
 - b) Coastal Commission. Section 20.86.080.A of the Monterey County Zoning Ordinance (Title 20). Design Approvals are not subject to appeal by/to the California Coastal Commission.

DECISION

NOW, THEREFORE, based on the above findings and evidence, the Zoning Administrator does hereby:

- A. Find the project exempt from CEQA per Section 15301 of the CEQA Guidelines; and
- B. Approve a Design Approval to allow the replacement of two (2) panel antennas and one (1) conduit riser; installation of one (1) pole riser, two (2) H-Frame (bracket), two (2) Remote Radio Units, one (1) cabinet, and 6-foot high wood fence to an existing wireless communications facility, in general conformance with the attached plans, being attached hereto and incorporated herein by reference.

PASSED AND ADOPTED this 11th day of May, 2017.



Mike Novo, Zoning Administrator

COPY OF THIS DECISION MAILED TO APPLICANT ON **MAY 12 2017**.

THIS APPLICATION IS APPEALABLE TO THE BOARD OF SUPERVISORS. IF ANYONE WISHES TO APPEAL THIS DECISION, AN APPEAL FORM MUST BE COMPLETED AND SUBMITTED TO THE CLERK TO THE BOARD ALONG WITH THE APPROPRIATE FILING FEE ON OR BEFORE **MAY 22 2017**.

THIS PROJECT IS LOCATED IN THE COASTAL ZONE AND IS NOT APPEALABLE TO THE COASTAL COMMISSION. FOR FURTHER INFORMATION, CONTACT THE COASTAL COMMISSION AT (831) 427-4863 OR AT 725 FRONT STREET, SUITE 300, SANTA CRUZ, CA.

This decision, if this is the final administrative decision, is subject to judicial review pursuant to California Code of Civil Procedure Sections 1094.5 and 1094.6. Any Petition for Writ of Mandate must be filed with the Court no later than the 90th day following the date on which this decision becomes final.

NOTES

1. You will need a building permit and must comply with the Monterey County Building Ordinance in every respect.

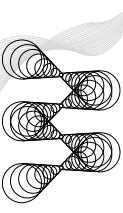
Additionally, the Zoning Ordinance provides that no building permit shall be issued, nor any use conducted, otherwise than in accordance with the conditions and terms of the permit granted or until ten days after the mailing of notice of the granting of the permit by the appropriate authority, or after granting of the permit by the Board of Supervisors in the event of appeal.

Do not start any construction or occupy any building until you have obtained the necessary permits and use clearances from Monterey County RMA-Planning and RMA-Building Services offices in Salinas.



astec
Network Solutions

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



**m.squared
ENGINEERS**
1387 CALLE AVANZADO
SAN CLEMENTE, CA 92573
(619) 997-4012

FA CODE:	10088137
DRAWN BY:	NG
CHECKED BY:	MM

1	02/14/2017	PER CALTRANS COMMENTS			
0	12/21/2016	100% CDS FOR SUBMITTAL			
A	11/22/2016	90% CDS FOR REVIEW			
REV	DATE	DESCRIPTION			

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

CCL03503
PCH CARMEL HIGHLANDS 1
HIGHWAY 1 CARMEL
CARMEL, CA 93923
WOOD UTILITY POLE

SHEET TITLE

GENERAL NOTES

SHEET NUMBER
GN-1

GROUNDING NOTES:

1. GROUNDING 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\", \"X\", \"N\", \"T\") WITH 1\" HIGH LETTERS.
3. ALL HARDWARE 1/8\" 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 CADDIUM FLAT WASHER BETWEEN LUG AND STEEL. COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
5. ALL BOLTS 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. TOWER THE SUBCONTRACTOR SHALL OBTAIN APPROVAL FROM THE TOWER OWNER PRIOR TO MOUNTING THE GROUNDING BAR TO THE TOWER.
8. ALL ELECTRICAL CODE (NEC, NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 780 (LATEST EDITION), AND MANUFACTURER.

SITE WORK & DRAINAGE

PART 1 - GENERAL

CLEANING, GRUBBING, STRIPPING, EROSION CONTROL, SURVEY LAYOUT, SUBGRADE PREPARATION AND FINISH GRADING AS REQUIRED TO COMPLETE THE PROPOSED 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 (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION).

1.2 INSPECTION AND TESTING:

- A. FIELD TESTING OF EARTHWORK COMPACTIION 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 SUBCONTRACTORS 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 WORK.
- B. AVOID DAMAGE TO THE SITE AND TO (E) FACILITIES, STRUCTURES, TREES, AND SHRUBS DESIGNATED TO REMAIN. TAKE PROTECTIVE MEASURES TO PREVENT (E) 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. (E) UTILITIES DO NOT INTERRUPT (E) 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.

ENVIRONMENTAL NOTES

1. ALL WORK PERFORMED SHALL BE DONE IN ACCORDANCE WITH ISSUED PERMITS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND PROPERLY MAINTAINING ALL PERMITS. THE TOWER CONSTRUCTION AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR PROTECTION OF ADJACENT PROPERTIES, ROADWAYS AND WATERWAYS AND SHALL BE MAINTAINED IN PLACE THROUGH FINAL JURISDICTIONAL INSPECTION & RELEASE OF SITE.
2. CONTRACTOR SHALL INSTALL/CONSTRUCT ALL NECESSARY SEDIMENT/SILT CONTROL, FENCING AND PROTECTIVE MEASURES WITHIN THE LIMITS OF SITE DISTURBANCE PRIOR TO CONSTRUCTION.
3. 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.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY INSPECTIONS AND ANY REPAIRS OF ALL SEDIMENT CONTROL MEASURES. SEDIMENTATION SHALL BE ONLY AS PERMITTED AND BE HELD TO A MINIMUM. ONLY TREES NECESSARY FOR CONSTRUCTION OF THE FACILITIES SHALL BE REMOVED. CLOSING OF VEGETATION AND REE REMOVAL SHALL BE ONLY AS PERMITTED AND BE HELD TO A MINIMUM. ONLY TREES NECESSARY FOR CONSTRUCTION OF THE FACILITIES SHALL BE REMOVED.
5. SEEDING AND MULCHING AND/OR SOODING OF THE SITE WILL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER COMPLETION OF THE PROJECT FACILITIES AFFECTING LAND DISTURBANCE.
6. 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.
7. ALL TYPES OF SIZES INDICATED SHALL CONSIST OF CLEAN, HARD, SOUND, DURABLE, UNIFORM IN PROPORTION, AND FREE FROM DEFECTS. ALL MATERIALS SHALL BE PROPERLY STOCKPILED, COVERED OR LAMINATED PIECES, DISINTEGRATED MATERIAL, ORGANIC MATTER, OIL, ALKALI OR OTHER DELETERIOUS SUBSTANCES

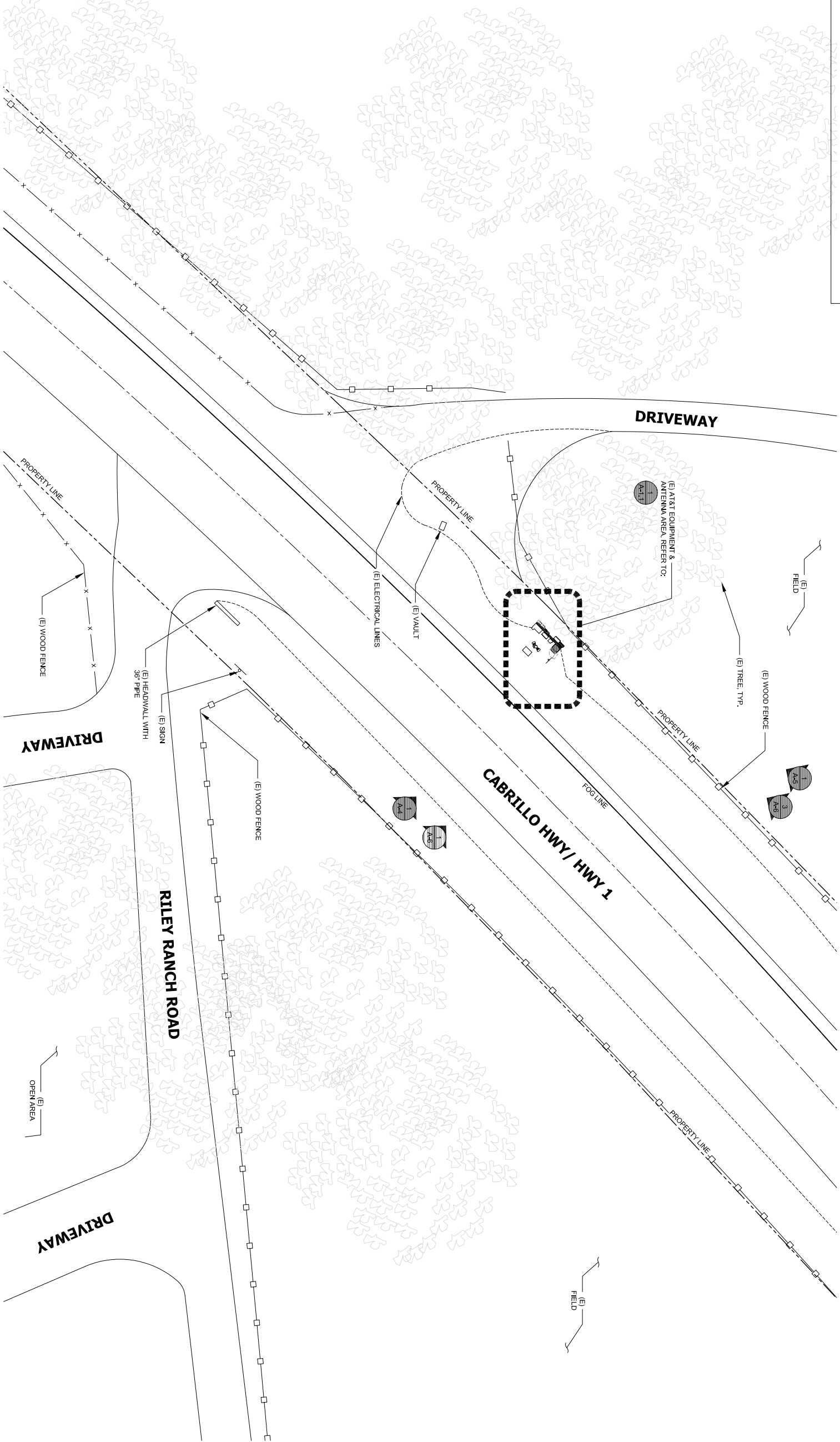
ELECTRICAL NOTES:

1. ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ANY/ALL ELECTRICAL WORK INDICATED, ANY/ALL ELECTRICAL CONSTRUCTION SHALL BE IN ACCORDANCE WITHDRAWINGS 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 (E) 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 BE CAUSE FOR THE CONTRACTOR TO BE DEEMED AS NOT PROVIDING A COMPLETE AND WORKING SYSTEM, AND MAY REFLECT CONTRACTOR OF PERFORMANCE 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:
 - A. - NATIONAL FIRE CODES
 - B. - UNDERWATERS LABORATORIES
 - C. - UL - NATIONAL ELECTRICAL SAFETY AND HEALTH ACT
 - D. - OSHA (OCCUPATIONAL SAFETY AND HEALTH ACT)
 - E. - NFPA - NATIONAL ELECTRICAL CODE
 - F. - NFPA - NATIONAL FIRE PROTECTION ASSOC.
4. DO NOT SCALE ELECTRICAL DRAWINGS. REFER TO SITE PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT, AND CONFER WITH CONSTRUCTION MANAGER ANY SIZES AND LOCATIONS WHEN NEEDED.
5. (E) SERVICES, CONTRACTOR SHALL NOT INTERRUPT (E) SERVICES WITHOUT WRITTEN PERMISSION OF THE OWNER. 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 CONFORM WITH LOCAL UTILITY COMPANY ANY/ALL REQUIREMENTS SUCH AS THE LUG SIZE RESTRICTIONS, CONDUIT ENTRY, SIZE OF TRANSFORMERS, SCHEDULED DOWNTIME FOR THE OWNERS CONVENIENCE, ETC., ANY/ALL CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER PRIOR TO THE BEGINNING OF WORK.
9. MINIMUM WIRE SIZE SHALL BE #12 AWG, NOT INCLUDING CONTROL, WIRING, UNLESS NOTED OTHERWISE. ALL CONDUCTORS SHALL BE COPPER WITH THIN 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 A/E.
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 WORKMANLIKE LIABILITY INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LOSS AND DAMAGE TO PROPERTY.
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 (N) 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 MANUFACTURERS CATALOG INFORMATION OF ANY/ALL LIGHTING TO INSTALLATION.
22. ANY CUTTING OR PATCHING 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 DIRECTIONS. ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
24. DISCONNECT SWITCHES SHALL BE H.P. RATED HEAVY-DUTY, QUICK-BREAK 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.
26. ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 780 (LATEST EDITION), AND MANUFACTURERS CATALOGS.
27. RACEWAYS, GROUND BARS, SHALL BE SCHEDULE 40 PVC MEETING OR EXCEEDING NEMA TG2 - 1990. CONTRACTOR SHALL TEST POLYETHYLENE CORO. 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 'BRATE ZINC' OR GOLD GALV.
22. SUPPORT OF ALL ELECTRICAL WORK SHALL BE AS REQUIRED BY NEC.
22. CONDUCTORS: CONTRACTOR SHALL USE 98% CONDUCTIVITY COPPER WITH TYPE THIN INSULATION, 800 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. CONDUCTORS 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. ABOVE ELECTRICAL AND TELCO 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 'CAUTION BURIED TELECOMMUNICATIONS'.
34. ALL BOLTS SHALL BE STAINLESS STEEL

GENERAL CONSTRUCTION NOTES:

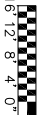
1. FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:
 - A. GENERAL CONTRACTOR - GENERAL CONTRACTOR
 - B. SUBCONTRACTOR - CONTRACTOR (CONSTRUCTION)
2. ALL SITE WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS AND AT&T PROJECT SPECIFICATIONS.
3. GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL VISIT THE SITE AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED 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. ALL DECISIONS THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER.
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 LAWS, 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 DIAGRAMATIC OUTLINE ONLY, UNLESS OTHERWISE NOTED. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND LOCATIONS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER PRIOR TO THE BEGINNING OF WORK. THEREFORE, IT IS CRITICAL TO FIELD VERIFY ALL 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 SHOW 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 MANUFACTURERS RECOMMENDATIONS UNLESS SPECIALLY STATED OTHERWISE.
9. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL SUBMIT AN ALTERNATE EQUIPMENT TO THE ARCHITECT/ENGINEER PRIOR TO THE BEGINNING OF WORK.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, FEES, INSPECTIONS AND TESTING, 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.
11. GENERAL CONTRACTOR SHALL COORDINATE WORK AND SCHEDULE WORK ACTIVITIES WITH OTHER DISCIPLINES. 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 AED PLUMBS AND TRUE AS INDICATED ON THE DRAWINGS.
13. SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED MATERIALS APPROVED BY LOCAL JURISDICTION.
14. WORK READINGS SHALL BE REPRESENTED BY LIGHT SHADOWED LINES AND NOTES. THE SCOPE OF WORK FOR CONSTRUCTION SHALL BE AS SHOWN ON THE DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL 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 SHOW 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.
15. SUBCONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CONSTRUCTION MANAGER 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
16. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTORS 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.
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-0 2-A-10-BC AND SHALL BE WITHIN 25 FEET OF TRAVEL DISTANCE TO ALL PORTIONS OF WHERE THE WORK IS BEING COMPLETED DURING CONSTRUCTION.
22. ALL (E) 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 PERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE PERSONNEL WHO WILL BE PERFORMING WORK LIMITED TO A FULL PROTECTION BY COVERED SPACE (C) ELECTRICAL SAFETY (D) TRENCHING & EXCAVATION.
23. ALL (E) 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. OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION.
25. MEASURES, IF REQUIRED DURING CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE FEDERAL AND LOCAL ORDINANCES.
26. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUNDING, FROZEN MATERIALS, SNOW OR ICE.
27. THE SUBGRADE SHALL BE BROUGHT TO A SMOOTH UNIFORM GRADE AND COMPACTED TO 95 PERCENT STANDARD PROCTOR DENSITY UNDER PAVEMENT AND STRUCTURES AND 90 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, STOKS, 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 COMPLETION OF PROJECT AND PRIOR TO FINAL PAYMENT.
30. SUBCONTRACTOR SHALL SUBMIT A COMPLETE SET OF AS-BUILT REIMAGES TO THE GENERAL CONTRACTOR UPON COMPLETION OF PROJECT AND PRIOR TO FINAL PAYMENT.
31. SUBCONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION.
32. THE PROPOSED FACILITY WILL BE UNMANNED AND DOES NOT REQUIRE PORTABLE 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 PROPOSED.
35. ALL MATERIAL SHALL BE FURNISHED AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST REVISION OF THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 780 (LATEST EDITION), AND MANUFACTURERS CATALOGS.
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 STROBE LIGHTS ARE PERMITTED. LIGHTING IF REQUIRED, WILL MEET FAA STANDARDS AND REQUIREMENTS.
40. ALL COAXIAL CABLE INSTALLATIONS TO FOLLOW MANUFACTURERS 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 PROPOSED. (E) ACCESS AND PARKING TO REMAIN, UNLESS NOTED OTHERWISE.
43. NO LANDSCAPING IS PROPOSED AT THIS SITE, UNLESS NOTED OTHERWISE.

- 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.

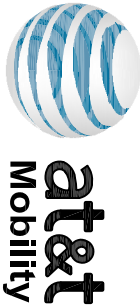


SITE PLAN

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



1



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

FA CODE:	10088137
DRAWN BY:	NG
CHECKED BY:	MM

1	02/14/2017	PER CALTRANS COMMENTS
0	12/21/2016	100% CDS FOR SUBMITTAL
A	11/22/2016	90% CDS FOR REVIEW
REV	DATE	DESCRIPTION

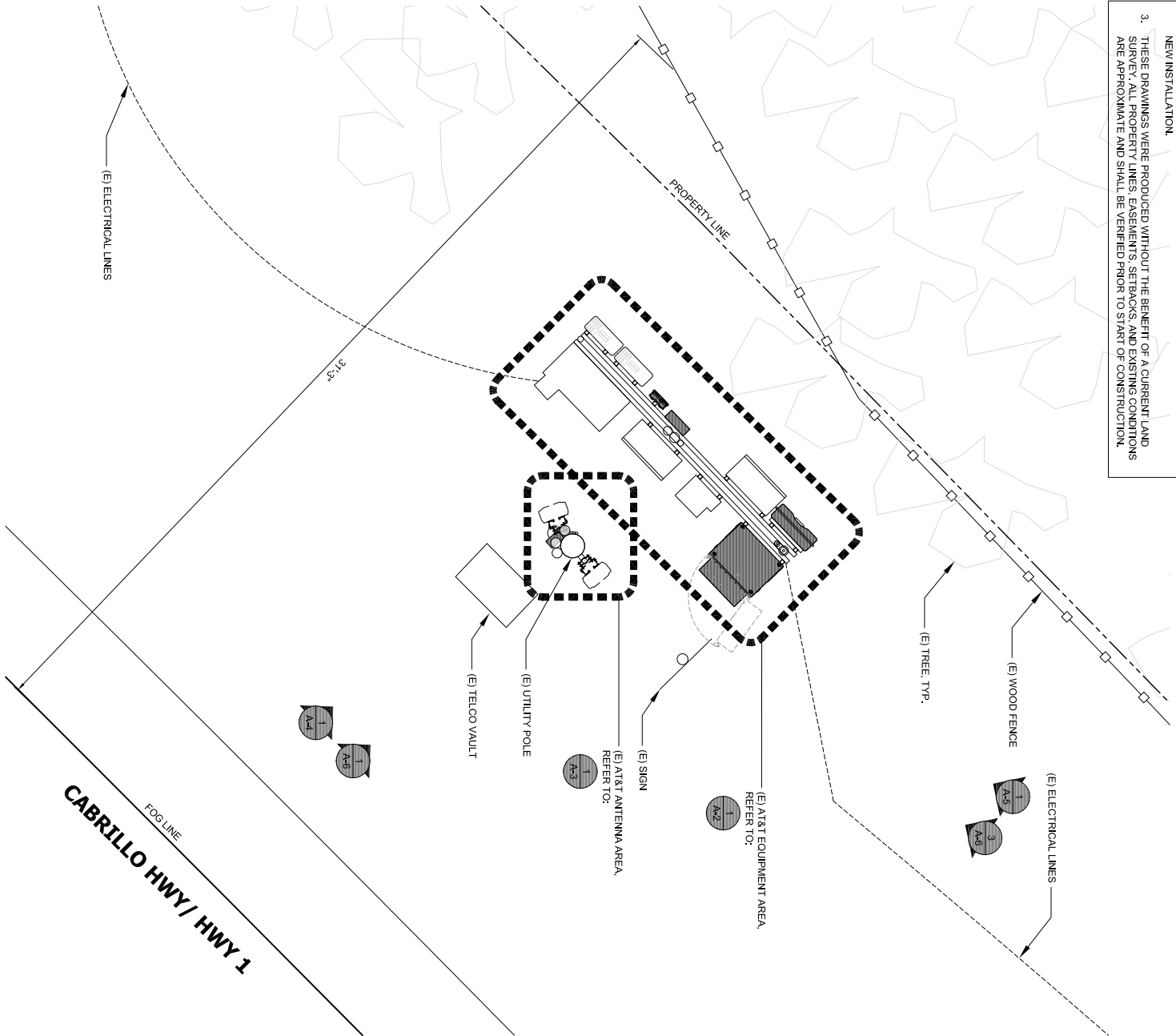
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CCL03503
PCH CARMEL HIGHLANDS 1
HIGHWAY 1 CARMEL
CARMEL, CA 93923
WOOD UTILITY POLE

SHEET TITLE
**SITE PLAN AND
ENLARGED SITE PLAN**

SHEET NUMBER
A-1

- 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.
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ENLARGED EXISTING SITE PLAN

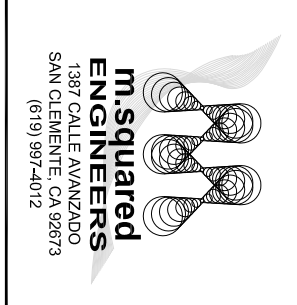
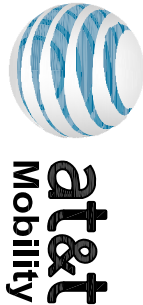
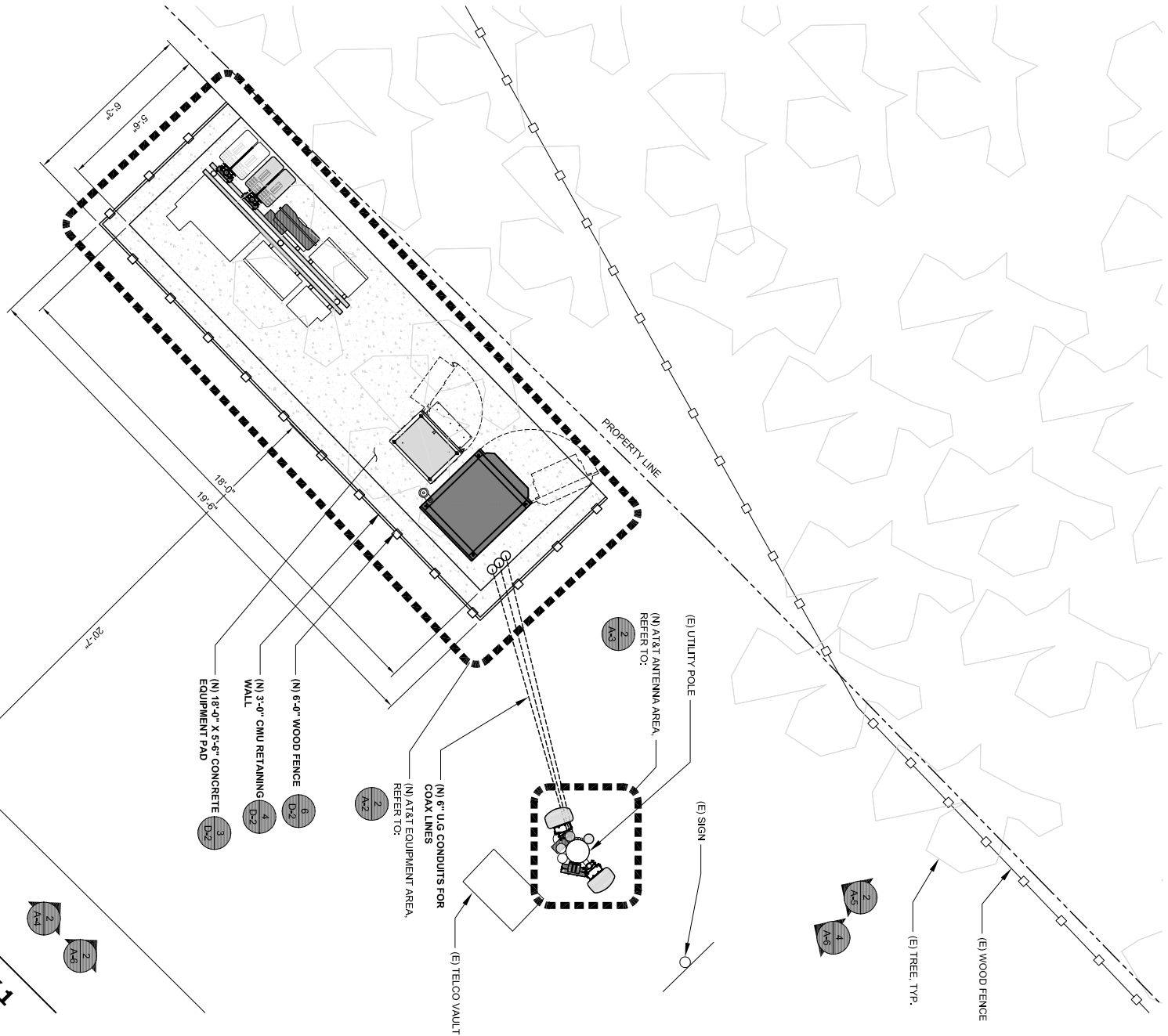
24"x36" SCALE: 3/8" = 1'-0"
11"x17" SCALE: 3/16" = 1'-0"

2

ENLARGED PROPOSED SITE PLAN

24"x36" SCALE: 3/8" = 1'-0"
11"x17" SCALE: 3/16" = 1'-0"

1



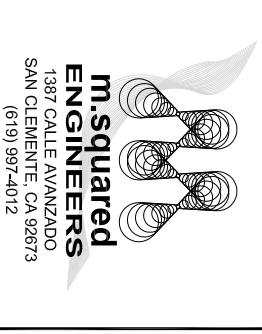
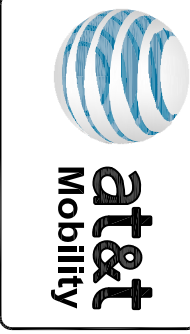
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A	11/22/2016	90% CDS FOR REVIEW

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PCH CARMEL HIGHLANDS 1
HIGHWAY 1 CARMEL
CARMEL, CA 93923
WOOD UTILITY POLE

SHEET TITLE
SITE PLAN AND
ENLARGED SITE PLAN

SHEET NUMBER
A-1.1



FA CODE:	10088137
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CHECKED BY:	MM

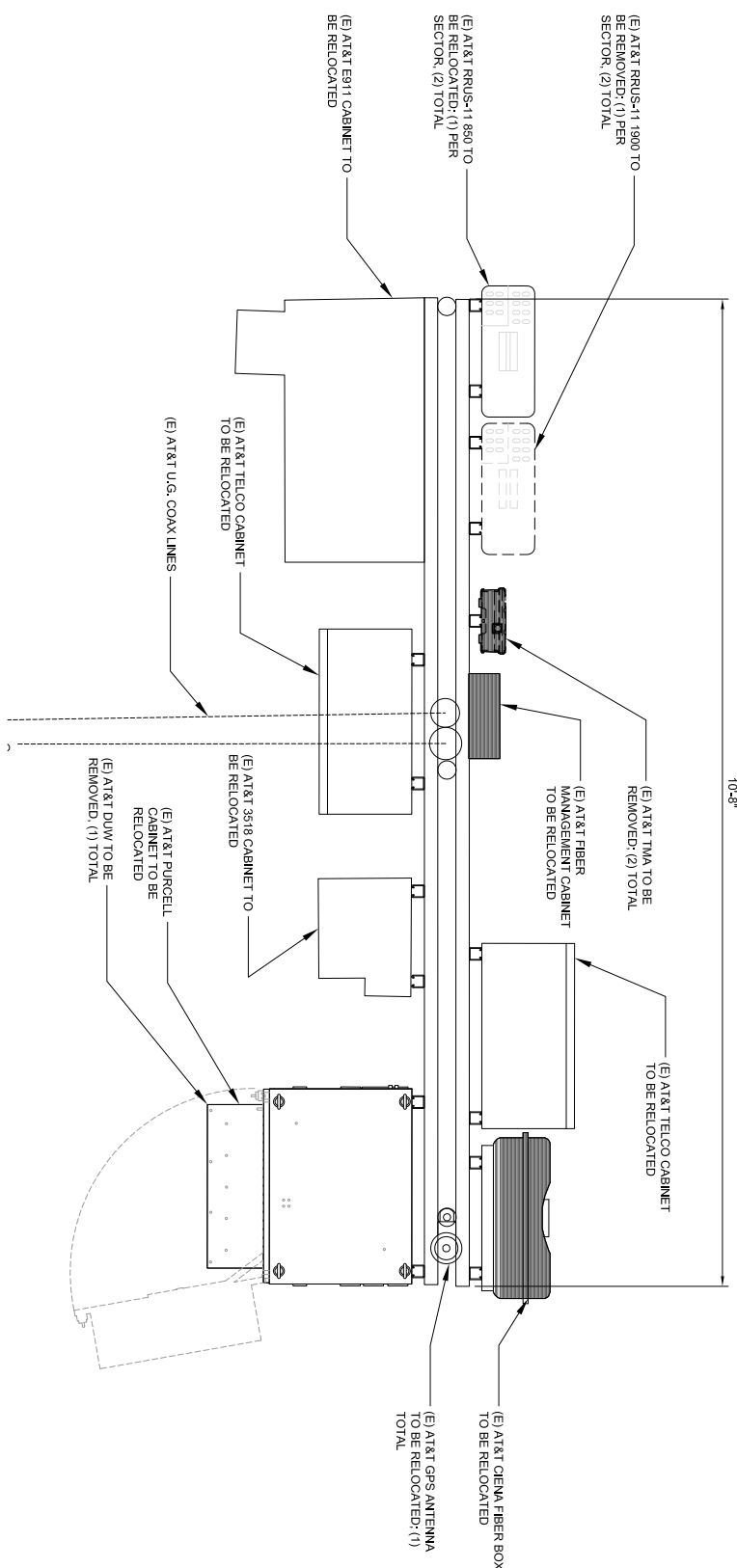
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A	11/22/2016	90% CDS FOR REVIEW

