

SAP# 40652799 TOWER 002/018

# APPLICABLE CODES

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

2022 CALIFORNIA BUILDING CODE, TITLE 24 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE 2022 CALIFORNIA ELECTRICAL CODE 2022 CALIFORNIA MECHANICAL CODE

2022 CALIFORNIA PLUMBING CODE 2022 CALIFORNIA FIRE CODE 2022 CALIFORNIA ENERGY CODE

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

# **GENERAL NOTES**

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION HANDICAPPED ACCESS REQUIREMENTS ARE NOT REQUIRED IN ACCORDANCE WITH THE 2022 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

# SITE INFORMATION

APPLICANT: AT&T MOBILITY

5001 EXECUTIVE PARKWAY SAN RAMON, CA 94583

PROPERTY OWNER: 5401 OLD REDWOOD HIGHWAY, ST 200

PETALUMA, CA 94954

STRUCTURE TYPE: LATTICE TOWER

TOWER HEIGHT: 92'-7"

ASSESSORS PARCEL NUMBER: 157-980-10

38° 3'20.862"N 38.055795 LATITUDE: LONGITUDE: 121 ° 31 ' 20.953" W - 122.52249°

LAT/LONG TYPE: NAD-83

**ELEVATION:** ±49.3' AMSL

UNMANNED TELECOM FACILTY **EXISTING ZONING:** 

PROPOSED PROJECT AREA: NO INCREASE IN S.F.

TYPE OF CONSTRUCTION: TYPE V-B

JURISDICTION: CITY OF NOVATO

# PROJECT TEAM

S-2

**CLIENT REPRESENTATIVE:** MASTEC NETWORK SOLUTIONS

OCCUPANCY GROUP:

3443 AIRPORT RD SACRAMENTO, CA 95834 CONTACT: CHRISTOPHER DOWELL

PH: (415) 230-9185 EMAIL: Christopher.Dowell@mastec.com

MASTEC NETWORK SOLUTIONS

125 KLUG CIRCLE CORONA, CA 92880 CONTACT: RAPHAEL MOHOMED PH: (919) 674-5895

**RF ENGINEER:** 

AT&T MOBILIT 5001 EXECUTIVE PKWY 4W750S SAN RAMON, CA 94583 CONTACT: SAGAR BONDE PH: (323) 547-5845 EMAIL: sb970r@att.com

MASTEC NETWORK SOLUTIONS

**SCOPING ENGINEER:** 

3443 AIRPORT RD

SACRAMENTO, CA 95834

CONTACT: SHAWN MARTIN EMAIL: SHAWN.MARTIN@MASTEC.COM

MASTEC NETWORK SOLUTIONS

3443 AIRPORT RD SACRAMENTO, CA 95834 CONTACT: BEN BRODERICK PH: (206) 303-9666 EMAIL: Raphael.Mohamed@mastec.com EMAIL: Benjamin.Broderick@mastec.com

> MASTEC NETWORK SOLUTIONS 3443 AIRPORT RD SACRAMENTO, CA 95834

CONTACT: JAMES PHILLIPS PH: (530) 333-5786 EMAIL: James.Phillips@mastec.com

# CCL00550 - 2022 CELL SITE RF MODIFICATIONS

PA#: MRSFR089889 PTN#: 3701A136MN - SPLIT SECTOR LTE

PA#: MRSFR087252 PTN#: 3701A113R0 - 5G NR 1SR

PA#: MRSFR087257 PTN#: 3701A111V8 - 5G NR 1SR CBAND

PA#: MRSFR087251 PTN#: 3701A110LB - 5G NR 1SR CBAND

FA#: 10101755

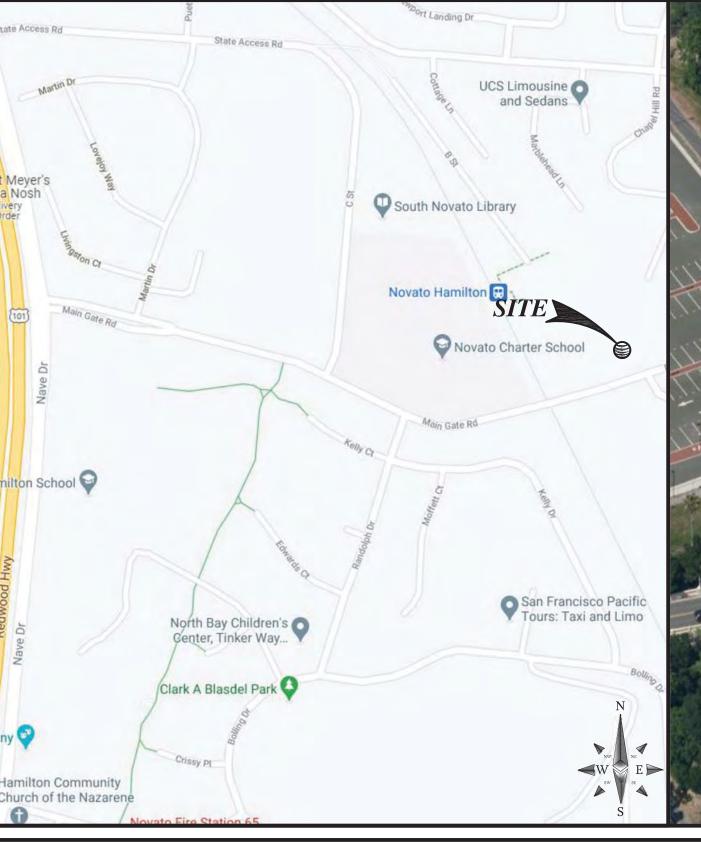
# HAMILTON PARKWAY-PALM DRIVE

10 MAIN GATE ROAD **NOVATO, CA 94949** MODIFICATION OF TELECOMMUNICATION SITE

# **LOCATION MAP**

# **VICINITY MAP**

LOCAL MAP





# **DRIVING DIRECTIONS**

DIRECTIONS FROM: 5001 EXECUTIVE PARKWAY 4W750S, SAN RAMON, CALIFORNIA

CALL THE CONTRACTOR HELP DESK BEFORE ENTERING

SITE @ 866-539-1483

- I-80 E TOWARD SACRAMENTO (TOLL APPLIES) TAKE EXIT #33/NAPA/NOVATO/AUTO MALL/ COLUMBUS PKWY ONTO CA-37 W TOWARD NAPA. TAKE LEFT RAMP ONTOO US-101 S TOWARD SAN
- RAFAEL/ SAN FRANCISCO 4. TAKE THE BEL MARIN KEYS BLVD/HAMILTON FIELD EXIT ONTO IGNACIO BLVD TOWARD BEL MARINKEYS BLVD/HAMILTON FIELD/NAVE DRIVE. 5. TURN RIGHT ON NAVE DR.
- 6. TURN LEFT ON HAMILTON PARKWAY. GO APPROX. 0.4 MILES. TURN RIGHT INTO PULLOUT, NO STREET SIGN.
- 7. TURN LEFT ON ROAD WAY. THE SITE IS APPROX. 0.2

# MILES ON THE LEFT.

# PROJECT DESCRIPTION

AT&T MOBILITY PROPOSES TO MODIFY AN EXISTING UNMANNED WIRELESS COMMUNICATIONS FACILITY. THIS MODIFICATION WILL CONSIST OF THE FOLLOWING:

## ABOVE CONDUCTOR

- REMOVE (4) EXISTING PANEL ANTENNAS; 3 @ P1 ALL SECTORS & 1 @ GAMMA P2
- REMOVE (1) EXISTING DC6 SQUID AND (1) EXISTING 18 PAIR FIBER TRUNK REMOVE (12) EXISTING 7/8" COAX MAINLINES FROM EQUIPMENT AREA TO ABOVE CONDUCTOR
- RELOCATE (2) EXISTING RRUS-4478 B14 FROM GROUND TO TOWER ALPHA/BETA SECTORS • RELOCATE (1) EXISTING RRUS-32 B2 TO NEW H-FRAME @ 32' RAD ON D LEG (GAMMA SECTOR)
- INSTALL (2) NEW PANEL ANTENNAS @ P1 ALPHA/BETA SECTORS
- INSTALL (2) NEW RRUS-4426 B66 ON ALPHA/BETA SECTORS
- SWAP (1) DC6 WITH (1) NEW DC9 SQUID WITH (1) NEW 6AWG DC TRUNK SWAP (1) 18 PAIR FIBER TRUNK WITH (1) NEW 24 PAIR FIBER TRUNK

- INSTALL (3) NEW B144796 H-FRAMES WITH (3) NEW B139409 BRACKETS @ NEW 42' RAD A/B/C LEGS
- (3) NEW AIR6419 B77G IN NEW P4 ON NEW H-FRAME @ 42' RAD: 1 PER SECTOR
- INSTALL (3) NEW AIR6449 B77D IN NEW P5 ON NEW H-FRAME @ 42' RAD; 1 PER SECTOR • INSTALL (1) NEW RRUS-4426 B66 ON NEW H-FRAME @ 26' RAD ON D LEG (GAMMA SECTOR)
- INSTALL (1) NEW B144796 H-FRAME WITH (1) NEW B139409 BRACKET @ NEW 36' RAD C LEG
- INSTALL (1) NEW B144796 H-FRAME WITH (1) NEW B139409 BRACKET @ NEW 32' RAD D LEG • (GAMMA SECTOR)
- INSTALL (1) NEW B144796 H-FRAME WITH (1) NEW B139409 BRACKET @ NEW 26' RAD D LEG
- INSTALL (1) NEW RRUS-4449 B5/B12 ON NEW H-FRAME @ 32' RAD ON D LEG (GAMMA SECTOR) 1) NEW RRUS-8843 B66 ON NEW H-FRAME @ 26' RAD ON D LEG (GAMMA SECTOR) • INSTALL (1) NEW RRUS-4478 B14 ON NEW H-FRAME @ 26' RAD ON D LEG (GAMMA SECTOR)
- INSTALL (2) NEW DC9 SQUID ON INSIDE TOWER LEG C/D WITH (2) NEW B141415 MOUNT BETWEEN 32' RAD AND 42' RAD
- INSTALL (5) NEW 6AWG DC TRUNKS IN NEW INNERDUCT
- INSTALL (2) NEW 24 PAIR FIBER TRUNKS IN NEW INNERDUCT
- INSTALL (1) NEW DC12 ON EXISTING STRUT

#### EQUIPMENT AREA

- REMOVE (1) UMTS BTS CABINET INSTALL (1) NEW BATTERY BACK UP CABINET IN FOOTPRINT OF REMOVED BTS CABINET
- INSTALL (4) NEW STRINGS 155AH BATTERIES (7) TOTAL FOR 4.05 HOURS BACK UP
- INSTALL (7) NEW VERTIV -48 RECTIFIERS IN EXISTING POWER PLANT (14 TOTAL) INSTALL (1) NEW 6648 IN EXISTING PURCELL
- INSTALL (1) NEW XMU UNIT IN EXISTING V2 PURCELL CABINET
- FINAL: (2) XMU, (2) 6630 (MM) AND (1) 6648
- WEED MITIGATION TO BE ADDRESSED DURING PRECON
- IF THERE IS ANY DISCREPANCY FOUND AT CIO25 ON THE RECTIFIER/BATTERY COUNT IN RELATION TO THE SPCT PLEASE CONTACT DAVE THOMAS IMMEDIATELY. 925.314.6210; SEE SHEET E-1

REFERENCE RFDS ID# 4893308, VERSION 4.00, DATED 04/18/2023

# DRAWING INDEX

| SHEET NO: | SHEET TITLE                                    |
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| GN-1      | GENERAL NOTES                                  |
| A-0       | OVERALL SITE PLAN                              |
| A-1       | ENLARGED SITE PLAN                             |
| A-2       | EQUIPMENT LAYOUT                               |
| A-3       | EXISTING ANTENNA LAYOUT                        |
| A-3.1     | PROPOSED ANTENNA LAYOUT                        |
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| A-5       | DETAILS  |
| A-6       | DETAILS  |
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| E-1       | ELECTRICAL DIAGRAM & LTE RET SCHEMATIC DIAGRAM |

### APPROVALS

| APPROVALS  |              |  |  |  |
|--|--------------|--|--|--|
| THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS & AUTHOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECTED LOCAL BUILDING DEPARTMENT & MAY IMPOSE CHANGES OR MODIFICATIONS. |              |  |  |  |
| 90% CDS  | DATE:        |  |  |  |
| 100% CDS   | _ DATE:      |  |  |  |
| 100% CDS WITH STRUCTURALS  | _ DATE:      |  |  |  |
| CONSTRUCTION:  | DATE:        |  |  |  |
| RF ENGINEER  | DATE:        |  |  |  |
| SCOPING ENGINEER   | _ DATE:      |  |  |  |
| PROJECT MANAGER: ————————————————————————————————————  | – DATE: ———— |  |  |  |

# **SCALE**

THE DRAWING SCALES SHOWN IN THIS SET REPRESENT THE CORRECT SCALE ONLY WHEN THESE DRAWINGS ARE PRINTED IN A 11"X17" OR 24"X36" FORMAT.



