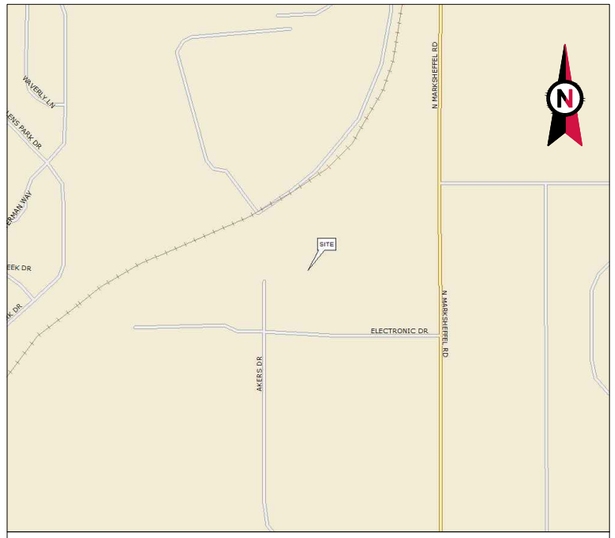
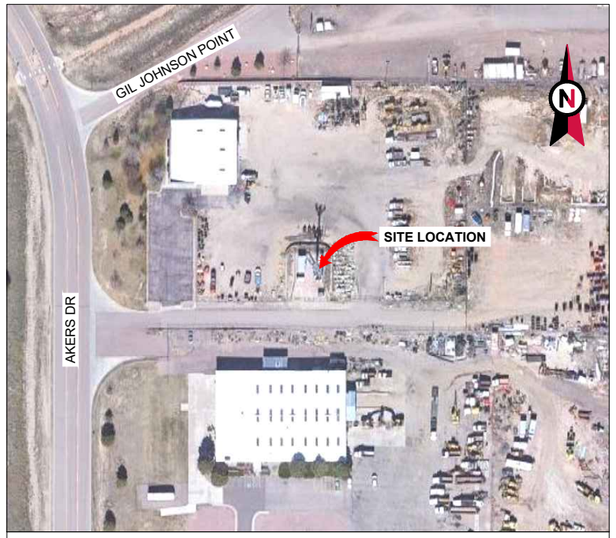


VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: ELSMERE CO 1
ATC SITE NUMBER: 302459
AT&T PACE NUMBER: MRUTH041226 (LTE 5C), MRUTH041230 (5G NR), MRUTH041231 (4TXRX ANTENNA RETROFIT)
AT&T SITE ID: COL02062
AT&T FA CODE:10102196
AT&T SITE NAME: CONSTITUTION AND HWY 24
SITE ADDRESS: 2865 AKERS DRIVE
COLORADO SPRINGS, CO 80922-1520

AT&T MOBILITY
ANTENNA AMENDMENT PLAN



LOCATION MAP

COMPLIANCE CODE

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

1. INTERNATIONAL BUILDING CODE (IBC)
2. NATIONAL ELECTRIC CODE (NEC)
3. LOCAL BUILDING CODE
4. CITY/COUNTY ORDINANCES

UTILITY COMPANIES

POWER COMPANY: MOUNTAIN VIEW ELECTRIC
PHONE: (800) 388-9881

TELEPHONE COMPANY: QWEST
PHONE: (866) 642-0444

811 Know what's below. Call before you dig.

PROJECT SUMMARY

SITE ADDRESS:

2865 AKERS DRIVE

COLORADO SPRINGS, CO 80922-1520

COUNTY: EL PASO

GEOGRAPHIC COORDINATES:

LATITUDE: 38.87495556

LONGITUDE: -104.68623056

GROUND ELEVATION: 6542' AMSL

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801
NATALIE.KENADY@
AMERICANTOWER.COM

ENGINEER:

TOWER ENGINEERING
PROFESSIONALS
326 TRYON RD
RALEIGH, NC 27603

PROPERTY OWNER:

D & K ACKERS LLC
2865 AKERS DRIVE
COLORADO SPRINGS, CO 80922

MOUNT ANALYSIS: YES

APPLICANT:

AT&T MOBILITY
161 INVERNESS DR, 2ND FLOOR
ENGLEWOOD, CO 80112
CONTACT: CONNOR RICHARDS
PHONE: (303) 828-7114
EMAIL: CR195T@ATT.COM

AT&T NOC:

(800) 638-2822
NOC@ATT.COM

LEASE LEGAL ENTITY:

NEW CINGULAR
WIRELESS PCS, LLC, A
DELAWARE LIMITED
LIABILITY COMPANY

PROJECT DESCRIPTION

THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW:

TOWER WORK:

REMOVE (6) ANTENNA(S), (6) TMA(s), (6) RRU(s), (2) 2" CONDUIT(S), AND (2) 3/8" RET CONTROL CABLE(S).

INSTALL (6) ANTENNA(S) AND (9) RRU(s).

GROUND WORK:

REMOVE (1) GSM CABINET(S), (1) POWER PLANT(S), (8) GNB MARATHON M12V155FT BATTERIES, (1) 200A POWER PANEL(S), (1) 100A SUB-PANEL(S), AND (1) MARCONI CABINET(S).

INSTALL (1) VERTIV NETSURE DC POWER PLANT(S), (24) ENERSYS POWERSAFE SBS-190F BATTERIES, (1) BATTERY CABINET(S), (1) NEMA 3R INTERSECT 200A AUTOMATIC TRANSFER SWITCH WITH INTEGRAL ASCO 300L SERIES 42 CKT LOAD CENTER TO INCLUDE OPTIONAL TVSS AND GENERATOR CAMLOK(S), (1) FLX21 CABINET(S), (1) NOKIA 5GNR W/ (1) ABIL CARD & (1) ASIK CARD, (3) DC UP-CONVERTER(S) FOR AHCA, (6) DC UP-CONVERTER(S) FOR AHLBBA, (6) DC UP-CONVERTER(S) FOR AHFIB, (3) 20A BREAKER(S) FOR 4X45 B66A, (3) 20A BREAKER(S) FOR RRH4X25-WCS, (1) 100A BREAKER(S) FOR FLX21, AND (1) 25 AMP BREAKER(S) FOR ASIK FOR 5GNR FSM4.

PROJECT NOTES

1. THE FACILITY IS UNMANNED.
2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE.
3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE.
4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED.
5. HANDICAP ACCESS IS NOT REQUIRED.

PROJECT LOCATION DIRECTIONS

I-25 EXIT 146, GO EAST ON AUSTIN BLUFFS PKWY TO BARNES RD., THEN SOUTH ON MARKSHEFFEL RD., WEST ON ELECTRONIC DR., THEN NORTH TO 2865 AKERS DR.

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	0	08/21/20	CAK
G-002	GENERAL NOTES	0	08/21/20	CAK
C-101	DETAILED SITE PLAN	0	08/21/20	CAK
C-102	DETAILED EQUIPMENT LAYOUT	0	08/21/20	CAK
C-201	TOWER ELEVATION	0	08/21/20	CAK
C-401	RF SCHEDULE AND ANTENNA INSTALLATION	0	08/21/20	CAK
C-501	CONSTRUCTION DETAILS	0	08/21/20	CAK
C-502	CONSTRUCTION DETAILS	0	08/21/20	CAK
E-101	ELECTRICAL DETAILS	0	08/21/20	CAK
E-501	GROUNDING DETAILS	0	08/21/20	CAK
R-601	SUPPLEMENTAL	0		
R-602	SUPPLEMENTAL	0		
R-603	SUPPLEMENTAL	0		
R-604	SUPPLEMENTAL	0		
R-605	SUPPLEMENTAL	0		
R-606	SUPPLEMENTAL	0		

Approved
By:Lindsay Darden
Date:09/21/2020 COM-20-047
El Paso County Planning & Community Development

AMERICAN TOWER

PLANS PREPARED BY:
TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	RRG	07/10/20
B	90% CONSTRUCTION	CAK	08/06/20
0	100% CONSTRUCTION	CAK	08/21/20

ATC SITE NUMBER: 302459

ATC SITE NAME: ELSMERE CO 1

AT&T MOBILITY SITE NUMBER:

COL02062

AT&T MOBILITY SITE NAME:

CONSTITUTION AND HWY 24

SITE ADDRESS:
2865 AKERS DRIVE
COLORADO SPRINGS, CO 80922-1520

SEAL:

08/21/20

AT&T

DATE DRAWN:	08/21/20
ATC JOB NO:	13248041
CUSTOMER NAME:	CONSTITUTION AND HWY 24
CUSTOMER ID:	COL02062

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	0

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GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, AT&T MOBILITY "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
   - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
   - B. AC/TELCO INTERFACE BOX (PPC)
   - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
   - D. TOWERS, MONOPOLES
   - E. TOWER LIGHTING
   - F. GENERATORS & LIQUID PROPANE TANK
   - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
   - H. ANTENNAS (INSTALLED BY OTHERS)
   - I. TRANSMISSION LINE
   - J. TRANSMISSION LINE JUMPERS
   - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
   - L. TRANSMISSION LINE GROUND KITS
   - M. HANGERS
   - N. HOISTING GRIPS
   - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF AT&T MOBILITY TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE AT&T MOBILITY REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE AT&T MOBILITY REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE AT&T MOBILITY REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE AT&T MOBILITY CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE AT&T MOBILITY REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH AT&T MOBILITY AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH AT&T MOBILITY REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH AT&T MOBILITY REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY AT&T MOBILITY MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH AT&T MOBILITY SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO AT&T MOBILITY FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO AT&T MOBILITY SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27. CONTRACTOR SHALL NOTIFY AT&T MOBILITY REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE AT&T MOBILITY REP. ANY WORK FOUND BY THE AT&T MOBILITY REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
31. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
32. AT&T MOBILITY FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE AT&T MOBILITY WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
33. AT&T MOBILITY OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO AT&T MOBILITY OR THEIR ARCHITECT/ENGINEER.

SPECIAL CONSTRUCTION ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:

A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY AT&T MOBILITY UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OD COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL AND

B. INSTALL ANTENNA AS INDICATE ON DRAWINGS AND AT&T MOBILITY SPECIFICATIONS.

C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS

D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE AND PROVIDE PRINTOUT OF THAT TEST.

E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.

F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.

