

PROJECT TEAM

CLIENT REPRESENTATIVE
 COMPANY: SMARTLINK, LLC
 ADDRESS: 10 CHURCH CIRCLE
 CITY, STATE, ZIP: ANNAPOLIS, MD 21401
 CONTACT: JUAN ANDRADE
 PHONE: (602) 350-1070
 EMAIL: JUAN.ANDRADE@SMARTLINKGROUP.COM

PROJECT OWNER
 COMPANY: AT&T
 ADDRESS: 1355 WEST UNIVERSITY DRIVE
 CITY, STATE, ZIP: MESA, AZ 85201-5419

PROFESSIONAL OF RECORD
 COMPANY: TELCYTE INFRASTRUCTURE SERVICES
 ADDRESS: 3450 N. HIGLEY ROAD - SUITE 102
 CITY, STATE, ZIP: MESA, AZ 85215
 CONTACT: CHRIS WOLFE
 PHONE: (833) 835-2983
 E-MAIL: CWOLFE@TELCYTE.COM

PROPERTY OWNER
 NAME: STATE OF COLORADO
 ADDRESS: ---
 CITY, STATE, ZIP: ---

TOWER OWNER
 COMPANY: AT&T TOWERS
 ADDRESS: 1355 WEST UNIVERSITY DRIVE
 CITY, STATE, ZIP: MESA, AZ 85201-5419
 CONTACT: MARICELA CITY (CO-LO PROCESS MANAGER)
 PHONE: (916) 266-7042
 E-MAIL: MC5293@ATT.COM

SHEET	DESCRIPTION
T-1	TITLE SHEET
A-1	SITE PLAN
A-1.1	ENLARGED SITE PLAN
A-2	EQUIPMENTS - EXISTING & NEW
A-3	ANTENNA LAYOUTS & SCHEDULES
A-4	ELEVATIONS - EXISTING & NEW
E-1	GROUNDING PLANS
DRAWINGS HAVE BEEN FORMATTED FOR 22"x34" CONTRACTOR TO REFERENCE PACKAGE "B" FOR SCHEMATICS, WIRING DIAGRAMS AND DETAILS.	


GENERAL NOTES

DO NOT SCALE DRAWINGS
 CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE, NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

SITE INFORMATION

LATITUDE: 38.52855
 LONGITUDE: -104.98994
 LAT./LONG. TYPE: NAD 83
 GROUND ELEVATION: --- MSL
 APN #: ---
 AREA OF CONSTRUCTION: EXISTING
 ZONING/JURISDICTION: STATE OF COLORADO
 CURRENT ZONING: ---
 EXISTING USE: UNMANNED TELECOMMUNICATIONS FACILITY
 COUNTY: FREMONT COUNTY
 HANDICAP REQUIREMENTS: FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS NOT REQUIRED.

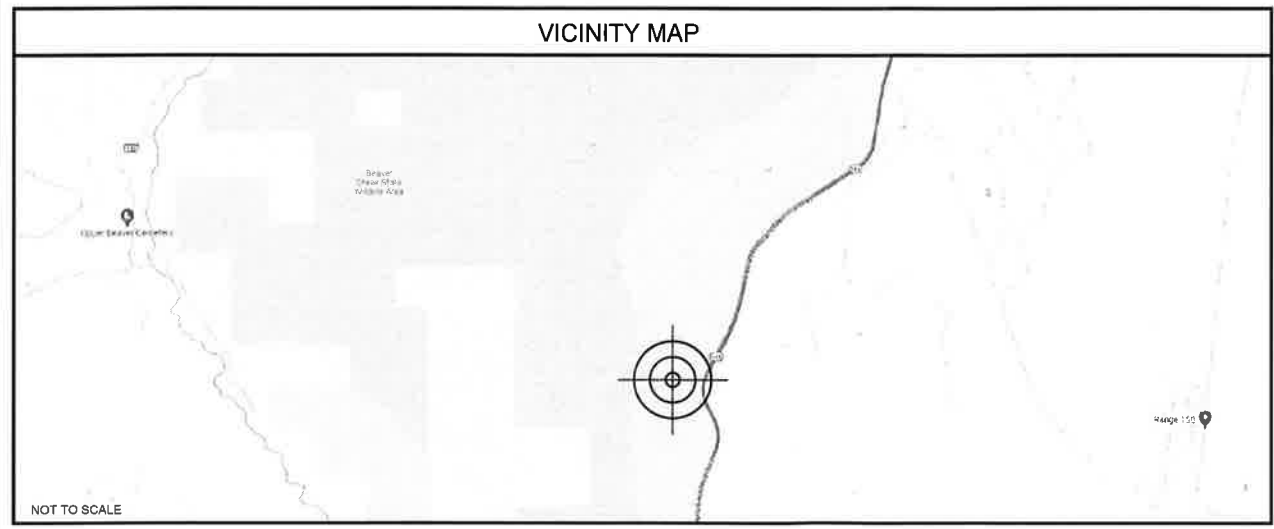


**COLO6032
 MEDIAN POINT**

24860 HIGHWAY 115
 PENROSE, CO 81240

LTE 1C RRH SWAP PTN: 3755A1CJWK, 5G NR RRH SWAP PTN: 3755A1CLBR
 LTE RRH SWAP PTN: 3755A1CJLH
 JOB ID:
 WSANM0042609, WSANM0042425, WSANM0042326

FA: 10114750 USID: 87013



DRIVING DIRECTIONS

FROM AT&T OFFICE (DENVER INTERNATIONAL AIRPORT 8500 PENA BLVD, DENVER, CO 80249):
 HEAD WEST ON E 78TH AVE CONNECTOR. MERGE ONTO PENA BLVD, TAKE EXIT 6A TOWARD I-70 SOUTH. USE THE LEFT LANE TO TAKE THE DENVER INT'L AIRPORT RAMP (TOLL ROAD). MERGE ONTO E-470 SOUTH (TOLL ROAD 26.9 MILES) USE THE RIGHT 2 LANES TO TAKE EXIT 1A FOR INTERSTATE 25 SOUTH TOWARD COLORADO SPRINGS. (0.8 MILES) MERGE ONTO I-25 SOUTH (53.8 MILES) USE THE 2ND FROM THE RIGHT LANE TO TAKE EXIT 140 FOR TEJON STREET. (0.3 MILES) TURN RIGHT ONTO CO-115 SOUTH (10.2 MILES) CONTINUE STRAIGHT TO STAY ON CO-115 SOUTH (12.8 MILES) PASS GCC RIO GRANDE INC. SALT CANYON GYPSUM QUARRY ON YOUR RIGHT, ABOUT 0.5 MILE PAST THAT TURN RIGHT INTO LARGE DIRT TURN-OUT WITH CATTLE. FOLLOW DIRT ROAD UP TO TOWER.

CODE COMPLIANCE

BUILDING CODE: INTERNATIONAL BUILDING CODE 2018
 ELECTRICAL CODE: NATIONAL ELECTRICAL CODE 2017
 LIGHTNING PROTECTION CODE: NFPA 780 - 2014, LIGHTNING PROTECTION SYSTEM

SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

RFDS DATA

DESIGN PACKAGE BASED ON RF DATA SHEET
 RFDS NAME: ---
 REVISION: ---
 RFDS DATE: 04/22/2024

APPROVALS

AT&T (RF): _____ DATE: _____
 AT&T (CONST.): _____ DATE: _____
 AT&T (SAM): _____ DATE: _____
 LANDLORD: _____ DATE: _____
 LANDLORD: _____ DATE: _____

FIELD DATA SUMMARY

YES	ANTENNA SWAP
4	NUMBER OF EXISTING COAX
4	NUMBER OF EXISTING DC CABLE TRUNKS
2	NUMBER OF EXISTING FIBER CABLE PAIRS
181' APPROX.	DISTANCE OF FIBER/COAX RUN
PENDING	FIBER PROVIDER
PENDING	CIRCUIT ID
*CONTRACTOR TO FIELD VERIFY ALL QUANTITIES AND LENGTHS	

PROJECT DESCRIPTION

THIS PROJECT WILL BE COMPRISED OF:
CHANGES ON THE EXISTING MONOPOLE:

- REMOVE (2) DBXN-6565B-R2M PANEL ANTENNAS
- REMOVE ALL TMAs
- REMOVE ALL RRHs
- REMOVE ALL NOKIA EQUIPMENT
- REMOVE ALL COAX
- INSTALL (1) POST STAND-OFF ARM ON POS B1
- INSTALL (2) TPA65R-BUBDA-K ANTENNAS
- RETAIN (2) TPA64R-BUBDA-K ANTENNAS
- INSTALL (2) 4490 B5/B12A ON SXK1255394/2 B2B'S FOR P1 A/B TO BE INSTALLED ON (N) 10' PIPES
- INSTALL (2) 4890 B25/B66 ON SXK1255394/2 B2B'S TO BE SHARED W/ (2) 4478 B14'S FOR P3 A/B TO BE INSTALLED ON (N) 10' PIPES

CHANGES IN THE EXISTING AT&T EQUIPMENT ENCLOSURE AREA:

- REMOVE ALL (E) RADIO GARDS
- INSTALL (2) 6651 & (1) 6610 IN EXISTING LTE

ACDC SCOPE:
DC POWER PLAN REVIEW:

- INSTALL (1) VERTIV 7100 w/ -58V CONVERSION KIT
- INSTALL (6) VERTIV C48/58 -2000P3 CONVERTERS
- INSTALL (1) COMMSCOPE 48V TO 58VDC INDOOR CONV SYSTEM - 26 BREAKERS (NEQ 57288)
- INSTALL BREAKERS AS NEEDED PER ATT-CEM-18002

BATTERY CHECK:

- RETAIN (20) EXISTING 170 BATTERIES (5) STRINGS TOTAL

HVAC UNITS:

- NO WORK - INDOOR EQUIPMENT

JURISDICTIONAL APPROVAL



1355 WEST UNIVERSITY DRIVE
 MESA, AZ 85201-5419

THE INFORMATION CONTAINED IN THIS SET OF DRAWINGS IS PROPRIETARY & CONFIDENTIAL TO AT&T WIRELESS
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8767 E. VIA DE VENTURA
 SUITE 200
 SCOTTSDALE, AZ 85258



3450 N HIGLEY RD - SUITE 102,
 MESA, AZ 85215



REV.	DATE	REVISION DESCRIPTION
0	05/20/24	PRELIMINARY

THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND SPEC'S, UNLESS SPECIFICALLY STATED OTHERWISE, THE MANUFACTURER'S EQUIPMENT INSTALLATION SPEC'S SHALL ALWAYS BE VERIFIED BY THE CONTRACTOR BEFORE INSTALLATION