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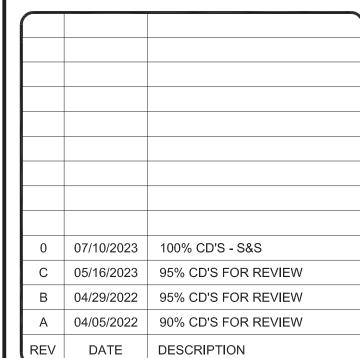




125 KLUG CIRCLE

CORONA, CALIFORNIA 92880

FA CODE: FA # 10101755 DRAWN BY: 31348





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

CCL00550

HAMILTON PARKWAY—PALM DRIVE 10 MAIN GATE ROAD NOVATO, CA 94949

> FA NUMBER 10101755

SHEET TITLE

TITLE SHEET

SHEET NUMBER

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#### <u>LIMITS OF LIABILITY:</u>

MNS HAS MADE EVERY EFFORT TO CREATE COMPLETE AND ACCURATE CONTRACT DOCUMENTS WITH THE BEST INFORMATION AVAILABLE AT THE TIME OF THEIR COMPLETION. CONTRACTORS ARE CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE CONTRACT DOCUMENTS MAY OCCUR AND SHALL NOT EXCUSE THE CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THE DOCUMENTS. REFERENCE ADMINISTRATIVE REQUIREMENTS.

#### **CONTRACT DOCUMENTS:**

- 1. THE CONTRACT DOCUMENTS INCLUDE THE AGENCY APPROVED PROJECT SPECIFICATIONS, PLANS, AND THEIR LATEST REVISIONS, ADDENDA, AND CLARIFICATIONS. THE CONTRACT DOCUMENTS MAY ALSO INCLUDE NETWORK CARRIER STANDARDS FOR INSTALLATION OF TELECOMMUNICATIONS EQUIPMENT.
- THE CONTRACTOR SHALL KEEP A MINIMUM OF ONE SET OF CONTRACT DOCUMENTS ON FILE IN THE PROJECT OFFICE AT THE JOB SITE. COPIES OF THE PROJECT DOCUMENTS USED BY SITE STAFF SHALL BE UP TO DATE WITH THE PROJECT OFFICE COPY.
- THE CONTRACTOR SHALL NOTIFY THE PROJECT TEAM OF ANY ERRORS, OMISSIONS, AND INCONSISTENCIES FOUND IN THE CONTRACT DOCUMENTS. THE NOTIFICATION SHALL BE GIVEN BOTH VERBALLY AND IN WRITING WITHIN 24 HOURS OF DISCOVERY.
- 4. IF AN ERROR OR OMISSION IN THE PROJECT DOCUMENTS REQUIRES RECTIFICATION, THE CONTRACTOR SHALL SUBMIT A PROPOSAL TO THE PROJECT TEAM TO RECTIFY THE ISSUE. THE PROPOSAL MUST BE APPROVED PRIOR TO WORK.
- THE CONTRACT DRAWINGS ARE PREPARED TO SCALE WITH THE BEST KNOWLEDGE OF THE SITE GIVEN TO MNS. WHERE DIMENSIONS ARE NOT SHOWN IN THE DRAWINGS, THE CONTRACTOR SHOULD CLARIFY WITH THE PROJECT TEAM WHEN THE INFORMATION IS CRITICAL TO PROPER INSTALLATION.
- 6. THE CONTRACTOR SHALL DOCUMENT ALL CHANGES AND SUBSTITUTIONS ON THE PROJECT OFFICE COPY OF THE CONTRACT DOCUMENTS.
- 7. WHEN FABRICATION OF STRUCTURAL ITEMS ARE REQUIRED, IT MAY BE NECESSARY TO SUBMIT SHOP DRAWINGS FOR REVIEW BY MNS. SEE STRUCTURAL NOTES.
- 8. DEFERRED SUBMITTALS ARE REQUIRED FOR MATERIALS TO BE PROVIDED BY THE CONTRACTOR. WHERE MATERIALS IN THE PLANS ARE DESIGNATED AS PROVIDED BY CONTRACTOR, THE CONTRACTOR SHALL SUBMIT THE PREFERRED MATERIAL TO THE PROJECT TEAM FOR REVIEW AND APPROVAL PRIOR TO WORK.

#### <u>ADMINISTRATIVE REQUIREMENTS:</u>

- 1. ALL ACCESS TO THE SITE, FOR SITE VISITS AND CONSTRUCTION, SHALL BE DURING 7:00-3:30 AND MUST BE COORDINATED WITH THE PROPERTY OWNER.
- 2. AT THE COMPLETION OF THE PROJECT, THE AT&T PROPERTY MANAGER AND THE DISTRICT WILL DO A FINAL WALK THROUGH AND APPROVE ALL WORK PRIOR TO ACCEPTANCE.
- 3. THE PROPERTY OWNER WILL RECEIVE ONSET OF FULL SIZE AND 11X17 ASBUILTS AT THE COMPLETION OF THE PROJECT.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED (INCLUDING FEES) TO COMPLETE THE WORK DESCRIBED BY THE CONSTRUCTION DOCUMENTS.
- 5. PRIOR TO BIDDING, THE CONTRACTOR IS RESPONSIBLE FOR REVIEW OF THE PROJECT SITE AND CONTRACT DOCUMENTS TO UNDERSTAND THE DESIGN AND CONDITIONS AFFECTING THE WORK TO BE PERFORMED. ANY ERRORS, OMISSIONS, AND DISCREPANCIES MUST BE SUBMITTED TO THE PROJECT TEAM VERBALLY AND IN WRITING.
- 6. THE CONTRACTOR SHALL PROVIDE A WARRANTY FOR WORK FOR A PERIOD OF ONE YEAR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL REMEDY ALL FAULTY, INFERIOR, AND/OR IMPROPER MATERIALS. DAMAGED GOODS, AND/OR FAULTY WORKMANSHIP. ALL ROOFING AND WATERPROOFING MUST BE WARRANTED FOR A PERIOD OF TWO YEARS. THE PERIOD BEGINS AT SUBSTANTIAL COMPLETION OF THE PROJECT.
- 7. THE CONTRACTOR SHALL PROVIDE A COPY OF LICENSE AND INSURANCE TO THE TELECOMMUNICATIONS CARRIER.

### SITE SAFETY:

- 1. THE CONTRACTOR SHALL PROVIDE OSHA COMPLIANT PROTECTION FOR THE SAFETY OF THE SITE STAFF AT ALL TIMES DURING THE CONSTRUCTION OF THE PROJECT.
- 2. CONTRACTOR SHALL KEEP GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION. SITE SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM DIRT AND DEBRIS. SURFACES SHALL BE CLEANED OF GREASE, PAINT, OR OTHER MATERIALS NOT SPECIFIED IN THE CONSTRUCTION DOCUMENTS.
- THE CONTRACTOR IS TO PROVIDE PROTECTION FOR ADJOINING PROPERTIES FROM PHYSICAL HARM, NOISE, DUST, DIRT, AND FIRE AS REQUIRED BY THE GOVERNING AGENCIES. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR OF ANY DAMAGE.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR THE SECURITY OF THE PROJECT SITE AREA.
- 5. WHERE WORK REQUIRES OPEN HAZARDS TO SITE STAFF, THE HAZARD SHALL BE TEMPORARILY MITIGATED TO OSHA STANDARD UNTIL THE HAZARD IS CLOSED.
- 6. SEE STRUCTURAL NOTES.

### UTILITY REQUIREMENTS

- 1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH UTILITY AGENCIES PRIOR TO WORK WITH UTILITIES.
- 2. CONTRACTOR TO LOCATE ALL UTILITIES PRIOR TO WORK.
- 3. CONTRACTOR TO PROTECT, REPLACE AND/OR REROUTE ANY EXISTING UTILITIES ENCOUNTERED DURING THE COURSE OF WORK.

### SPECIAL CONSIDERATIONS FOR WEATHERPROOFING:

- 1. ALL PENETRATIONS TO EXISTING STRUCTURES MUST BE SEALED WITH APPROVED WEATHERPROOFING. IF WEATHERPROOFING IS OMITTED. CONTACT THE PROJECT TEAM FOR CLARIFICATION OR PROVIDE A WEATHERPROOFING PROPOSAL FOR APPROVAL.
- 2. CONTRACTOR SHALL COORDINATE WITH OWNER AND THE EXISTING

ROOFING CONTRACTOR OF RECORD FOR ANY AUGMENTATION TO THE ROOF MEMBRANE, AND HAVING THE WORK GUARANTEED UNDER THE ROOFING CONTRACTOR'S EXISTING WARRANTY.

#### WORK REQUIREMENTS:

- 1. ALL WORK MUST BE PERFORMED DURING THE OWNERS PREFERRED HOURS.
- 2. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER
- 3. ALL WORK PERFORMED ON THE PROJECT SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS. SEE STRUCTURAL NOTES.
- 4. IF INSPECTION OF WORK IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE INSPECTION ENTITY 24 HOURS IN ADVANCE OF THE WORK TO BE
- 5. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH UTILITY AGENCIES PRIOR TO WORK WITH UTILITIES. REFERENCE UTILITIES SECTION.
- 6. THE CONTRACTOR SHALL COORDINATE ON-SITE STORAGE WITH OWNER IN ADVANCE OF WORK. PERMITS MAY BE REQUIRED FOR STORAGE ON PUBLIC RIGHT OF WAY.
- 7. ALL NEW CONSTRUCTION SHALL MATCH EXISTING CONSTRUCTION IN FORM, TEXTURE, FINISH, AND IN MATERIALS EXCEPT AS NOTED IN THE CONSTRUCTION DOCUMENTS.
- 8. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO PROTECT EXISTING WORK FROM DAMAGE DURING THE COURSE OF WORK FOR THIS PROJECT.
- 9. THE CONTRACTOR SHALL PROVIDE WORK WHICH IS LEVEL, PLUMB, AND WITHIN TOLERANCES SPECIFIED BY CODES AND STANDARDS INCLUDED IN THE STRUCTURAL NOTES.
- 10. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO MANUFACTURER'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
- 11. ANY SUBSTITUTIONS OF MATERIALS MUST BE APPROVED BY THE PROJECT TEAM IN WRITING.
- 12. THE CONTRACTOR SHALL SUPPLY ALL MATERIALS INCIDENTAL TO THE WORK DESCRIBED BY THE CONTRACT DOCUMENTS.
- 13. THE CONTRACTOR MUST RESTORE ALL PORTIONS OF THE PROJECT SITE TO IT'S PRE-WORK CONDITION. WHERE THE WORK PERFORMED DOES NOT ALLOW FOR PRE-WORK RESTORATION, WORK AREAS MUST BE REPAIRED OR REPLACED TO MATCH EXISTING FINISH AND SITE GRADING.
- 14. THE CONTRACTOR IS RESPONSIBLE FOR ALL DISPOSAL OF DEBRIS AND ITEMS WHICH ARE SPECIFIED TO BE REMOVED IN THE COURSE OF WORK.