G. ANTENNA AND COAXIAL CABLE GROUNDING:

2. ALL EXTERIOR #6 GREED GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.
3. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

AMERICAN TOWER

PLANS PREPARED BY:
TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	RRG	07/10/20
B	90% CONSTRUCTION	CAK	08/06/20
0	100% CONSTRUCTION	CAK	08/21/20

ATC SITE NUMBER: 302459

ATC SITE NAME: ELSMERE CO 1

AT&T MOBILITY SITE NUMBER:

COL02062

AT&T MOBILITY SITE NAME:

CONSTITUTION AND HWY 24

SITE ADDRESS:
2865 AKERS DRIVE
COLORADO SPRINGS, CO 80922-1520

SEAL:

COLORADO LICENSED
GRAHAM M. ANDRES
42045
PROFESSIONAL ENGINEER

08/21/20

AT&T

DATE DRAWN:	08/21/20
ATC JOB NO:	13248041
CUSTOMER NAME:	CONSTITUTION AND HWY 24
CUSTOMER ID:	COL02062

GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	0

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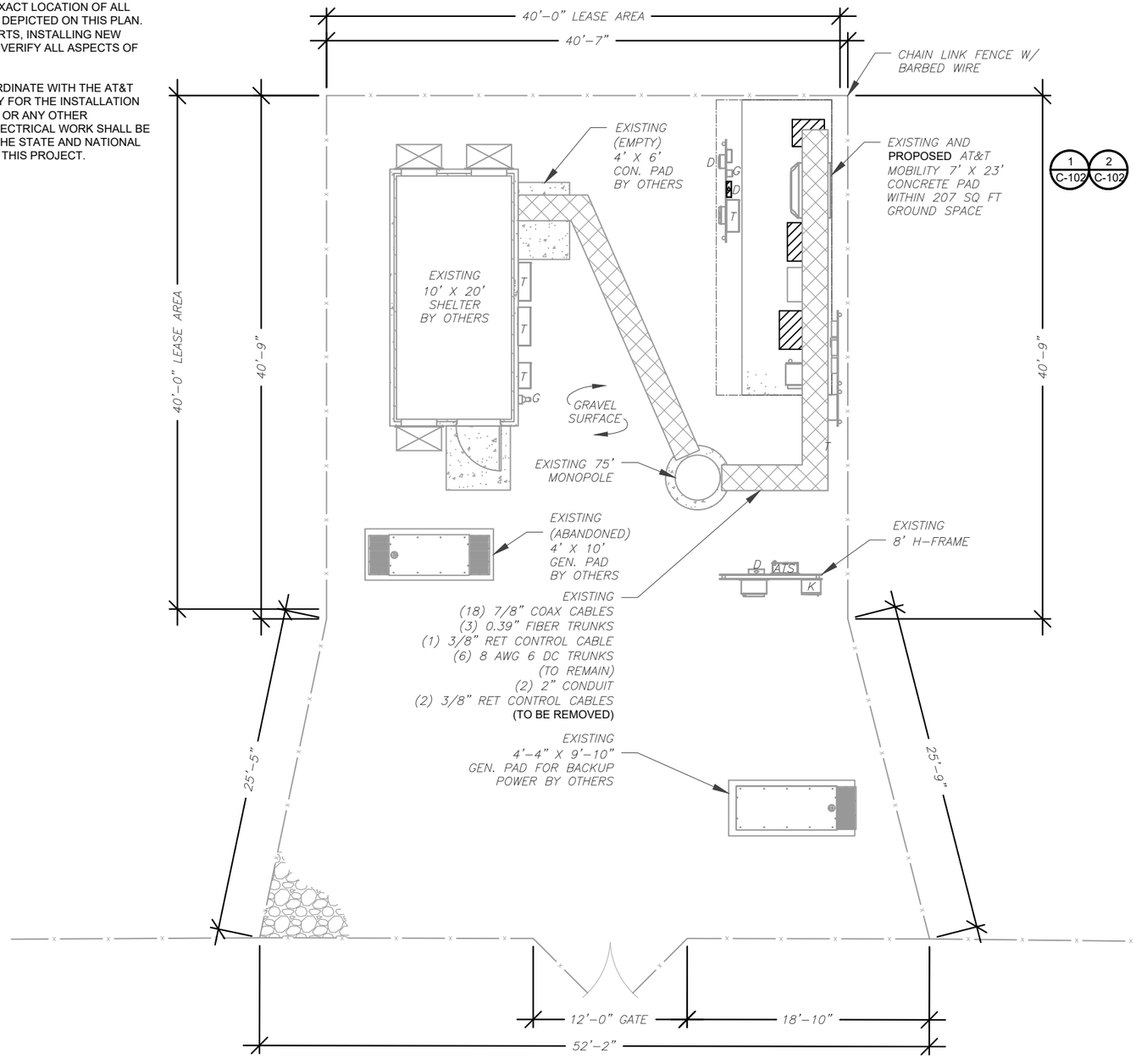
SITE PLAN NOTES:

1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE AT&T MOBILITY REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.

LEGEND

⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACAL
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
——x——	CHAINLINK FENCE



1 DETAILED SITE PLAN
SCALE: 1" = 10'

0 10' 20'

SCALE: 1"=10' (11X17)
1"=5' (22X34)

PROPOSED CABLE LENGTH:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **110'**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES), CDS DEFER TO GREATEST CABLE LENGTH.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.

NOTES:

1. REPLACE EXISTING OUTDOOR POWER PLANT WITH NEW VERTIV NETSURE -48VDC POWER SYSTEM; INSTALL (1) NEW VERTIV NETSURE 512 -48VDC POWER PLANT OUTFITTED WITH (13) EA. HE 2KW -48VDC RECTIFIERS & (5) EA. HE 1.5KW -48VDC/+24VDC CONVERTER MODULES.
2. (3) DC UP-CONVERTER AIRSCALE DUAL RRH B5 AHCA
3. (6) DC UP-CONVERTER AIRSCALE DUAL RRH B25/66 AHFIB
4. (6) DC UP-CONVERTER NOKIA B14/12/29 TRIBAND RRH AHLBBA
5. (1) 100A BREAKER FOR FLEX 21
6. (3) 20A BREAKERS FOR RRH4X45 B66A
7. (3) 20A BREAKERS FOR RRH4X25-WCS
8. (1) 25A BREAKER FOR ASIK FOR 5GNR FSM4
9. REMOVE (8) EXISTING GNB MARATHON M12V155FT BATTERIES. INSTALL (1) NEW VERTIVE -48VDC BATTERY CABINET OUTFITTED WITH (12) NEW ENERSYS POWERSAFE SBS-190F BATTERIES, INSTALL (12) NEW ENERSYS POWERSAFE SBS-190F BATTERIES UNDERNEATH NEW POWER PLANT FOR A TOTAL OF (24) BATTERIES, i.e. (6) STRINGS CONFIGURED @ -48VDC NOMINAL TO ACHIEVE 4.53 HRS OF BATTERY RESERVE
10. REMOVE EXISTING 200A POWER PANEL AND 100A SUB-PANEL
11. INSTALL NEW NEMA 3R INTERSECT AUTOMATIC TRANSFER SWITCH WITH INTEGRAL ASCO 300L SERIES 42 CKT LOAD CENTER TO INCLUDE OPTIONAL TVSS AND GENERATOR CAMLOK
12. INSTALL (1) EA. NEW -48VDC PURCELL FLX21 CABINET

AMERICAN TOWER

PLANS PREPARED BY:

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2865 AKERS DRIVE
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COLORADO LICENSED
GRAHAM M. ANDRES
42045
PROFESSIONAL ENGINEER

08/21/20

AT&T

DATE DRAWN:	08/21/20
ATC JOB NO:	13248041
CUSTOMER NAME:	CONSTITUTION AND HWY 24
CUSTOMER ID:	COL02062

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	0

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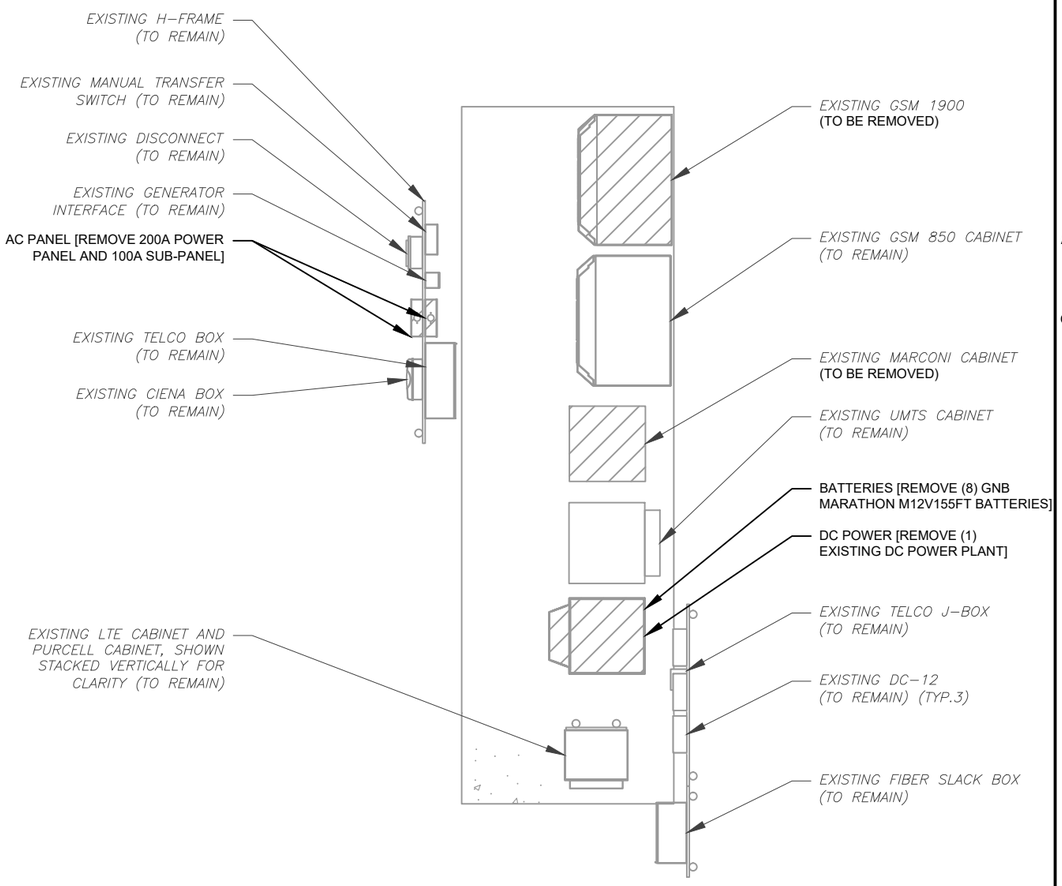
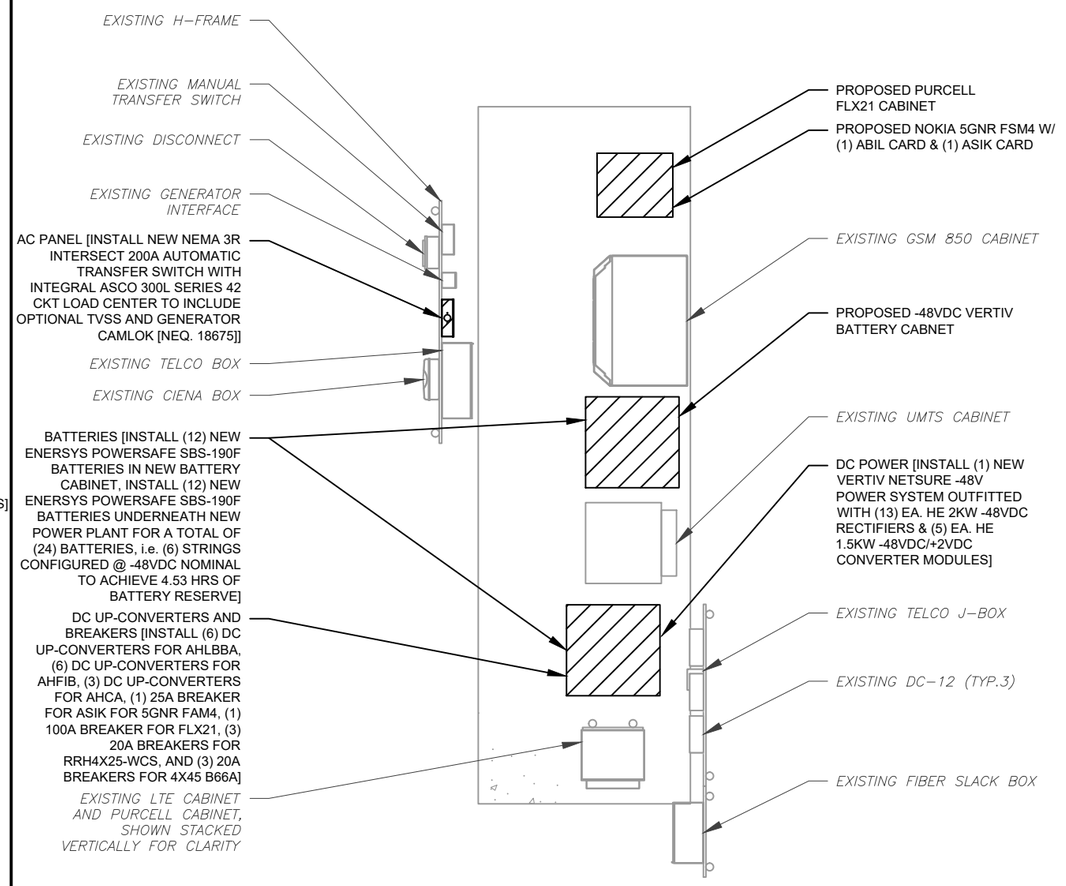