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PCH CARMEL HIGHLANDS 1
HIGHWAY 1 CARMEL
CARMEL, CA 93923
WOOD UTILITY POLE

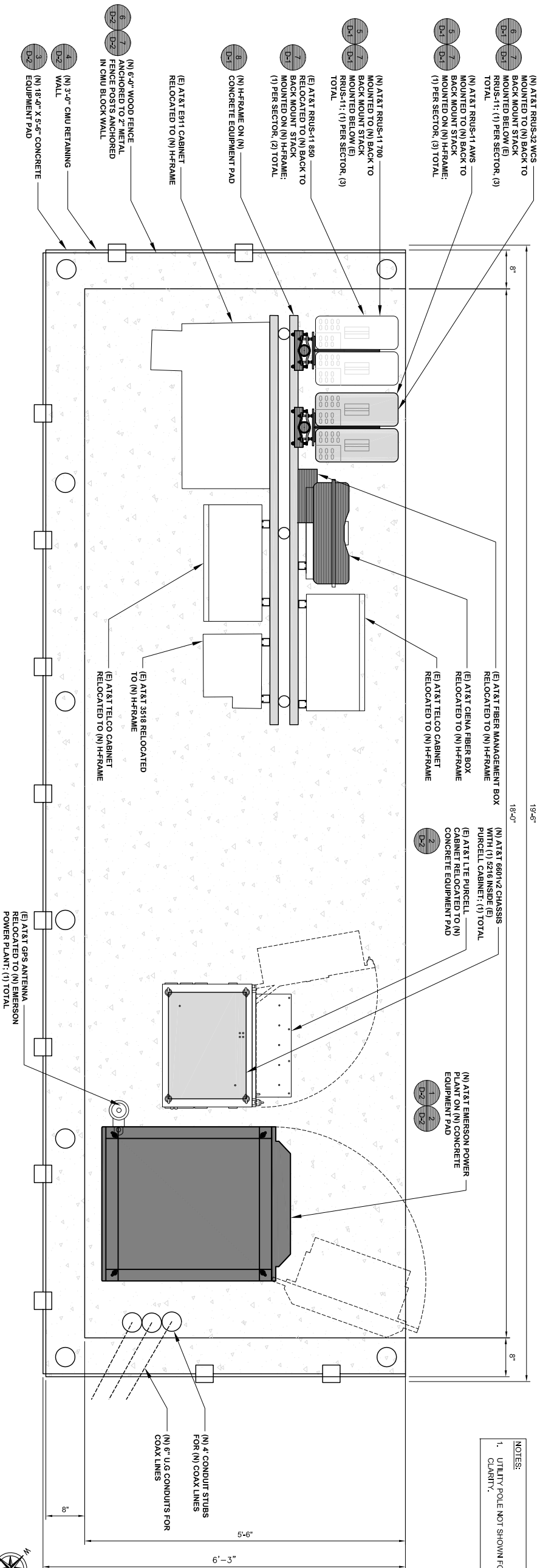
SHEET TITLE
EQUIPMENT LAYOUT

SHEET NUMBER
A-2



NOTES:

1. UTILITY POLE NOT SHOWN FOR CLARITY.



EXISTING EQUIPMENT LAYOUT

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

PROPOSED EQUIPMENT LAYOUT

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

2

TOP OF EXISTING BUILDING
ELEV. 43.3' AGL

RAD CENTER OF EXISTING 4' PANEL ANTENNAS
ELEV. 36.3' AGL

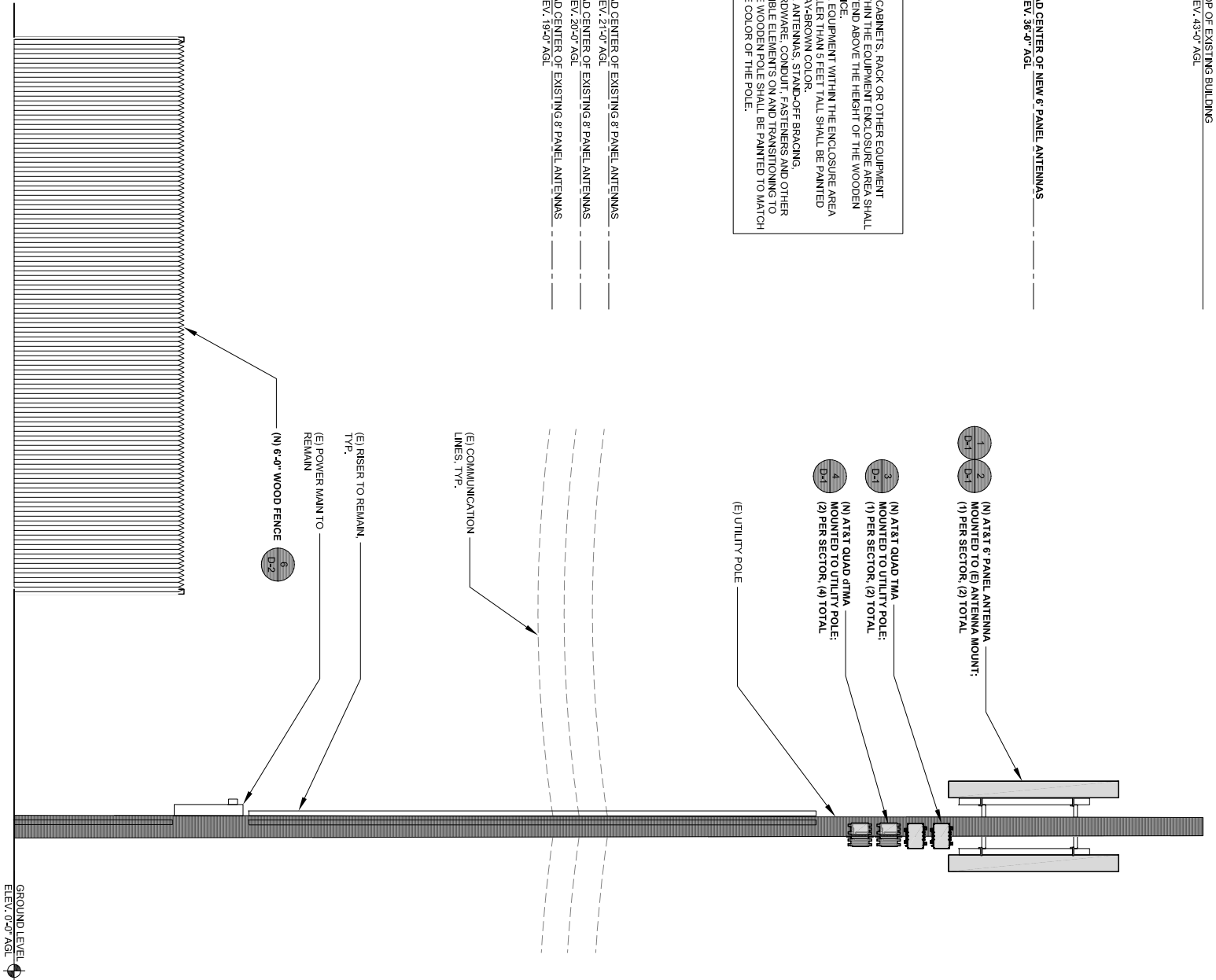
(E) AT&T 4' PANEL ANTENNA TO
BE REMOVED: (1) PER SECTOR,
(2) TOTAL

(E) UTILITY POLE

(E) COMMUNICATION
LINES, TYP.

RAD CENTER OF EXISTING 8' PANEL ANTENNAS
ELEV. 21.3' AGL
RAD CENTER OF EXISTING 8' PANEL ANTENNAS
ELEV. 20.3' AGL
RAD CENTER OF EXISTING 8' PANEL ANTENNAS
ELEV. 19.3' AGL

(E) RISER TO REMAIN
TYP.
(E) POWER MAIN TO
REMAIN
(E) AT&T TMA TO BE
REMOVED: (2) TOTAL
(E) AT&T RRUS-11 1900 TO
BE REMOVED: (1) PER
SECTOR, (2) TOTAL
(E) AT&T RRUS-11 1850 TO
BE RELOCATED: (1) PER
SECTOR, (2) TOTAL
(E) WOOD FENCE,
BEYOND
(E) AT&T E911 CABINET TO
BE RELOCATED
(E) AT&T TELCO CABINET
TO BE RELOCATED
(E) AT&T GPS ANTENNA
TO BE RELOCATED: (1)
TOTAL
(E) AT&T TELCO CABINET
TO BE RELOCATED
(E) AT&T CIENA FIBER BOX
TO BE RELOCATED
(E) AT&T PURCELL
CABINET TO BE
RELOCATED
(E) AT&T DUW TO BE
REMOVED: (1) TOTAL
(E) AT&T 3518 CABINET TO
BE RELOCATED
(E) AT&T FIBER
MANAGER CABINET
TO BE RELOCATED



TOP OF EXISTING BUILDING
ELEV. 43.3' AGL

RAD CENTER OF NEW 6' PANEL ANTENNAS
ELEV. 36.3' AGL

RAD CENTER OF EXISTING 8' PANEL ANTENNAS
ELEV. 21.3' AGL
RAD CENTER OF EXISTING 8' PANEL ANTENNAS
ELEV. 20.3' AGL
RAD CENTER OF EXISTING 8' PANEL ANTENNAS
ELEV. 19.3' AGL

EXISTING SOUTHEAST ELEVATION

24"x36" SCALE: 3/8" = 1'-0"
11"x17" SCALE: 3/16" = 1'-0"



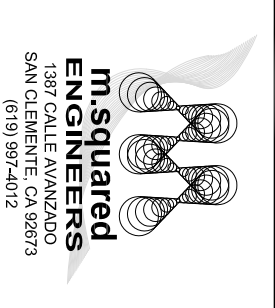
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PROPOSED SOUTHEAST ELEVATION

24"x36" SCALE: 3/8" = 1'-0"
11"x17" SCALE: 3/16" = 1'-0"



2



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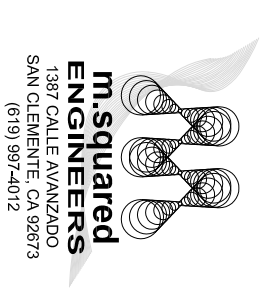
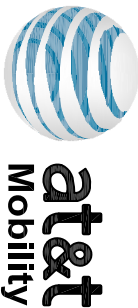
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CCL03503
PCH CARMEL HIGHLANDS 1
HIGHWAY 1 CARMEL
CARMEL, CA 93923
WOOD UTILITY POLE

SHEET TITLE
ELEVATIONS

SHEET NUMBER
A-4



FA CODE:	10088137
DRAWN BY:	NG
CHECKED BY:	MM

1	02/14/2017	PER CALTRANS COMMENTS
0	12/21/2016	100% CDS FOR SUBMITTAL
A	11/22/2016	90% CDS FOR REVIEW
REV	DATE	DESCRIPTION

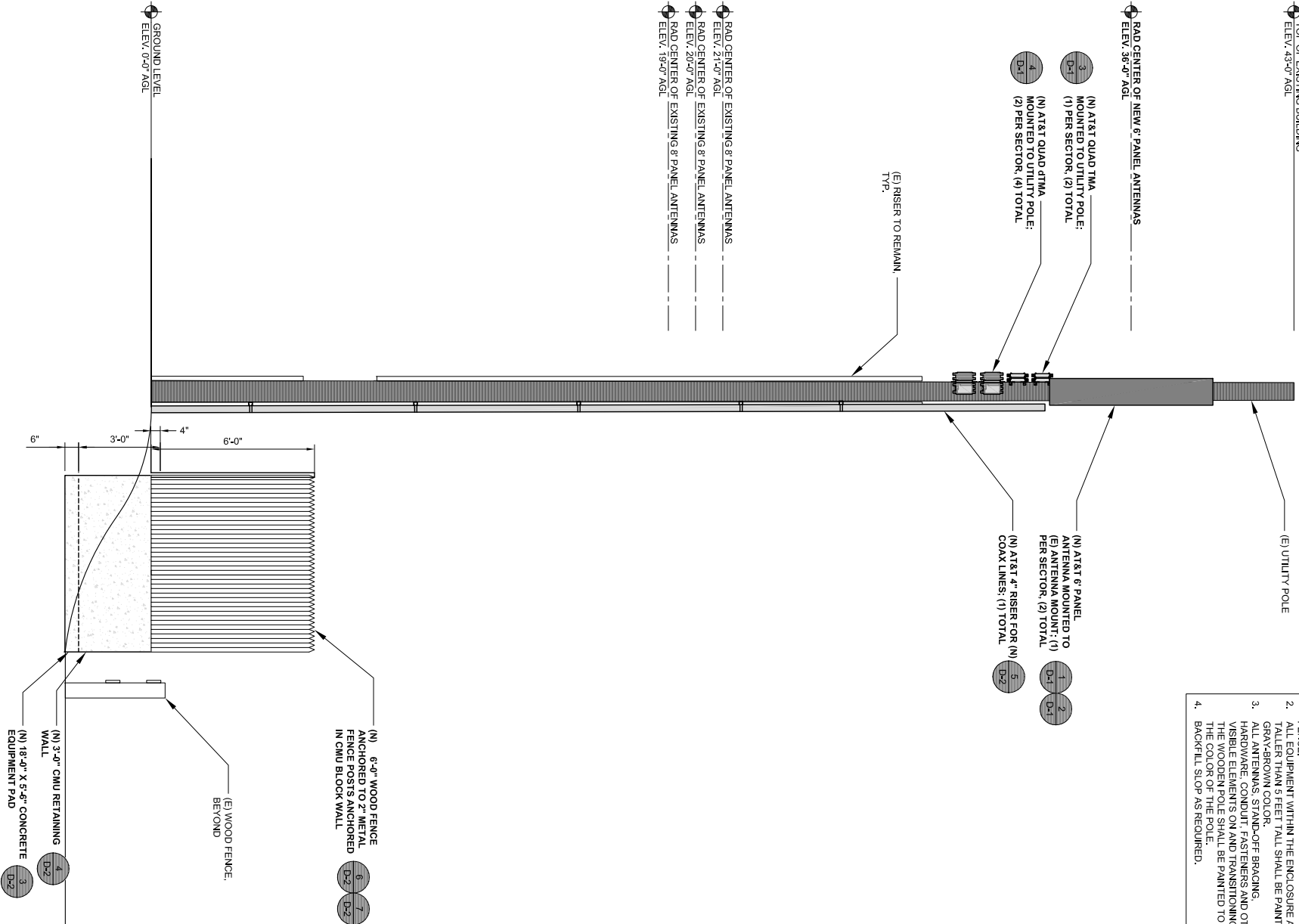
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CCL03503
PCH CARMEL HIGHLANDS 1
HIGHWAY 1 CARMEL
CARMEL, CA 93923
WOOD UTILITY POLE