- 1. ALL CONCRETE DESIGN DESCRIBED BY THIS SET OF DRAWINGS IS BASED ON ACI 318.
- 2. ALL STRUCTURAL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI. UNLESS SPECIFIED OTHERWISE.
- 3. EACH CONCRETE MIX DESIGN SHALL HAVE A CYLINDER TEST HISTORY OF 60 DAYS MINIMUM, TESTED IN ACCORDANCE WITH ASTM C39, TESTED BY AN ACI CERTIFIED STRENGTH TESTING TECHNICIAN, AND THE STRENGTH STATISTICALLY DETERMINED IN ACCORDANCE WITH ACI 318. EACH MIX DESIGN USED ON SITE SHALL BE SUBMITTED TO, AND RECEIVED BY THE PROJECT TEAM BEFORE THE CONCRETE IS PLACED ON SITE.
- 4. RAW MATERIALS, MANUFACTURE, AND DELIVERY TO THE FORMWORK SHALL BE IN ACCORDANCE WITH ASTM C94 AND ACI 318.
- 5. EMBEDDED ITEMS ARE TO BE SECURELY FASTENED SO THAT THEY DO NOT MOVE DURING PLACEMENT OF THE CONCRETE. REFERENCE THE REINFORCING STEEL SECTION.
- 6. TWO CYLINDERS SHALL BE TAKEN FOR EACH LOAD DELIVERED TO THE FORMWORK. SAMPLES ARE TO BE TAKEN FROM THE CONCRETE AS IT IS PLACED IN THE FORMWORK IN ACCORDANCE WITH ASTM C172. CYLINDERS ARE TESTED PER ASTM C39 AND TESTED BY AN ACI CERTIFIED CSTT. CONCRETE SAMPLES ARE TO BE TESTED FOR AIR CONTENT AND WATER CEMENT RATIO. ALL TEST RESULTS ARE SUBMITTED TO THE PROJECT TEAM WITHIN ONE MONTH OF PLACING THE CONCRETE ON SITE.
- 7. WHEN AMBIENT TEMPERATURES FALL BELOW 55 DEGREES FAHRENHEIT, THE CONTRACTOR SHALL FOLLOW GUIDELINES DESCRIBED IN ACI 306. WHEN AMBIENT TEMPERATURES RISE ABOVE 90 DEGREES FAHRENHEIT, THE CONTRACTOR SHALL FOLLOW GUIDELINES DESCRIBED IN ACI 305. THE CONCRETE SHALL BE PROTECTED FROM FREEZING OR FROM EXCESSIVE HEAT WITH TENTS OR BLANKETS TO PROVIDE FOR HEAT OR MOISTURE LOSS.
- 8. ALL CONCRETE SHALL BE PLACED AS CLOSE TO PRACTICAL TO THE FINAL DESTINATION IN THE FORM. CONCRETE SHALL NOT BE PLACE FROM A HEIGHT GREATER THAN 6 FEET FROM THE POINT OF DISCHARGE.
- 9. VIBRATION SHALL BE USED TO CONSOLIDATE CONVENTIONAL CONCRETE. EXTERNAL STINGER VIBRATORS SHALL BE INSERTED VERTICALLY INTO FORMS EVERY 36 INCHES MAXIMUM AND FOR EACH LIFT. STINGER VIBRATORS SHALL BE INSERTED TO A VERTICAL DEPTH OF 12 INCHES INTO PREVIOUS LIFTS TO ENSURE CONSOLIDATION. FOLLOW GUIDELINES USED IN ACI 309R.
- 10. REPAIRS FOR MINOR DEFECTS MAY BE ADMINISTERED BY AN EXPERIENCED CRAFTSMAN WITHOUT AN APPROVED PROCEDURE. A MINOR DEFECT INCLUDES BUG HOLES, HONEYCOMBING, CHIPS, AND SPALLS THAT DO NOT EXCEED 1/2 INCH OF DEPTH INTO THE FACE OF THE CONCRETE. MAJOR REPAIRS EXTENDING BEYOND 1/2 INCH OF DEPTH AND UP TO THE REINFORCING MAY BE REPAIRED WITH AN APPROVED REPAIR PROCEDURE. REPAIR PROCEDURES MAY BE SUBMITTED TO THE PROJECT TEAM FOR APPROVAL IN ADVANCE OF FIELD WORK. DAMAGE EXTENDING BEYOND STEEL REINFORCING REQUIRES A RETROFIT DESIGN OR IS
- 11. SEE ARCHITECTURAL NOTES FOR CONCRETE FINISH REQUIREMENTS

### **EXISTING STRUCTURES:**

1. THE EXISTING FRAMING IS REPRODUCED FROM THE LATEST INFORMATION PROVIDED. SOME FRAMING AND MATERIALS ENCOUNTERED AT THE TIME OF CONSTRUCTION MAY VARY FROM THAT SHOWN IN THE PLANS. IF THE PLAN CONDITION VARIES FROM THE AS-BUILT CONDITION, THE CONTRACTOR SHOULD CONSULT THE PROJECT TEAM FOR A REVISED DETAIL OR DIRECTION TO PROCEED.

#### CONCRETE SLABS ON GRADE:

- 1. SLAB-ON-GRADE CONSTRUCTION SHALL BE SUPPORTED ON A 6 INCH LAYER OF CLEAN 3/4 INCH MINUS SUBGRADE COMPACTED TO A DENSITY OF NO LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1557). SUBGRADE SHALL BE SUPPORTED ON UNDISTURBED NATIVE SOIL OR PROPERLY PLACED AND COMPACTED STRUCTURAL FILL.
- 2. INTERIOR SLABS-ON-GRADE SHALL BE CAST OVER A 4 MIL VAPOR
- 3. PROVIDE CONTROL JOINTS IN ALL SLABS ON GRADE. JOINTS ARE TO BE INSTALLED AT 14 TO 16 FEET ON CENTER EACH WAY MAXIMUM UNLESS SHOWN OTHERWISE ON THE DRAWINGS. ALL SAW CUT JOINTS IN CONCRETE SLABS ARE TO BE MADE WITH AN EARLY CUT SAW AS SOON AS POSSIBLE AFTER POURING BUT NO LATER THAN ONE HOUR AFTER
- 4. PROVIDE ISOLATION JOINTS AROUND ALL COLUMNS/SPREAD FOOTINGS. JOINTS SHALL BE FORMED BY INSERTING PREFORMED JOINT FILLER FOR THE FULL DEPTH OF THE SLAB.
- 5. PROTECT CONCRETE FROM DAMAGE OR REDUCED STRENGTH DUE TO COLD OR HOT WEATHER IN ACCORDANCE WITH ACI 305 AND 306. CONTRACTOR SHALL TAKE SPECIAL CURING PRECAUTIONS TO MINIMIZE SHRINKAGE CRACKING OF CONCRETE SLABS.
- THE CONTRACTOR SHALL TAKE CARE THAT HEAVY EQUIPMENT AND AREAS USED FOR STAGING DO NOT AND DAMAGE SLABS ON GRADE. DAMAGED SLABS ON SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL EXPENSE TO THE OWNER.
- 7. CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2,500 PSI. UNLESS SPECIFIED OTHERWISE.

#### CONCRETE OR MASONRY ANCHORAGE:

1. EXPANSION BOLTS INTO CONCRETE SHALL BE "KWIK BOLT TZ" AS MANUFACTURED BY THE HILTI CORP., INSTALLED IN STRICT ACCORDANCE WITH ICC-ES REPORT ESR-1917. SPECIAL INSPECTION IS REQUIRED. EXPANSION ANCHORS EXPOSED TO WEATHER SHALL BE STAINLESS STEEL.

#### REINFORCING STEEL:

- 1. ALL DETAILING, FABRICATION, AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH THE ACI MANUAL OF CONCRETE PRACTICE.
- 2. REINFORCING BARS SHALL BE DEFORMED AND CONFORM TO ASTM A615 OR A706, GRADE 60. REINFORCING TIE WIRE MAY BE GRADE 40.
- 3. REINFORCING STEEL SPLICES SHALL BE 40 BAR DIAMETERS OR TWO TRANSVERSE WIRE SPACINGS FOR WIRE MATS.
- 4. MINIMUM CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE IN ACCORDANCE WITH ACI 318.
- 5. NO.5 OR LARGER REINFORCING BARS SHALL NOT BE RE-BENT WITHOUT APPROVAL BY THE STRUCTURAL ENGINEER. WELDING OF REBAR IS NOT ALLOWED WITHIN THE MIDDLE THIRD OF THE BAR LENGTH. WELDING OF REBAR IS CONDUCTED IN ACCORDANCE WITH
- AWS D1.4. USE ONLY ASTM A706 REINFORCING. 7. WIRE REINFORCING CONFORMS TO ASTM A82 OR A185. 8. CONCRETE COVER FOR REINFORCING STEEL CONFORMS TO ACI 318.

- 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
- BF 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 IN NO WAY RELIEVE CONTRACTOR OF PERFORMING ALL WORK NECESSARY FOR A COMPLETE AND WORKING
- 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. UL UNDERWRITERS LABORATORIES NEC - NATIONAL ELECTRICAL CODE NEMA - NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
  - OSHA OCCUPATIONAL SAFETY AND HEAL TH ACT E. SBC - STANDARD BUILDING CODE
- 4. (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.
- 5. 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
- 6. MINIMUM WIRE SIZE SHALL BE #12 AWG. NOT INCLUDING CONTROL WIRING. UNLESS NOTED OTHERWISE. ALL CONDUCTORS SHALL BE COPPER WITH THWN INSULATION.
- 7. 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.
- 8. 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.
- 9. ELECTRICAL SYSTEM SHALL BE AS COMPLETELY AND EFFECTIVELY GROUNDED, AS REQUIRED BY SPECIFICATIONS, SET FORTH BY AT&T.
- 10. 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.

- 11. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
- 12. PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES AND DEVICES FOR ALL OUTLETS AS INDICATED.
- 13. 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.
- 14. THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS WITH ONLY TYPEWRITTEN DIRECTORIES. ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- 15. DISCONNECT SWITCHES SHALL BE H.P. RATED HEAVY-DUTY, QUICK-MAKE AND QUICK-BREAK ENCLOSURES, AS REQUIRED BY EXPOSURE TYPE.
- 16. 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.
- 17. 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 'GOLD GALV'.
- 18. CONDUCTORS: CONTRACTOR SHALL USE 98% CONDUCTIVITY COPPER WITH TYPE THWN 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.
- 19. 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. B AWG AND LARGER.
- 20. SERVICE: 240/120V, SINGLE PHASE, 3 WIRE CONNECTION AVAILABLE FROM UTILITY COMPANY. OWNER OR OWNERS AGENT WILL APPLY FOR
- 21. ELECTRICAL AND TELCO RACEWAYS TO BE BURIED A MINIMUM OF 2'
- 22. 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".
- 23. ALL BOLTS SHALL BE STAINLESS STEEL

#### **GROUNDING:**

- 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 (E) 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.