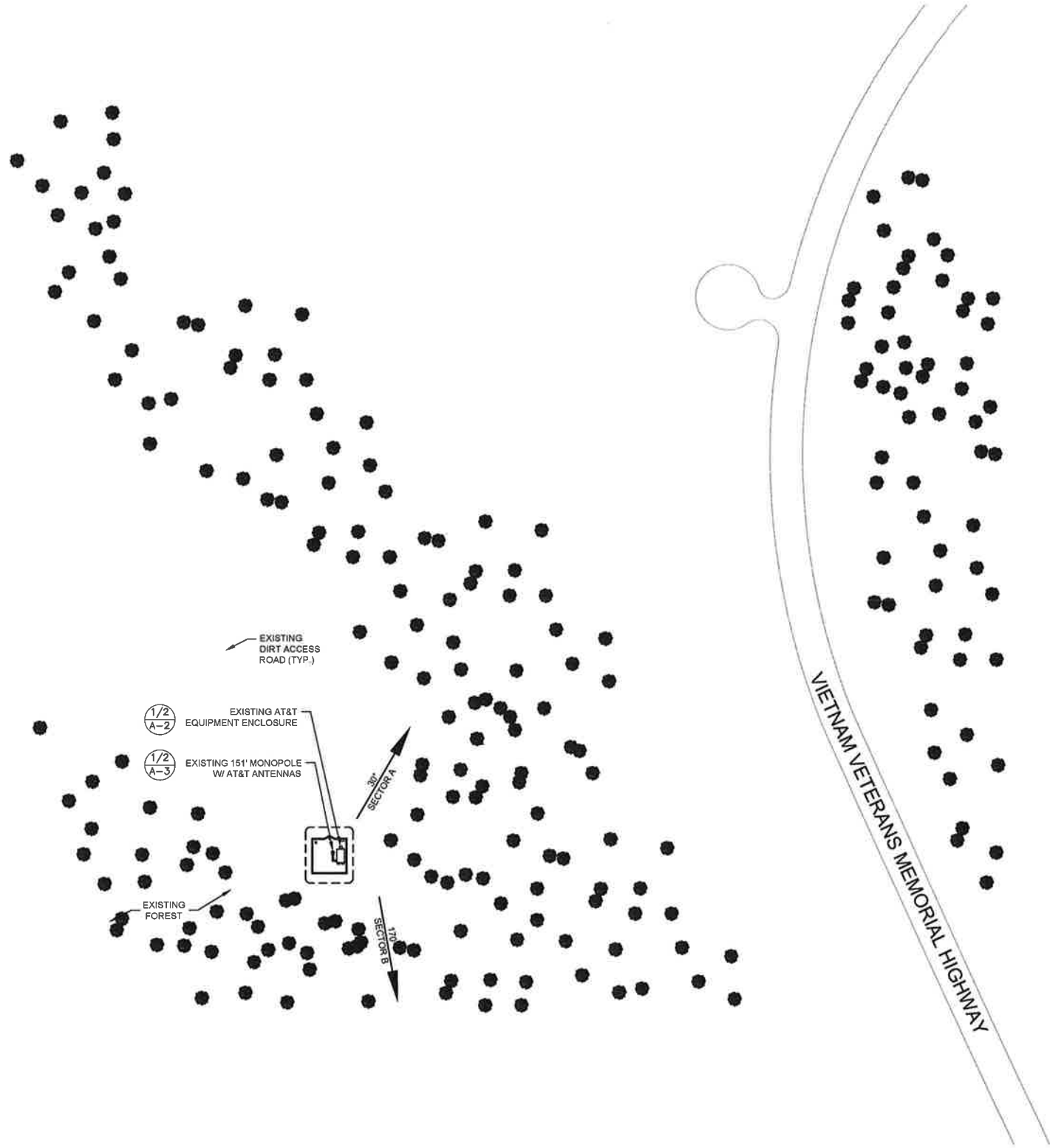
PROJECT INFORMATION:
**COLO6032
 MEDIAN POINT
 24860 HIGHWAY 115
 PENROSE, CO 81240
 FREMONT**

DRAWN BY: **JM** CHECKED BY: **CM**

SHEET TITLE:
TITLE SHEET

SHEET NUMBER: **T-1** REV.: **0**

NOTE:
 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.



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INFRASTRUCTURE SERVICES
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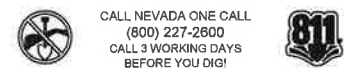
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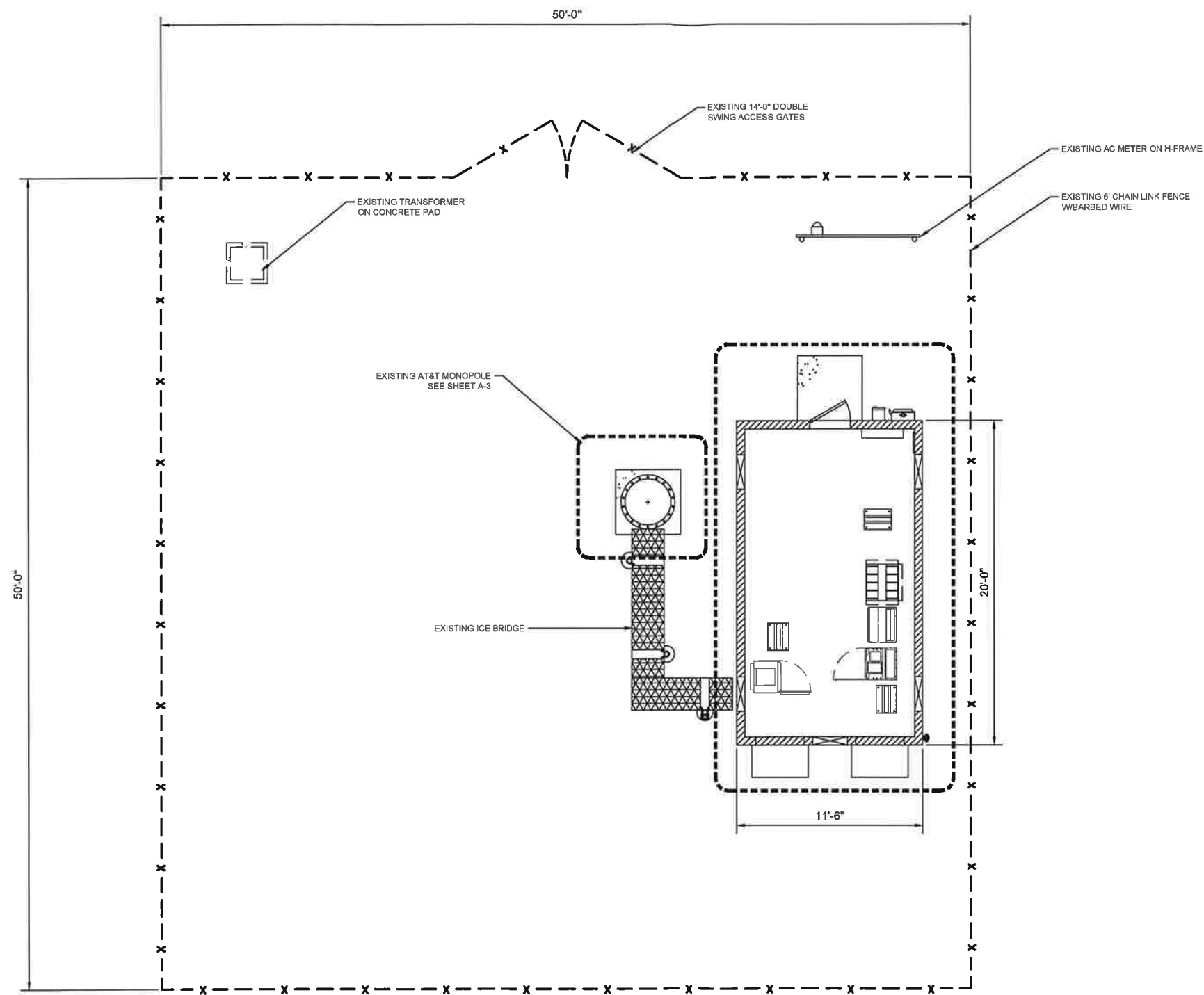
SHEET TITLE:
SITE PLAN

SHEET NUMBER: **A-1** REV.: **0**



SITE PLAN

22x34" SCALE: 1" = 50'-0"
 11x17" SCALE: 1" = 100'-0"
 50' 25' 0' 50'
 1



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MESA, AZ 85201-5419

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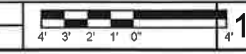
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SHEET TITLE:
ENLARGED SITE PLAN

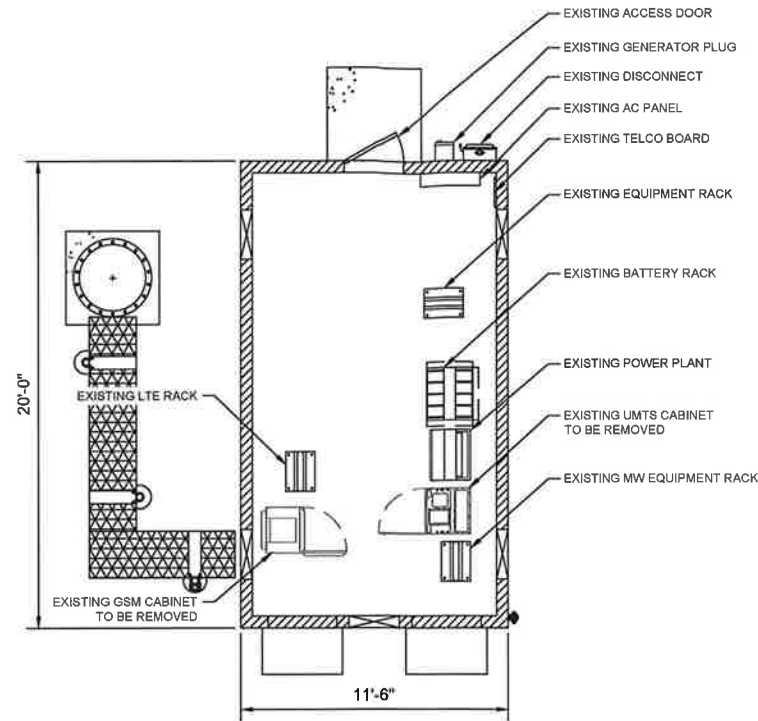
SHEET NUMBER: **A-1.1** REV.: **0**

ENLARGED SITE PLAN

22"x34" SCALE: 1/4" = 1'-0"
11"x17" SCALE: 1/8" = 1'-0"



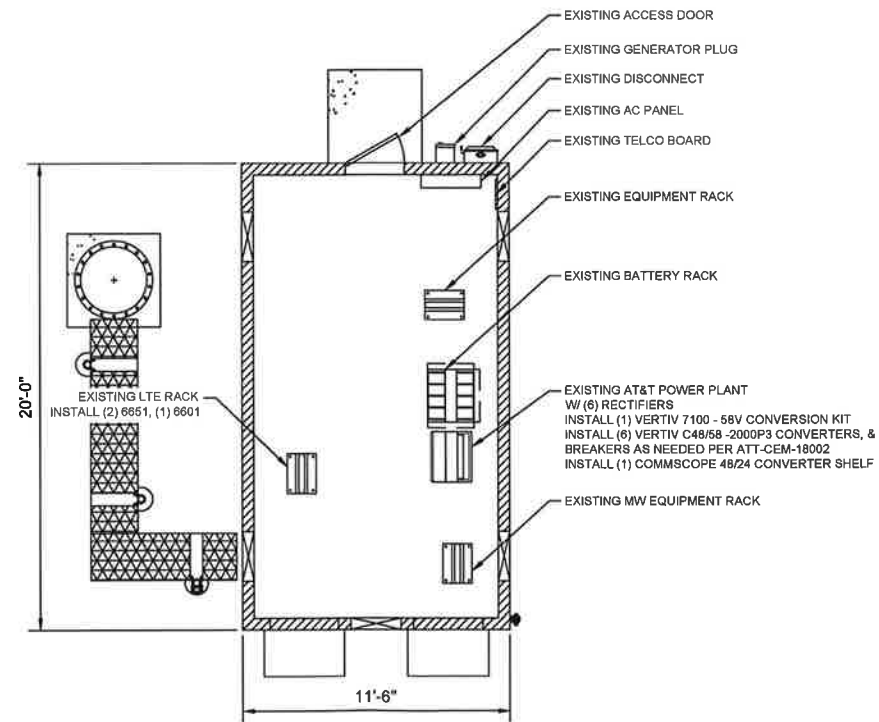
CABLE COUNT:
 (4) EXISTING 7/8" COAX
 (2) EXISTING FIBER TRUNKS
 (4) EXISTING DC TRUNKS
 (---) EXISTING RET CABLE