SHEET TITLE
ELEVATIONS

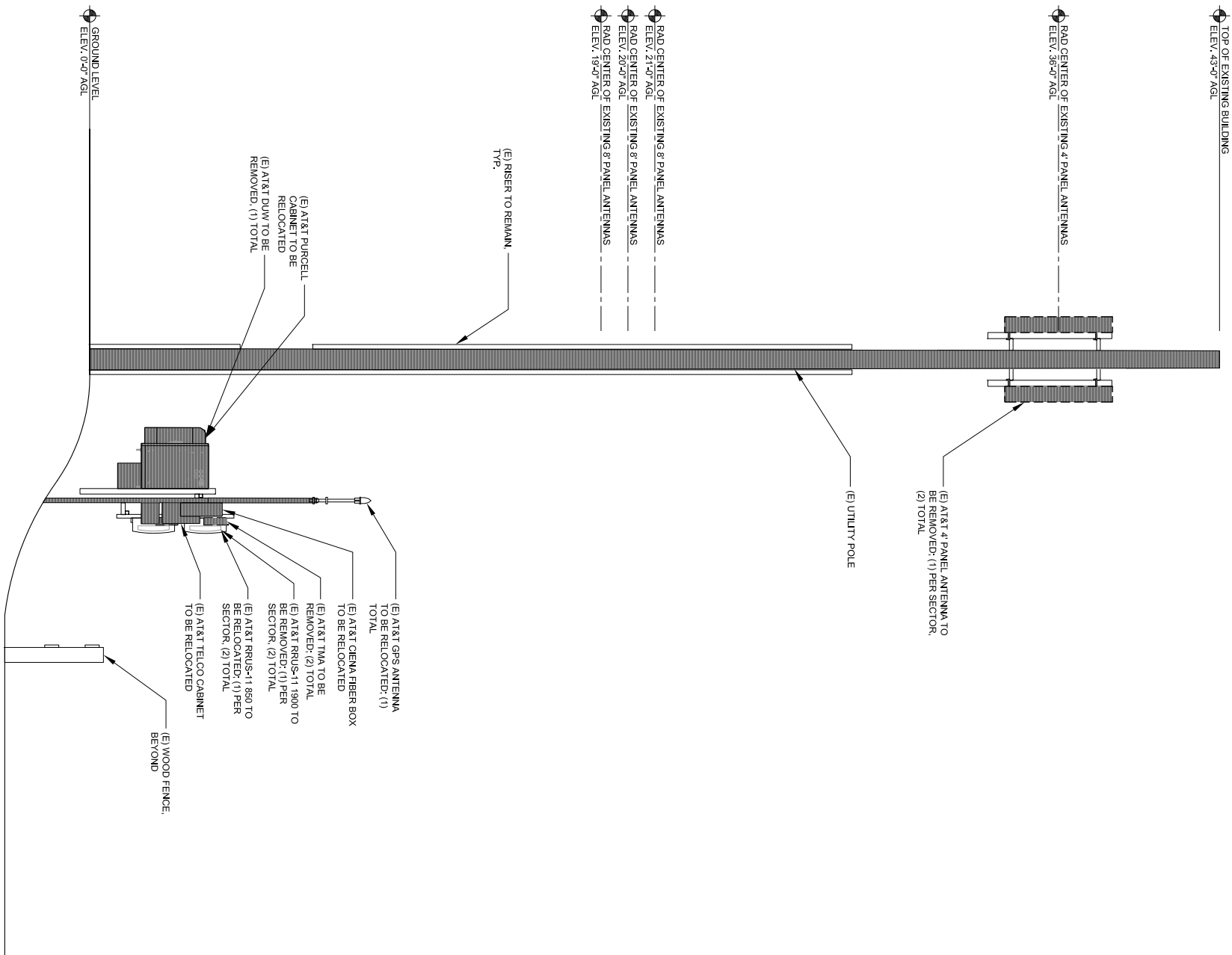
SHEET NUMBER
A-5

- NOTE:
- NO CABINETS, RACK OR OTHER EQUIPMENT WITHIN THE EQUIPMENT ENCLOSURE AREA SHALL EXTEND ABOVE THE HEIGHT OF THE WOODEN FENCE.
 - ALL EQUIPMENT WITHIN THE ENCLOSURE AREA TALLER THAN 5 FEET TALL SHALL BE PAINTED GRAY-BROWN COLOR.
 - ALL ANTENNAS, STAND-OFF BRACING, HARDWARE, CONDUIT, FASTENERS AND OTHER VISIBLE ELEMENTS ON AND TRANSITIONING TO THE WOODEN POLE SHALL BE PAINTED TO MATCH THE COLOR OF THE POLE.
 - BACKFILL SLOP AS REQUIRED.



PROPOSED NORTHEAST ELEVATION

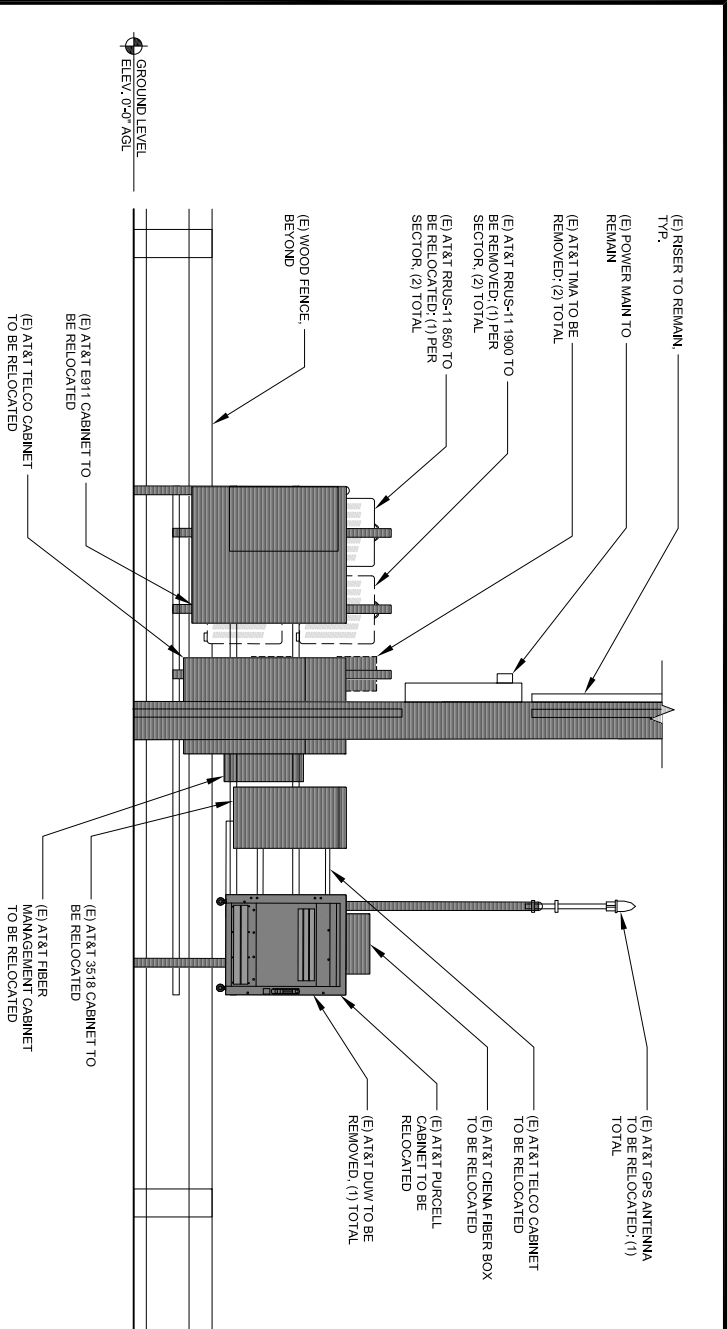
1



EXISTING NORTHEAST ELEVATION

24"x36" SCALE: 3/8" = 1'-0"
11"x17" SCALE: 3/16" = 1'-0"