#### ABBREVIATIONS:

AMSL

BCW

BLDG

BLK

CONST

CONT

DIA

FΑ

DWG

ELEC

EQUIP

FLUOR

FLR

FRP

GALV

HORZ

HVAC

LBS

LTE

NTS

PLYWD

PROJ

PROP

STD

THRU

TNNG

TYP

UNO

**VERT** 

W/O

VIF

GΑ

FIN

APPROX

CONCCONCRETE

EACH

FOUIPMEN'

EXTERIOR

**FLUORESCENT** 

FIBER-REINFORCED POLYMER

GROUND

GENERAL CONTRACTOR

HEATING VENTILATION AIR CONDITIONING

INTERNATIONAL BUILDING CODE

LOCATION MEASUREMENT UNIT

LONG TERM EVOLUTION

GLOBAL POSITIONING SYSTEM

FINISH

FI OOR

GAUGE

GALVANIZED

HORIZONTAL

INFORMATION

INSULATION

INTERIOR

POUNDS

MAXIMUM

MANAGER

MINIMUM

MANUFACTURE

MISCELLANEOUS

NOT TO SCALE

ON CENTER

PLYWOOD

PROJECT

PROPERTY

SIMII AR

STEEL

STRUCT STRUCTURAL

NOT APPLICABLE

NOT IN CONTRACT

OUTSIDE DIAMETER

PRESSURE TREATED

REMOTE RADIO UNIT

ROUGH OPENING

**SPECIFICATION** 

SQUARE FOOT

STANDARD

THROUGH

TINNFD

TYPICAL

WITH

VERTICAL

VERIFY IN FIELD

WATER PROOF

SUSPENDED

STAINLESS STEEL

TOWER MOUNTED AMPLIFIER

UNLESS NOTED OTHERWISE

WITHOUT

RADIO FREQUENCY

REMOTE RADIO HEAD

MECHMECHANICAL

INSIDE DIAMETER

FOOT

AIR CONDITIONING

ABOVE GROUND LEVEL

ABOVE MEAN SEA LEVEL APPROXIMATELY AMERICAN WIRE GAGE BARE COPPER WIRE BUILDING BLOCKING COAXIAL CABLE CONSTRUCTION CONTINUOUS DIAMETER DRAWING **ELEVATION** ELECTRICAL

> **Network Solutions** 125 KLUG CIRCLE CORONA, CALIFORNIA 92880

FA CODE: FA # 10101755 DRAWN BY: 31348

07/10/2023 | 100% CD'S - S&S 05/16/2023 | 95% CD'S FOR REVIEW B 04/29/2022 95% CD'S FOR REVIEW A 04/05/2022 90% CD'S FOR REVIEW REV DATE DESCRIPTION



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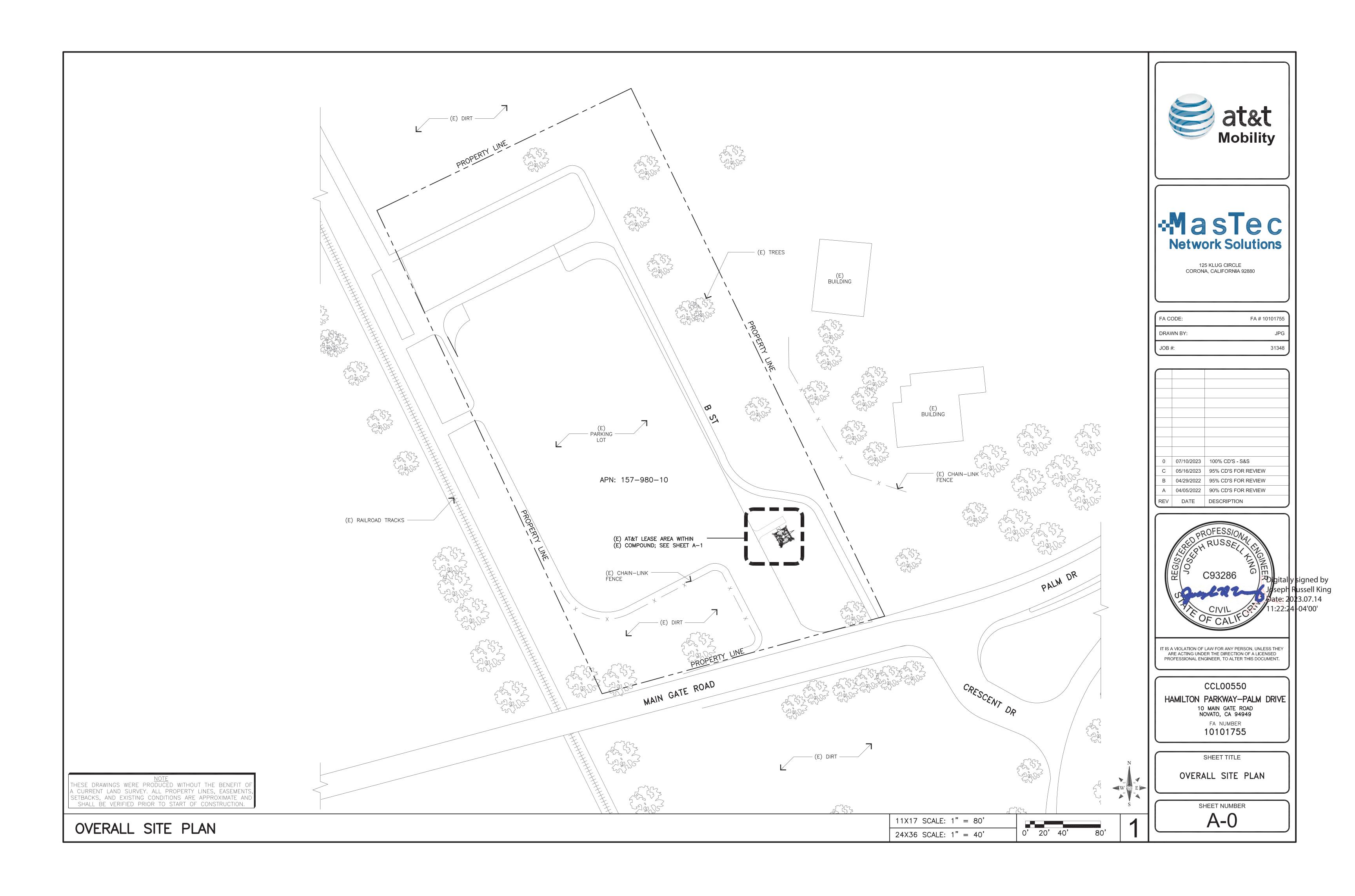
CCL00550

HAMILTON PARKWAY—PALM DRIVE 10 MAIN GATE ROAD NOVATO, CA 94949 FA NUMBER 10101755

SHEET TITLE

GENERAL NOTES

SHEET NUMBER



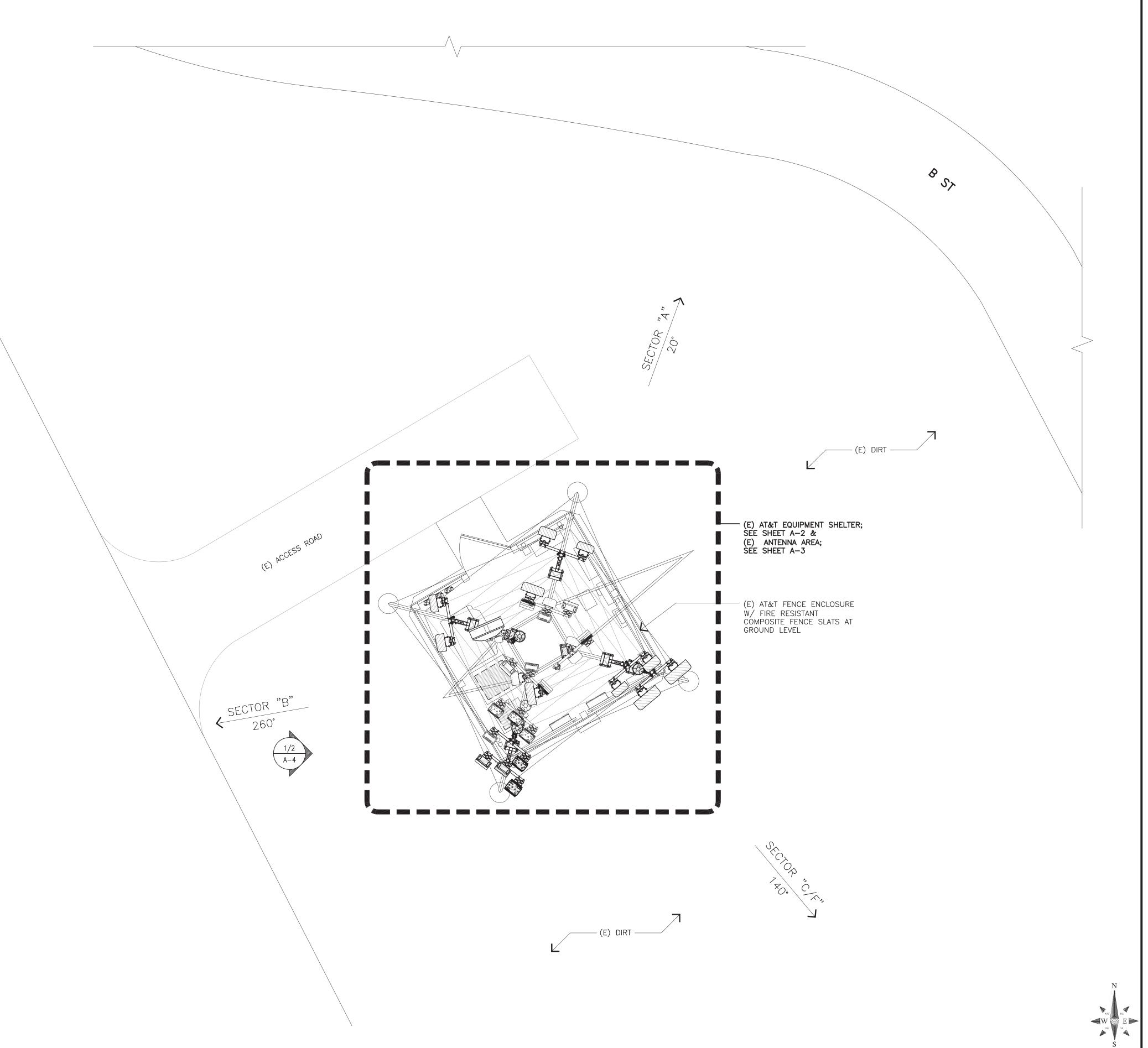
#### ENLARGED SITE PLAN GENERAL NOTES

- A. OTHER CARRIER ANTENNAS NOT SHOWN FOR CLARITY.
- B. GROUND ALL (N) EQUIPMENT AND COAX PER SHEET G-1.
- C. CONTRACTOR TO PROVIDE ALL LABOR TO INSTALL COAX, RETS AND ANTENNAS.
- D. CONTRACTOR TO PROVIDE ALL COAX, CONNECTORS, ANCILLARY EQUIPMENT (INCLUDING WEATHER STRIPPING, GROUND KITS, ETC.).
- E. CONTRACTOR TO COLOR CODE ALL COAX. COLORED BANDS OF TAPE ON COAX IDENTIFY SECTOR, FREQUENCY, TECHNOLOGY, AND TRANSMIT GROUP AS FOLLOWS ON ALL COAX MODIFIED OR INSTALLED ONLY.
- F. WHEN ANTENNA LINES ARE DIPLEXED, THE COLOR CODE OF THE HIGHEST FREQUENCY PREVAILS (I.E. UMTS DIPLEXED WITH TDMA SHOULD HAVE COLOR 4 BANDS).
- G. ALL ANTENNAS AND ANTENNA CABLE SHALL BE FURNISHED BY CONTRACTOR AND INSTALLED BY ANTENNA INSTALLATION CONTRACTOR.
- H. PRIOR TO PLACEMENT OF ANTENNA POLE MOUNTS, THE CONTRACTOR SHALL VERIFY THAT THE AZIMUTH AND DIMENSIONS SHOWN ON THE PLANS MATCH ACTUAL FIELD CONDITIONS. ALLOWABLE TOLERANCE: HORIZONTAL ALIGNMENT =  $\pm 5^{\circ}$ ; VERTICAL ALIGNMENT =  $\pm 1^{\circ}$ .
- I. ANTENNA INSTALLATION CONTRACTOR SHALL PROVIDE ALL CONDUIT, CABLE TRAY, GROUNDS, ETC. FOR COMPLETE INSTALLATION OF ANTENNAS AND CABLES SHOWN AND INTENDED AS REQUIRED FOR A COMPLETE OPERATING SYSTEM IN ACCORDANCE WITH CONTRACTOR STANDARDS.
- J. IN NO CASE SHALL THERE BE ANY MORE THAN TWO (2) 90° TURNS (OR EQUIVALENT) IN ANY CONTINUOUS LENGTH OF CONDUIT BETWEEN PULL BOXES OR SIMILAR FEATURES.
- K. ANTENNA CONDUIT SHALL ONLY INCLUDE FACTORY—MADE LARGE RADIUS SWEEPS AT ALL CHANGES IN DIRECTION. SWEEP RADIUS SHALL BE 18" MINIMUM ABOVE GROUND AND 36" MINIMUM BELOW GROUND.
- L. CONDUIT SHALL BE 3"Ø MINIMUM. ALL UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC. ALL EXPOSED CONDUIT ABOVE GRADE LEVEL SHALL BE IMC OR RIGID GALVANIZED. ALL EXPOSED CONDUIT PROTECTED IN A BUILDING OR ON A ROOF SHALL BE EMT OR UV STABILIZED PAINTED SCHEDULE 80 PVC.
- M. IN HIGH TRAFFIC AREAS OR WHERE SUSCEPTIBLE TO DAMAGE CONTRACTOR SHALL PROVIDE FORMED 14 GA. GALVANIZED SHEET METAL COVER OVER COAXIAL CABLE ROUTES. WHERE CABLE IS RUN ON THE WALL, ATTACH UNISTRUT TO WALL AND COVER WITH 14 GA. GALVANIZED FORMED SHEET METAL COVER OR MATERIAL AS DIRECTED BY CONTRACTOR CONSTRUCTION MANAGER.
- N. VERIFY ROUTE AND LENGTH OF CABLE PRIOR TO CUTTING. ADJUST INDICATED ROUTE AS REQUIRED TO CLEAR (E) EQUIPMENT AT FACILITIES.
- O. MAXIMUM LENGTH OF 7/8" COAX CABLE SHALL BE 140'-0". MAXIMUM LENGTH OF 1-1/4" COAX CABLE SHALL BE 190'-0". MAXIMUM LENGTH OF 1-5/8" COAX CABLE SHALL BE 235'-0".
- P. VERIFY MODEL NUMBERS OF ANTENNAS WITH CONTRACTOR SERVICES.
- Q. THE CONTRACTOR SHALL PROVIDE TESTING OF ANTENNAS AND SHALL PROVIDE DOCUMENTATION TO THE CONTRACTOR PROJECT MANAGER.
- R. GENERAL CONTRACTOR TO VERIFY ALL TORQUE TOLERANCES PER THE MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS.