1 EXISTING DETAILED EQUIPMENT LAYOUT

SCALE: 1" = 5'

0 5' 10'

SCALE: 1"=5' (11X17)
1"=2.5' (22X34)



2 PROPOSED DETAILED EQUIPMENT LAYOUT

SCALE: 1" = 5'

0 5' 10'

SCALE: 1"=5' (11X17)
1"=2.5' (22X34)

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AMERICAN TOWER

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	RRG	07/10/20
B	90% CONSTRUCTION	CAK	08/06/20
0	100% CONSTRUCTION	CAK	08/21/20

ATC SITE NUMBER: 302459

ATC SITE NAME: ELSMERE CO 1

AT&T MOBILITY SITE NUMBER:

COL02062

AT&T MOBILITY SITE NAME:

CONSTITUTION AND HWY 24

SITE ADDRESS:
2865 AKERS DRIVE
COLORADO SPRINGS, CO 80922-1520

SEAL:

COLORADO LICENSED GRAHAM M. ANDRES 42045 PROFESSIONAL ENGINEER

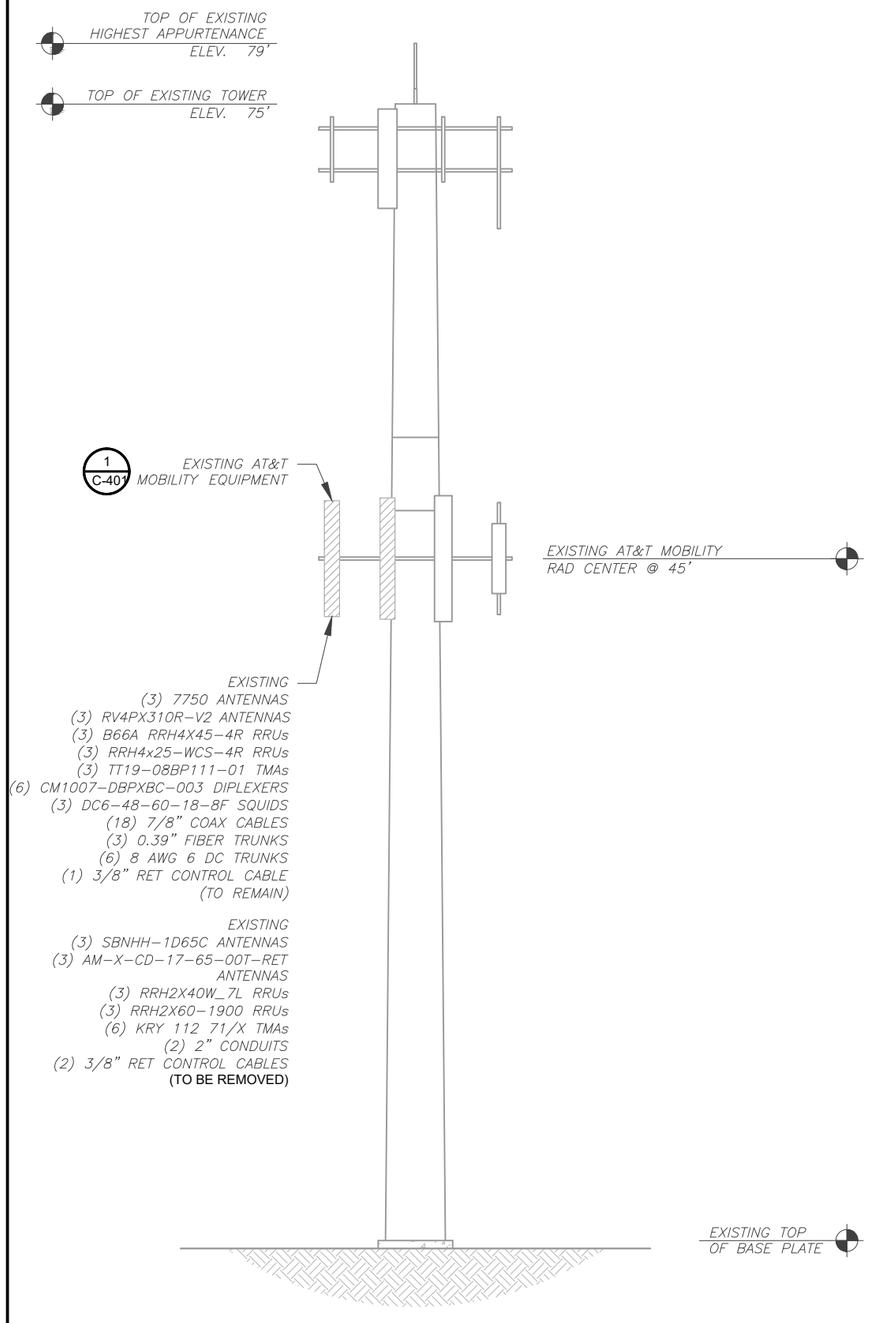
08/21/20

AT&T

DATE DRAWN:	08/21/20
ATC JOB NO:	13248041
CUSTOMER NAME:	CONSTITUTION AND HWY 24
CUSTOMER ID:	COL02062

DETAILED EQUIPMENT LAYOUT

SHEET NUMBER:	REVISION:
C-102	0

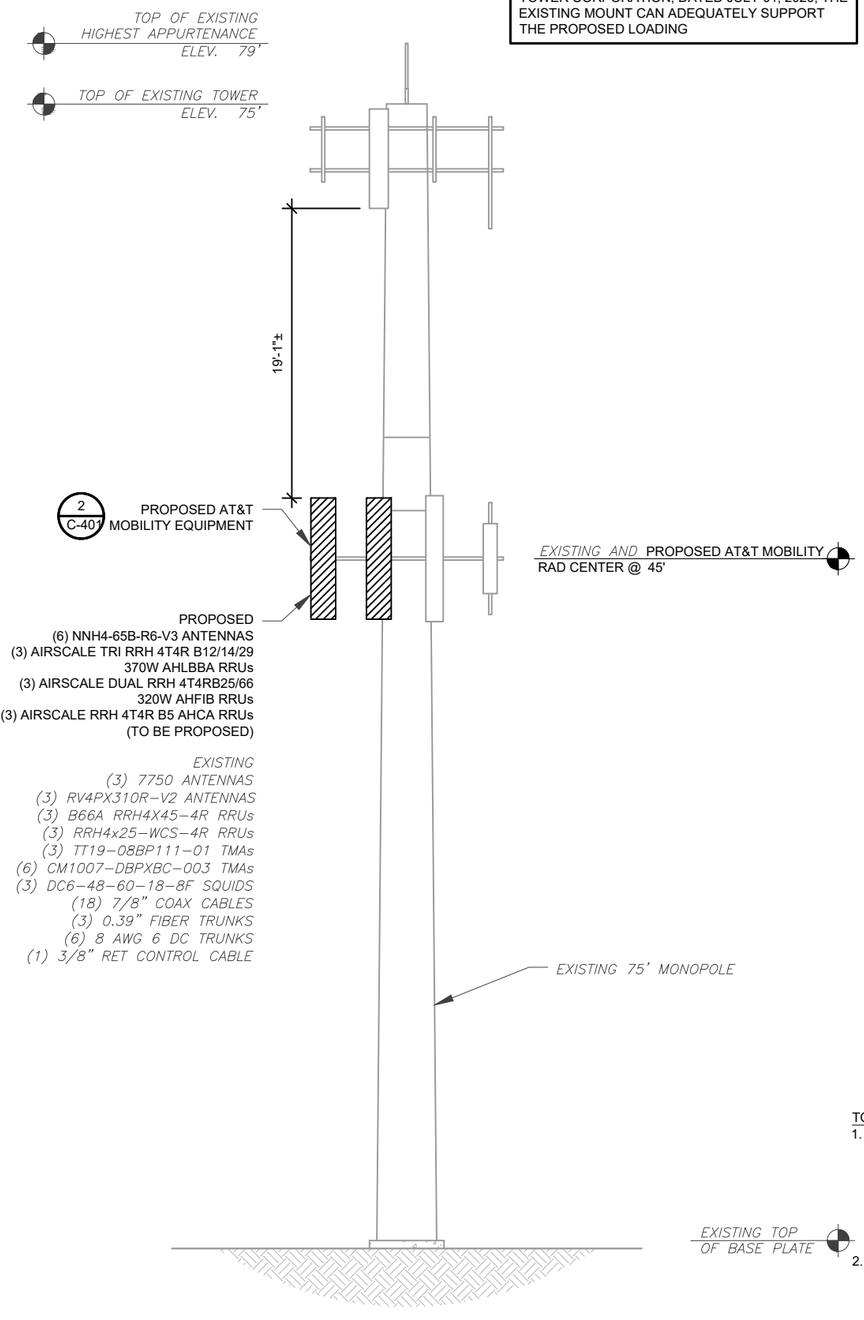


1 EXISTING TOWER ELEVATION

SCALE: 1" = 10'

0 10' 20'

SCALE: 1"=10' (11X17)
1"=5' (22X34)



2 PROPOSED TOWER ELEVATION

SCALE: 1" = 10'

0 10' 20'

SCALE: 1"=10' (11X17)
1"=5' (22X34)

PER MOUNT ANALYSIS COMPLETED BY AMERICAN TOWER CORPORATION, DATED JULY 01, 2020, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING

DETAILED SOW:
TOPSIDE
REMOVE (6) ANTENNAS
REMOVE (6) RRUS
REMOVE (6) TMAS
REMOVE (2) 2" CONDUITS
REMOVE (2) 3/8" RET CONTROL CABLES
INSTALL (3) NNH4-65C-R6-V3 ANTENNAS IN POS. 3, PER MA
INSTALL (3) NNH4-65C-R6-V3 ANTENNAS IN POS. 4, PER MA
INSTALL (3) AHFIB B55/B66 RRHS IN POS. 4, PER MA
INSTALL (3) AHCA B5 RRHS IN POS. 3, PER MA
INSTALL (3) AHLBBA B12/B14/B29 RRHS IN POS. 4, PER MA
RETAIN (3) 7750 ANTENNAS IN POS. 1, PER MA
RETAIN (3) RV4PX310R-V2 ANTENNAS IN POS. 2, PER MA
RETAIN (3) B66A RRH4X45-4R RRUs IN POS. 2, PER MA
RETAIN (3) RRH4X25-WCS-4R RRUs IN POS. 2, PER MA
RETAIN (3) TT19-08BP111-01 TMAs IN POS. 1, PER MA
RETAIN (6) CM1007-DBPXBC-003 DIPLEXERS I POS. 1, PER MA
RETAIN (3) DC6-48-60-18-8F SQUIDS
RETAIN (18) 7/8" COAX
RETAIN (1) 3/8" RET CONTROL
RETAIN (3) 0.39" FIBER TRUNKS
RETAIN (6) 8 AWG 6 DC TRUNKS
TEST NEW LINES PER MARKET SPEC
LABEL NEW CABLES PER MARKET SPEC
GROUND NEW EQUIPMENT PER MARKET SPEC
BOTTOMSIDE
-REMOVE EXISTING OUTDOOR POWER PLANT
-REMOVE (8) EXISTING GNB MARATHON M12V155FT BATTERIES
-REMOVE (1) 200A POWER PANEL AND (1) 100A SUB-PANEL
-INSTALL (1) NEW OUTDOOR DC12
-INSTALL (1) NEW VERTIV NETSURE 512 -48VDC POWER PLANT OUTFITTED WITH (13) EA. HE 2KW -48VDC RECTIFIERS & (5) EA. HE 1.5KW -48VDC/+24VDC CONVERTER MODULES.
-(3) 20A BREAKERS FOR B66A RRH4X45-4R
-(3) 20A BREAKERS FOR RRH4X25-WCS
-(3) DC UP-CONVERTER AIRSCALE DUAL RRH B5 AHCA
-(6) DC UP-CONVERTER AIRSCALE DUAL RRH B25/66 AHFIB
-(6) DC UP-CONVERTER NOKIA B14/12/29 TRIBAND RRH AHLBBA
-(1) 100A BREAKER FLEX 21
-(1) 25A BREAKER FOR ASIK FOR 5GNR FSM4
-INSTALL (1) NEW VERTIV -48VDC BATTERY CABINET OUTFITTED WITH (12) NEW ENERSYS POWERSAFE SBS-190 BATTERIES, INSTALL (12) NEW ENERSYS POWERSAFE SBS-190F BATTERIES UNDERNEATH NEW POWER PLANT FOR A TOTAL OF (24) BATTERIES, I.E. (6) STRINGS CONFIGURED @ -48VDC NOMINAL TO ACHIEVE 4.53 HRS OF BATTERY RESERVE
-INSTALL NEW NEMA 3R INTERSECT AUTOMATIC TRANSFER SWITCH WITH INTEGRAL ASCO 300L SERIES 42 CKT LOAD CENTER TO INCLUDE OPTIONAL TVSS AND GENERATOR CAMLOK [NEQ. 18675].
-INSTALL (1) EA. NEW -48VDC PURCELL FLX21 CABINET [CEQ.18306].
-5G BBU
TEST NEW LINES PER MARKET SPEC
LABEL NEW CABLES PER MARKET SPEC
GROUND NEW EQUIPMENT PER MARKET SPEC

TOWER NOTE:
1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE AMERICAN TOWER CONSTRUCTION MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.
3. TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)

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0	100% CONSTRUCTION	CAK	08/21/20

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ATC SITE NAME: ELSMERE CO 1

AT&T MOBILITY SITE NUMBER:
COL02062

AT&T MOBILITY SITE NAME:
CONSTITUTION AND HWY 24

SITE ADDRESS:
2865 AKERS DRIVE
COLORADO SPRINGS, CO 80922-1520

SEAL:

08/21/20

AT&T

DATE DRAWN:	08/21/20
ATC JOB NO:	13248041
CUSTOMER NAME:	CONSTITUTION AND HWY 24
CUSTOMER ID:	COL02062

TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-201	0

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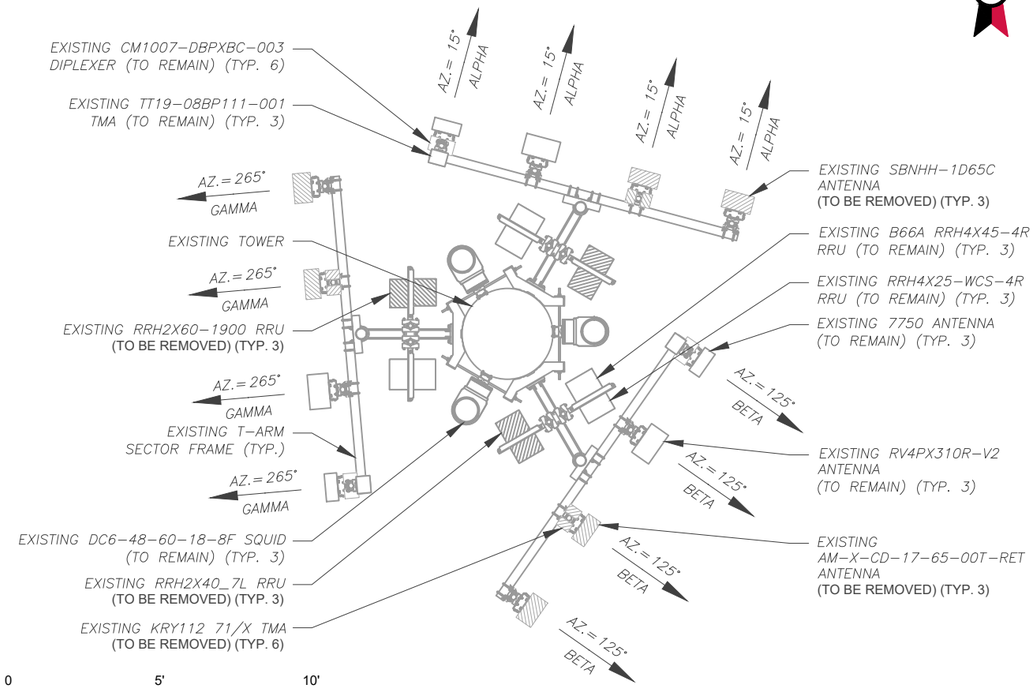
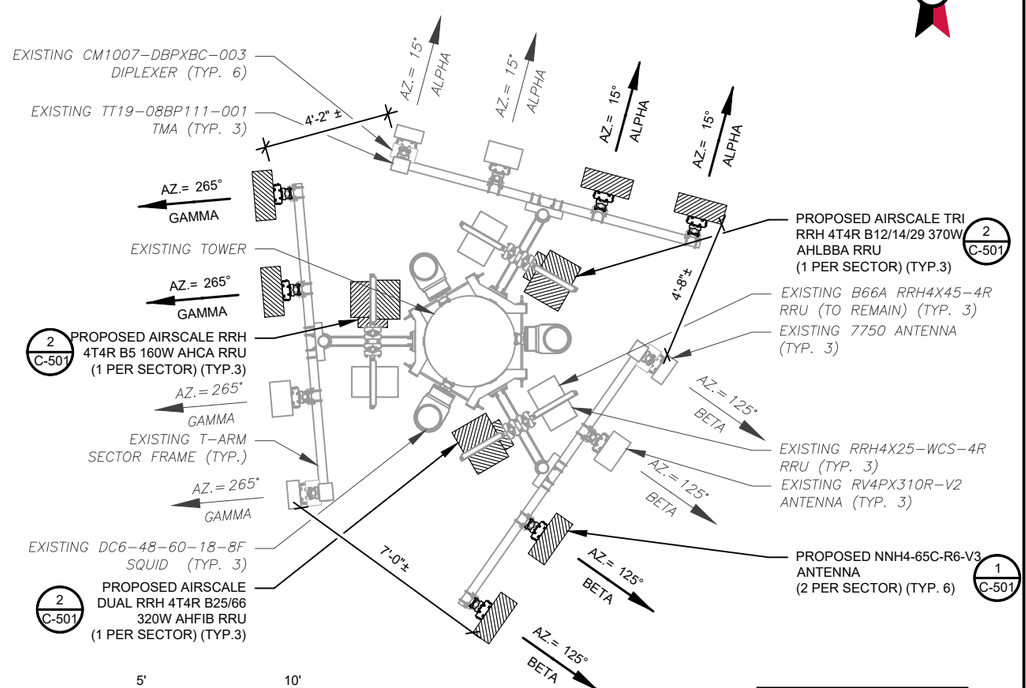
EXISTING CONFIGURATIONS ARE BASED ON RFDS.
CONTRACTOR TO VERIFY EXISTING CONDITIONS.



SCALE: 1"=5' (11X17)
1"=2.5' (22X34)

1 CURRENT ANTENNA PLAN
SCALE: 1" = 5'

PER MOUNT ANALYSIS COMPLETED BY AMERICAN TOWER CORPORATION, DATED JULY 01, 2020, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING



SCALE: 1"=5' (11X17)
1"=2.5' (22X34)

2 FINAL ANTENNA PLAN
SCALE: 1" = 5'

PROPOSED RRUs MUST BE INSTALLED A MINIMUM OF 12" AWAY FROM ALL ANTENNAS

EXISTING ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	45'	15°	A1	7750	UMTS 850/1900	RMN	(2) CM1007-DBPXBC-003 (1) TT19-08B111-001	RMN RMN
			A2	RV4PX310R-V2	LTE WCS/AWS	RMN	(1) B66A RRH4X45-4R (1) RRH4X25-WCS-4R	RMN RMN
			A3	AM-X-CD-17-65-00T-RET	OTHER	RMV	(2) KRY112 71/X	RMV
			A4	SBNHH-1D65C	LTE 700/1900	RMV	(1) RRH2X40W_7L (1) RRH2X60-1900	RMV RMV
BETA	45'	125°	B1	7750	UMTS 850/1900	RMN	(2) CM1007-DBPXBC-003 (1) TT19-08B111-001	RMN RMN
			B2	RV4PX310R-V2	LTE WCS/AWS	RMN	(1) B66A RRH4X45-4R (1) RRH4X25-WCS-4R	RMN RMN
			B3	AM-X-CD-17-65-00T-RET	OTHER	RMV	(2) KRY112 71/X	RMV
			B4	SBNHH-1D65C	LTE 700/1900	RMV	(1) RRH2X40W_7L (1) RRH2X60-1900	RMV RMV
GAMMA	45'	265°	C1	7750	UMTS 850/1900	RMN	(2) CM1007-DBPXBC-003 (1) TT19-08B111-001	RMN RMN
			C2	RV4PX310R-V2	LTE WCS/AWS	RMN	(1) B66A RRH4X45-4R (1) RRH4X25-WCS-4R	RMN RMN
			C3	AM-X-CD-17-65-00T-RET	OTHER	RMV	(2) KRY112 71/X	RMV
			C4	SBNHH-1D65C	LTE 700/1900	RMV	(1) RRH2X40W_7L (1) RRH2X60-1900	RMV RMV