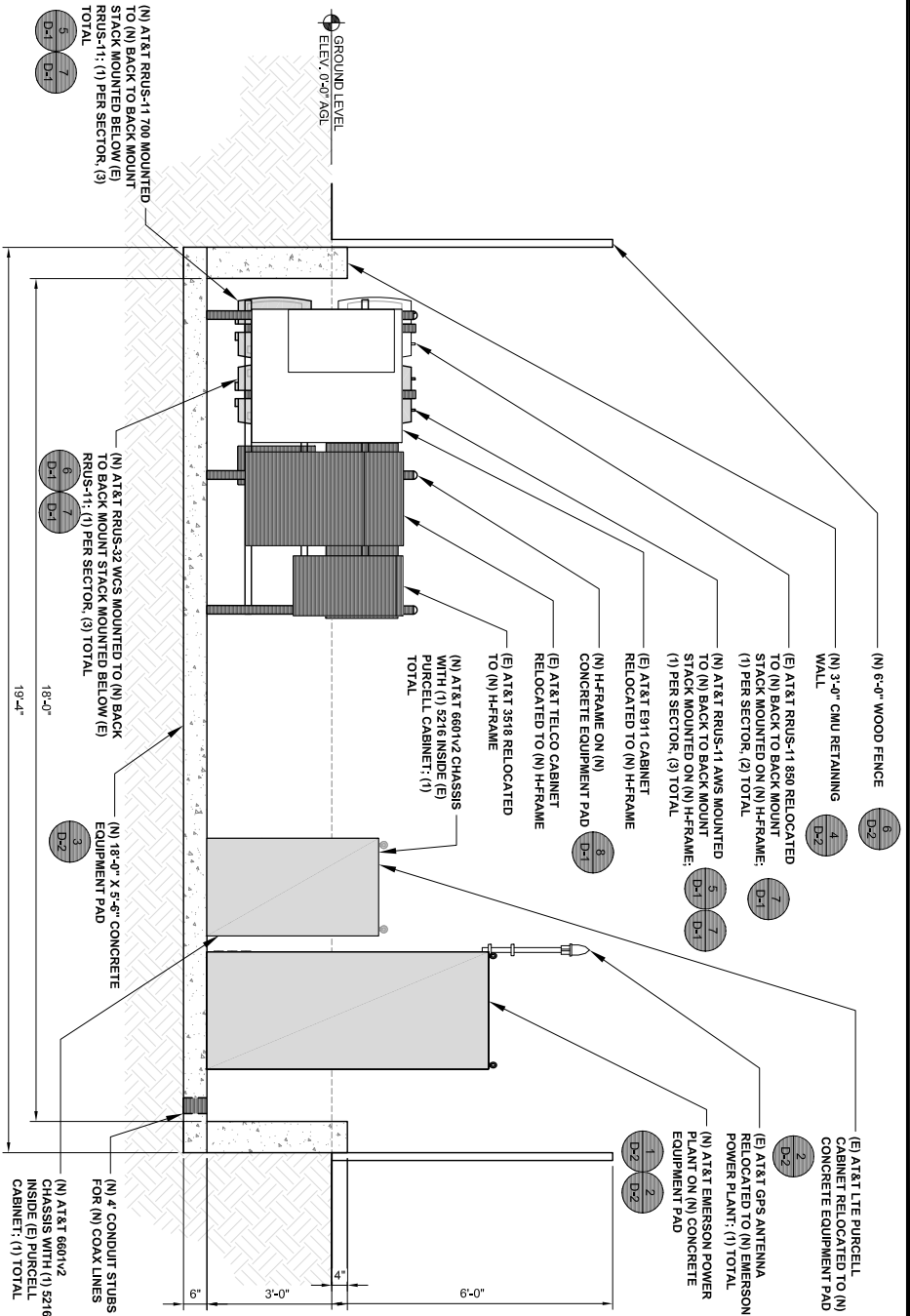


ENLARGE EXISTING SOUTHEAST ELEVATION

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



1

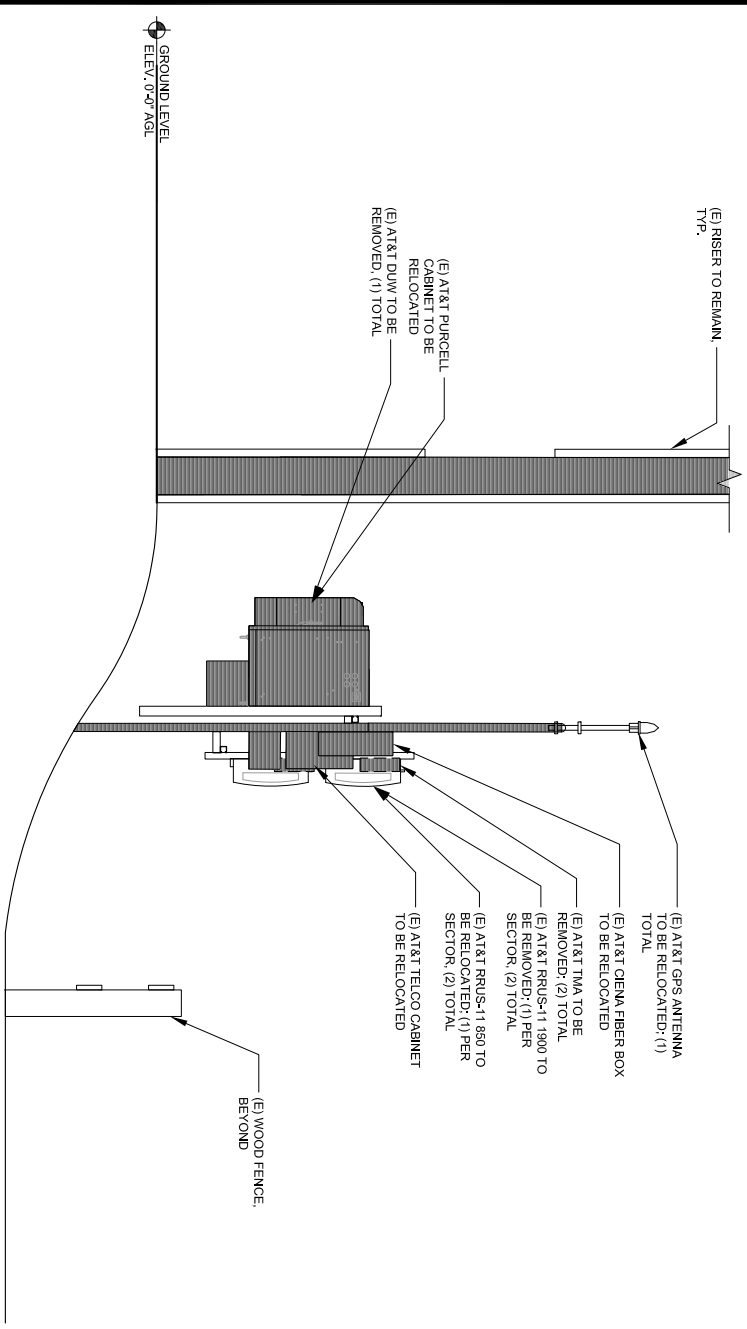


ENLARGE PROPOSED SOUTHEAST ELEVATION

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



2

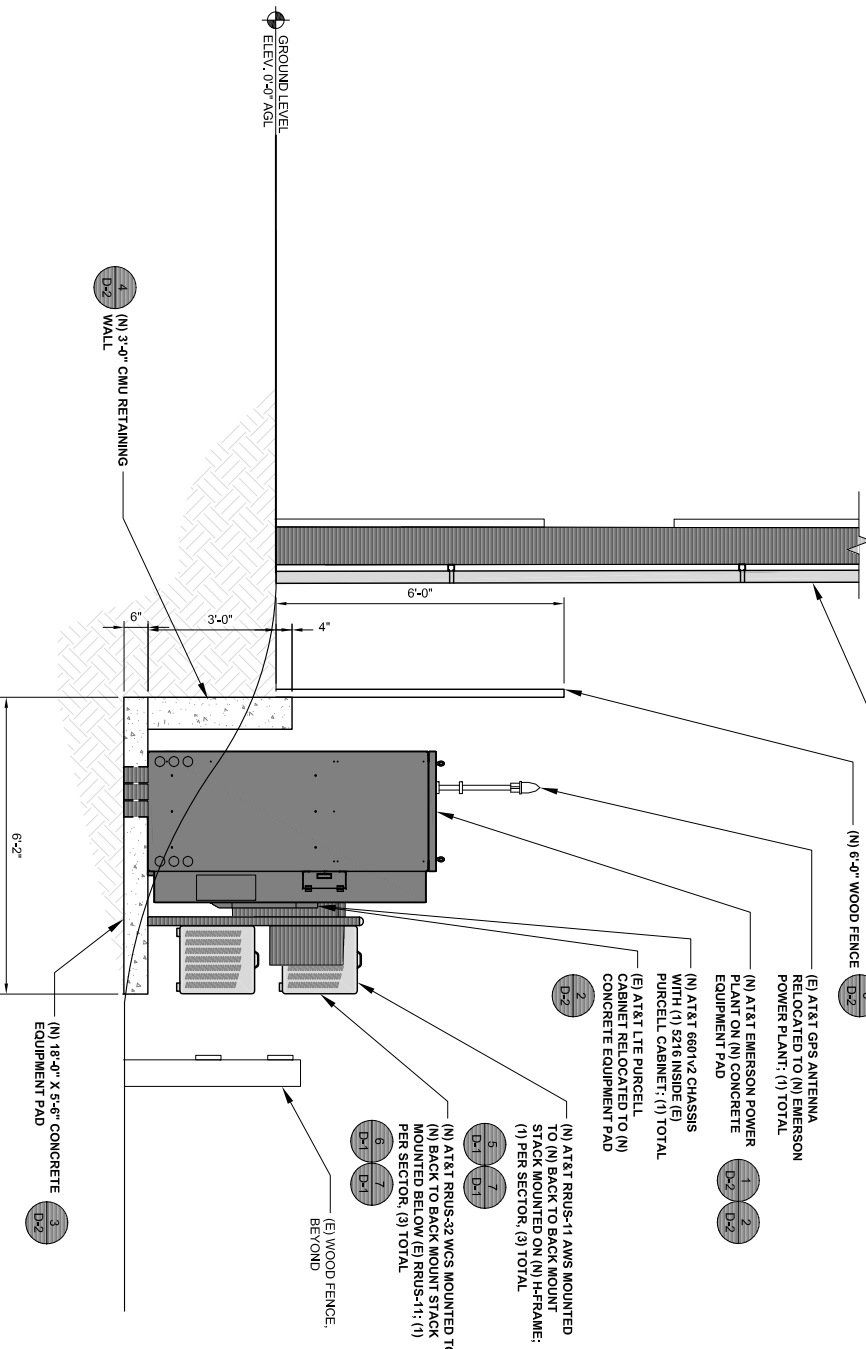


ENLARGE EXISTING NORTHEAST ELEVATION

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



3

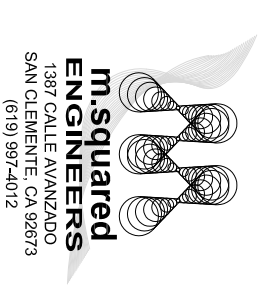


ENLARGED PROPOSED NORTHEAST ELEVATION

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



4



FA CODE:	10088137
DRAWN BY:	NG
CHECKED BY:	MM

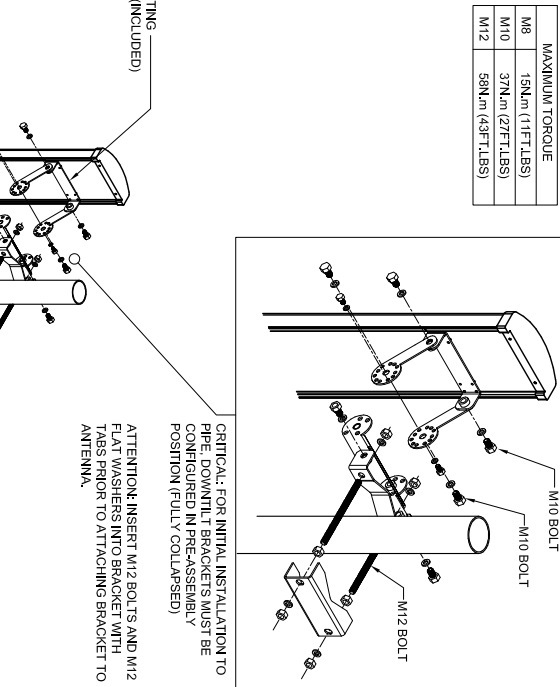
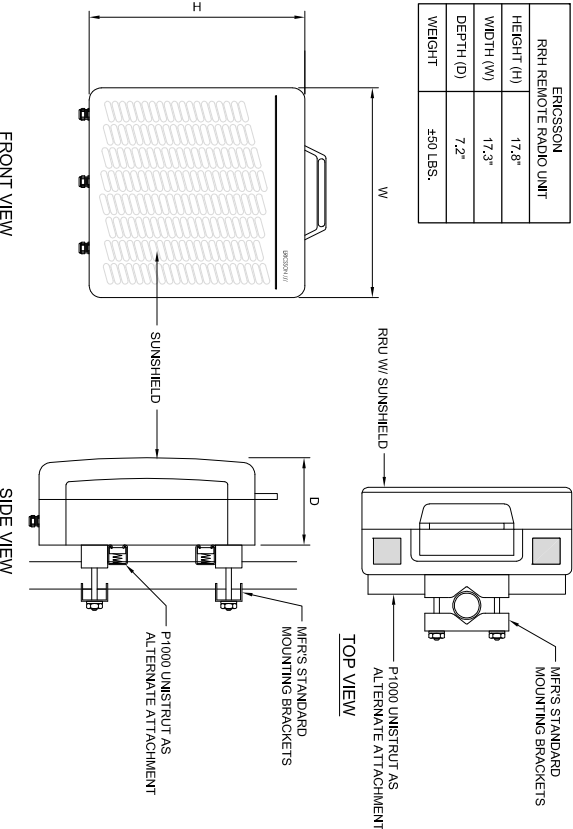
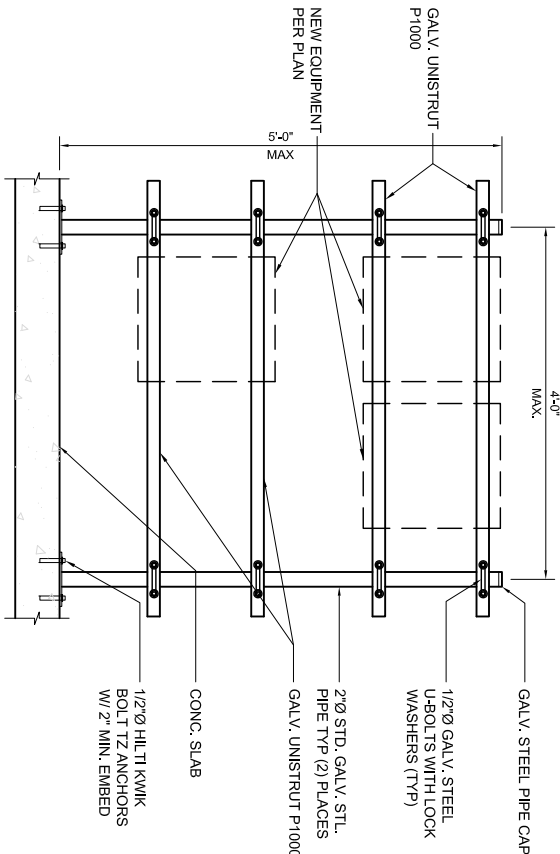
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CCL03503
PCH CARMEL HIGHLANDS 1
HIGHWAY 1 CARMEL
CARMEL, CA 93923
WOOD UTILITY POLE

SHEET TITLE
ENLARGED
ELEVATIONS

SHEET NUMBER
A-6



H-FRAME DETAIL

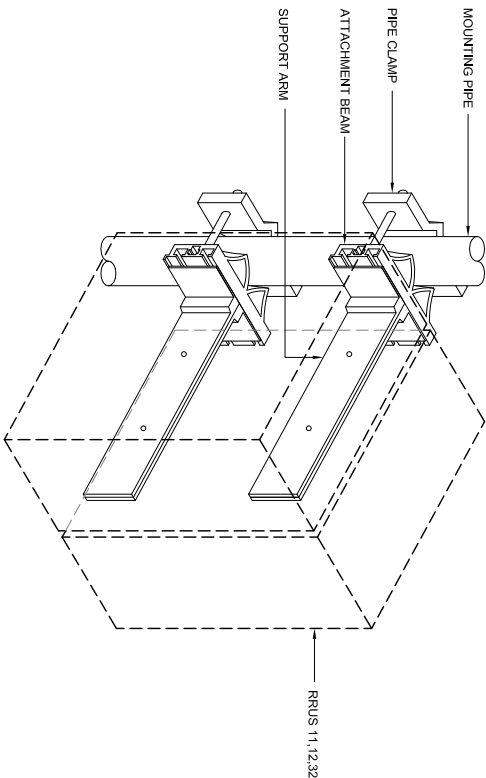
24"x36" SCALE: NTS
11"x17" SCALE: NTS

ERICSSON RRU 11

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

5

CLUEDE
SKK 107 289/1



RRUS SUPPORT KIT

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

E15Z09P94

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

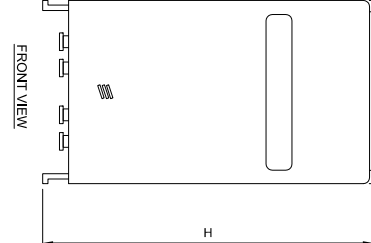
ANTENNA MOUNTING DETAIL

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

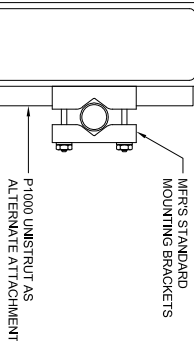
2

ERICSSON RRU REMOTE RADIO UNIT	
HEIGHT (H)	27.2"
WIDTH (W)	12.1"
DEPTH (D)	7.0"
WEIGHT	±80 LBS.

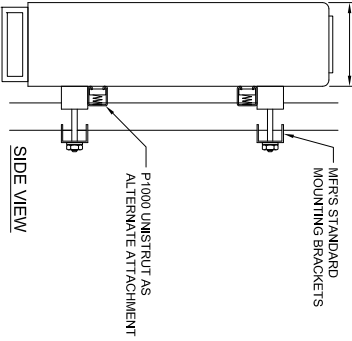
W



FRONT VIEW



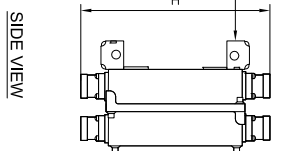
TOP VIEW



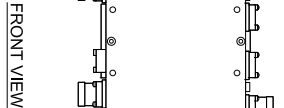
SIDE VIEW

COMMSCOPE TMAQ23-11A	
HEIGHT (H)	6.7"
WIDTH (W)	10.6"
DEPTH (D)	3.5"
WEIGHT	17.2 LBS.

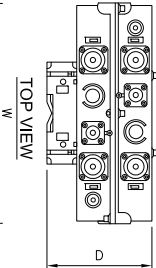
MOUNTING BRACKET INCLUDED:
(TOP AND BOTTOM)



SIDE VIEW



FRONT VIEW



TOP VIEW

RRUS 32

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

TMAQ23-11A

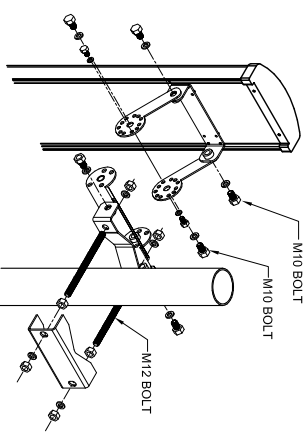
24"x36" SCALE: NTS
11"x17" SCALE: NTS

6" PANEL ANTENNA

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

1

MAXIMUM TORQUE	
M8	15Nm (11FT.LBS)
M10	37Nm (27FT.LBS)
M12	58Nm (43FT.LBS)

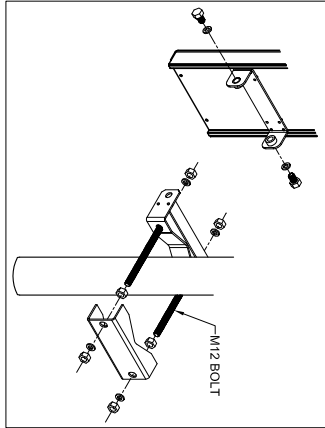


CRITICAL: FOR INITIAL INSTALLATION TO PIPE, DOWNLIFT BRACKETS MUST BE CONFIGURED IN PRE-ASSEMBLY POSITION (FULLY COLLAPSED)

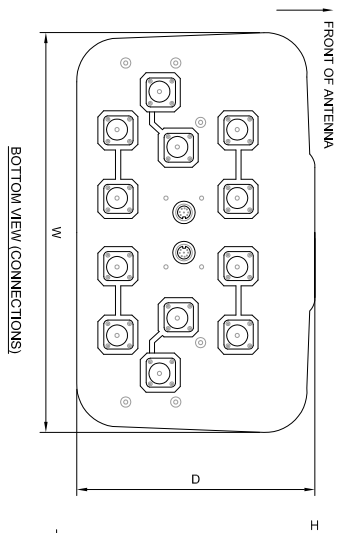
ATTENTION: INSERT M12 BOLTS AND M12 FLAT WASHERS INTO BRACKET WITH TABS PRIOR TO ATTACHING BRACKET TO ANTENNA.

3" STD. PIPE (3-1/2" O.D.), ANTENNA MOUNTING MAST, MIN. 6'-0" L. (ATTACH TO EXISTING CROSSARM W/ SITE PRO-1 PN: SCX-4 CROSSOVER KIT)

MAXIMUM TORQUE	
M10	37Nm (27FT.LBS)
M12	58Nm (43FT.LBS)



COMMSCOPE SBLAH-10688-DL	
HEIGHT (H)	72.0"
WIDTH (W)	13.8"
DEPTH (D)	8.2"
WEIGHT	58.1 LBS.
SIGNAL WIND SPEED:	> 150 MPH
WIND LOADING, MAXIMUM:	746.0 N @ 150 KMH
FRONT:	243.0 LBF @ 150 KMH
SIDE:	12.4-3-10 DIN FEMALE - BOTTOM
CONNECTOR:	2-5 INCHES (5-12 CM)
MOUNTING POLE:	



BOTTOM VIEW (CONNECTIONS)

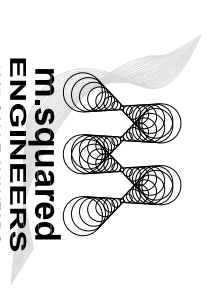


FRONT VIEW



MaStec
Network Solutions

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



1387 CALLE AVANZADO
SAN CLEMENTE, CA 92573
(619) 997-4012

FA CODE: 10088137

DRAWN BY: NG

CHECKED BY: MM

REV	DATE	DESCRIPTION
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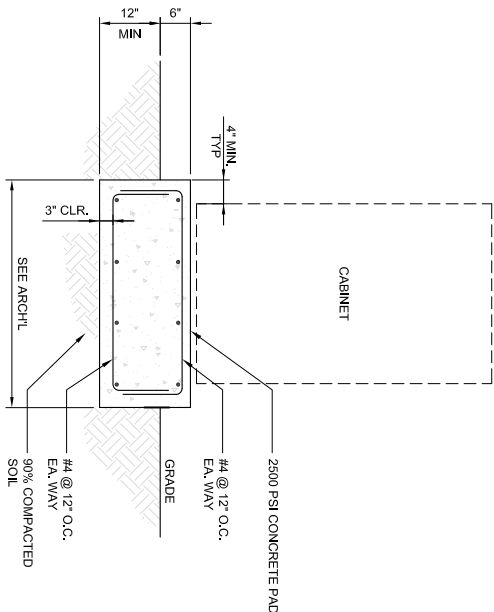
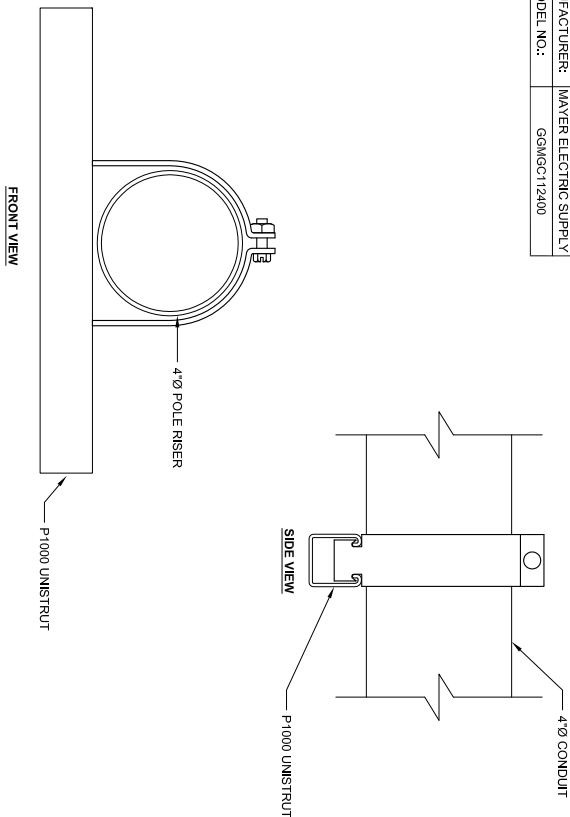
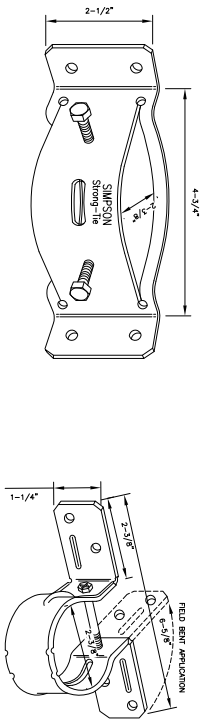
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CCL03503
PCH CARMEL HIGHLANDS 1
HIGHWAY 1 CARMEL
CARMEL, CA 93923
WOOD UTILITY POLE

SHEET TITLE
DETAILS

SHEET NUMBER
D-1

MANUFACTURER:	MAYER ELECTRIC SUPPLY
MODEL NO.:	GGMG0112400



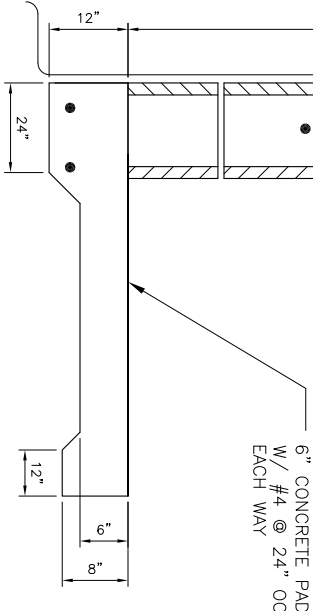
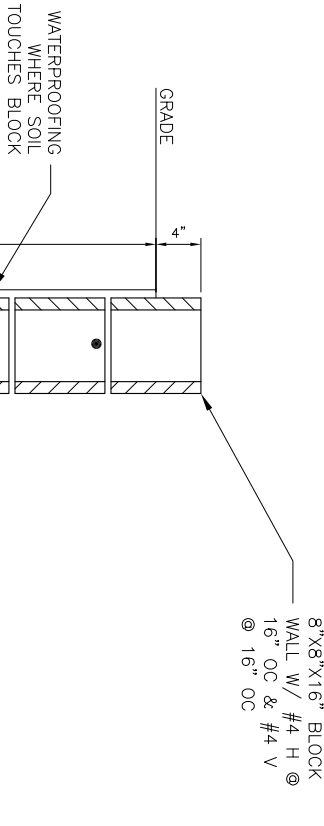
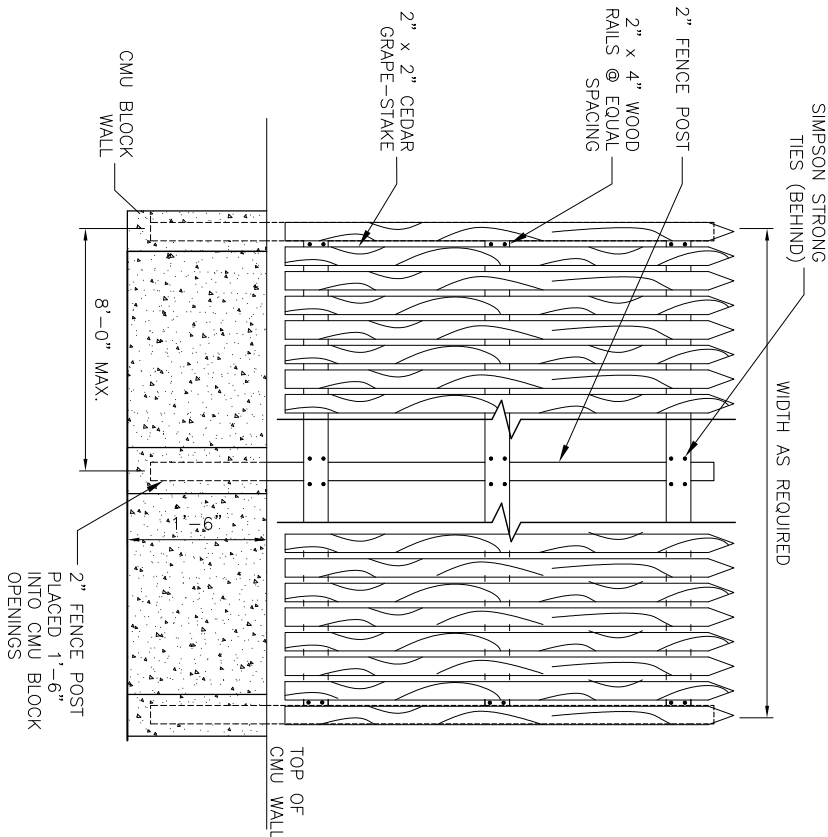
SIMPSON STRONG TIES

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

4" POLE RISER CLAMP

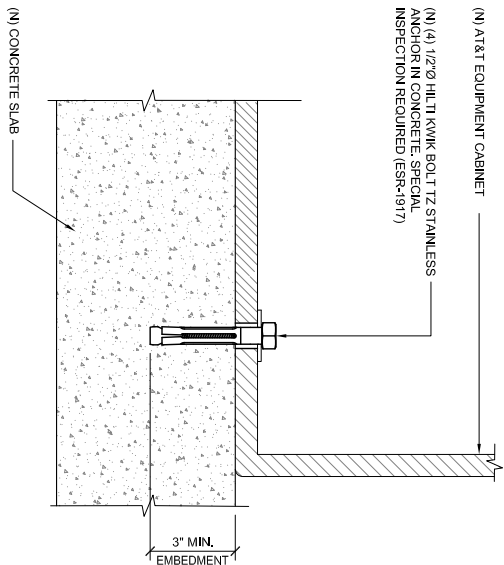
CONCRETE EQUIPMENT PAD

3

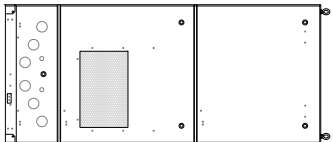
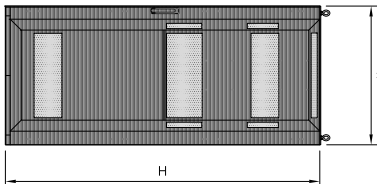
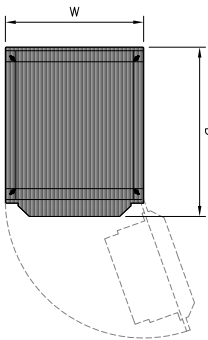


EQUIPMENT ANCHORAGE

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



EMERSON NETWORK POWER NETXEND FLEX CABINET - #2012504 48VDC/24VDC POWER & BATTERY ENCLOSURE	
HEIGHT (H)	72"
WIDTH (W)	32"
DEPTH (D)	39"
WEIGHT	752 LBS.
MOUNTING:	PAD/ PLATFORM



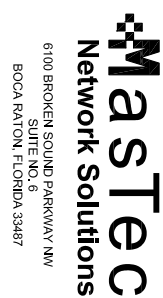
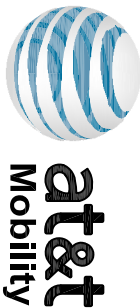
WOOD FENCE DETAIL

RETAINING WALL DETAIL

NETSURE 512 DC POWER SYSTEM

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

1



FA CODE:	10088137
DRAWN BY:	NG
CHECKED BY:	MM

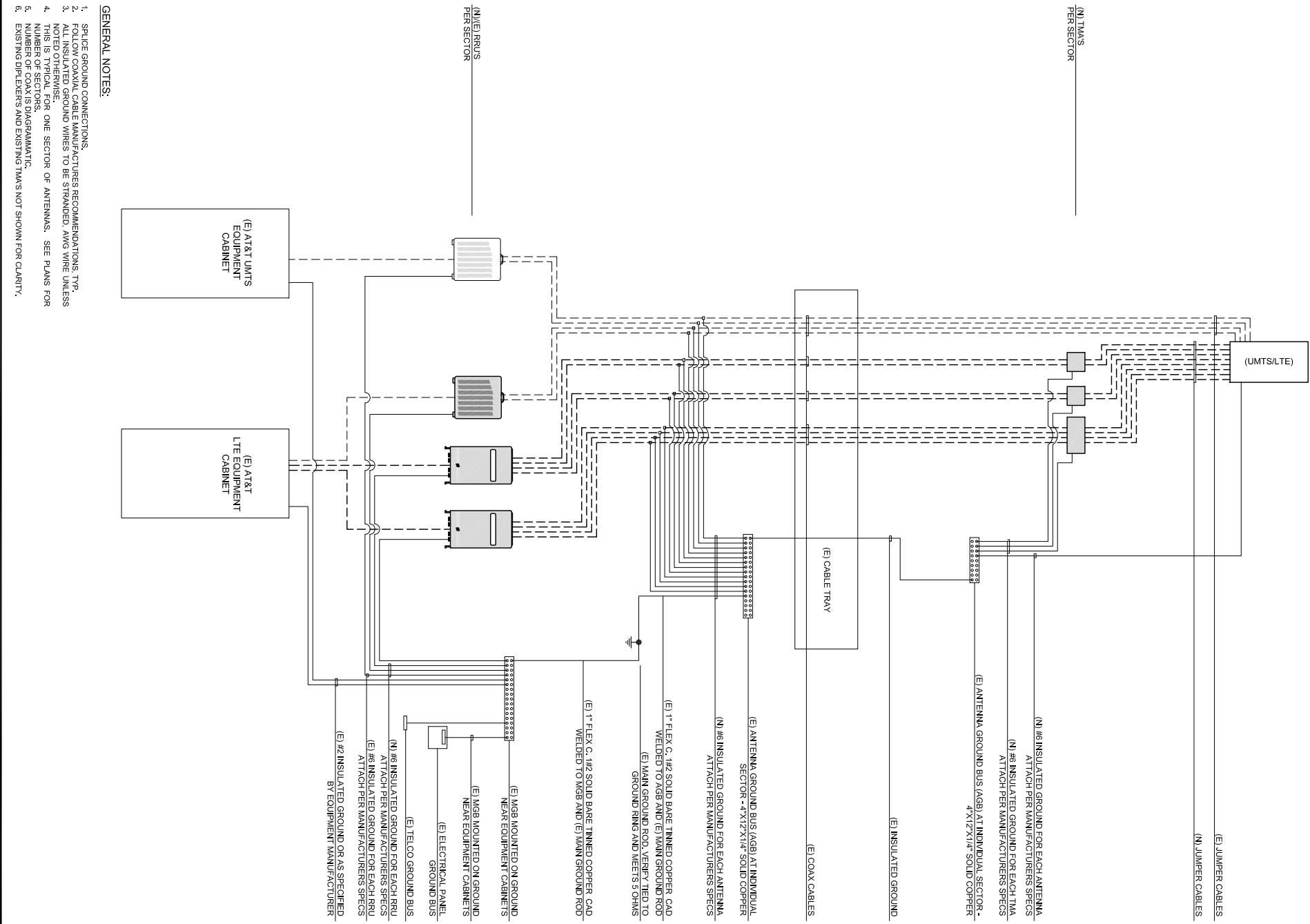
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PCH CARMEL HIGHLANDS 1
HIGHWAY 1 CARMEL
CARMEL, CA 93923
WOOD UTILITY POLE