### NOTE

1. WEED MITIGATION TO BE ADDRESSED DURING PRECON.

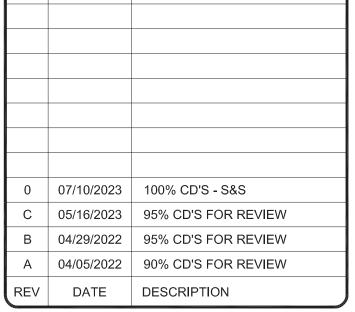
ENLARGED SITE PLAN

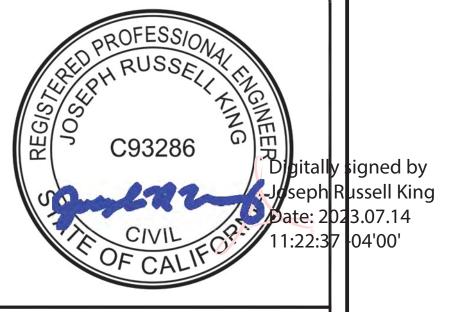






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| JOB #:    | 31348         |





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CCL00550

HAMILTON PARKWAY—PALM DRIVE

10 MAIN GATE ROAD
NOVATO, CA 94949

FA NUMBER

10101755

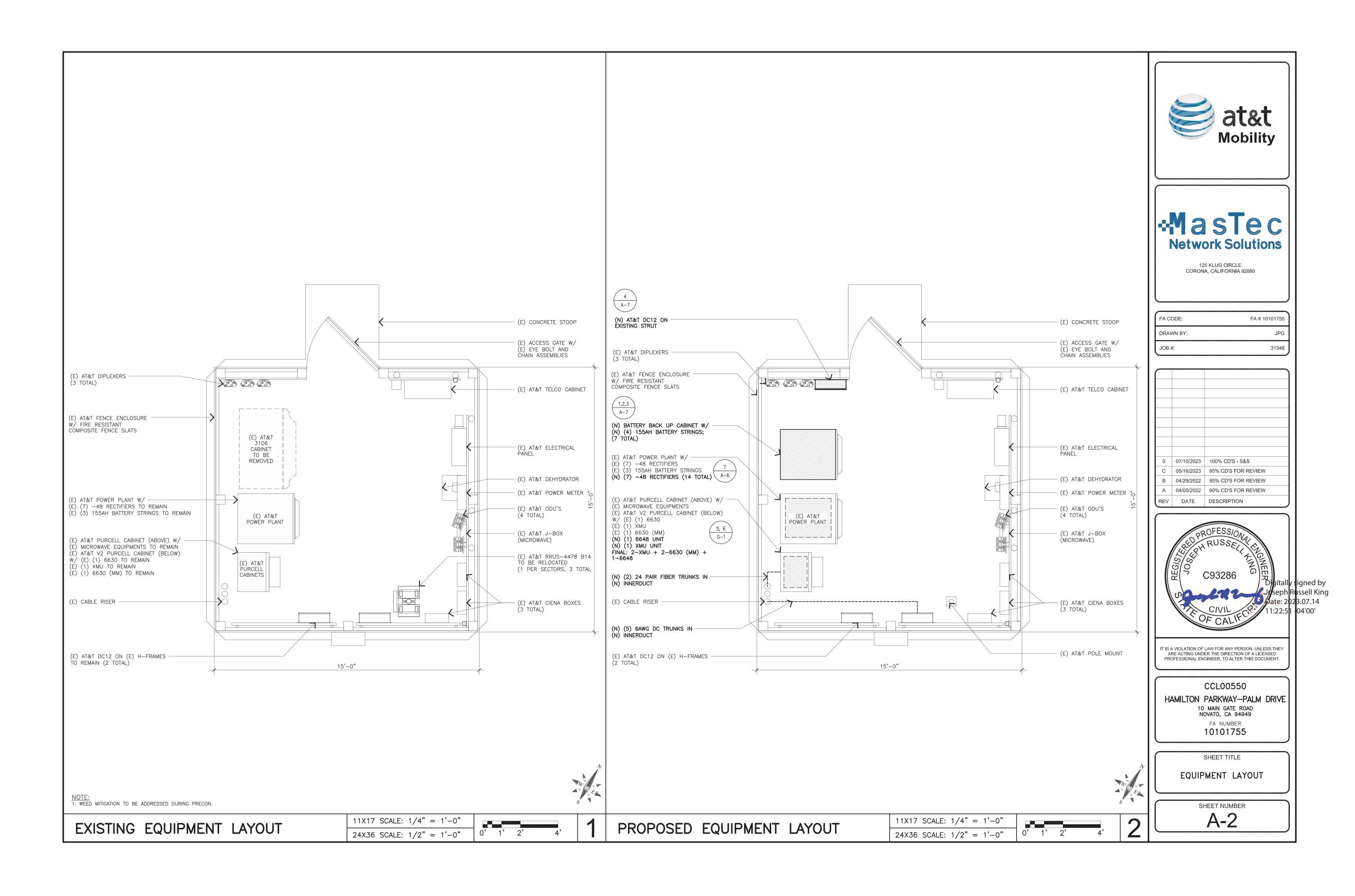
SHEET TITLE

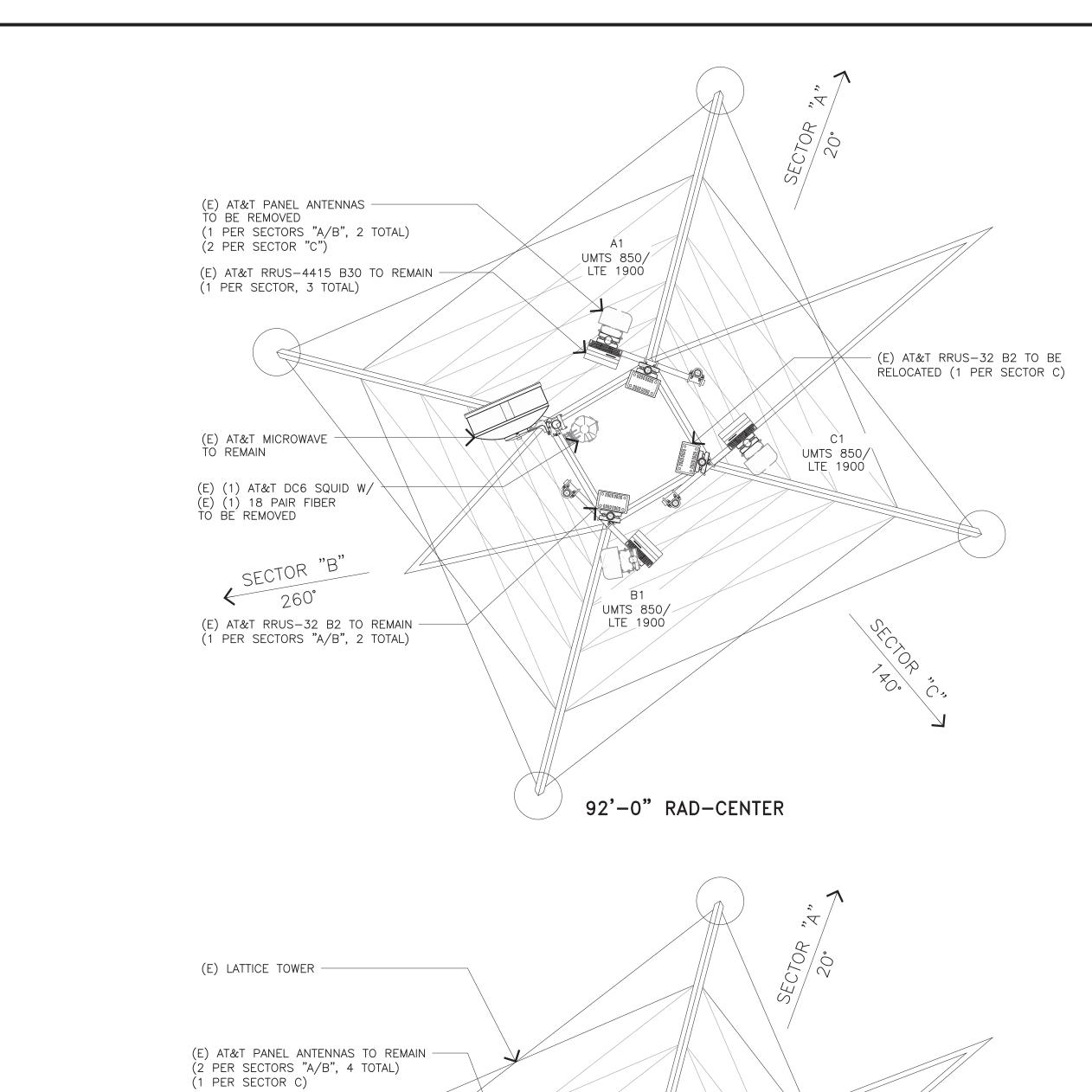
ENLARGED SITE PLAN

SHEET NUMBER

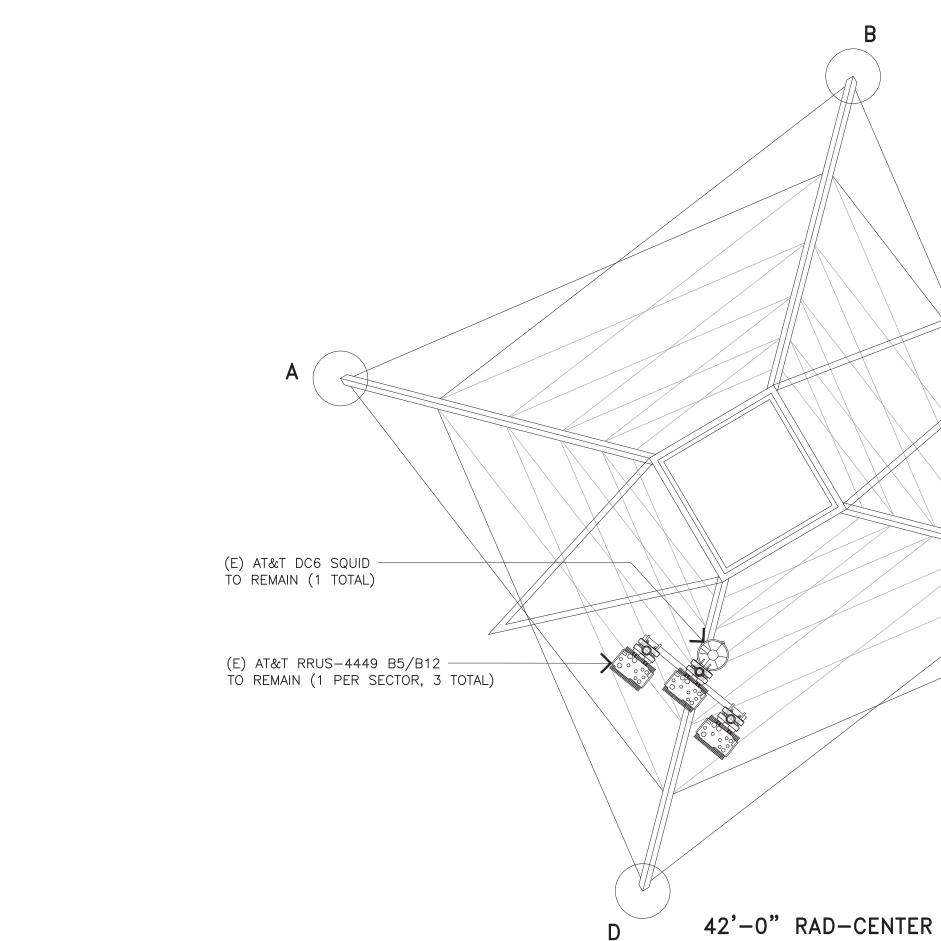
11X17 SCALE: 1/8" = 1'-0"