EQUIPMENT PLAN-EXISTING

22"x34" SCALE: 1/4" = 1'-0"
 11"x17" SCALE: 1/8" = 1'-0" 1

CABLE COUNT:
 (0) FINAL 7/8" COAX
 (2) FINAL FIBER TRUNKS
 (4) FINAL DC TRUNKS
 (0) FINAL RET CABLE



EQUIPMENT PLAN-NEW

22"x34" SCALE: 1/4" = 1'-0"
 11"x17" SCALE: 1/8" = 1'-0" 2



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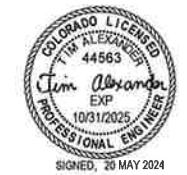
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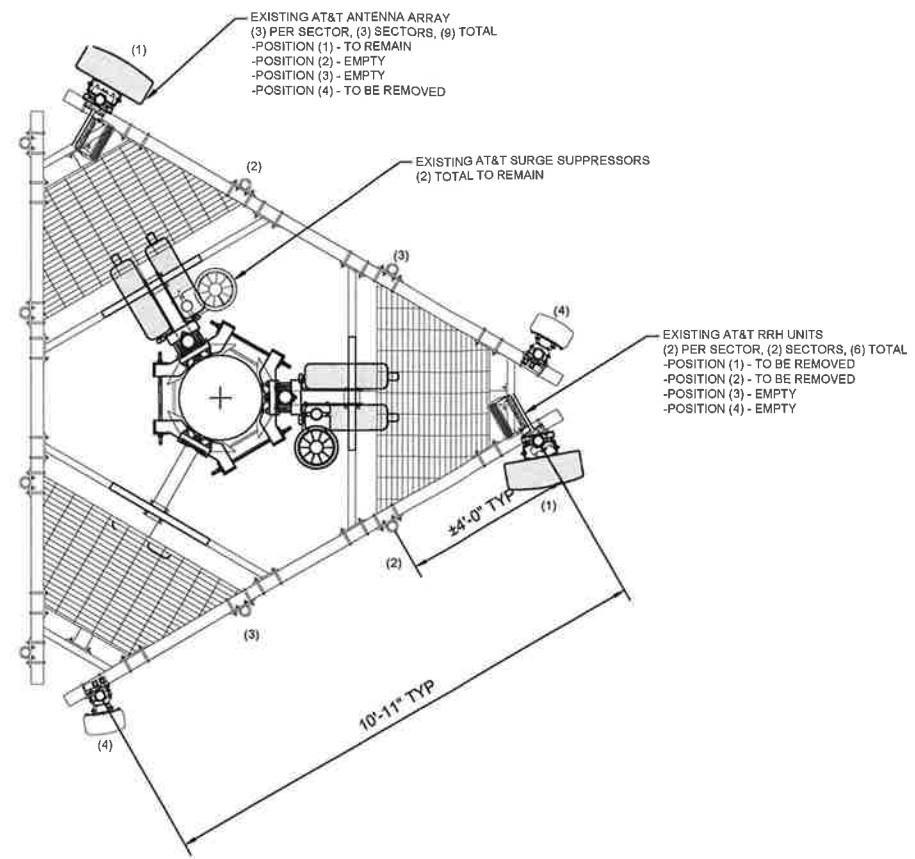
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COLO6032
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24860 HIGHWAY 115
PENROSE, CO 81240
FREMONT

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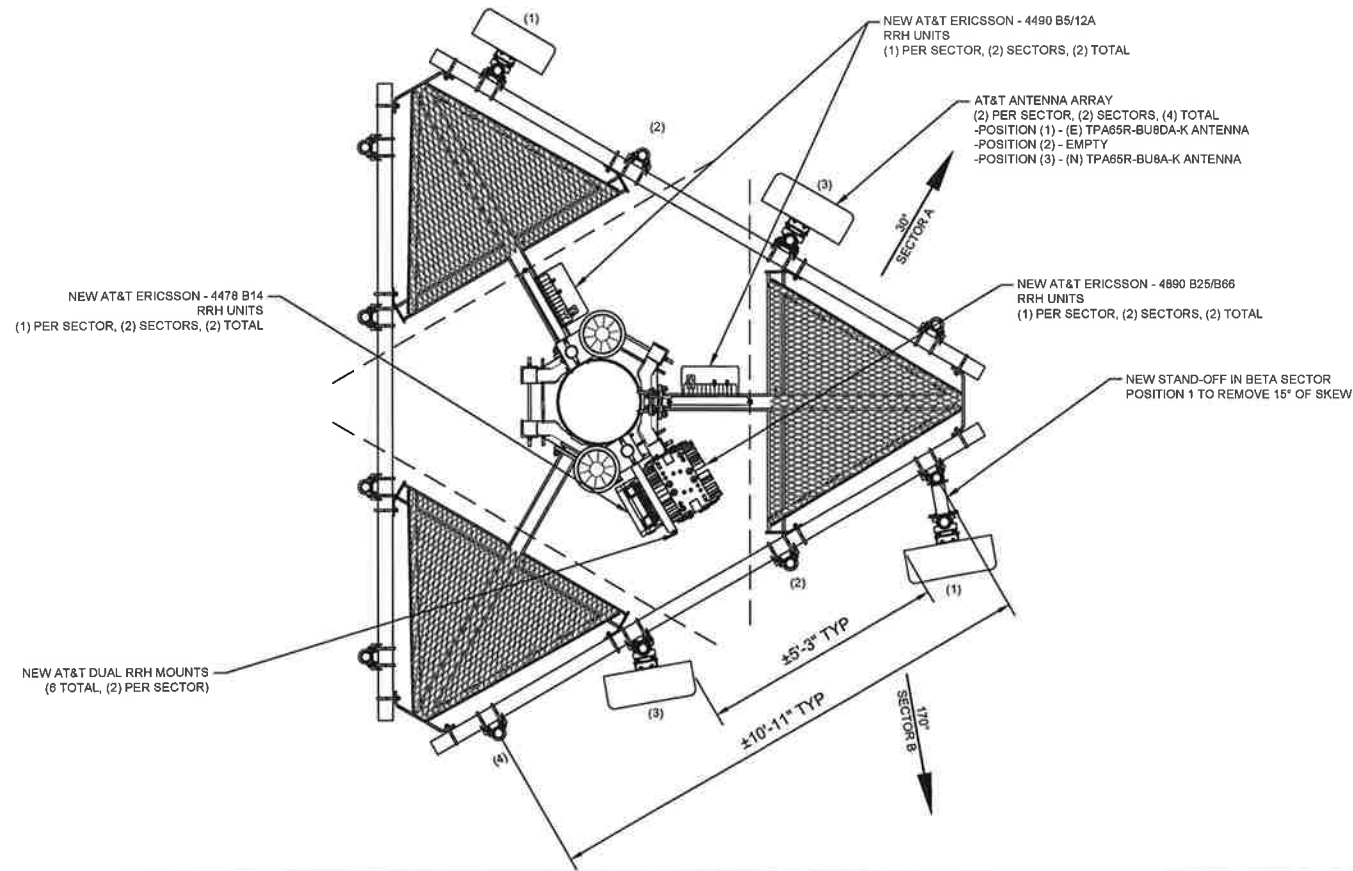
SHEET TITLE:
EQUIPMENT & ANTENNA LAYOUTS

SHEET NUMBER: **A-2** REV.: **0**



ANTENNA PLAN - EXISTING

22"x34" SCALE: 1/2" = 1'-0"
 11"x17" SCALE: 1/4" = 1'-0"



ANTENNA PLAN - NEW

22"x34" SCALE: 1/2" = 1'-0"
 11"x17" SCALE: 1/4" = 1'-0"



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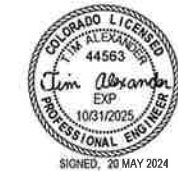
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SHEET TITLE:
**ANTENNA PLANS
 & SCHEDULES**

SHEET NUMBER: **A-3** REV.: **0**

CABLE COUNT:
 (4) EXISTING 7/8" COAX
 (2) EXISTING FIBER TRUNK
 (4) EXISTING DC TRUNKS
 (—) EXISTING RET CABLE

EXISTING AT&T ANTENNA ARRAY
 (3) PER SECTOR, (3) SECTORS, (9) TOTAL
 -POSITION (1) - TO REMAIN
 -POSITION (2) - EMPTY
 -POSITION (3) - EMPTY
 -POSITION (4) - TO BE REPLACED

EXISTING AT&T RRH UNITS
 (3) PER SECTOR, (2) SECTORS, (6) TOTAL
 -POSITION (1) - (2) TO BE REMOVED
 -POSITION (2) - (4) TO BE REMOVED

INSTALLER NOTE:
 TOWER DOES NOT HAVE CLIMBING FACILITIES
 - MANLIFT REQUIRED FOR ELEVATED WORK

CABLE COUNT:
 (0) FINAL 7/8" COAX
 (2) FINAL FIBER TRUNKS
 (4) FINAL DC TRUNKS
 (0) FINAL RET CABLE

EXISTING RELOCATED AT&T SURGE SUPPRESSORS
 (2) TOTAL

AT&T ANTENNA ARRAY
 (2) PER SECTOR, (2) SECTORS, (4) TOTAL
 -POSITION (1) - (E) TPA65R-BU8DA-K ANTENNA
 -POSITION (2) - EMPTY
 -POSITION (3) - (N) TPA65R-BU8DA-K ANTENNA

AT&T RRH UNITS
 (3) PER SECTOR, (2) SECTORS, (6) TOTAL
 -POSITION (1) - (2) NEW UNITS
 -POSITION (2) - EMPTY
 -POSITION (3) - (4) NEW UNITS

155'-0" TOP OF ANTENNA

151'-0" RAD CENTER

EXISTING AT&T SURGE SUPPRESSORS
 (2) TOTAL TO REMAIN

EXISTING 151' MONOPOLE

EXISTING FEEDLINES TO REMAIN:
 (4) 7/8" COAX CABLES
 (4) DC TRUNKS
 (2) FIBER TRUNK
 -APPROX. FEEDER LENGTH 181'

MICROWAVE (OTHERS)

EXISTING COMPOUND

NOTE:
 MOUNT ANALYSIS BY TOWER ENGINEERING PROS. DATED 5/17/2024
 STRUCTURAL ANALYSIS BY TOWER ENGINEERING PROS. DATED 05/16/2024. GC TO ENSURE ANY MODIFICATIONS ARE MADE PRIOR TO CONSTRUCTION

155'-0" TOP OF ANTENNA

151'-0" RAD CENTER

EXISTING 151' MONOPOLE

EXISTING FEEDLINES TO REMAIN:
 (4) 7/8" COAX CABLES TO RETIRE IN PLACE
 (4) DC TRUNKS
 (2) FIBER TRUNK
 -APPROX. FEEDER LENGTH 181'

MICROWAVE (OTHERS)

EXISTING COMPOUND



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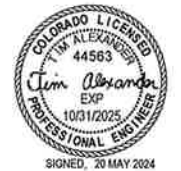
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SHEET TITLE:
ELEVATIONS
EXISTING & NEW

SHEET NUMBER: **A-4** REV.: **0**

SOUTH ELEVATION - EXISTING

22"x34" SCALE: 1/4" = 1'-0"
 11"x17" SCALE: 1/8" = 1'-0"

1

SOUTH ELEVATION - NEW

22"x34" SCALE: 1/4" = 1'-0"
 11"x17" SCALE: 1/8" = 1'-0"

2



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MESA, AZ 85201-5419

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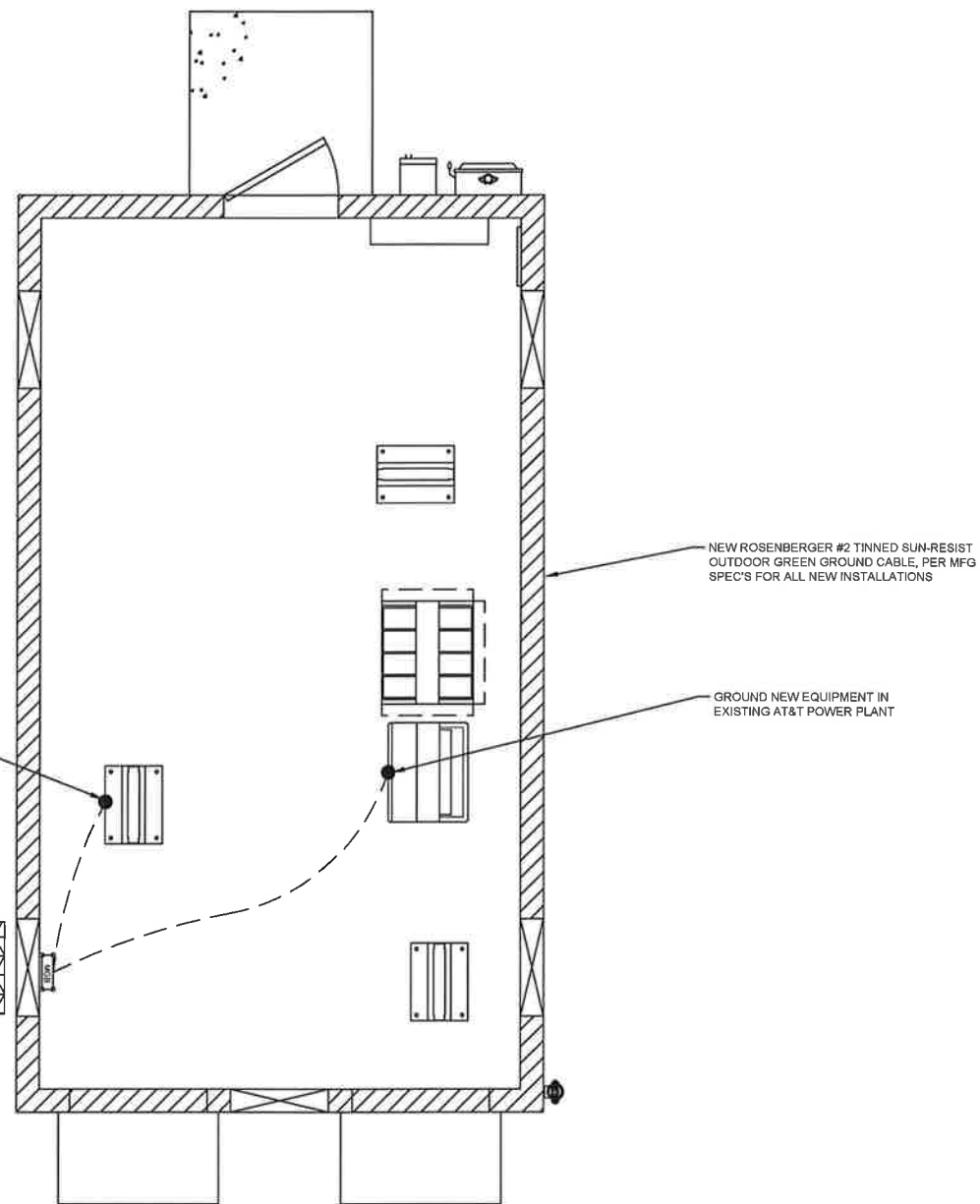
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SHEET TITLE:
GROUNDING PLANS

SHEET NUMBER: **E-1** REV.: **0**



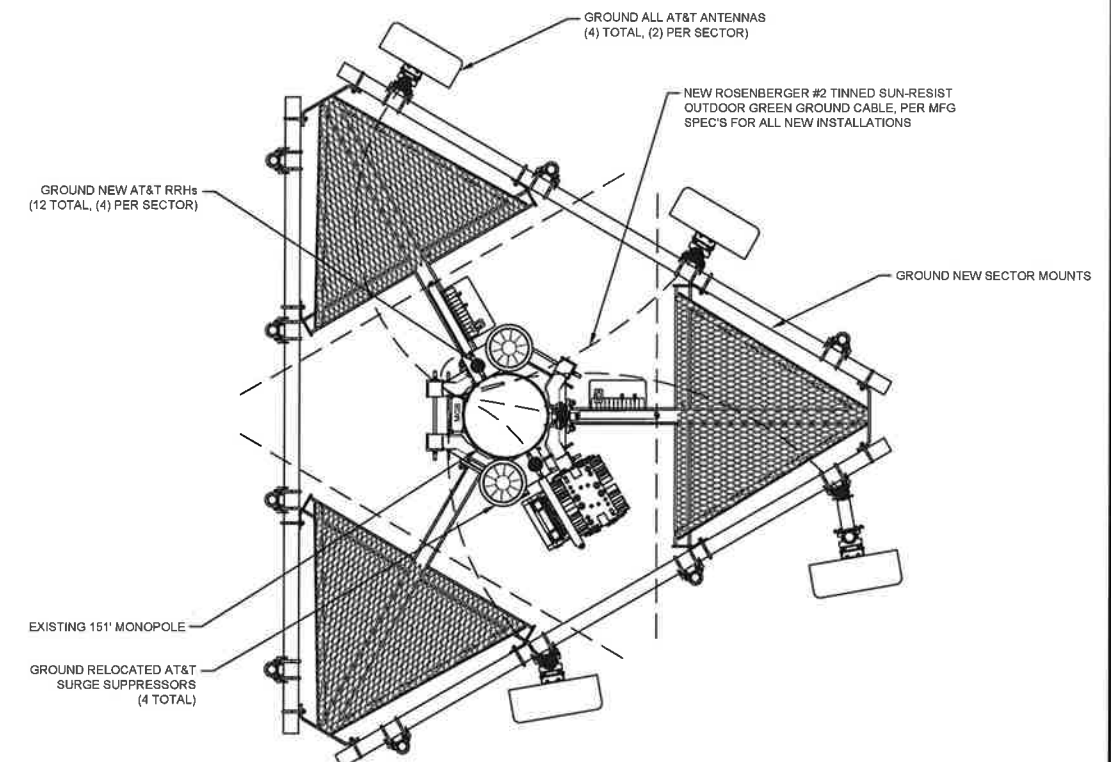
LEGEND

■	EXOTHERMIC CONNECTION
●	MECHANICAL CONNECTION
▭	ANTENNA GROUND BAR
⊞	MASTER GROUND BAR

NOTE:
• ALL NEW EQUIPMENT MUST BE GROUNDED TO GROUND RING OR HALO PER AT&T SPECIFICATIONS
• CONTRACTOR TO REPLACE ALL MISSING GROUND BARS AND GROUNDING CONNECTIONS AS REQUIRED.

22"x34" SCALE: 1/2" = 1'-0"
11"x17" SCALE: 1/4" = 1'-0"
2' 1' 0' 2'

EQUIPMENT PLAN-NEW



LEGEND

■	EXOTHERMIC CONNECTION
●	MECHANICAL CONNECTION
▭	ANTENNA GROUND BAR
⊞	MASTER GROUND BAR

NOTE:
• ALL NEW EQUIPMENT MUST BE GROUNDED TO GROUND RING OR HALO PER AT&T SPECIFICATIONS
• CONTRACTOR TO REPLACE ALL MISSING GROUND BARS AND GROUNDING CONNECTIONS AS REQUIRED.

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2' 1' 0' 2'

ANTENNA PLAN - NEW



GENERAL CONSTRUCTION NOTES:

- FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
CONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION)
OWNER - AT&T MOBILITY
OEM - ORIGINAL EQUIPMENT MANUFACTURER
- PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF OWNER.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. 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 THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- DELETED.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.
- CONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. CONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE OWNER. ROUTING OF TRENCHING SHALL BE APPROVED BY OWNER.
- THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
- CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
- CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
- ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.
- ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS UNLESS OTHERWISE SPECIFIED. ALL CONCRETING WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
- ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.
- CONSTRUCTION SHALL COMPLY WITH SPECIFICATION 24782-000-3APS-AOOZ-00002, "GENERAL CONSTRUCTION SERVICES.
- CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. CONTRACTOR SHALL NOTIFY THE OWNER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
- THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY CONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH OWNER. ALSO, WORK MAY NEED TO BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
- SINCE THE CELL SITE MAY BE ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE REQUIRED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

GROUNDING NOTES:

- THE CONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE CONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE OWNER FOR RESOLUTION.
- ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GESS) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
- THE CONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS. TESTS SHALL BE PERFORMED IN ACCORDANCE WITH 24782-000-3PS-EG00-0001, DESIGN & TESTING OF FACILITY GROUNDING FOR CELL SITES.
- METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
- EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS; 2 AWS STRANDED COPPER FOR OUTDOOR BTS.
- EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
- APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
- ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED WITH STAINLESS STEEL HARDWARE TO THE BRIDGE AND THE TOWER GROUND BAR.
- ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
- MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
- METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
- GROUND CONDUCTORS USED IN THE FACILITY GROUND AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC PLASTIC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (E.G., NON-METALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
- ALL TOWER GROUNDING SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF ANSI/TIA 222. FOR TOWERS BEING BUILT TO REV G OF THE STANDARD, THE WIRE SIZE OF THE BURIED GROUND RING AND CONNECTIONS BETWEEN THE TOWER AND THE BURIED GROUND RING SHALL BE CHANGED FROM 2 AWG TO 2/0 AWG. IN ADDITION, THE MINIMUM LENGTH OF THE GROUND RODS SHALL BE INCREASED FROM 8 FEET TO 10 FEET.

CONCRETE AND REINFORCING STEEL NOTES:

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE.
- REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, U.N.O.
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

CONCRETE CAST AGAINST EARTH	3 IN.
CONCRETE EXPOSED TO EARTH OR WEATHER:	
#6 AND LARGER	2 IN.
#5 AND SMALLER & WWF	1-1/2 IN.
CONCRETE NOT EXPOSED TO EARTH OR WEATHER, NOR CAST AGAINST THE GROUND:	
SLAB AND WALL	3/4 IN.
BEAMS AND COLUMNS	1-1/2 IN.
- A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, U.N.O., IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD OR APPROVED EQUAL.
- CONCRETE CYLINDER TEST IS NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS (UBC 1905.6.1.3) IN THAT EVENT THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER;

(A) RESULTS OF CONCRETE CYLINDER TESTS PERFORMED AT THE SUPPLIER'S PLANT,
(B) CERTIFICATION OF MINIMUM COMPRESSIVE STRENGTH FOR THE CONCRETE GRADE SUPPLIED. FOR GREATER THAN 50 CUBIC YARDS THE GC SHALL PERFORM THE CONCRETE CYLINDER TEST.



1355 WEST UNIVERSITY DRIVE
MESA, AZ 85201-5419

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0	05/20/24	PRELIMINARY
REV.	DATE	REVISION DESCRIPTION

THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND SPEC'S. UNLESS SPECIFICALLY STATED OTHERWISE, THE MANUFACTURER'S EQUIPMENT INSTALLATION SPEC'S SHALL ALWAYS BE VERIFIED BY THE CONTRACTOR BEFORE INSTALLATION

PROJECT INFORMATION:
**COLO6032
MEDIAN POINT
24860 HIGHWAY 115
PENROSE, CO 81240
FREMONT**

DRAWN BY: **JM** CHECKED BY: **CM**

SHEET TITLE:
SPECIFICATIONS

SHEET NUMBER: **T-2B** REV.: **0**

SITE WORK GENERAL NOTES:

1. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING & EXCAVATION.
3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
5. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, OWNER AND/OR LOCAL UTILITIES.
6. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION.
7. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE AT&T MOBILITY SPECIFICATION FOR SITE SIGNAGE.
8. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
9. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
10. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
11. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION.
12. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL JURISDICTION'S GUIDELINES FOR EROSION AND SEDIMENT CONTROL.

STRUCTURAL STEEL NOTES:

1. ALL STEEL WORK SHALL BE PAINTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND IN ACCORDANCE WITH ASTM A36 UNLESS OTHERWISE NOTED.
2. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION". PAINTED SURFACES SHALL BE TOUCHED UP.
3. BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE (3/4"Ø) CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
4. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.
5. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS.
6. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. THE ANCHOR BOLT DOWEL AND ROD SHALL BE STAINLESS STEEL WITH STAINLESS STEEL WASHERS.

SOIL COMPACTION NOTES FOR SLAB ON GRADE:

1. EXCAVATE AS REQUIRED TO REMOVE VEGETATION & TOPSOIL EXPOSE UNDISTURBED NATURAL SUBGRADE AND PLACE CRUSHED STONE AS REQUIRED.
2. COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR ENGINEER IS ACCEPTABLE.
3. AS AN ALTERNATIVE TO INSPECTION AND WRITTEN CERTIFICATION, THE "UNDISTURBED SOIL" BASE SHALL BE COMPACTED WITH "COMPACTION EQUIPMENT", LISTED BELOW, TO AT LEAST 90% MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM D 1557 METHOD C.
4. COMPACTED SUBBASE SHALL BE UNIFORM & LEVELED. PROVIDE 6" MINIMUM CRUSHED STONE OR GRAVEL COMPACTED IN 3" LIFTS ABOVE COMPACTED SOIL. GRAVEL SHALL BE NATURAL OR CRUSHED WITH 100% PASSING 1" SIEVE.

COMPACTION EQUIPMENT:

HAND OPERATED DOUBLE DRUM, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR.

ELECTRICAL INSTALLATION NOTES:

1. WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.
2. CONTRACTOR SHALL MODIFY EXISTING CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLING TO THE NEW BTS EQUIPMENT. CONTRACTOR SHALL SUBMIT MODIFICATIONS TO OWNER FOR APPROVAL.
3. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.
4. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
5. EACH END OF EVERY POWER, GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA, AND MATCH EXISTING INSTALLATION REQUIREMENTS.
6. POWER PHASE CONDUCTORS (I.E., HOTS) SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). PHASE CONDUCTOR COLOR CODES SHALL CONFORM WITH THE NEC & OSHA AND MATCH EXISTING INSTALLATION REQUIREMENTS.
7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S).
8. PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.
9. ALL TIE WRAPS WHERE PERMITTED SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES. USE LOW PROFILE TIE WRAPS.
10. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (12 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (6 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
12. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR 2 AWG SOLID TINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED.
13. POWER WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (12 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.
14. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).
15. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANS/IEEE, AND NEC.
16. NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
17. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40, OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
18. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
19. GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
20. RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.
21. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
22. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
23. CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANS/IEEE, AND NEC.
24. CABINETS, BOXES, AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
25. WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
26. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
27. METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED, OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
28. NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
29. THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE OWNER BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
30. THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODS AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.



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MESA, AZ 85201-5419

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0	05/20/24	PRELIMINARY
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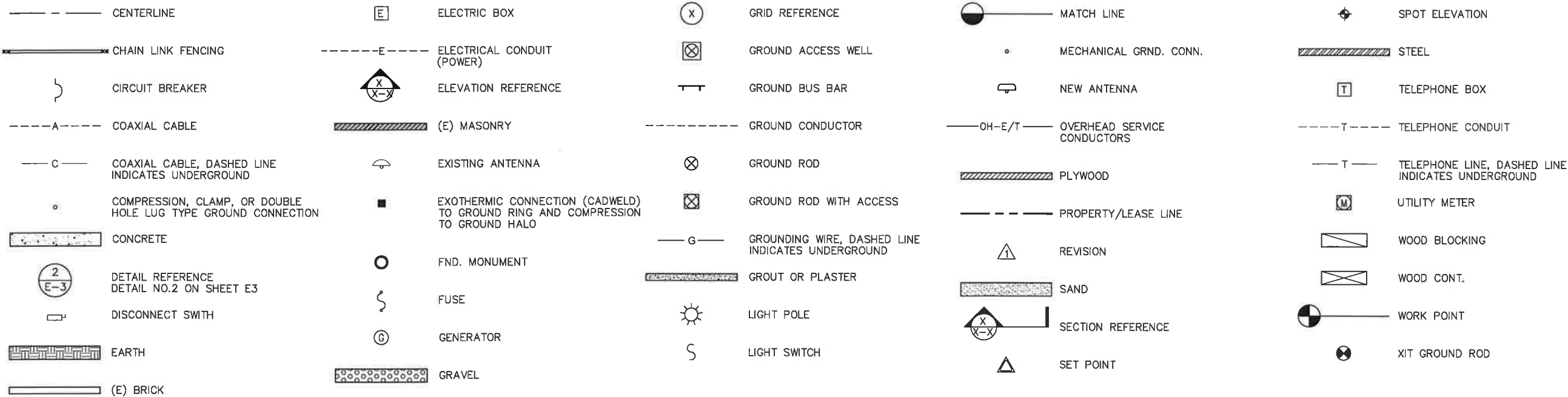
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PROJECT INFORMATION:
**COLO6032
MEDIAN POINT
24860 HIGHWAY 115
PENROSE, CO 81240
FREMONT**

DRAWN BY: JM	CHECKED BY: CM
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SHEET TITLE:
SPECIFICATIONS

SHEET NUMBER: T-3B	REV.: 0
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LEGEND

1

ABBREVIATION	DEFINITION	ABBREVIATION	DEFINITION	ABBREVIATION	DEFINITION
A.B.	ANCHOR BOLT	FAB.	FABRICATION(OR)	P.S.I.	POUNDS PER SQUARE INCH
ABV.	ABOVE	F.F.	FINISH FLOOR	P.T.	PRESSURE TREATED
ACCA	ANTENNA CABLE COVER ASSEMBLY	F.G.	FINISH GRADE	PVC.	POLYVINYL CHLORIDE CONDUIT
ADD'L	ADDITIONAL	FIN.	FINISH(ED)	PWR.	POWER (CABINET)
A.F.F.	ABOVE FINISHED FLOOR	FLR.	FLOOR	QTY.	QUANTITY
A.F.G.	ABOVE FINISHED GRADE	FDN.	FOUNDATION	RAD.(R)	RADIUS
ALUM.	ALUMINUM	F.O.C.	FACE OF CONCRETE	RAN.	RADIO ACCESS NODE
ALT.	ALTERNATE	F.O.M.	FACE OF MASONRY	REF.	REFERENCE
ANT.	ANTENNA	F.O.S.	FACE OF STUD	REINF.	REINFORCEMENT(ING)
APPRX.	APPROXIMATE(LY)	F.O.W.	FACE OF WALL	REQ'D.	REQUIRED
ARCH.	ARCHITECT(URAL)	F.S.	FINISH SURFACE	RGS.	RIGID GALVANIZED STEEL
AWG.	AMERICAN WIRE GAUGE	FT.(')	FOOT(FEET)	RWY.	RACEWAY
BLDG.	BUILDING	FTG.	FOOTING	SCH.	SCHEDULE
BLK.	BLOCK	G.	GROWTH (CABINET)	SHT.	SHEET
BLKG.	BLOCKING	GA.	GAUGE	SIM.	SIMILAR
BM.	BEAM	GEN.	GENERATOR	S.L.D.	SINGLE LINE DIAGRAM
B.N.	BOUNDARY NAILING	GI.	GALVANIZE(D)	SPEC.	SPECIFICATION(S)
BTCW.	BARE TINNED COPPER WIRE	G.F.I.	GROUND FAULT CIRCUIT INTERRUPTER	SQ.	SQUARE
B.O.F.	BOTTOM OF FOOTING	GLB.(GLU-LAM)	GLUE LAMINATED BEAM	S.S.	STAINLESS STEEL
B/U	BACK-UP CABINET	GPS	GLOBAL POSITIONING SYSTEM	STD.	STANDARD
C	CONDUIT	GR.	GROWTH	STL.	STEEL
CAB.	CABINET	GRND.	GROUND	STRUC.	STRUCTURAL
CANT.	CANTILEVER(ED)	GSM.	GLOBAL SYSTEM MOBILE COMMUNICATIONS	TEL.	TELEPHONE
C.I.P.	CAST IN PLACE	HDR.	HEADER	TEMP.	TEMPORARY
CIGBE	COAX INSULATED GROUND BAR EXTERNAL	HGR.	HANGER	THK.	THICK(NESS)
CL.	CENTER LINE	HT.	HEIGHT	TMLP	AT&T LIMITED PARTNERSHIP
CLG.	CEILING	ICGB.	ISOLATED COPPER GROUND BUS	T.N.	TOE NAIL
CLR.	CLEAR	IGR.	INTERIOR GROUND RING (HALO)	T.O.A.	TOP OF ANTENNA
CO.	CONDUIT ONLY	IN.(")	INCH(ES)	T.O.C.	TOP OF CURB
COL.	COLUMN	INT.	INTERIOR	T.O.F.	TOP OF FOUNDATION
CONC.	CONCRETE	LB.(#)	POUND(S)	T.O.P.	TOP OF PLATE (PARAPET)
CONN.	CONNECTION(OR)	L.B.	LAG BOLTS	T.O.S.	TOP OF STEEL
CONST.	CONSTRUCTION	L.F.	LINEAR FEET (FOOT)	T.O.W.	TOP OF WALL
CONT.	CONTINUOUS	L.	LONG(ITU)DINAL	TYP.	TYPICAL
d	PENNY (NAILS)	LTE.	LONG TERM EVOLUTION	U.G.	UNDER GROUND
DBL.	DOUBLE	MAS.	MASONRY	U.L.	UNDERWRITERS LABORATORY
DEPT.	DEPARTMENT	MAX.	MAXIMUM	UMTS.	UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM
D.F.	DOUGLAS FIR	M.B.	MACHINE BOLT	U.N.O.	UNLESS NOTED OTHERWISE
DIA.	DIAMETER	MECH.	MECHANICAL	V.I.F.	VERIFY IN FIELD
DIAG.	DIAGONAL	MFR.	MANUFACTURER	W	WIDE(WIDTH)
DIM.	DIMENSION	MIGB	MASTER ISOLATED GROUND BAR	W/	WITH
DWG.	DRAWING(S)	MIN.	MINIMUM	WD.	WOOD
DWL.	DOWEL(S)	MISC.	MISCELLANEOUS	W.P.	WEATHERPROOF
EA.	EACH	MTL.	METAL	WT.	WEIGHT
EL.	ELEVATION	(N)	NEW	⊕	CENTERLINE
ELEC.	ELECTRICAL	NO.(#)	NUMBER	⊖	PLATE
ELEV.	ELEVATOR	N.T.S.	NOT TO SCALE		
EMT.	ELECTRICAL METALLIC TUBING	O.C.	ON CENTER		
E.N.	EDGE NAIL	OPNG.	OPENING		
ENG.	ENGINEER	P/C	PRECAST CONCRETE		
ENG.	ENGINEER	PCS	PERSONAL COMMUNICATION SERVICES		
EQ.	EQUAL	PLY.	PLYWOOD		
EXP.	EXPANSION	PPC	POWER PROTECTION CABINET		
EXST.(E)	EXISTING	PRC	PRIMARY RADIO CABINET		
EXT.	EXTERIOR	P.S.F.	POUNDS PER SQUARE FOOT		

ABBREVIATIONS

2



1355 WEST UNIVERSITY DRIVE
MESA, AZ 85201-5419

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8767 E. VIA DE VENTURA
SUITE 200
SCOTTSDALE, AZ 85258



3450 N HIGLEY RD - SUITE 102,
MESA, AZ 85215



0	05/20/24	PRELIMINARY
REV.	DATE	REVISION DESCRIPTION

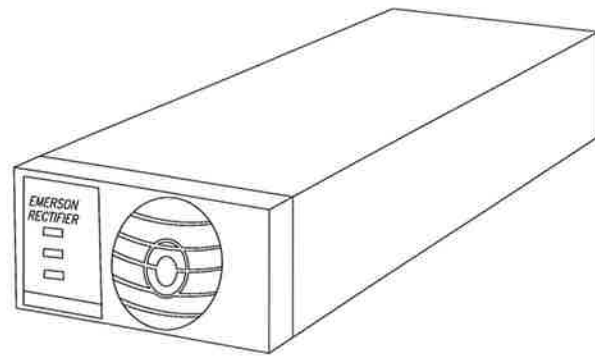
THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND SPEC'S. UNLESS SPECIFICALLY STATED OTHERWISE, THE MANUFACTURERS EQUIPMENT INSTALLATION SPEC'S SHALL ALWAYS BE VERIFIED BY THE CONTRACTOR BEFORE INSTALLATION.

PROJECT INFORMATION:
COLO6032
MEDIAN POINT
24860 HIGHWAY 115
PENROSE, CO 81240
FREMONT

DRAWN BY: **JM** CHECKED BY: **CM**

SHEET TITLE:
LEGEND & ABBREVIATIONS

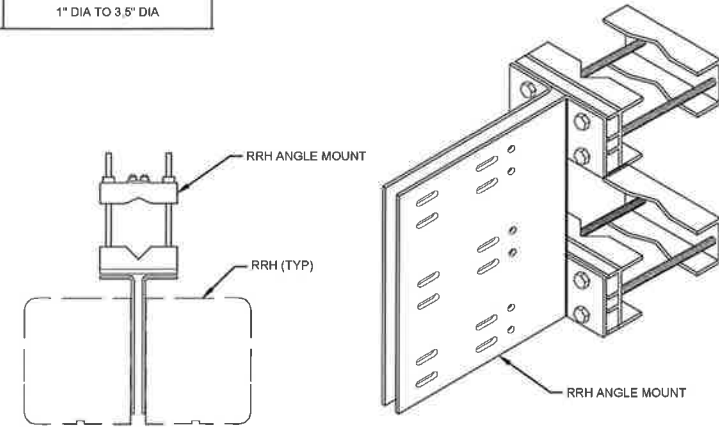
SHEET NUMBER: **T-4B** REV.: **0**



NEQ.15930 1R482000E3
RECTIFIER, NETSURE™ 512 & 721, HIGH EFFICIENCY,
-48 VDC, 40 A/2000 W, 120/208/240 VAC,
SINGLE-PHASE INPUT, 4.4 LBS.

BACK TO BACK ANGLE MOUNT

ERICSSON SXX 1255394/2	
TOTAL WEIGHT (UNFINISHED)	22LBS 10KG
ROUND LEGS	1/2" DIA TO 5" DIA
60 DEGREE ANGLE LEGS	1" DIA TO 5" DIA
90 DEGREE ANGLE LEGS	1" DIA TO 3.5" DIA



RECTIFIER DETAIL

NOT TO SCALE

1 NOT USED

NOT TO SCALE

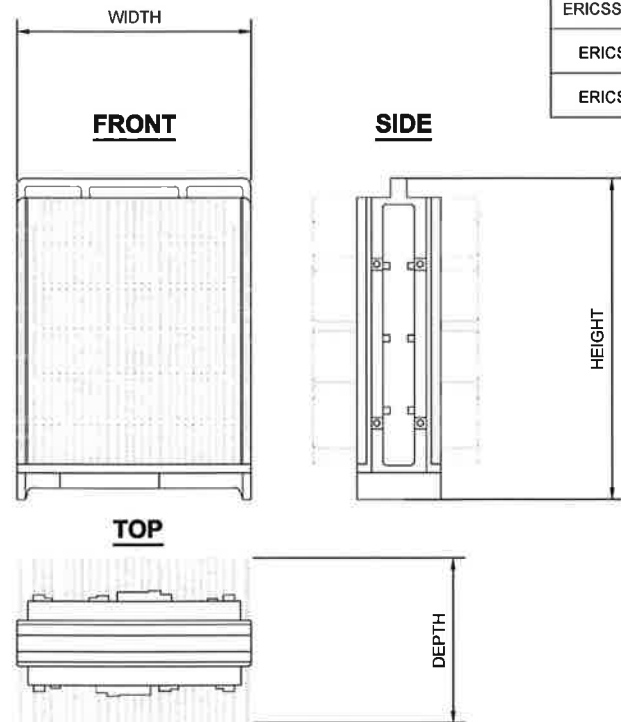
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RRH MOUNTING DETAIL

NOT TO SCALE

3

RRH MODEL	DIMENSIONS (HXWXD)	WEIGHT(LBS)
ERICSSON 4490 B5/B12	17.5"X15.2"X6.8"	68.4
ERICSSON 4890 B25/B66	17.5"X15.1"X6.9"	69.5
ERICSSON 4415 B30	16.5"X13.5"X5.9"	46.3
ERICSSON 4478 B14	15.0"X13.2"X7.3"	59.4



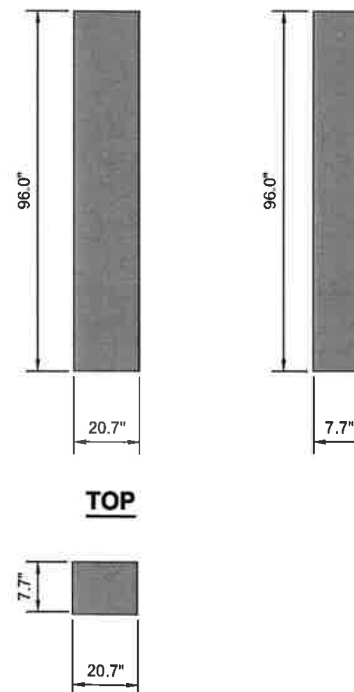
**CCI
TPA65R-BU8D**

DIMENSIONS, HxWxD 96.0" X 20.7" X 7.7"

WEIGHT W/O
PREMOUNTED BRACKETS: 87.1 LBS

FRONT

SIDE



RRH DETAILS

NOT TO SCALE

4

ANTENNA DETAILS

NOT TO SCALE

5



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THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND
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STATED OTHERWISE, THE MANUFACTURERS EQUIPMENT
INSTALLATION SPECS SHALL ALWAYS BE VERIFIED BY THE
CONTRACTOR BEFORE INSTALLATION

PROJECT INFORMATION:
**COLO6032
MEDIAN POINT
24860 HIGHWAY 115
PENROSE, CO 81240
FREMONT**

DRAWN BY: **JM** CHECKED BY: **CM**

SHEET TITLE: **DETAILS**

SHEET NUMBER: **D-1B** REV.: **0**



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PROJECT INFORMATION:
COLO6032
MEDIAN POINT
24860 HIGHWAY 115
PENROSE, CO 81240
FREMONT

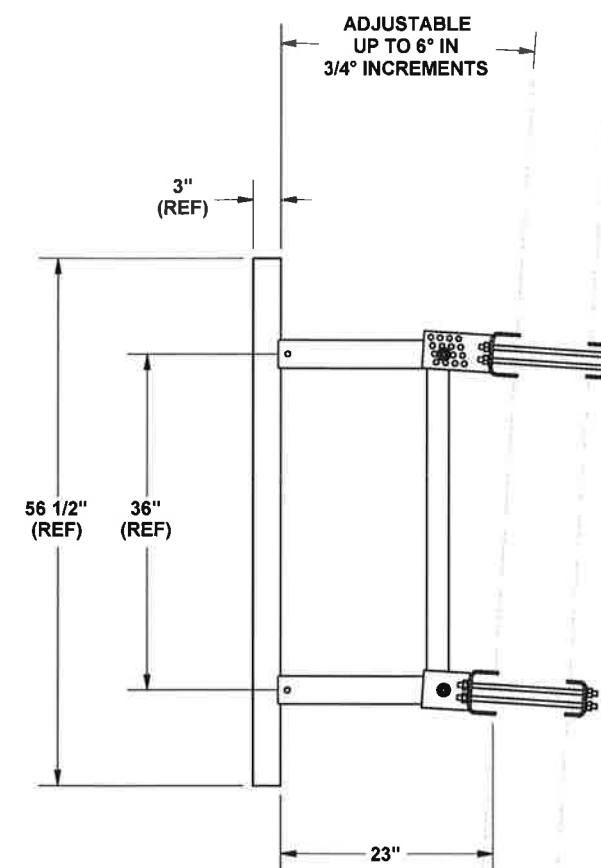
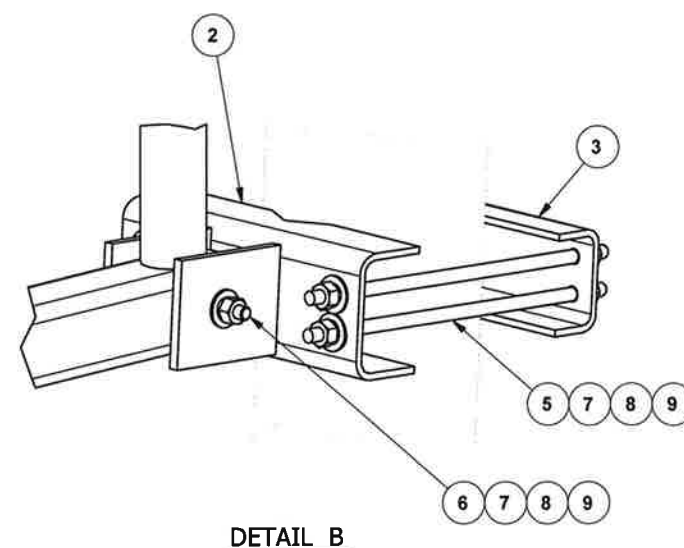
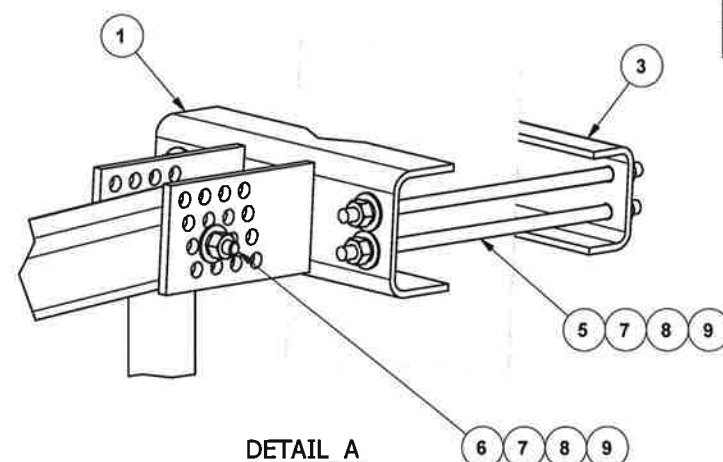
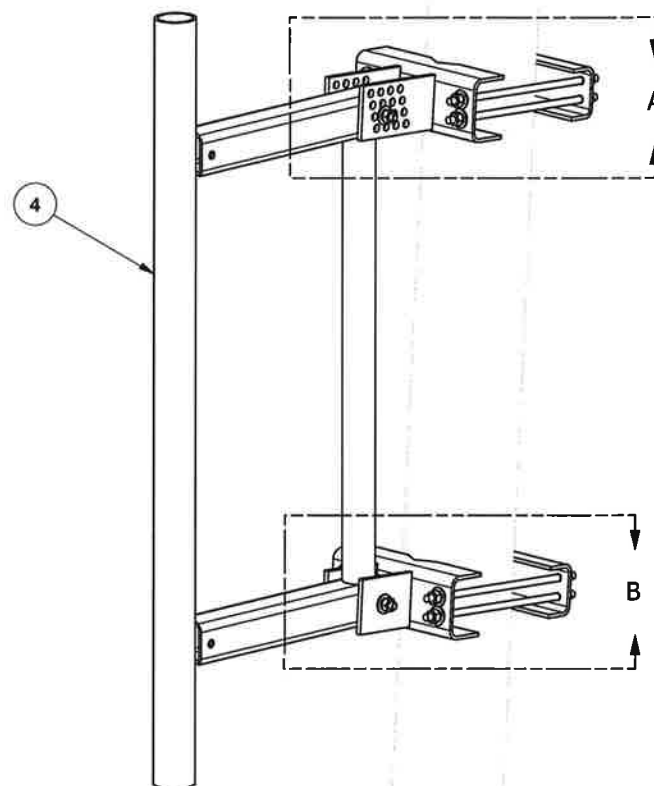
DRAWN BY: **JM** CHECKED BY: **CM**

SHEET TITLE: **DETAILS**

SHEET NUMBER: **D-2B** REV.: **0**

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	1	CFM	UPPER GATE FOOT WELDMENT		13.90	13.90
2	1	CFS	LOWER GATE FOOT WELDMENT		12.72	12.72
3	2	GBB	GATE BACKING BAR		4.53	9.06
4	1	2PBG	24" PIPE MOUNT STANDOFF ARM		71.96	71.96
5	8	G12R-12	1/2" x 12" GALV. THREADED ROD		0.67	5.35
5	8	G12R-15	1/2" x 15" GALV. THREADED ROD		0.84	6.69
6	2	A1205	1/2" x 5" A325 HDG BOLT		0.34	0.69
7	18	G12FW	1/2" HDG USS FLATWASHER		0.03	0.61
8	18	G12LW	1/2" HDG LOCKWASHER		0.01	0.25
9	18	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	1.29
					TOTAL WT. #	128.25

EXISTING LEG,
1" TO 8" ROUND LEGS
OR 60° ANGLE LEGS



TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
 SAWED, SHEARED AND GAS CUT EDGES (± 0.030")
 DRILLED AND GAS CUT HOLES (± 0.030") - NO CONING OF HOLES
 LASER CUT EDGES AND HOLES (± 0.010") - NO CONING OF HOLES
 BENDS ARE ± 1/2 DEGREE
 ALL OTHER MACHINING (± 0.030")
 ALL OTHER ASSEMBLY (± 0.060")

PROPRIETARY NOTE:
 THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.

DESCRIPTION
**24" ULTIMATE UNIVERSAL
 STANDOFF FRAME**



Locations:
 New York, NY
 Atlanta, GA
 Los Angeles, CA
 Plymouth, IN
 Salem, OR
 Dallas, TX

Engineering Support Team:
 1-888-753-7446

A valmont COMPANY

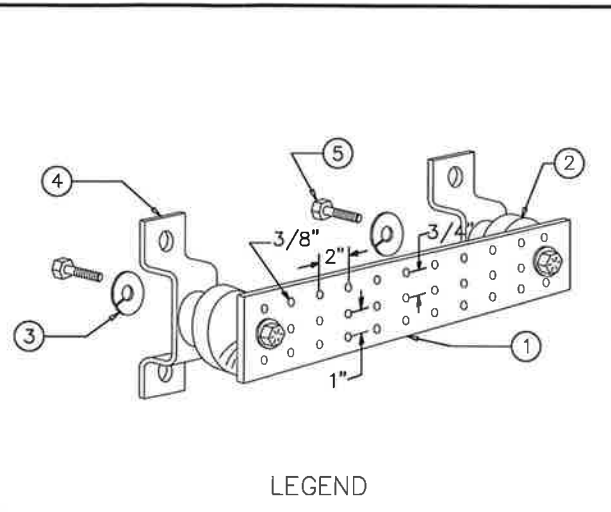
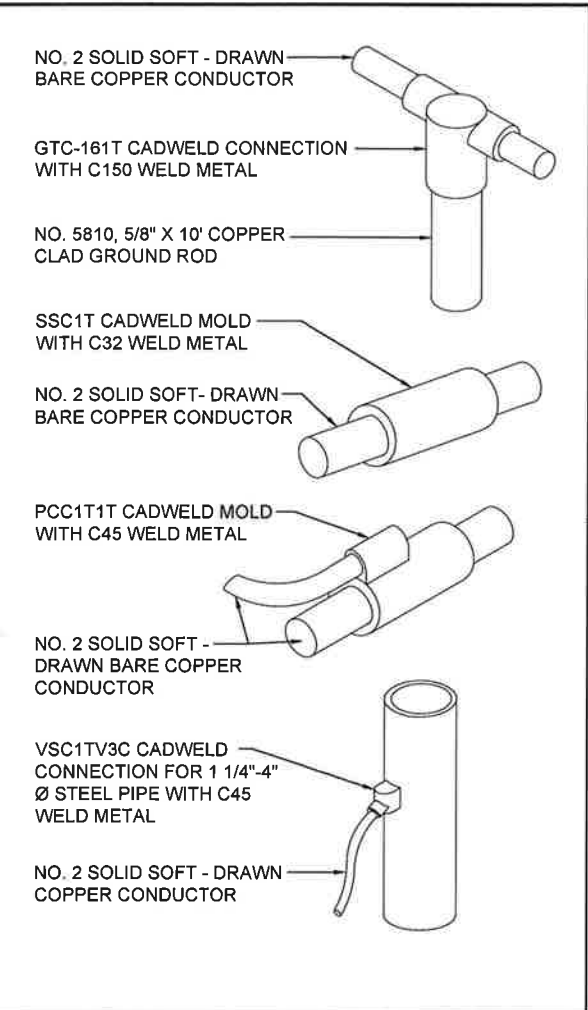
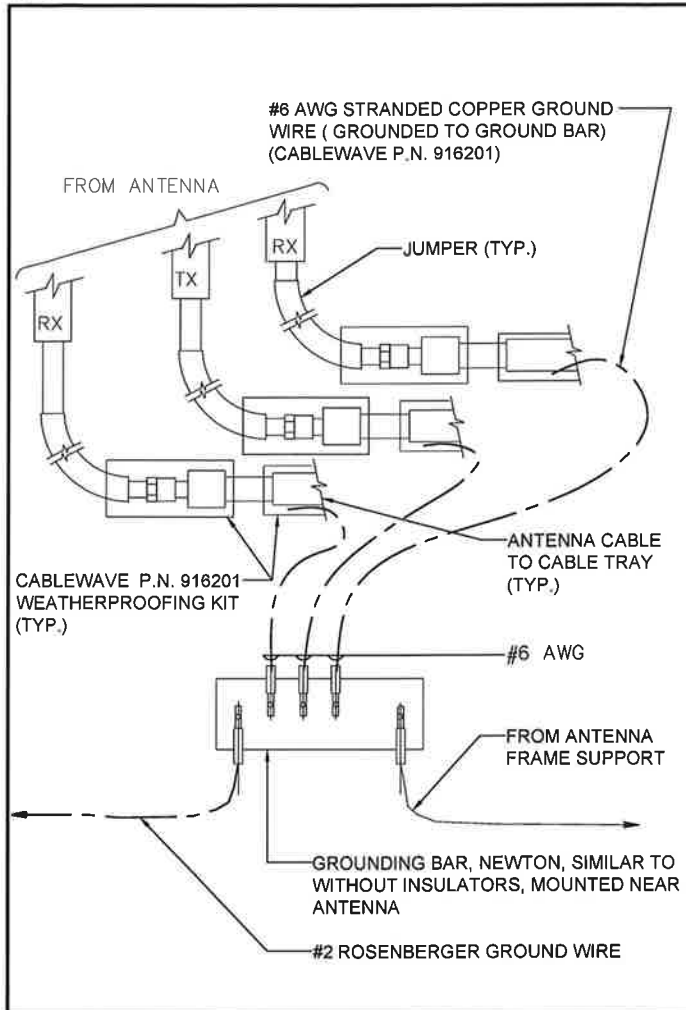
CPD NO.	DRAWN BY	ENG. APPROVAL
	RCH 2/1/2011	
CLASS	SUB	DRAWING USAGE
81	01	CUSTOMER
		CHECKED BY
		BMC 2/16/2011