NOTES

1. CONFIRM WITH AT&T MOBILITY REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
2. CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.
3. THE ANTENNA ORIENTATION PLAN IS A SCHEMATIC. ATC DID NOT CONFIRM EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO, ANTENNA AZIMUTHS, MOUNT CONFIGURATIONS AND TOWER ORIENTATION. SCALES SHOWN ARE FOR REFERENCE ONLY AND EXISTING DIMENSIONS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO INSTALLATION AND NOTIFY ATC OF ANY DISCREPANCIES.
4. CONTRACTOR TO ENSURE PROPER SEPARATION IN ACCORDANCE WITH AT&T'S FIRSTNET REQUIREMENTS (SEE SHEET R-602)

STATUS ABBREVIATIONS

RMV: TO BE REMOVED
RMN: TO REMAIN
REL: TO BE RELOCATED
ADD: TO BE ADDED

CABLE LENGTHS FOR JUMPERS

JUNCTION BOX TO RRU: 15'
RRU TO ANTENNA: 10'

FINAL ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	45'	15°	A1	7750	UMTS 850/1900	RMN	(2) CM1007-DBPXBC-003 (1) TT19-08B111-001	RMN RMN
			A2	RV4PX310R-V2	LTE WCS/AWS	RMN	(1) B66A RRH4X45-4R (1) RRH4X25-WCS-4R	RMN RMN
			A3	NNHH-65C-R6-V3	LTE/5G 850	ADD	AIRSCALE RRH 4T4R B5 160W AHCA	ADD
			A4	NNHH-65C-R6-V3	LTE 700/1900 /2100	ADD	AIRSCALE TRI RRH 4T4R B12/14/29 370W AHLBBA AIRSCALE DUAL RRH 4T4R B25/66 320W AHFIB	ADD ADD
BETA	45'	125°	B1	7750	UMTS 850/1900	RMN	(2) CM1007-DBPXBC-003 (1) TT19-08B111-001	RMN RMN
			B2	RV4PX310R-V2	LTE WCS/AWS	RMN	(1) B66A RRH4X45-4R (1) RRH4X25-WCS-4R	RMN RMN
			B3	NNHH-65C-R6-V3	LTE/5G 850	ADD	AIRSCALE RRH 4T4R B5 160W AHCA	ADD
			B4	NNHH-65C-R6-V3	LTE 700/1900 /2100	ADD	AIRSCALE TRI RRH 4T4R B12/14/29 370W AHLBBA AIRSCALE DUAL RRH 4T4R B25/66 320W AHFIB	ADD ADD
GAMMA	45'	265°	C1	7750	UMTS 850/1900	RMN	(2) CM1007-DBPXBC-003 (1) TT19-08B111-001	RMN RMN
			C2	RV4PX310R-V2	LTE WCS/AWS	RMN	(1) B66A RRH4X45-4R (1) RRH4X25-WCS-4R	RMN RMN
			C3	NNHH-65C-R6-V3	LTE/5G 850	ADD	AIRSCALE RRH 4T4R B5 160W AHCA	ADD
			C4	NNHH-65C-R6-V3	LTE 700/1900 /2100	ADD	AIRSCALE TRI RRH 4T4R B12/14/29 370W AHLBBA AIRSCALE DUAL RRH 4T4R B25/66 320W AHFIB	ADD ADD

EXISTING FIBER DISTRIBUTION/SQUID		EXISTING CABLING SUMMARY			
MODEL NUMBER	STATUS	COAX	DC	FIBER	STATUS
(3) DC6-48-60-18-8F	RMN	(18) 7/8"	(1) 3/8" (6) 8 AWG 6	(3) 0.39"	RMN
–	–	(2) 2" CONDUIT	(2) 3/8"	–	RMV

FINAL FIBER DISTRIBUTION/SQUID		FINAL CABLING SUMMARY			
MODEL NUMBER	STATUS	COAX	DC	FIBER	STATUS
(3) DC6-48-60-18-8F	RMN	(18) 7/8"	(1) 3/8" (6) 8 AWG 6	(3) 0.39"	RMN

3 EQUIPMENT SCHEDULES

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REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	RRG	07/10/20
B	90% CONSTRUCTION	CAK	08/06/20
0	100% CONSTRUCTION	CAK	08/21/20

ATC SITE NUMBER: 302459

ATC SITE NAME: ELSMERE CO 1

AT&T MOBILITY SITE NUMBER:

COL02062

AT&T MOBILITY SITE NAME:

CONSTITUTION AND HWY 24

SITE ADDRESS:
2865 AKERS DRIVE
COLORADO SPRINGS, CO 80922-1520

SEAL:

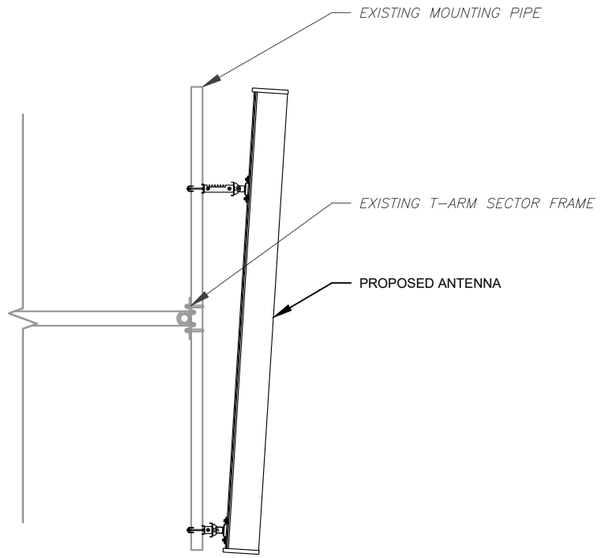
08/21/20

AT&T

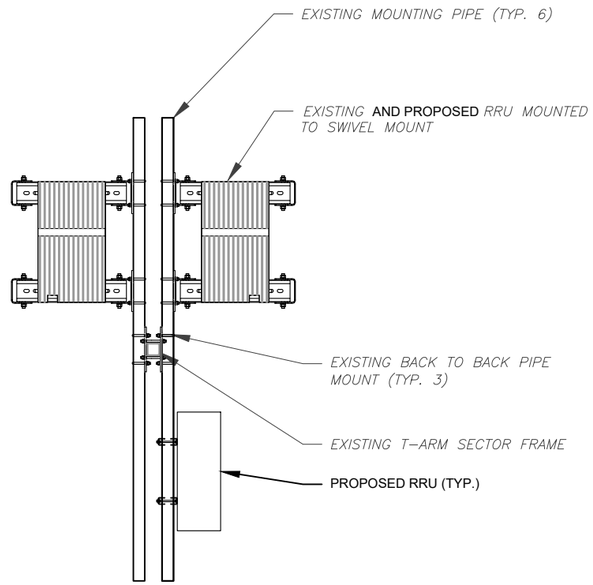
DATE DRAWN:	08/21/20
ATC JOB NO:	13248041
CUSTOMER NAME:	CONSTITUTION AND HWY 24
CUSTOMER ID:	COL02062

RF SCHEDULE AND ANTENNA INSTALLATION

SHEET NUMBER:	REVISION:
C-401	0



1 ANTENNA DETAIL
SCALE: N.T.S.



2 RRU DETAIL
SCALE: N.T.S.

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SITE ADDRESS:
2865 AKERS DRIVE
COLORADO SPRINGS, CO 80922-1520

SEAL:

COLORADO LICENSED
GRAHAM M. ANDRES
42045
PROFESSIONAL ENGINEER

08/21/20

AT&T

DATE DRAWN:	08/21/20
ATC JOB NO:	13248041
CUSTOMER NAME:	CONSTITUTION AND HWY 24
CUSTOMER ID:	COL02062

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	0

VERTIV™

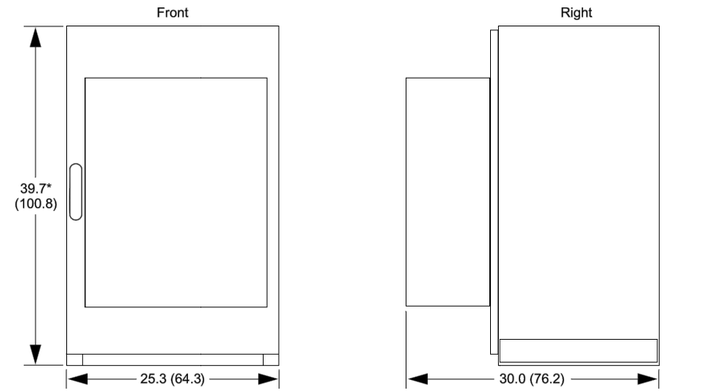
NetSure 512 Series DC Power System	
Product Overview	
Power Capacity	18 - 28.8 kW/1.5 - 19.2 kW
Current Capacity	40 - 600 A/50 - 400 A
System Type	System
Input	
Input Voltage, Nominal	Single phase: 208 VAC to 240 VAC
Input Voltage, Operational	Rectifier: (Single Phase) 85 VAC to 300 VAC, DC-DC Converter: 41 VDC to 58.5 VDC
Input Connections	Molex for AC cords or hardwiring
Equipment Dimensions (H x W x D)	Distribution cabinet: 8U x 27" x 16", Module shelf: 1U x (19" or 23") x 15"
Access	Top or rear cabled with front and top access
Output	
Output Voltage, Nominal	-48V DC, +24V
Output Voltage, Operational	Rectifier: -42 VDC to -58 VDC, -48V to +24V Converter: +24 VDC to +28 VDC
Output Capacity	Up to 600 amps at -48 VDC plus redundancy, Up to 400 amps at +24 VDC plus redundancy
Peak Efficiency	Rectifier: 96.2%, -48V to +24V Converter: 95%
Load Circuit Breakers / Fuses	1-250 A E/M or E bullet nose breakers, 3-100 A TPS/TLS fuses, 18/100 A to 15 A GMT fuses
Physical Characteristics	
Options	SM-Temp
Weight	up to 550 lbs.
Height	15.75 up to 22.75 in.
Width	27 in.
Depth	16 in.
Environmetal & Standard Compliance	
Control and Monitoring	NCU with remote access via web browsers, TCP/IP & SNMP as standard
Operating Temperature	-40 °C to +65 °C (40 °F to +149 °F)
Safety Compliance	UL Recognized (cUL)

1 VERTIV OUTDOOR POWER PLANT DETAIL
SCALE: N.T.S.

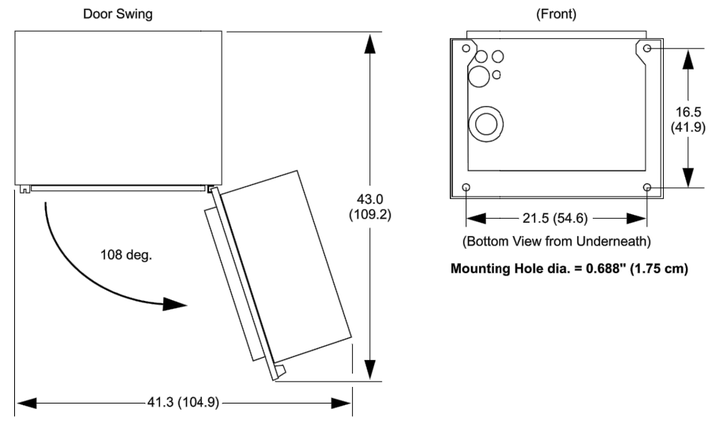
Cabinet Dimensions

Important! *If site requires a stacked configuration, see "Preparing a Stacked Configuration" on page 4.*

Inches (centimeters)



*Height dimension increased by use of 4 in. or 14 in. plinth.