24X36 SCALE: 1/4" = 1'-0"





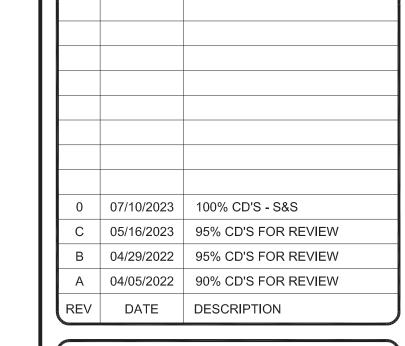
|        | 1        |                        |                          | 1                  |            |   |                |                        |                                  |        |
|--------|----------|------------------------|--------------------------|--------------------|------------|---|----------------|------------------------|----------------------------------|--------|
| SECTOR | POSITION | BAND TECH.             | ANTENNA MODEL            | ANTENNA<br>AZIMUTH | RAD-CENTER | QTY./RRU MODEL                            | QTY./TMA MODEL | QTY./RAYCAP MODEL      | CABLING                          | LENGTH |
|        | A1       | UMTS 850/<br>LTE 1900  | COMMSCOPE<br>SBNHH-1D65A | 20°                | 92'-0"     | (1) RRUS-32 B2<br>(1) RRUS-4478 B14 (DN)  | -              | (1) DC6-48-60-18-8C-EV |                                  |        |
| ALPHA  | A2       | LTE 700/<br>5G 850/WCS | COMMSCOPE<br>SBNHH-1D65A | 20°                | 86'-0"     | (1) RRUS-4449 B5/B12<br>(1) RRUS-4415 B30 | _              | -                      |                                  |        |
|        | A3       | LTE 700/5G 850         | COMMSCOPE<br>SBNHH-1D65A | 20°                | 86'-0"     | _   | -              | _                      |                                  |        |
|        | B1       | UMTS 850/<br>LTE 1900  | COMMSCOPE<br>SBNHH-1D65A | 260°               | 92'-0"     | (1) RRUS-32 B2<br>(1) RRUS-4478 B14 (DN)  | -              | -                      | (4) POWER<br>TRUNKS/             |        |
| BETA   | B2       | LTE 700/<br>5G 850/WCS | COMMSCOPE<br>SBNHH-1D65A | 260°               | 86'-0"     | (1) RRUS-4449 B5/B12<br>(1) RRUS-4415 B30 | -              | (1) DC6-48-60-18-8C-EV | (2) FIBER TRUNK/ (12) 7/8" COAX/ | ±100'  |
|        | В3       | LTE 700/5G 850         | COMMSCOPE<br>SBNHH-1D65A | 260°               | 86'-0"     | -   | -              | -                      | (2) ELIPTICAL<br>COAX            |        |
|        | C1       | UMTS 850/<br>LTE 1900  | COMMSCOPE<br>SBNHH-1D65A | 140°               | 92'-0"     | (1) RRUS-32 B2<br>(1) RRUS-4478 B14 (DN)  | -              | -                      |                                  |        |
| GAMMA  | C2       | LTE 700/<br>5G 850/WCS | COMMSCOPE<br>SBNHH-1D65A | 140°               | 86'-0"     | (1) RRUS-4449 B5/B12<br>(1) RRUS-4415 B30 | -              | -                      |                                  |        |
|        | C3       | LTE 700/5G 850         | COMMSCOPE<br>SBNHH-1D65A | 140°               | 86'-0"     | _   | -              | -                      |                                  |        |
| TOTALS |          |                        | 9 TOTAL                  |                    |            | (9) UP, (3) DN<br>12 TOTAL                | 0 TOTAL        | 2 TOTAL                |                                  |        |







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| JOB#:     | 31348         |





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CCL00550 HAMILTON PARKWAY-PALM DRIVE 10 MAIN GATE ROAD NOVATO, CA 94949 FA NUMBER

10101755

SHEET TITLE **EXISTING** ANTENNA LAYOUT

> SHEET NUMBER **A-3**

EXISTING ANTENNA LAYOUT

86'-0" RAD-CENTER

A3 LTE 700/ 5G 850

LTE 700/ 5G 850/WCS

LTE 700/ 5G 850/WCS

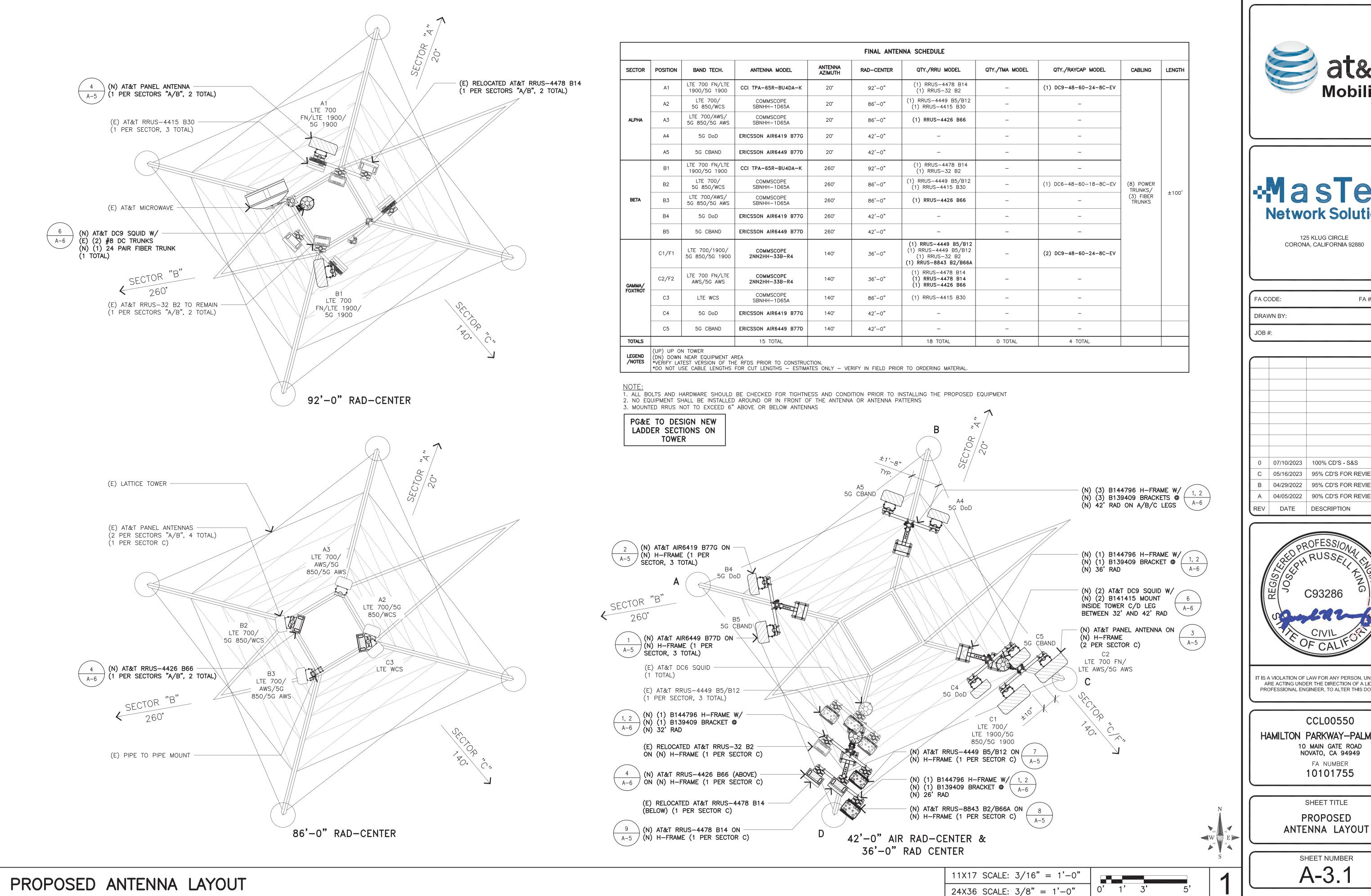
(E) PIPE TO PIPE MOUNT

LTE 700/ 5G 850

A2 LTE 700/ 5G 850/WCS

C3 LTE 700/ 5G 850

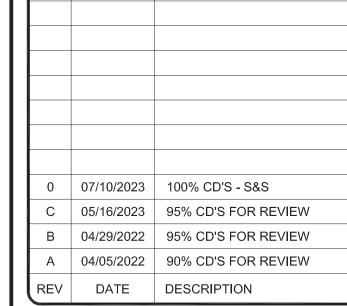
11X17 SCALE: 3/16" = 1'-0" 24X36 SCALE: 3/8" = 1'-0"