SHEET TITLE
DETAILS

SHEET NUMBER
D-2



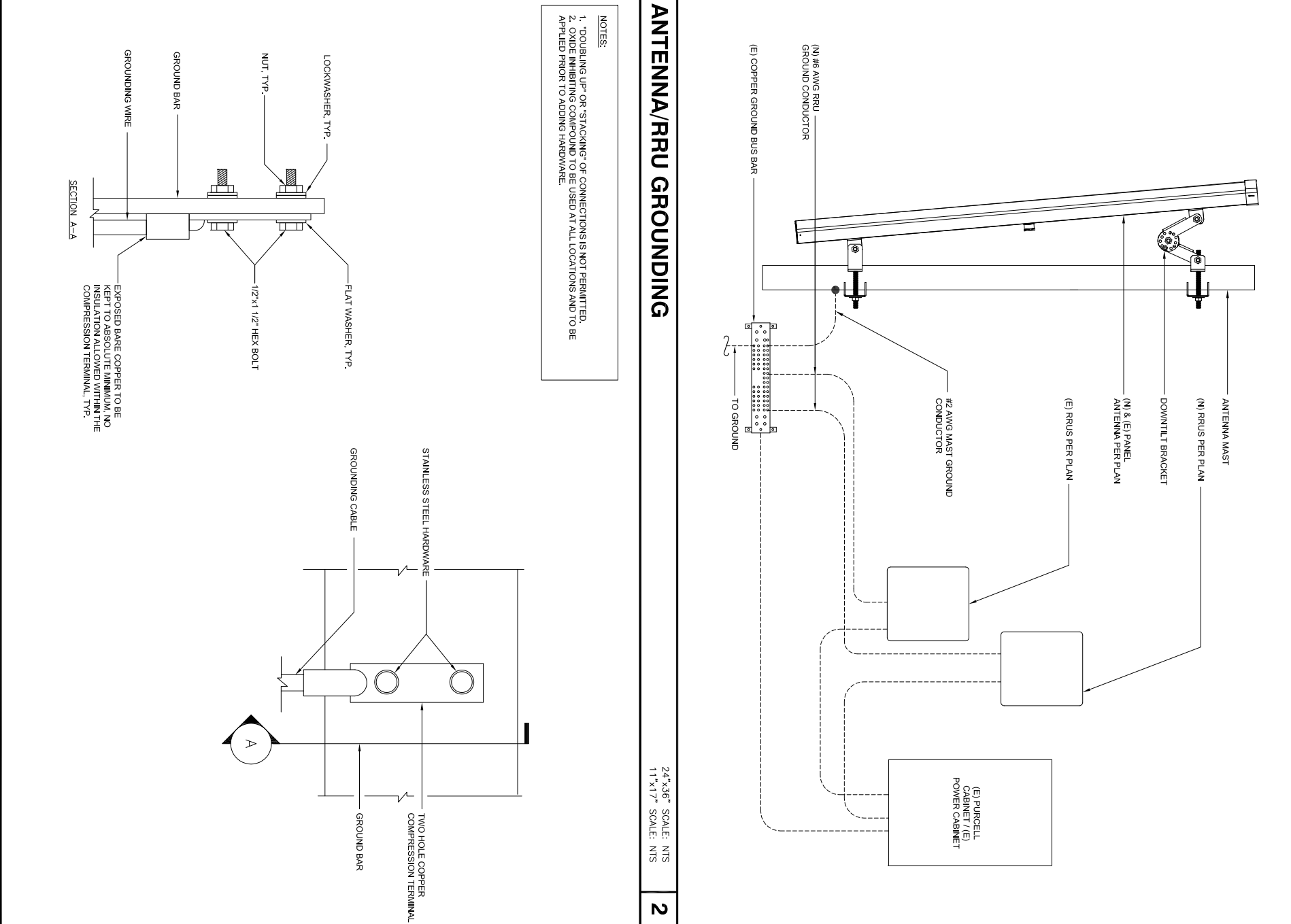
GENERAL NOTES:

1. SPICE GROUND CONNECTIONS.
2. FOLLOW COAXIAL CABLE MANUFACTURES RECOMMENDATIONS TYP.
3. ALL INSULATED GROUND WIRES TO BE STRANDED, AWG WIRE UNLESS NOTED OTHERWISE.
4. TIED OFF EACH END OF ONE SECTOR OF ANTENNAS. SEE PLANS FOR NUMBER OF SECTORS.
5. NUMBER OF COAX IS DIAGRAMMATIC.
6. EXISTING DIPLEXERS AND EXISTING TMA'S NOT SHOWN FOR CLARITY.

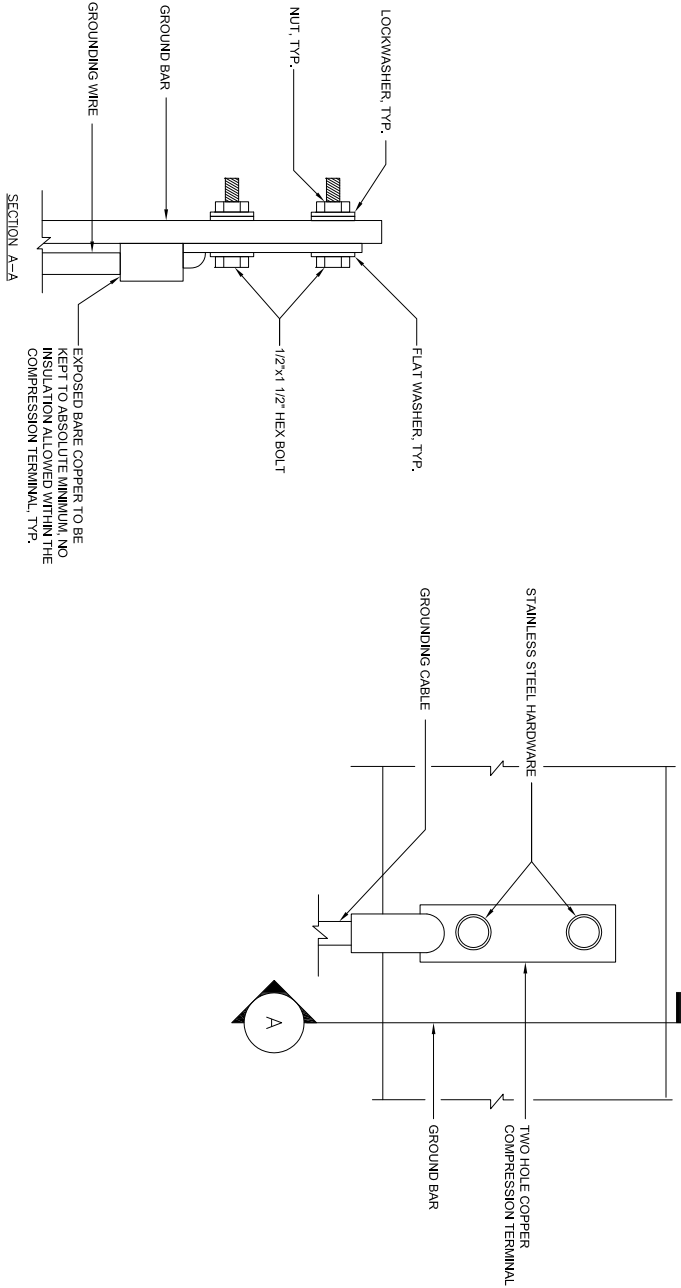
COAX & GROUNDING SYSTEM SCHEMATIC

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

3



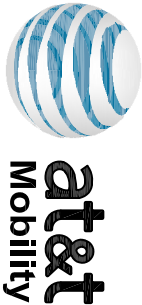
ANTENNA/RRU GROUNDING



TYPICAL GROUND BAR CONNECTION

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

1



FA CODE:	10088137
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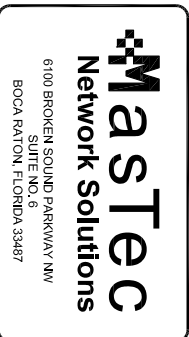
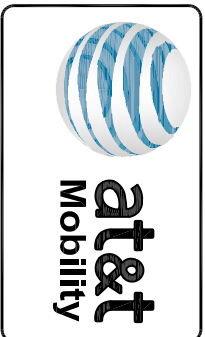
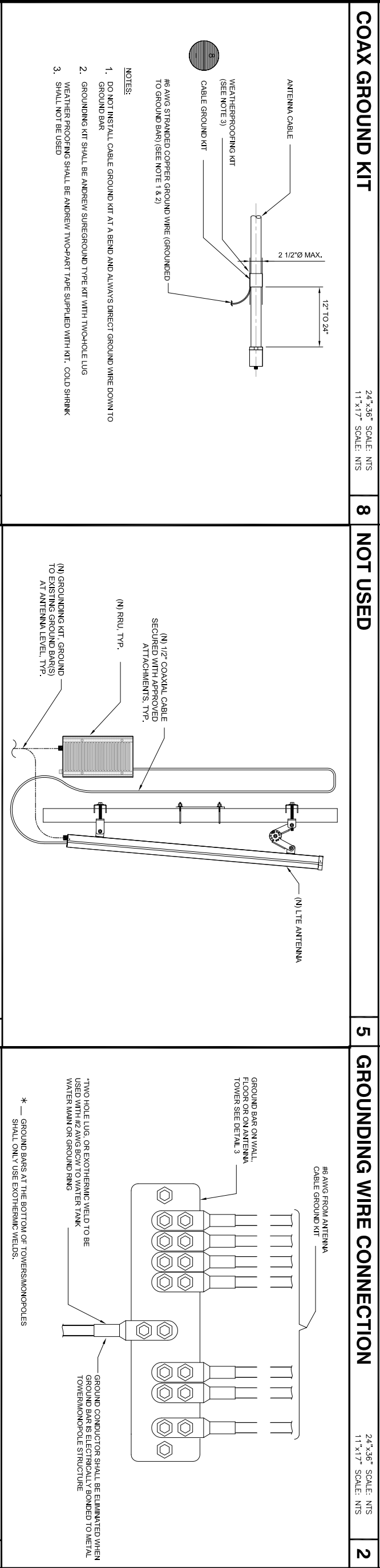
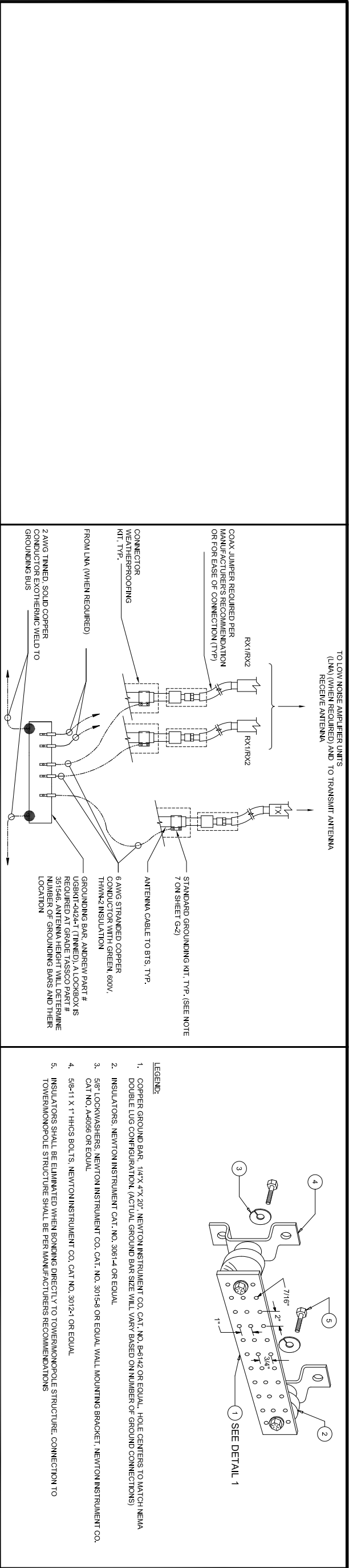
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PCH CARMEL HIGHLANDS 1
HIGHWAY 1 CARMEL
CARMEL, CA 93923
WOOD UTILITY POLE

SHEET TITLE
GROUNDING SCHEMATIC
& GROUNDING DETAILS

SHEET NUMBER
G-1



FA CODE:	10088137
DRAWN BY:	NG
CHECKED BY:	MM

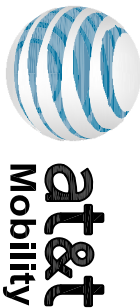
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HIGHWAY 1 CARMEL
CARMEL, CA 93923
WOOD UTILITY POLE

SHEET TITLE
GROUNDING DETAILS

SHEET NUMBER
G-2



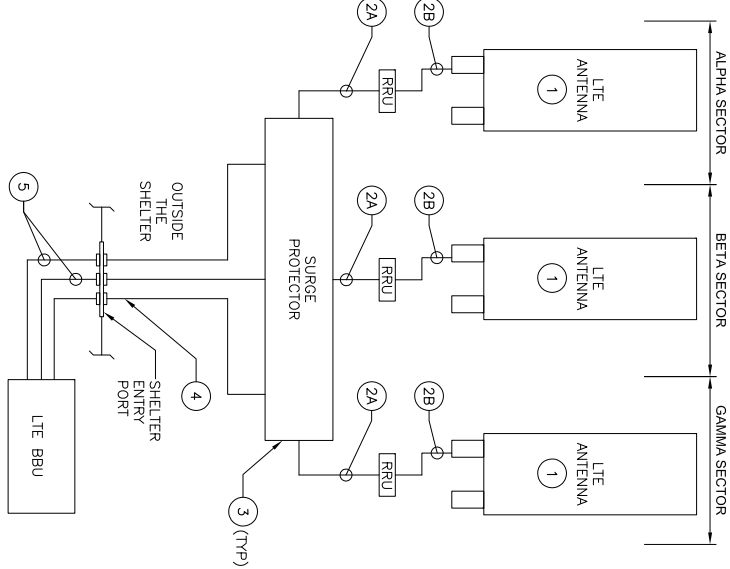
FA CODE:	10088137		
DRAWN BY:	N	MM	
CHECKED BY:			
REV	DATE	DESCRIPTION	
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POH CARMEL HIGHLANDS 1
HIGHWAY 1 CARMEL
CARMEL, CA 93923
WOOD UTILITY POLE

SHEET TITLE
ELECTRICAL DIAGRAM & LTE
RET SCHEMATIC DIAGRAM

SHEET NUMBER
E-1



- RET SCHEMATIC DIAGRAM NOTES:
- LIMIT OVERALL RET CABLE RUN TO LESS THAN 400 FT.
 - SUPPORT RET ASS COAX CABLE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
 - USE #6 AWG STRANDED COPPER THIN-Z GREEN INSULATED CONDUCTOR UNLESS OTHERWISE NOTED. CONNECT THE POU TO EXISTING FIELD BACK GROUNDING BAR.
 - ROUTE CIRCUITS IN CABLE TRAY OR ENIT CONDUITS TO THE EXISTING +24VDC POU OR -48VDC POU PANELS. PROVIDE THE APPROPRIATE SIZE OF OVERCURRENT PROTECTION AND FOLLOW THE TERMINATION PROCEDURES IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
 - TOWER MOUNT APPLICATION WILL DICTATE THE LENGTH OF CABLE TO BE USED.
 - ASS CABLES PROVIDE CONTROL AND POWER TO ELECTRICAL DOWN TILT DRIVES ON THE ANTENNAS.
 - THE CABLES ARE FACTORY ASSEMBLED WITH ONE MALE AND ONE FEMALE CONNECTOR ON EACH END. SUPPORT EVERY 18" USING THE WIRING SPLITTER FOR OUTDOOR USE. INSULATE ALL JOINTS AT EVERY LOCATION WHERE WATER MAY ACCUMULATE.
 - NO TESTING OF THE CABLE IS REQUIRED.
 - SEE DETAIL ON SECTOR CONFIGURATION SHEETS FOR ASS BAK-T PLACEMENT.
 - DURING INSTALLATION, RECORD THE FOLLOWING INFORMATION FOR USE DURING THE COMMISSIONING RET ACTIVATOR/AUTOPOR SERIAL NUMBER LOCATION (SECTOR IN WHICH THE ANTENNA WILL OPERATE)
 - ANTENNA CONFIGURATION IS SHOWN DIAGRAMMATICALLY ONLY AS A REPRESENTATION.
 - IF A JUNCTION BOX WILL NOT BE USED AT THE TOP OF THE RET SYSTEM, IT IS RECOMMENDED THAT AN ADDITIONAL LIGHTNING PROTECTION UNIT BE INSTALLED AT THE TOWER TOP.
 - FOR RET CABLES 165 FEET OR LESS, THE ASS CABLE END.
 - USE THIS DRAWING FOR RET GROUNDING SPECIFICATIONS. SEE DRAWING G-1 FOR GENERAL REQUIREMENTS.

BILL OF MATERIAL						
ITEM #	ITEM DESCRIPTION	SECTOR			TOTAL QUANTITY	APPLICATION
		A	B	C		
1	DUAL BAND ANTENNA	1	1	1	3	DUAL BAND
2A	FIBER JUMPER	1	1	1	3	DUAL BAND
2B	RET. CABLE	1	1	1	3	DUAL BAND
3	RAYCAP DCG-48-60-18-BF		1		1	REQUIRED
4	FIBER TRUNK CABLE		1		1	REQUIRED
5	POWER TRUNK CONDUCTOR		2		2	REQUIRED

LTE RET SCHEMATIC DIAGRAM

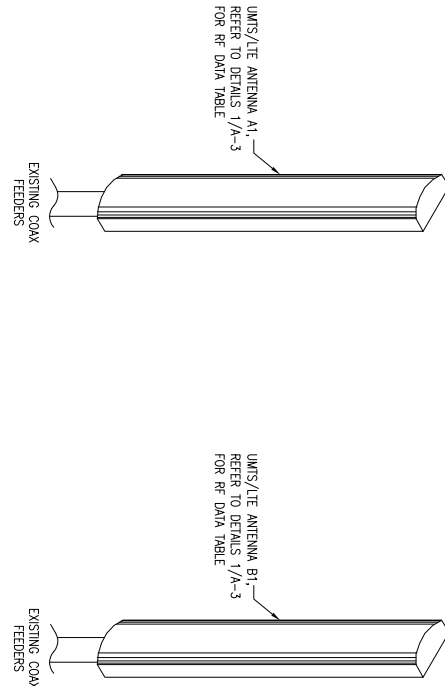
NOMINAL BATTERY TERMINAL VOLTAGE OF 48VDC (NEARING FULL DISCHARGE)		8 AWG (TRUNK CONDUCTOR LENGTH, FEET)															
		150.0	175.0	200.0	225.0	250.0	275.0	300.0	325.0	350.0	375.0	400.0	425.0	450.0	475.0	500.0	
30.0		45.00	44.70	44.40	44.10	43.70	43.40	43.10	42.80	42.40	42.10	41.79	41.47	41.14	40.82	40.49	
60.0		44.00	43.70	43.40	43.10	42.70	42.40	30.00	41.76	41.43	41.11	40.78	40.46	40.13			
90.0		43.00	42.70	42.40	42.10	41.73	41.40	30.00	40.75	40.43	40.10						
120.0		42.00	41.89	41.57	41.04	40.72	40.39	30.00									
150.0		41.01	40.89	40.36	40.04												

NOMINAL BATTERY TERMINAL VOLTAGE OF 48VDC (NEARING FULL DISCHARGE)		8 AWG (TRUNK CONDUCTOR LENGTH, FEET)															
		150.0	175.0	200.0	225.0	250.0	275.0	300.0	325.0	350.0	375.0	400.0	425.0	450.0	475.0	500.0	
30.0		45.40	45.10	44.80	44.50	44.10	43.80	43.50	43.20	42.80	42.50	41.88	41.52	41.20	40.88		
60.0		44.80	44.50	44.20	43.90	43.60	43.30	42.90	42.60	42.20	41.88	41.58	41.23	40.90	40.58	40.25	
90.0		44.20	43.90	43.50	43.20	42.90	42.60	42.20	41.90	41.58	41.25	40.93	40.60	40.23			
120.0		43.60	43.20	42.90	42.60	42.30	41.93	41.61	41.28	40.96	40.63	40.31					
150.0		42.90	42.60	42.30	42.00	41.63	41.31	40.98	40.66	40.33	40.01						

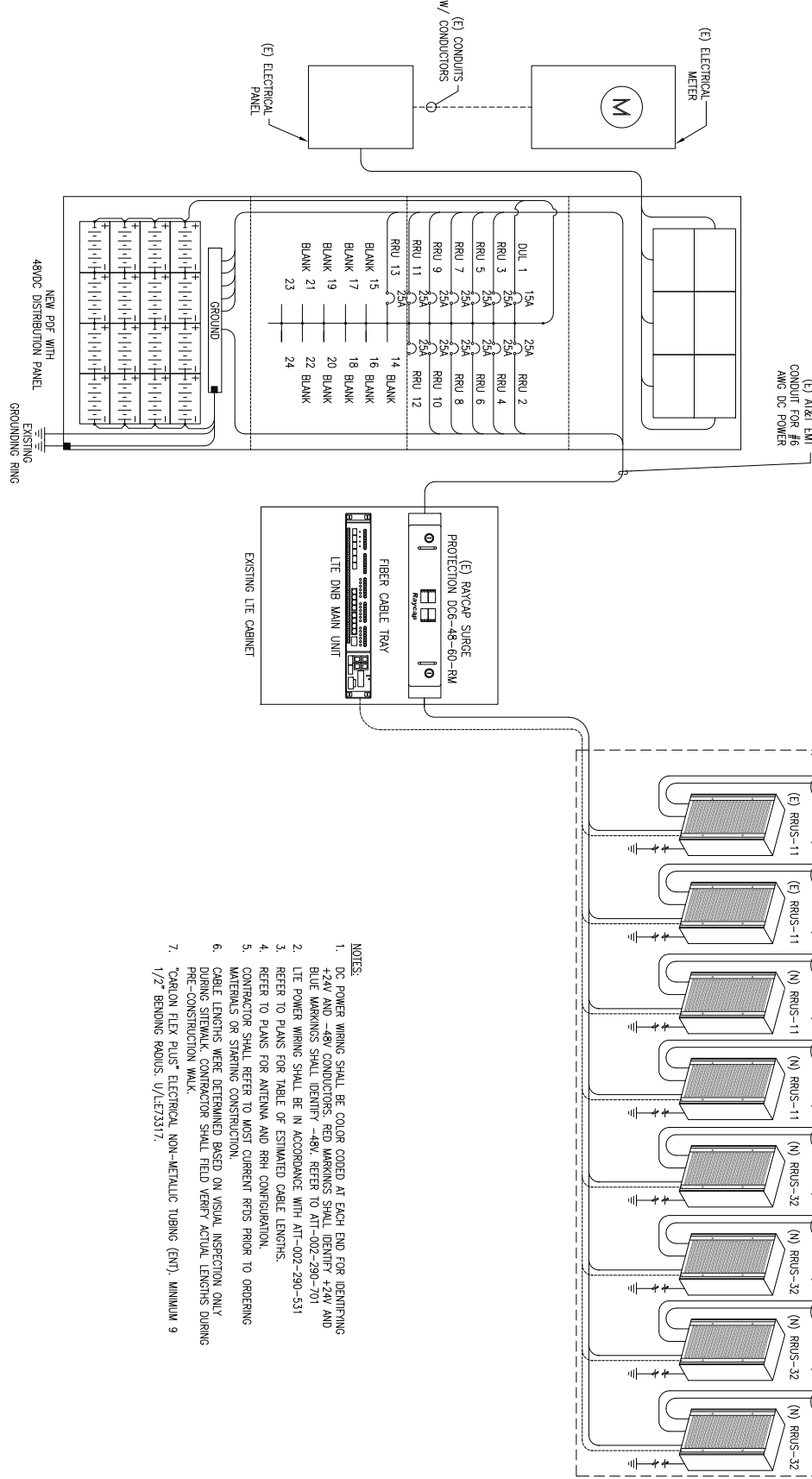
NOMINAL BATTERY TERMINAL VOLTAGE OF 48VDC (NEARING FULL DISCHARGE)		8 AWG (TRUNK CONDUCTOR LENGTH, FEET)															
		150.0	175.0	200.0	225.0	250.0	275.0	300.0	325.0	350.0	375.0	400.0	425.0	450.0	475.0	500.0	
30.0		45.7	45.30	45.00	44.70	44.40	44.00	43.70	43.40	43.10	42.70	42.40	41.76	41.44	41.11		
60.0		44.90	44.60	44.30	44.00	43.60	43.30	42.90	42.60	42.30	42.00	41.70	41.37	41.05	40.72		
90.0		44.80	44.60	44.20	43.90	43.60	43.30	42.90	42.60	42.30	42.00	41.63	41.31	40.98	40.66	40.33	
120.0		44.50	44.20	43.80	43.50	43.20	42.90	42.50	42.20	41.88	41.57	41.24	40.92	40.59	40.27		
150.0		44.10	43.80	43.50	43.10	42.80	42.50	42.20	41.83	41.50	41.18	40.85	40.53	40.20			

- AT&T LTE POWER CABLE VOLTAGE DROP TABLE NOTES:
- LOAD CURRENT ASSUMED 10A AT BATTERY TERMINAL REPRESENTING HIGHEST POSSIBLE VALUE.
 - 48VDC MINIMUM VOLTAGE REQUIRED AT THE RRU POWER TERMINALS.
 - ANY TABLE VALUE LESS THAN 48VDC INDICATES YOU MUST STEP UP TO THE NEXT LARGER GAUGE JUMPER/TRUNK CABLE COMBINATION.
 - JUMPER CONDUCTOR=DC CONDUCTOR B/T THE DCG SURGE SUPPRESSOR AND RRU.

WIRE SIZE AND VOLTAGE DROP TABLE

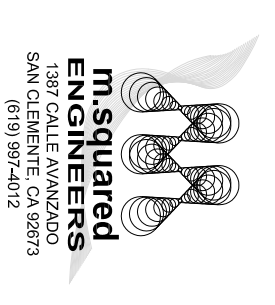
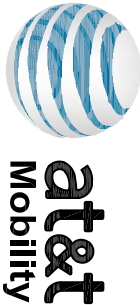


NOTE:
DIAGRAM IS DIAGRAMMATIC. REFER TO EQUIPMENT AND ANTENNA LAYOUTS FOR ACTUAL REPRESENTATION



- NOTES:
- DC POWER WIRING SHALL BE COLOR CODED AT EACH END FOR IDENTIFYING +24V AND -48V CONDUCTORS. RED MARKINGS SHALL IDENTIFY +24V AND BLUE MARKINGS SHALL IDENTIFY -48V. REFER TO AIT--402--290-701
 - LTE POWER WIRING SHALL BE IN ACCORDANCE WITH AIT--402--290-531
 - REFER TO PLANS FOR TABLE OF ESTIMATED CABLE LENGTHS.
 - REFER TO PLANS FOR ANTENNA AND RRU CONFIGURATION.
 - CONTRACTOR SHALL REFER TO MOST CURRENT RFDs PRIOR TO ORDERING MATERIALS OR STARTING CONSTRUCTION.
 - CABLE LENGTHS WERE DETERMINED BASED ON VISUAL INSPECTION ONLY. AROUND SUTTERLAND CONTRACTOR SHALL FIELD VERIFY ACTUAL LENGTHS DURING PRE-CONSTRUCTION WALK.
 - TORALON FLEX PLUS ELECTRICAL NON-METALLIC TUBING (ENT). MINIMUM 9 1/2" BENDING RADIUS. U/I/E73317.

ELECTRICAL DIAGRAM



FA CODE:	10088137
DRAWN BY:	NG
CHECKED BY:	MM

1	02/14/2017	PER CALTRANS COMMENTS
0	12/21/2016	100% CDS FOR SUBMITTAL
A	11/22/2016	90% CDS FOR REVIEW
REV	DATE	DESCRIPTION

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

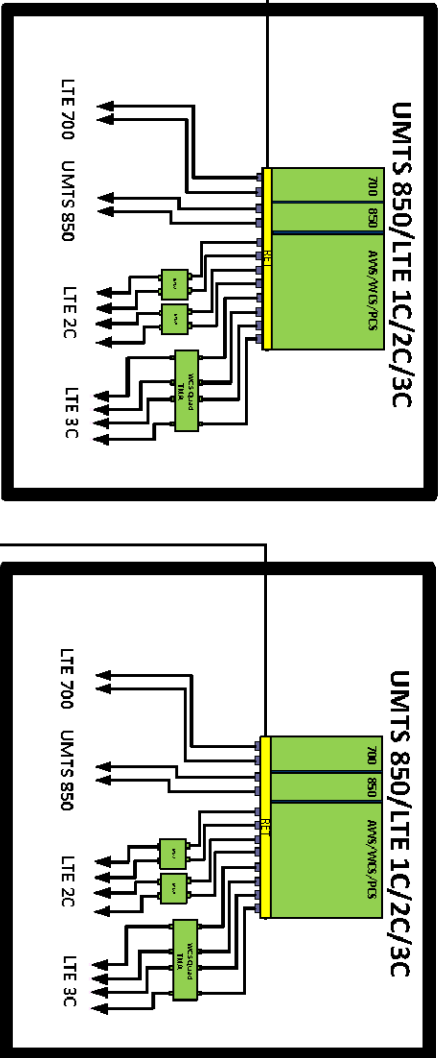
CCL03503
PCH CARMEL HIGHLANDS 1
HIGHWAY 1 CARMEL
CARMEL, CA 93923
WOOD UTILITY POLE

SHEET TITLE
PLUMBING DIAGRAM

SHEET NUMBER
RF-1

Diagram - Sector	A	Diagram File Name -	CCL03503_Combined.vsd
Atoll Site Name -	CNU3503	Location Name -	PCH / CARMEL HIGHLANDS 1
Comments:		Market -	SAN FRANCISCO
		Market Cluster -	SAN FRANCISCO/SACRA MCINTO

BETA



COMPLETE UMTS 1900 DECOMM
REQUIRED FOR THIS BUILT.
CONTACT AT&T RAN AND C&E
BEFORE PROCEEDING.

ALPHA