2 PURCELL FLX21 CABINET DETAIL
SCALE: N.T.S.

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CUSTOMER ID:	COL02062

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-502	0

AC POWER PANEL A (EXISTING)
120/240 VOLTS, 1-PHASE, 3-WIRE, 200A

MAIN BREAKER RATING (A):			200			SYSTEM VOLTAGE (V):			240	
DESCRIPTION	VA	c/nc	BKR	POSN	L1	L2	POSN	BKR	c/nc	VA	DESCRIPTION
1900 GSM/OFF	0	nc	50/2	1	180		2	20/1	nc	180	GFI
	0	nc		3		100	4	20/1	nc	100	LIGHTS
850 ERICSSON/OFF	0	nc	50/2	5	720		6	20/1	nc	720	TELCO OUTLET
	0	nc		7		0	8	20/1	nc	0	SPARE
SURGE PROTECTOR	0	nc	60/2	9	1920		10	20/1	nc	1920	911 CABINET
	0	nc		11		2880	12	30/1	nc	2880	911 CABINET
UMTS	2200	nc	100/2	13	2226		14	100/2	c	26	SUB PAN
	2200	nc		15		2231	16		c	31	
CIENA	50	nc	20/1	17	50		18				BLANK
BLANK				19		0	20				BLANK
PHASE TOTALS (VA):					5096	5211					
CURRENT PER PHASE (A):					43	43	Amperes/phase cannot exceed main breaker rating				
PANEL TOTAL (VA):					10307		Legend: c = continuous, nc = non-continuous				

1 EXISTING A/C PANEL A

AC POWER PANEL A (EXISTING)
120/240 VOLTS, 1-PHASE, 3-WIRE, 200A

MAIN BREAKER RATING (A):			200			SYSTEM VOLTAGE (V):			240	
DESCRIPTION	VA	c/nc	BKR	POSN	L1	L2	POSN	BKR	c/nc	VA	DESCRIPTION
REC #1	712	nc	30/2	1	712		2	30/2	nc	0	REC #4
	712	nc		3		712	4		nc	0	
REC #2	712	nc	30/2	5	712		6	30/2	nc	0	REC #5
	712	nc		7		712	8		nc	0	
REC #3	712	nc	60/2	9	712		10	20/1	nc	0	SPARE / OFF
	712	nc		11		2312	12	20/1	nc	1600	ARGUS ACC
ARGUS HEAT	1000	nc	20/1	13	1000		14				BLANK
BLANK				15		0	16				BLANK
BLANK				17	0		18				BLANK
BLANK				19		0	20				BLANK
PHASE TOTALS (VA):					3136	3736					
CURRENT PER PHASE (A):					26	31	Amperes/phase cannot exceed main breaker rating				
PANEL TOTAL (VA):					6872		Legend: c = continuous, nc = non-continuous				

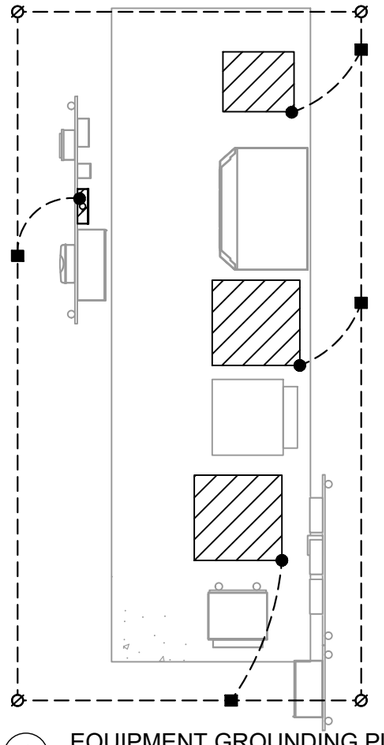
2 EXISTING A/C PANEL B

AC POWER PANEL A (PROPOSED)
120/240 VOLTS, 1-PHASE, 3-WIRE, 400A

MAIN BREAKER RATING (A):			200			SYSTEM VOLTAGE (V):			240	
DESCRIPTION	VA	c/nc	BKR	POSN	L1	L2	POSN	BKR	c/nc	VA	DESCRIPTION
1900 GSM/OFF	0	nc	50/2	1	180		2	20/1	nc	180	GFI
	0	nc		3		100	4	20/1	nc	100	LIGHTS
850 ERICSSON/OFF	0	nc	50/2	5	720		6	20/1	nc	720	TELCO OUTLET
	0	nc		7		0	8	20/1	nc	0	SPARE
SURGE PROTECTOR	0	nc	60/2	9	1920		10	20/1	nc	1920	911 CABINET
	0	nc		11		2880	12	30/1	nc	2880	911 CABINET
UMTS	2200	nc	100/2	13	2200		14	20/1	nc	0	SPARE/OFF
	2200	nc		15		3800	16	20/1	nc	1600	ARGUS ACC
CIENA	50	nc	20/1	17	1050		18	20/1	nc	1000	ARGUS HEAT
RECTIFIERS 1 & 2	1924	c	30/2	19		3848	20	30/2	c	1924	RECTIFIERS 9 & 10
	1924	c		21	3848		22		c	1924	
RECTIFIERS 3 & 4	1924	c	30/2	23		3848	24	30/2	c	1924	RECTIFIERS 11 & 12
	1924	c		25	3848		26		c	1924	
RECTIFIERS 5 & 6	1924	c	30/2	27		2886	28	30/2	c	962	RECTIFIERS 13 & 14 (FUTURE)
	1924	c		29	2886		30		c	962	
RECTIFIERS 7 & 8	1924	c	30/2	31		1924	32				BLANK
	1924	c		33	1924		34				BLANK
BLANK				35		0	36				BLANK
BLANK				37	0		38				BLANK
BLANK				39		0	40				BLANK
BLANK				41	0		42				BLANK
PHASE TOTALS (VA):					18576	19286					
CURRENT PER PHASE (A):					181	187	Amperes/phase cannot exceed main breaker rating				
PANEL TOTAL (VA):					37862		Legend: c = continuous, nc = non-continuous				

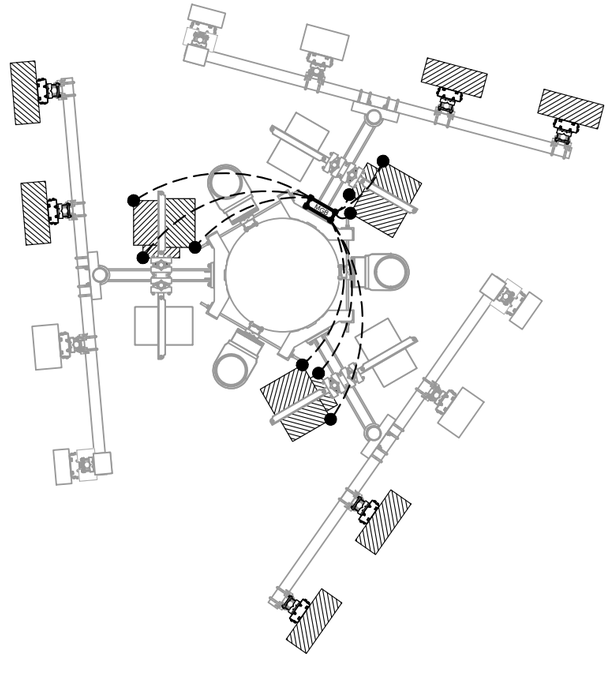
3 PROPOSED AC PANEL

LEGEND
- EXOTHERMIC CONNECTION
- MECHANICAL CONNECTION
- ANTENNA GROUND BAR
- MASTER GROUND BAR (MGB)



4 EQUIPMENT GROUNDING PLAN
3/16" = 1'-0"

LEGEND
- EXOTHERMIC CONNECTION
- MECHANICAL CONNECTION
- ANTENNA GROUND BAR
- MASTER GROUND BAR (MGB)



5 ANTENNA GROUNDING PLAN
1/4" = 1'-0"

AMERICAN TOWER

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	RRG	07/10/20
B	90% CONSTRUCTION	CAK	08/06/20
0	100% CONSTRUCTION	CAK	08/21/20

ATC SITE NUMBER: 302459

ATC SITE NAME: ELSMERE CO 1

AT&T MOBILITY SITE NUMBER:

COL02062

AT&T MOBILITY SITE NAME:

CONSTITUTION AND HWY 24

SITE ADDRESS:
2865 AKERS DRIVE
COLORADO SPRINGS, CO 80922-1520

SEAL:

COLORADO LICENSED
GRAHAM M. ANDRES
42045
PROFESSIONAL ENGINEER

08/21/20

AT&T

DATE DRAWN:	08/21/20
ATC JOB NO:	13248041
CUSTOMER NAME:	CONSTITUTION AND HWY 24
CUSTOMER ID:	COL02062

ELECTRICAL DETAILS

SHEET NUMBER:	REVISION:
E-101	0

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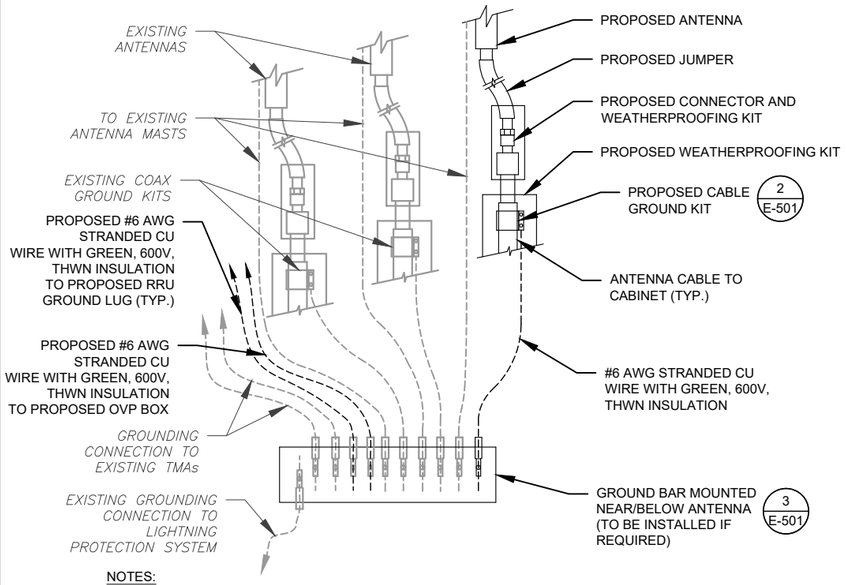
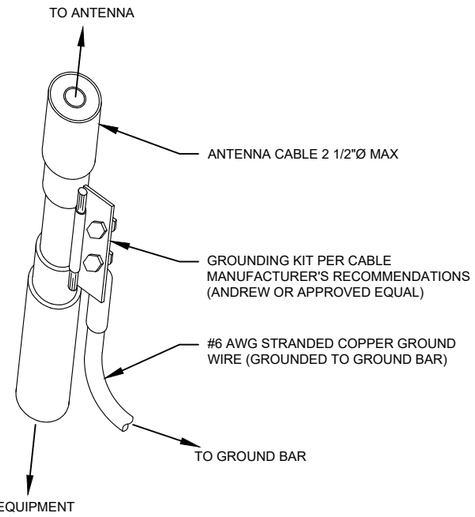


NOTES:

1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH AT&T MOBILITY GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH AT&T MOBILITY GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

1 TYPICAL ANTENNA GROUNDING DIAGRAM

SCALE: N.T.S.

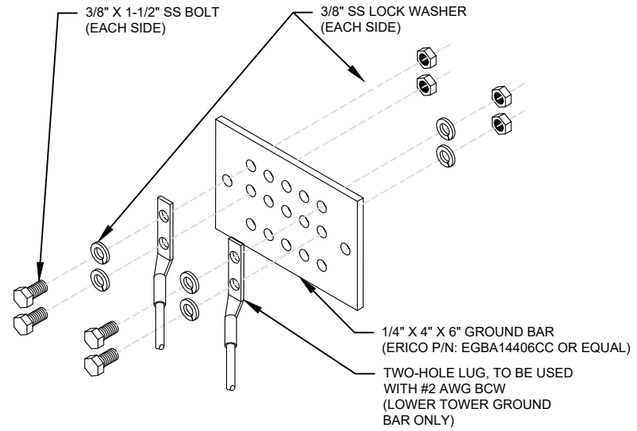


GROUND KIT NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

2 CABLE GROUND KIT CONNECTION DETAIL

SCALE: N.T.S.

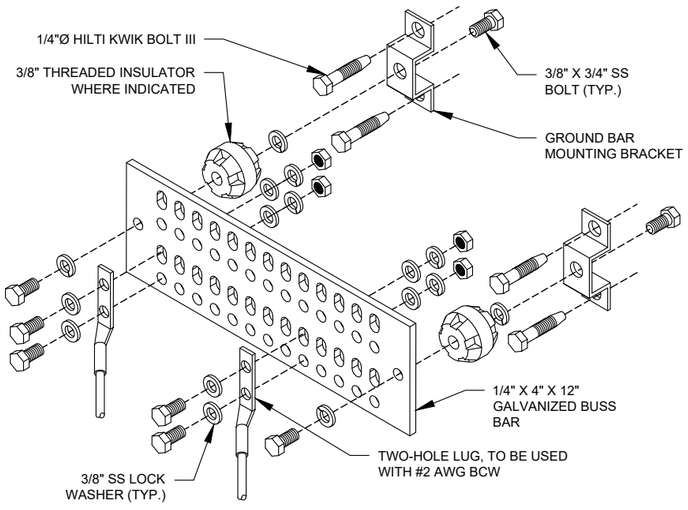


GROUND BAR NOTES:

1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

3 TOWER GROUND BAR DETAIL

SCALE: N.T.S.

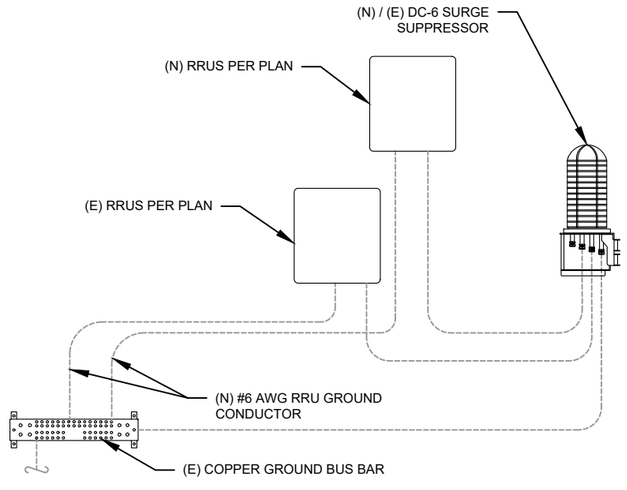


GROUND BAR NOTES

1. GROUND KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR SHALL BE BOLTED TO STRUCTURAL MEMBER OR ANCHORED TO CONCRETE SLAB W/ HILTI KWIK BOLT III.

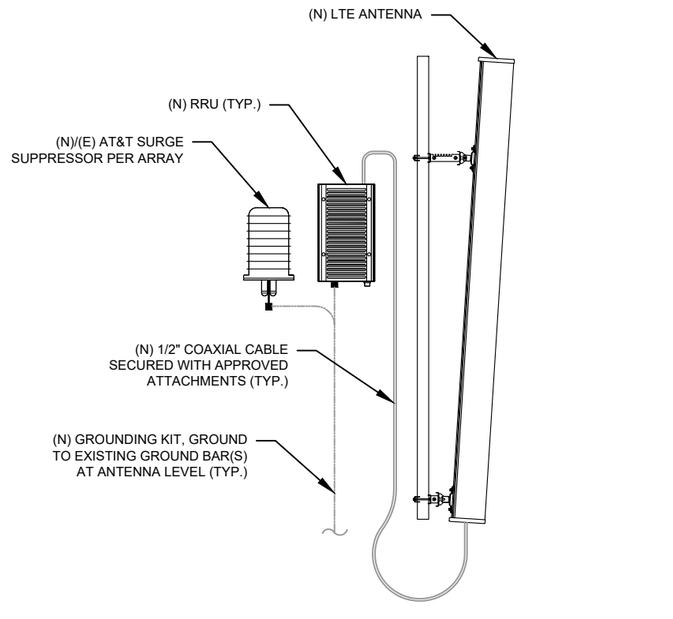
4 MAIN GROUND BAR DETAIL

SCALE: N.T.S.



5 RRU GROUNDING

SCALE: N.T.S.



6 ANTENNA/RRU GROUNDING

SCALE: N.T.S.

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REV.	DESCRIPTION	BY	DATE
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ATC SITE NUMBER: 302459

ATC SITE NAME: ELSMERE CO 1

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COL02062

AT&T MOBILITY SITE NAME:

CONSTITUTION AND HWY 24

SITE ADDRESS:
2865 AKERS DRIVE
COLORADO SPRINGS, CO 80922-1520

SEAL:

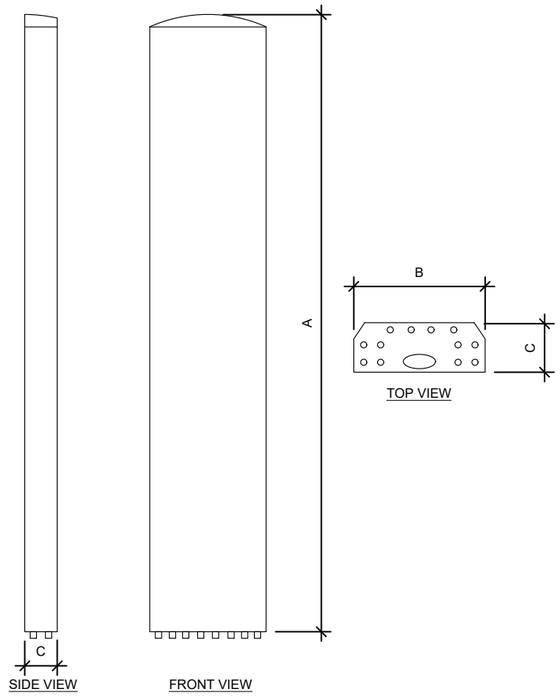
08/21/20

AT&T

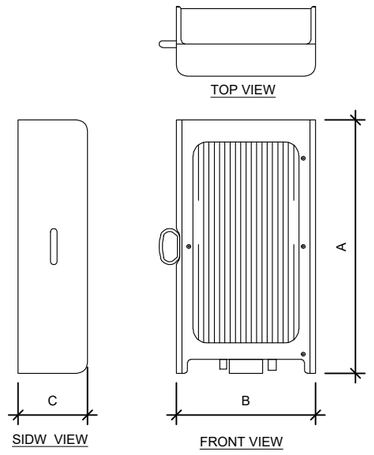
DATE DRAWN:	08/21/20
ATC JOB NO:	13248041
CUSTOMER NAME:	CONSTITUTION AND HWY 24
CUSTOMER ID:	COL02062

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	0



ANTENNA SPECIFICATIONS				
ANTENNA MODEL	A	B	C	WEIGHT (LBS)
NHH4-65C-R6-V3	96.0"	19.6"	7.8"	102.5



RRU SPECIFICATIONS				
RRU MODEL	A	B	C	WEIGHT (LBS)
AIRSCALE 4T4R B5 160W AHCA	13.3"	11.6"	6.5"	35.3
AIRSCALE DUAL RRH 4T4R B25/66 320W AHFIB	28.7"	15.4"	9.4"	88.2
AIRSCALE TRI RRH 4T4R B12/14/29 370W AHLBBA	24.0"	14.1"	7.8"	94.8

SUPPLEMENTAL

SHEET NUMBER: R-601

REVISION: 0

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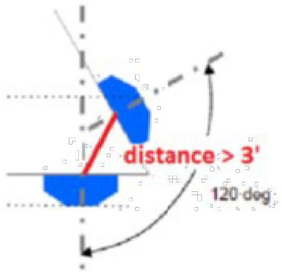
RF REQUIREMENTS FOR 700 B14 FIRSTNET, 700 B12, 700D B29 ANTENNA SEPARATION

- Horizontal separation (side to side of antenna): >= 3’
- Vertical separation (between the tips of the antennas): > 3’
- Inter-sector separation: > 3’ between the center of the antenna backplanes.



- Please note additional horizontal separation may be required if B14 antennas azimuth are different from others or antennas are severely angled with respect to the mount.
- Typical 3' horizontal separation can tolerate skew angle up to 6°.

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SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-602	0

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AMERICAN TOWER®
CORPORATION

Antenna Mount Analysis Report

ATC Site Name	:	**Elsmere CO 1, CO**
ATC Site Number	:	**302459**
Engineering Number	:	**13248041_C8_05**
Mount Elevation	:	**45 ft**
Carrier	:	**AT&T Mobility**
Carrier Site Name	:	**CONSTITUTION and HWY 24**
Carrier Site Number	:	**COL02062**
Site Location	:	**2865 Akers Drive** **COLORADO SPRINGS, CO 80922-1520** **38.87495556, -104.6862306**
County	:	**El Paso**
Date	:	**July 1, 2020**
Max Usage	:	**100%**
Result	:	**Pass**

Prepared By:
Michael Ellis
Structural Engineer

Reviewed By:

COLORADO LICENSED
MICHAEL EVAN DEES
PE.0051453
PROFESSIONAL ENGINEER

Authorized by "EOR"
01 Jul 2020 04:25:50 cosign

Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for AT&T Mobility at 45 ft.

Supporting Documents

Previous Mount Analysis	Black and Veatch Project #129051, dated January 16, 2017
Radio Frequency Data Sheet	RFDS ID #10102196, dated June 5, 2020
Reference Photos	Site photos from 2020

Analysis

This antenna mount was analyzed using American Tower Corporation's Mount Analysis Program and RISA-3D

Basic Wind Speed:	130 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1/4'' radial ice concurrent
Codes:	ANSI/TIA-222-H
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 2
Feature:	Flat
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	Ss = 0.185, S1 = 0.059
Site Class:	D - Stiff Soil
Live Loads:	Lm = 450 lbs *, Lv = 250 lbs

*** Live load(s) have been reduced on the existing structure per ANSI/TIA-222-H Section 16.9**

Conclusion

Based on the analysis results, the antenna mount meets the requirements per the applicable codes listed above. The mount can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

ATC Tower Services, LLC - 3500 Regency Parkway, Suite 100 - Cary, NC 27518 - 919.468.0112 Office - 919.466.5414 Fax - www.americantower.com

1 MOUNT ANALYSIS

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERYIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONTRUCTION.

SUPPLEMENTAL

SHEET NUMBER: R-603

REVISION: 0

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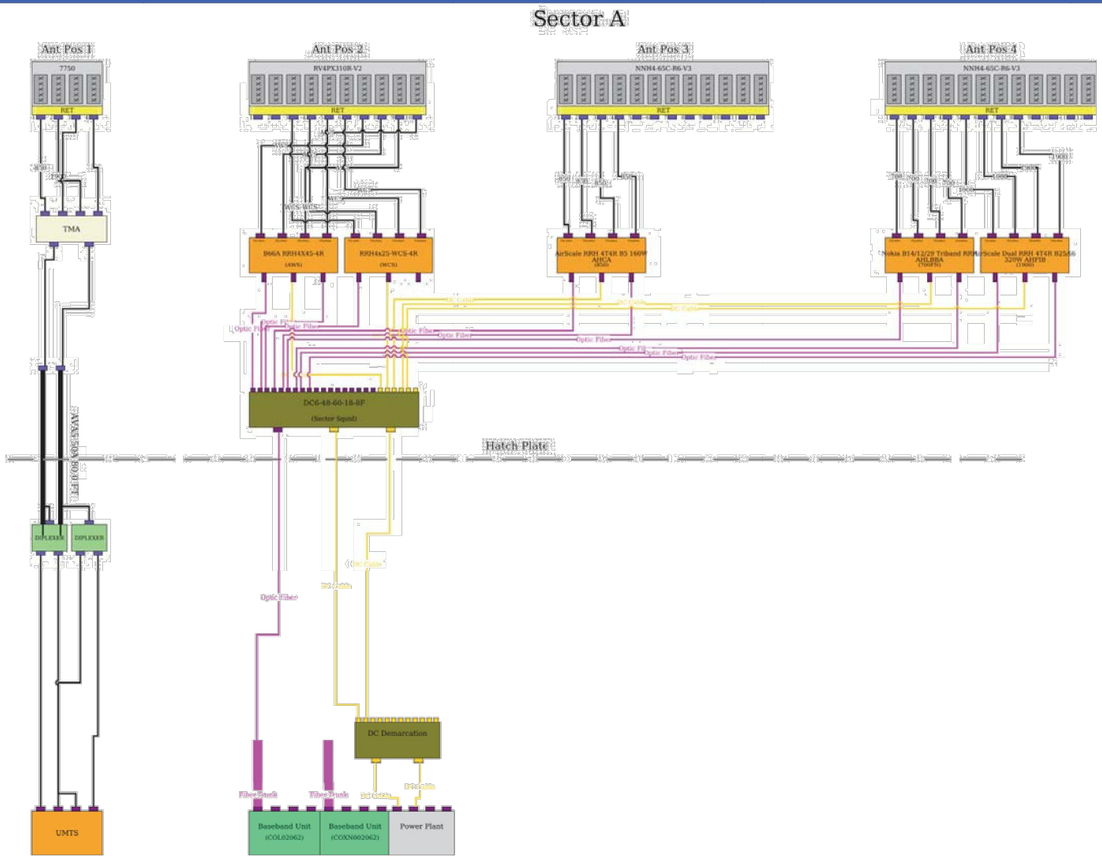
Diagram - Sector	A	Diagram File Name - WAT3726422_SectorA.png							
Atoll Site Name -	Constitution_&_Hwy_24	Location Name -	CONSTITUTION & HWY 24	Market -	COLORADO		Market Cluster -	CO/UT/WY/MT/SO. ID	
Comments:									



1 RFDS PLUMBING DIAGRAM

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SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-604	0

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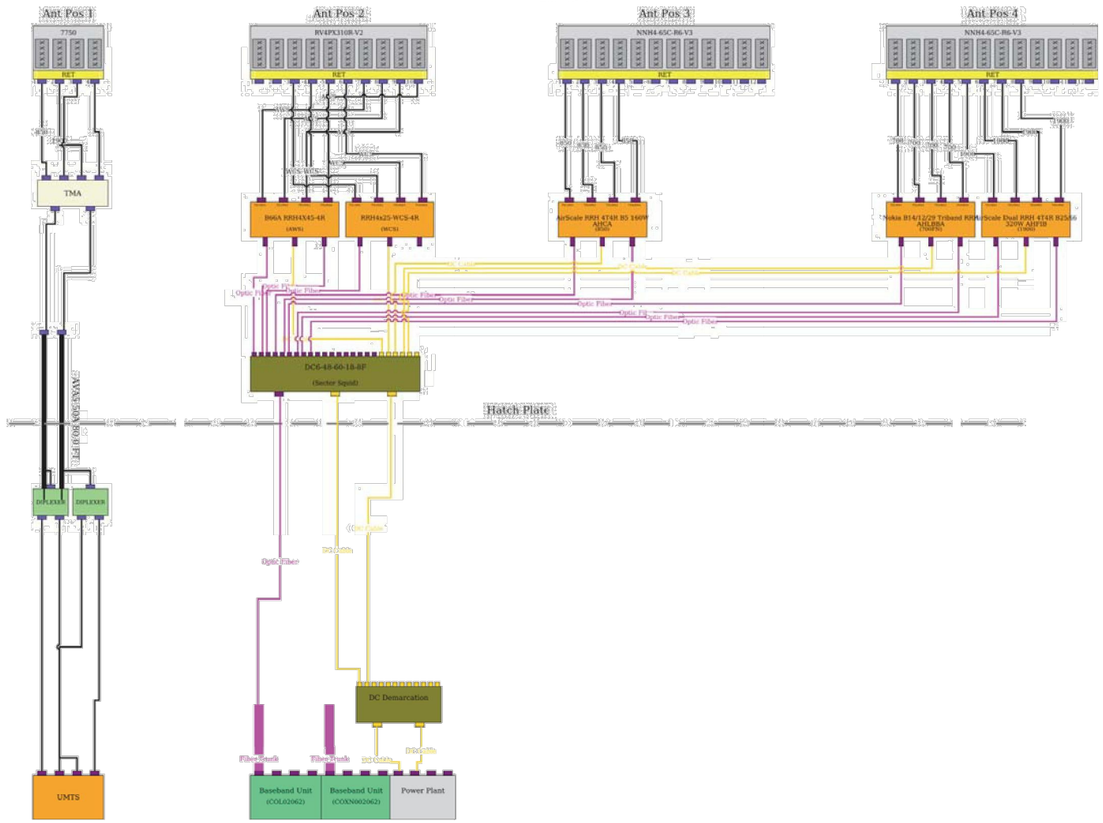
Diagram - Sector	B	Diagram File Name - WAT3726422_SectorB.png						
Atoll Site Name -	Constitution_&_Hwy_24	Location Name -	CONSTITUTION & HWY 24	Market -	COLORADO		Market Cluster -	CO/UT/WY/MT/SO. ID
Comments:								

Sector B



1 RFDS PLUMBING DIAGRAM

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SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-605	0

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Diagram - Sector	C	Diagram File Name - WAT3726422_SectorC.png					
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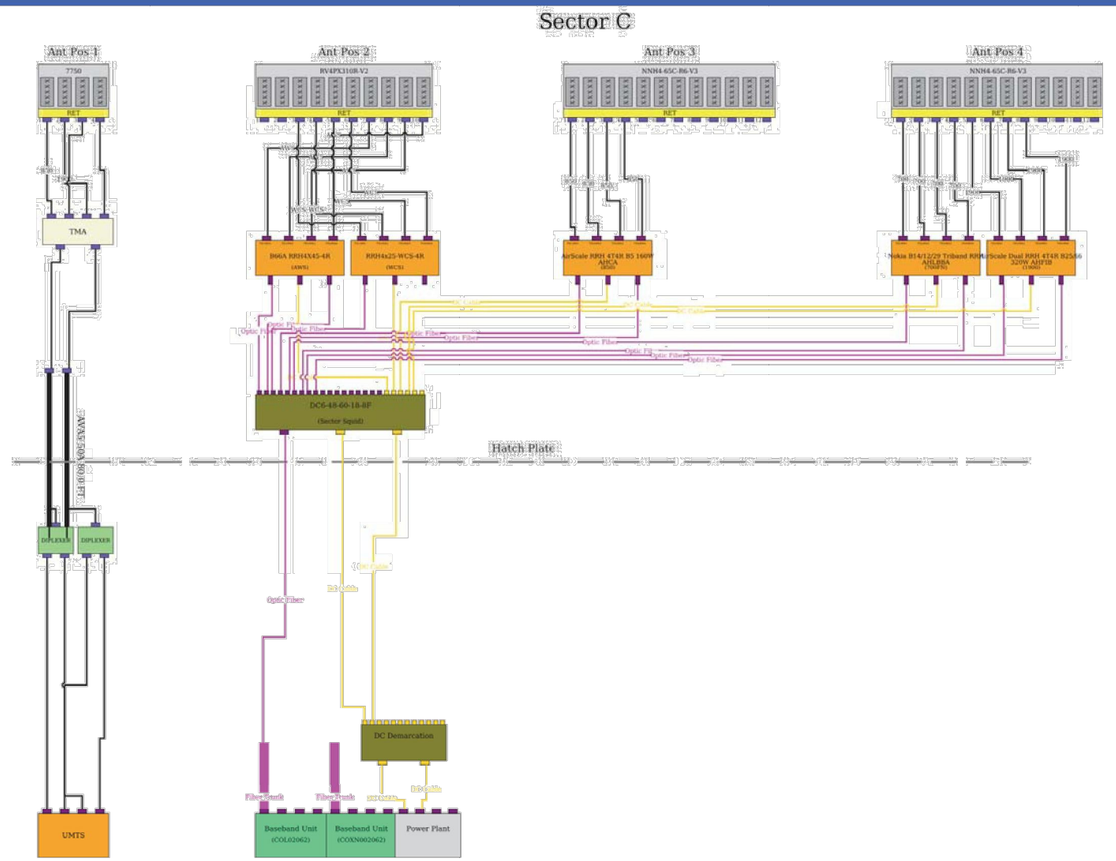
Comments:							



1 RFDS PLUMBING DIAGRAM

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SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-606	0

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