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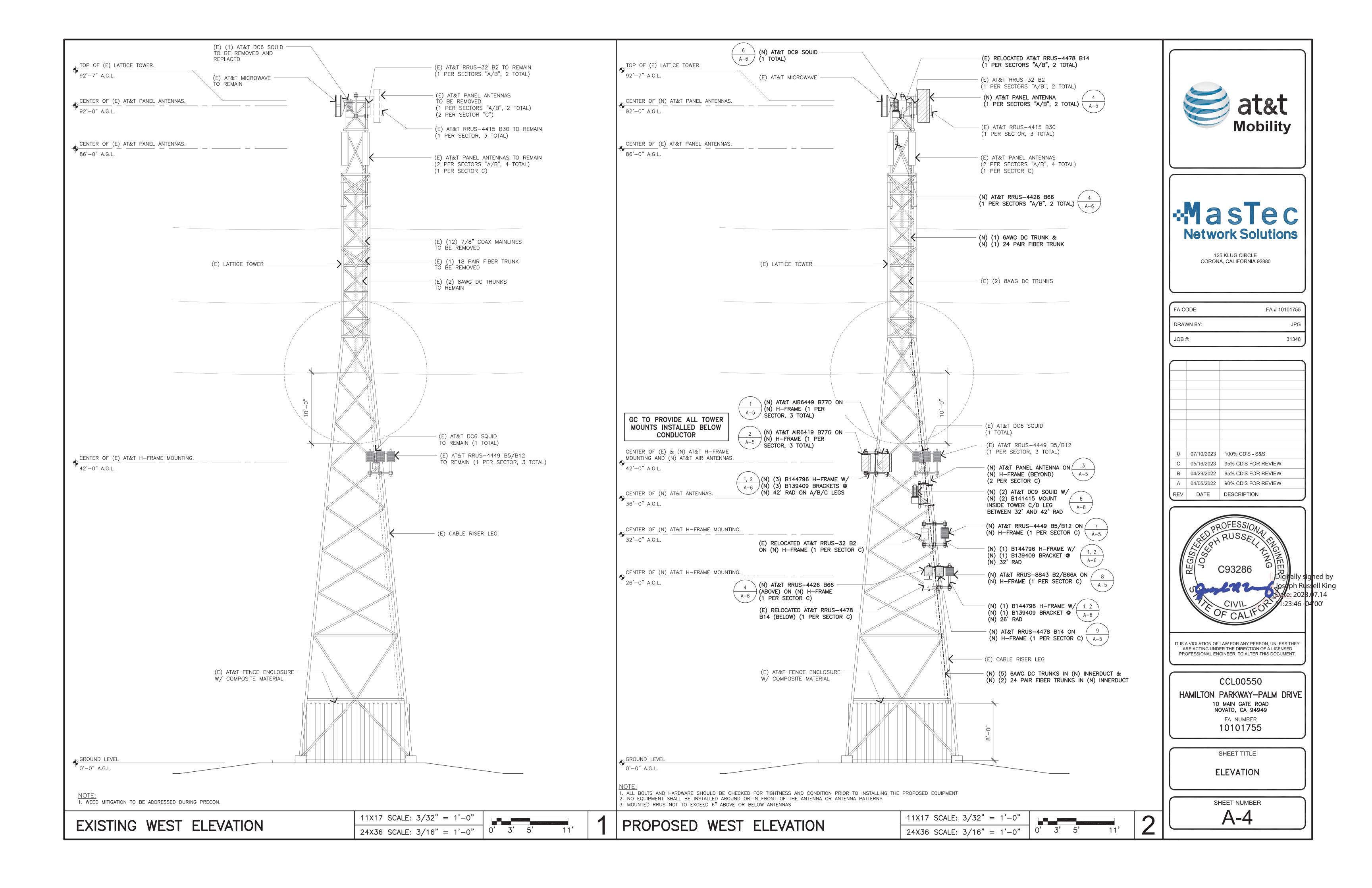


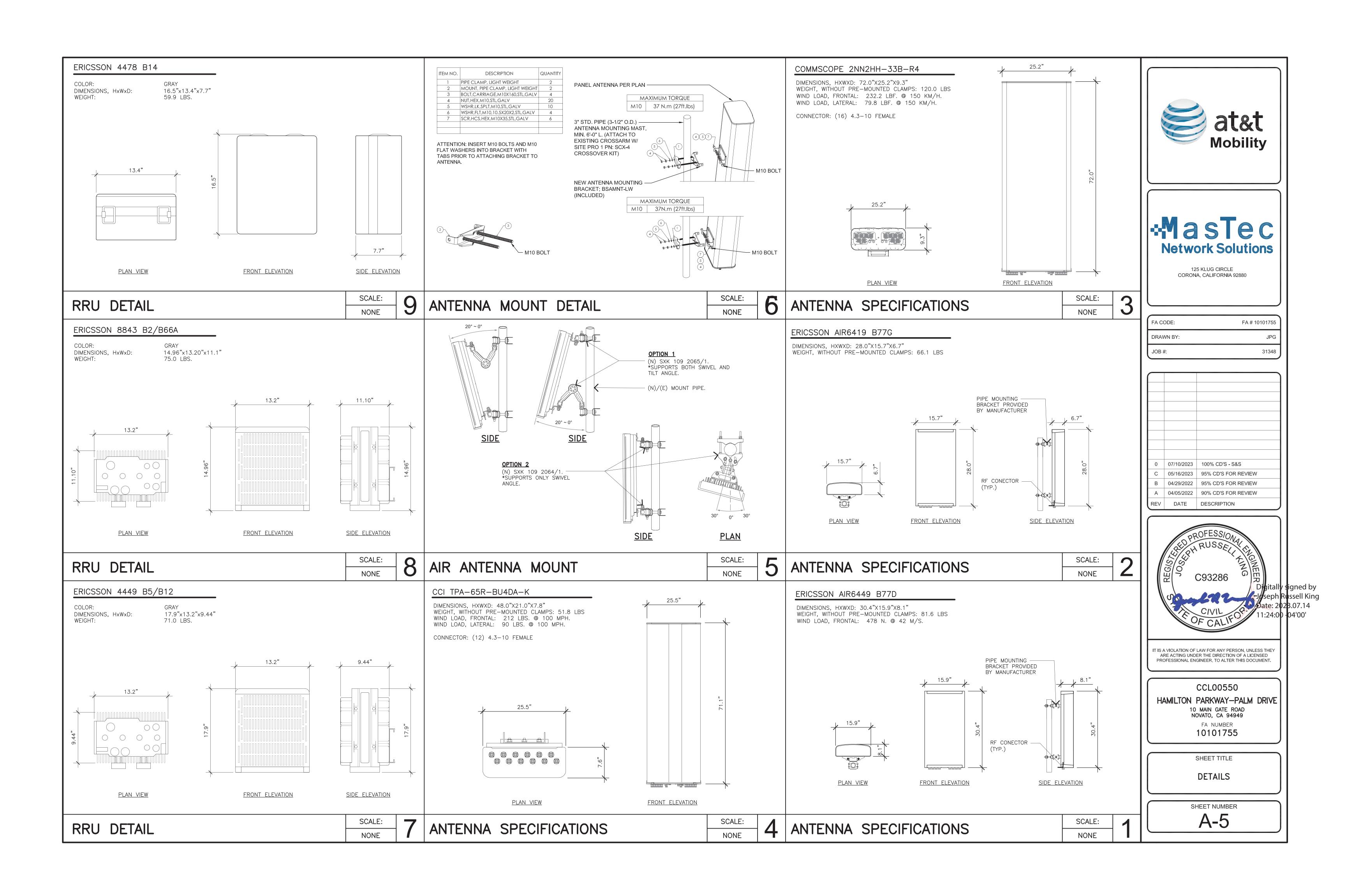


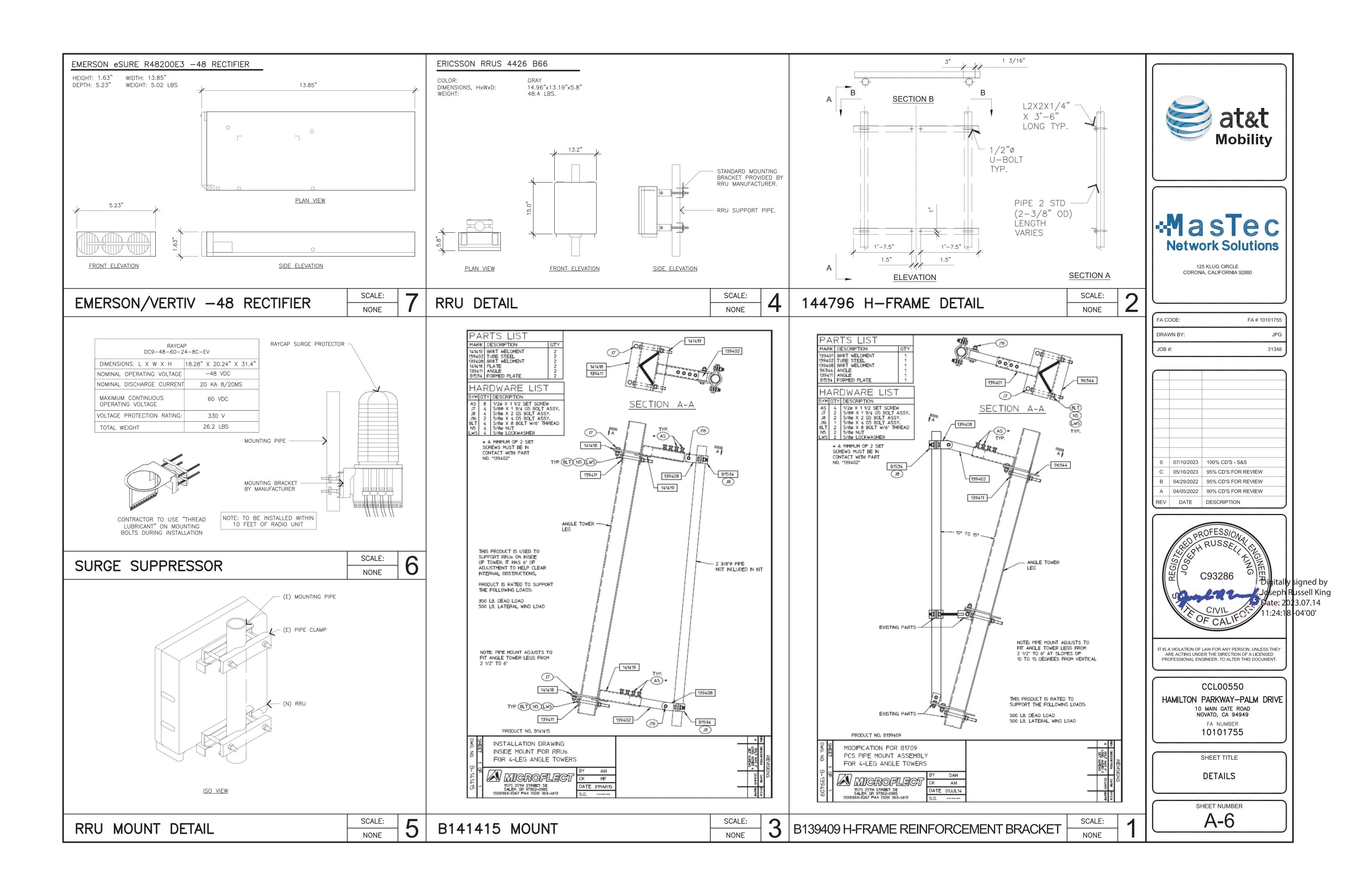
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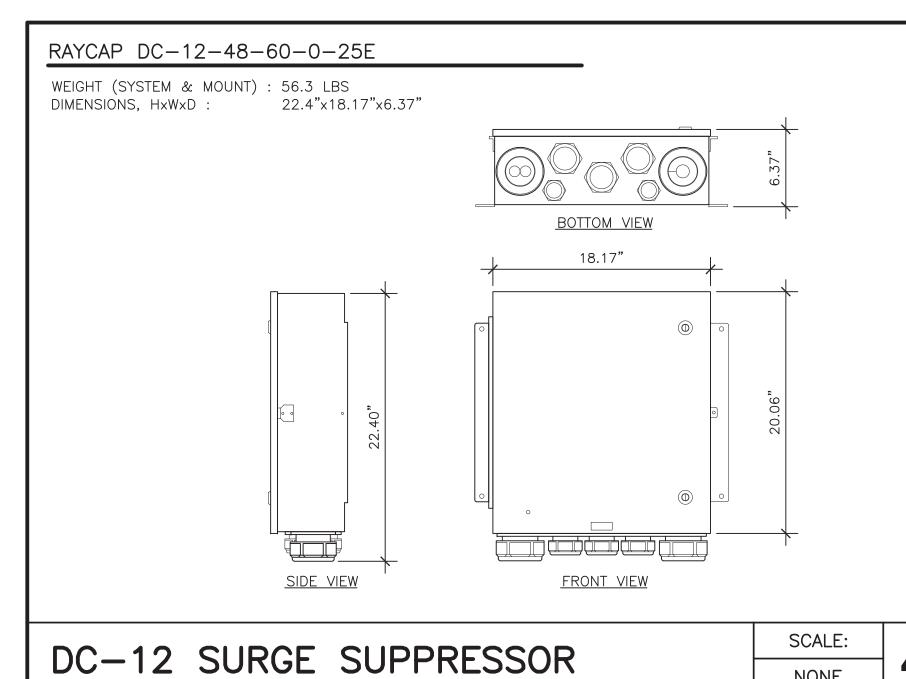
HAMILTON PARKWAY-PALM DRIVE 10 MAIN GATE ROAD NOVATO, CA 94949

PROPOSED









MARATHON®

Designed for durability in Telecommunications and Electric Utility applications, the GNB® Industrial Power Front Terminal MARATHON® series provides high performance and reli-

ability in long duration discharge applications. The location of the terminals on the front (vs. the top) of the battery greatly facilitates the installation and maintenance of the product when placed

in a cabinet enclosure or on a standard relay rack tray. The MARATHON® Front Terminal battery series highlights another example of GNB's extensive experience and worldwide leadership in

Quality manufacturing processes for the MARATHON® series batteries incorporate the industry's

most advanced technologies including: an automated helium leak detection system, a computer

controlled "fill by weight" acid filler, and a temperature controlled water bath formation process.