PART NO.	USF-2U
DWG. NO.	USF-2U

1 OF 1
PAGE

STAND-OFF MOUNT DETAIL

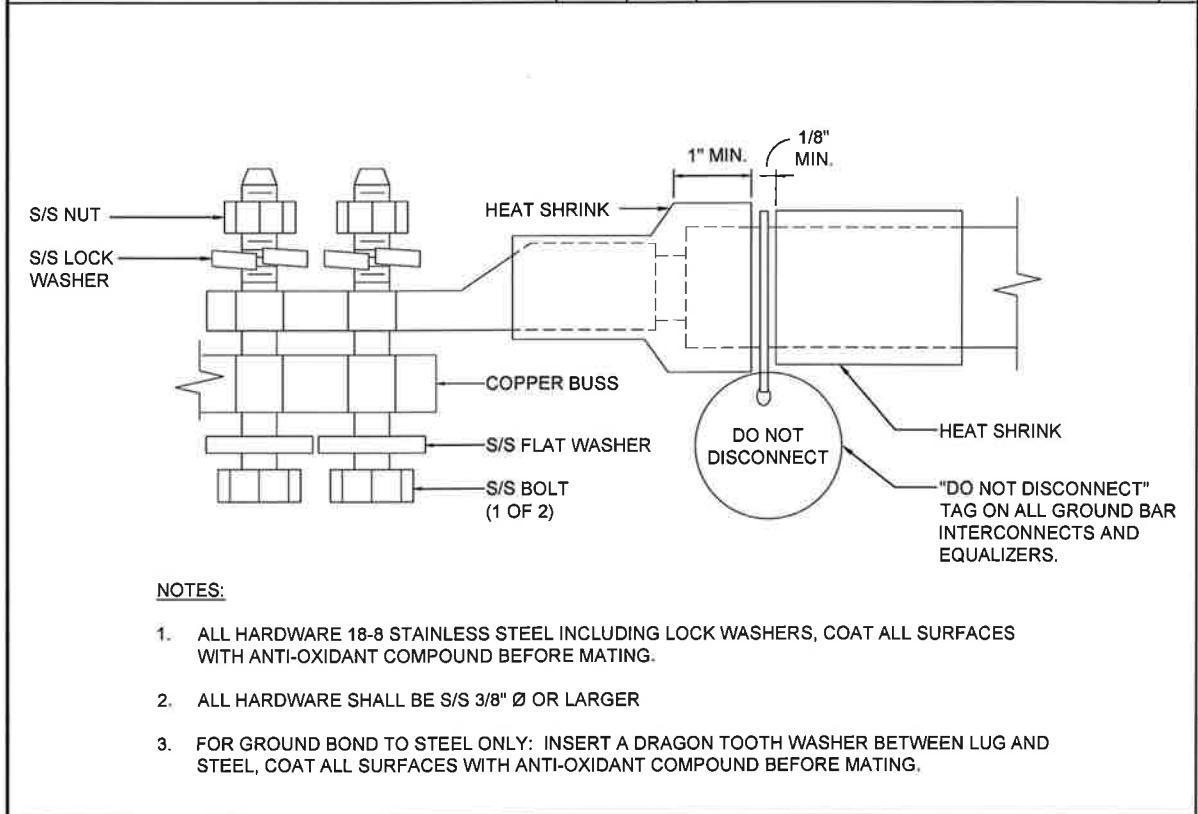
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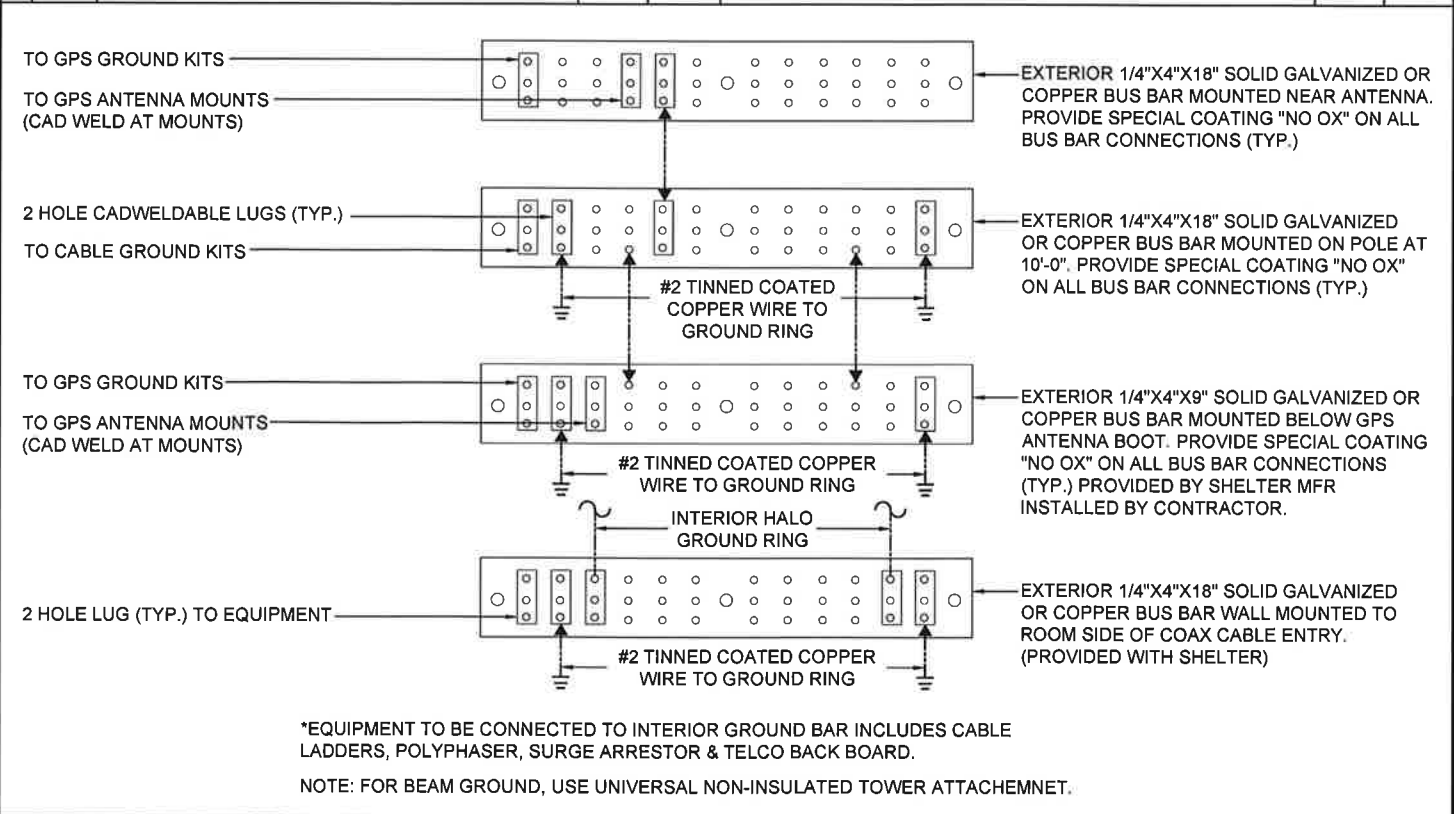
1. TINNED COPPER GROUND BAR, 1/4"x4"x20", NEWTON INSTRUMENT CO. CAT. NO. B-6142 OR EQUAL. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
2. INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4
3. 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8
4. WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-5056
5. 5/8-11 X 1" HHCS BOLTS, NEWTON INSTRUMENT CO. CAT NO. 3012-1

- NOTES:
1. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION REQUIREMENTS AND CONSTRUCTION ACCORDING TO SITE CONDITIONS.
 2. ALL GROUNDING CONDUCTORS: #2 AWG SOLID BARE TINNED COPPER WIRE UNLESS OTHERWISE NOTED.
 3. GROUND BAR LOCATED IN BASE OF EQUIPMENT WILL BE PROVIDED, FURNISHED AND INSTALLED BY THE VENDOR.
 4. ALL BELOW GRADE CONNECTIONS: EXOTHERMIC WELD TYPE, ABOVE GRADE CONNECTIONS: EXOTHERMIC WELD TYPE.
 5. GROUND RING SHALL BE LOCATED A MINIMUM OF 30" BELOW GRADE OR 6" MINIMUM BELOW THE FROST LINE, WHICH EVER IS DEEPER.
 6. INSTALL GROUND CONDUCTORS AND GROUND ROD MINIMUM OF 1'-0" FROM EQUIPMENT CONCRETE SLAB, SPREAD FOOTING, OR FENCE.
 7. EXOTHERMIC WELD GROUND CONNECTION TO FENCE POST: TREAT WITH A COLD GALVANIZED SPRAY.
 8. GROUND BARS:
 - A. EQUIPMENT GROUND BUS BAR (EGB) LOCATED AT BOTTOM OF ANTENNA POLE/MAST FOR MAKING GROUNDING JUMPER CONNECTIONS TO COAX FEEDER CABLES SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. JUMPERS (FURNISHED BY OWNERS) SHALL BE INSTALLED AND CONNECTED BY ELECTRICAL CONTRACTOR.
 - B. MAIN GROUND BUS BAR (MGB) LOCATED NEAR THE BASE OF THE RADIO EQUIPMENT CABINET(S) SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
 9. ALL GROUNDING INSTALLATIONS AND CONNECTIONS SHALL BE MADE BY ELECTRICAL CONTRACTOR.
 10. OBSERVE N.E.C. AND LOCAL UTILITY REQUIREMENTS FOR ELECTRICAL SERVICE GROUNDING.
 11. GROUNDING ATTACHMENT TO TOWER SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS OR AT GROUNDING POINTS PROVIDED (2 MINIMUM).

ANTENNA CABLE GROUND 1 CADWELDS 2 GROUND BAR 3 GROUNDING NOTES 4



TWO LUG GROUND 5



GROUND BAR 6

1355 WEST UNIVERSITY DRIVE
MESA, AZ 85201-5419

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8767 E. VIA DE VENTURA
SUITE 200
SCOTTSDALE, AZ 85258

INFRASTRUCTURE SERVICES
3450 N HIGLEY RD - SUITE 102,
MESA, AZ 85215

SIGNED, 20 MAY 2024

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PROJECT INFORMATION: COLO6032 MEDIAN POINT 24860 HIGHWAY 115 PENROSE, CO 81240 FREMONT		
DRAWN BY:	CHECKED BY:	
JM	CM	
SHEET TITLE:		
GROUNDING PLANS DETAILS & NOTES		
SHEET NUMBER:	REV.:	
G-1B	0	