Applications

MARATHON® Batteries

for long life and high

**Telecommunications** Distributed Power

performance in:

• PCS

Cellular

Broadband

**Electric Utility** 

Communications

incorporate GNB's advanced

VRLA technology designed

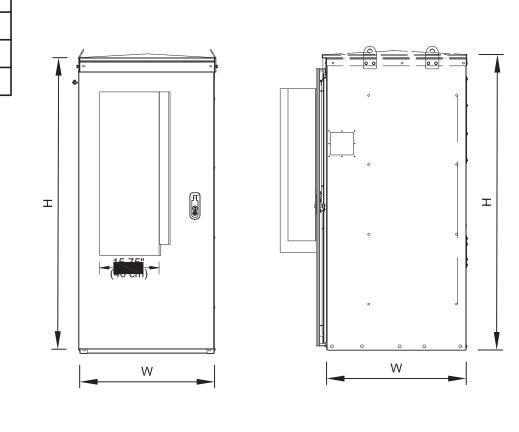
Switchgear Control Power

• Industrial Long Duration

PROPOSED BATTERY CABINET PROPOSED (4) 1/2"Ø HILTI EPX-ANCHOR KB-TZ WITH 2-1/2" EMB. INSTALL PER MANUFACTURERS SPECIFICATIONS (E) CONCRETE FLOOR.

| VERTIV XTE EBRE CABINET - PART# F2014009<br>-48VDC POWER & BATTERY ENCLOSURE |         |  |  |
|--|---------|--|--|
| HEIGHT (H)   | 80"     |  |  |
| WIDTH (W)  | 36"     |  |  |
| DEPTH (D)  | 48.5"   |  |  |
| WEIGHT   | 980 LBS |  |  |
| MOUNTING: PAD/ PLATFORM  |         |  |  |
|  |         |  |  |

BATTERY BACK UP UNIT



SIDE VIEW

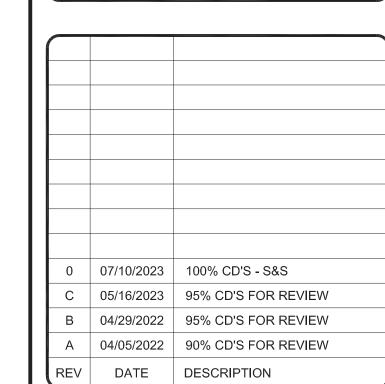
SCALE:

NONE





| _ |           |               |
|---|-----------|---------------|
|   | FA CODE:  | FA # 10101755 |
|   | DRAWN BY: | JPG           |
|   | JOB #:    | 31348         |





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CCL00550 HAMILTON PARKWAY-PALM DRIVE 10 MAIN GATE ROAD NOVATO, CA 94949

> FA NUMBER 10101755

SHEET TITLE

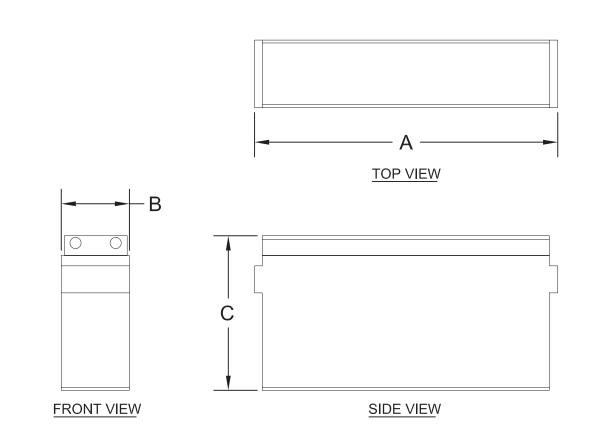
**DETAILS** 

SHEET NUMBER A-7

# MARATHON FRONT TERMINAL SPECIFICATIONS

NONE

|           |         | CAPACI      | TY (AH)      |       | NOMI | NAL D | IMENS | SIONS |     | NOM  | INAL |
|-----------|---------|-------------|--------------|-------|------|-------|-------|-------|-----|------|------|
| MODEL     |         | 8HR TO 1.75 | 10HR TO 1.75 | 1     | NCHE | S     | MIL   | LIME1 | ERS | WEI  | GHT  |
| NUMBER    | VOLTAGE | VPC @ 25°C  | VPC @ 20°C   | Α     | В    | С     | Α     | В     | С   | LBS. | KG.  |
| M12V90FT  | 12      | 86          | 86           | 15.55 | 4.13 | 10.63 | 395   | 105   | 270 | 79   | 35.8 |
| M12V105FT | 12      | 104         | 100          | 20.12 | 4.33 | 9.38  | 511   | 110   | 238 | 79   | 35.8 |
| M12V125FT | 12      | 125         | 121          | 22.00 | 4.90 | 11.15 | 559   | 124   | 283 | 105  | 47.6 |
| M12V155FT | 12      | 155         | 150          | 22.00 | 4.90 | 11.15 | 559   | 124   | 283 | 119  | 53.8 |
| M12V180FT | 12      | 180         | 175          | 22.00 | 4.90 | 12.50 | 559   | 124   | 318 | 133  | 60   |



| BATTERY STORAGE SYSTEM THRESHOLD QUANTITIES        |                   |  |  |  |
|--|-------------------|--|--|--|
| BATTERY MODEL NUMBER                               | M12V155FT         |  |  |  |
| BATTERY VOLTAGE                                    | 12V               |  |  |  |
| BATTERY TECHNOLOGY                                 | LEAD ACID         |  |  |  |
| QUANTITY OF EXISTING BATTERY STRINGS               | 3                 |  |  |  |
| QUANTITY OF NEW BATTERY STRINGS                    | 4                 |  |  |  |
| QUANTITY OF TOTAL BATTERY STRINGS                  | 7                 |  |  |  |
| EXISTING BATTERY STORAGE<br>SYSTEM CAPACITY        | 155AH PER BATTERY |  |  |  |
| NEW BATTERY STORAGE<br>SYSTEM CAPACITY             | 155AH PER BATTERY |  |  |  |
| NEW BATTERY STORAGE<br>SYSTEM CAPACITY (V*AH)/1000 | 13.02 KWH         |  |  |  |

FRONT VIEW

\* TOTAL VOLUME IS LESS THAN 70KWH, WHICH DOES NOT EXCEED ENERGY CAPACITY THRESHOLD PER CFC SECTION 1207, THEREFORE NO ADDITIONAL ENERGY

### CALIFORNIA FIRE CODE 2022

TABLE 1207.1.1

| TECHNOLOGY                             | ENERGY CAPACITY "                    |
|--|--------------------------------------|
| Lead-acid batteries, all types         | 70 KWh (252 Megajoules) <sup>c</sup> |
| Nickel-cadmium batteries (Ni-Cd)       | 70 KWh (252 Megajoules)              |
| Nickel-metal hydridê (Ni-MH)           | 70 KWh (252 Megajoules)              |
| Lithium-ion batteries                  | 20 KWh (72 Megajoules)               |
| Flow batteries <sup>b</sup>            | 20 KWh (72 Megajoules)               |
| Other battery technologies             | 10 KWh (36 Megajoules)               |
| Capacitor ESS                          | 3 KWh (10.8 Megajoules)              |
| Other electrochemical ESS technologies | 3 KWh (10.8 Megajoules)              |

- a. Energy capacity is the total energy capable of being stored (nameplate rating), not the usable energy rating. For units rated in Amp-Hours, KWh shall equal rated voltage multiplied by the amp-hour rating divided by 1000.
- b. Shall include vanadium, zinc-bromine, polysulfide-bromide, and other flowing electrolyte type technologies.

ANCHORAGE DETAIL

NONE

## MARATHON FRONT TERMINAL SPECIFICATIONS

|           |               | INTERNAL   |
|-----------|---------------|------------|
| MODEL     | SHORT CIRCUIT | RESISTANCE |
| NUMBER    | CURRENT AMPS  | (mOhms)    |
|           |               |            |
| M12V90FT  | 2358          | 4.5        |
|           |               |            |
| M12V105FT | 3125          | 4.0        |
| MAOVAGEET | 2014          | 2.0        |
| M12V125FT | 2814          | 3.2        |
| M12V155FT | 3883          | 3.0        |
|           |               |            |
| M12V180FT | 4147          | 3.0        |

| FLOAT VOLTAGE & CHARGING                          |                                |
|---|--------------------------------|
| CONSTANT VOLTAGE CHARGING IS RECOMMENDED.         |                                |
| RECOMMENDED FLOAT VOLTAGE: 2.27 VPC @ 25°C (77°F) |                                |
| FLOAT VOLTAGE RANGE:                              | 2.25 TO 2.30 VPC @ 25°C (77°F) |
| EQUALIZE VOLTAGE:                                 | 2.35 VPC FOR 24 HOURS OR       |
| EQUALIZE VOLTAGE:                                 | 2.40 VPC FOR 12 HOURS          |
|   |                                |

DESIGN AND/OR SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE. IF QUESTIONS ARISE, CONTACT YOUR LOCAL GNB SALES REPRESENTATIVE FOR CLARIFICATION.

#### Higher Vent Opening Pressure minimizes unnecessary gassing; one-way self resealing device • Front Accessible Copper Alloy, 6 mm, Female Terminals

ensures low resistance, high integrity connections

Superior Lead-Tin-Calcium Positive Alloy helps to resist

- "Easy On\Easy Off" Terminal Post Protector
- provides added safety
- Post Design accomodates voltage/diagnostic probes Footprint Ready fits in all standard 23" Relay Rack Applications
- Compliance: Designed in accordance with IEC 60896-21/-22

From the World Leader in

**VRLA Battery Technology** 

"Designed-in" Quality Manufacturing

High Performance MARATHON® Features

integrity in higher operating temperatures

Carry Handles facilitate ease of installation

secure and safe protection

@ 20°C (68°F)

corrosion

• Patented "Diamond Side-Wall" Design maintains structural

Durable Flame Retardant Polypropylene Container and Cover complies with UL94 V-0; 28% L.O.I.

High-Compression Absorbent Glass Mat (AGM) Technology

Integrated Flash Arrestor ultrasonically welded into cover for

10 Year Design Life in float applications @ 25°C (77°F); 12 year

ensures greater than 99% recombination efficiency

Each and every unit is capacity tested.

VRLA technology.

 No Transport Restrictions: Complies with IATA/ICAO Special Provision A67; DOT-CFR Title 49; IMDG Amendment 34-08

UL Recognized Component

155AH BATTERY DETAIL

NONE

STORAGE NEEDED.

| TECHNOLOGY                             | ENERGY CAPACITY a                    |
|--|--------------------------------------|
| Lead-acid batteries, all types         | 70 KWh (252 Megajoules) <sup>c</sup> |
| Nickel-cadmium batteries (Ni-Cd)       | 70 KWh (252 Megajoules)              |
| Nickel-metal hydridê (Ni-MH)           | 70 KWh (252 Megajoules)              |
| Lithium-ion batteries                  | 20 KWh (72 Megajoules)               |
| Flow botteries <sup>b</sup>            | 20 KWh (72 Megajoules)               |
| Other battery technologies             | 10 KWh (36 Megajoules)               |
| Capacitor ESS                          | 3 KWh (10.8 Megajoules)              |
| Other electrochemical ESS technologies | 3 KWh (10.8 Megajoules)              |

For SI: 1 kilowatt hour = 3,6 megajoules.

- c, 50 gallons of lead-acid battery electrolyte shall be considered equivalent to 70 KWh.

SCALE:

