

Y:/Drawings - 2019/Jacobs/Richmond/CV369/CD's - REV 2/T1.dwg 02-18-20 MPRAD 12:15:04

PROJECT INFORMATION

SCOPE OF WORK: REMOVE/RELOCATE/INSTALL WIRELESS COMMUNICATIONS ANTENNAS, RRH'S, AND ASSOCIATED SUPPORT EQUIPMENT ON EXISTING ANTENNA MOUNT. INSTALL ASSOCIATED SUPPORT EQUIPMENT AT GROUND LEVEL AND ON EXISTING LTE RACK IN AN EXISTING EQUIPMENT SHELTER. REMOVE/RE-ROUTE/INSTALL ALL NECESSARY COAXIAL CABLES, JUMPERS, FIBER AND DC CABLES ROUTED FROM EQUIPMENT SHELTER ON GROUND LEVEL TO TOP OF TOWER.

SITE ADDRESS: 700 HOLIDAY TRAILS LANE
CHARLOTTESVILLE, VA 22903
LATITUDE: N 38° 1' 22.11636"
LONGITUDE: W 78° 33' 28.19988"
JURISDICTION: ALBEMARLE COUNTY
PARCEL ID: 07500-00-00-047C0
ZONING: HS1-HOMESITE 1
GROUND ELEVATION: 661'
TOWER TYPE: MONOPOLE
FA#: 10068640

NAME OF APPLICANT: AT&T
4801 COX RD
GLEN ALLEN, VA 23060
TOWER OWNER: VERIZON
PROPERTY OWNER: VERIZON COMMUNICATIONS
140 WEST STREET
NEW YORK, NEW YORK 10007

THE DESIGN SHOWN IN THESE DRAWINGS IS BASED ON INFORMATION GATHERED FROM THE AT&T RFDS VERSION 2.00 UPDATED 10/22/2019

UTILITY INFORMATION

POWER: DOMINION VA POWER 1-866-366-4357
TELCO: CENTURYLINK 1-888-669-3608

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NOTES

NOTE: MAGNETIC DECLINATION - 9.71° W ± 0.35° CHANGING BY 0.00° E PER YEAR AS OF 02/18/2020

NO WORK IS TO BE PERFORMED ON THIS SITE WITHOUT REVIEW OF THE APPROVED STRUCTURAL ANALYSIS, IF ANY DISCREPANCIES ARE FOUND THE GENERAL CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING. AT NO TIME WILL ANY ADDITIONAL ANTENNAS BE INSTALLED WITHOUT WRITTEN CONSENT FROM TOWER ENGINEER.



at&t
Mobility

JACOBS

SITE #: CV369
SITE NAME: CAMP HOLIDAY
FA #: 10068640
LTE 2C/3C/4C - ANTENNA & RRU ADD



Know what's below.
Call before you dig.

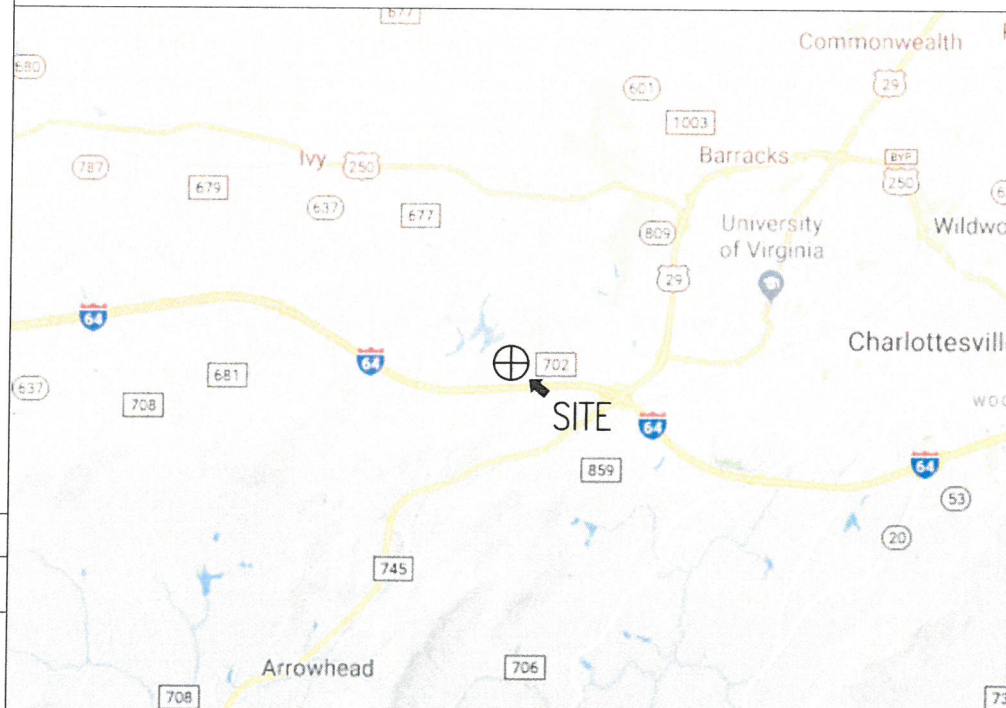
FOR MORE INFORMATION CONTACT THE STATE
CORPORATION COMMISSION DIVISION OF UTILITY
AND RAILROAD SAFETY

VIRGINIA UTILITY PROTECTION SERVICE, INC.
CALL BEFORE YOU DIG:
811 OR 1-800-552-7001

VICINITY MAP

DIRECTION:

GET ON I-295 N FROM NUCKOLS RD 1.3 MI. HEAD SOUTH TOWARD N PARK DR. TURN RIGHT ONTO N PARK DR. TURN LEFT ONTO COX RD. TURN RIGHT ONTO NUCKOLS RD. USE THE RIGHT LANE TO MERGE ONTO I-295 N VIA THE RAMP TO I-64 W/CHARLOTTESVILLE. MERGE ONTO I-295 N. USE THE RIGHT 2 LANES TO TAKE EXIT 53A TO MERGE ONTO I-64 W TOWARD CHARLOTTESVILLE. TAKE EXIT 118B TO MERGE ONTO US-29 N TOWARD CHARLOTTESVILLE/CULPEPER. TAKE THE US-29 BUS N EXIT TOWARD CHARLOTTESVILLE. TURN LEFT ONTO US-29 BUS S. CONTINUE STRAIGHT ONTO FONTAINE AVE EXTENDED. TURN RIGHT ONTO RESERVOIR RD. SLIGHT LEFT ONTO HOLIDAY TRAILS LN AND ARRIVE AT DESTINATION.



SCALE: 1"=2000'(11X17)
1"=1000'(24X36)



APPLICABLE BUILDING CODES AND STANDARDS

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.

ATT STANDARDS - ATT-TP 76300, ATT -+P 76416 & ATT UPDATES AS REQUIRED

BUILDING CODE: VIRGINIA UNIFORM STATEWIDE BUILDING CODE 2015 (VUSBC 2015)

ELECTRICAL CODE: NATIONAL ELECTRIC CODE 2014 (NEC 2014)

SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

AMERICAN CONCRETE INSTITUTE (ACI) 318-11, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION.

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA)
TIA 222-G, STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES.
TIA 607, COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS.

INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)
IEEE 81-2012, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM.
RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC EQUIPMENT.
IEEE C62.41.2, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND "HIGH SYSTEM EXPOSURE").

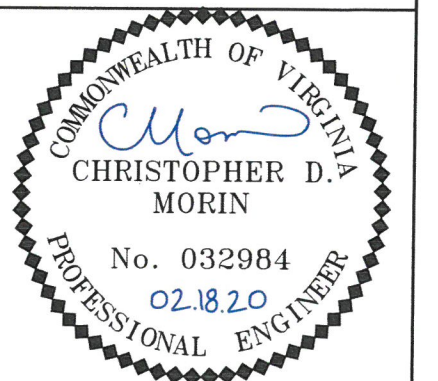
TELCORDIA, GR-1275, GENERAL INSTALLATION REQUIREMENTS.

ANSI T1.311, FOR TELECOM - DC POWER SYSTEMS - TELECOM, ENVIRONMENTAL PROTECTION.

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.

DRAWING APPROVAL SIGNATURES

JACOBS SA:	DATE:
JACOBS A&E:	DATE:
JACOBS CM:	DATE:
AT&T CM:	DATE:
AT&T RF:	DATE:
AT&T PM:	DATE:



5661 COLUMBIA PIKE, SUITE 200
FALLS CHURCH, VA 22041-2868
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FAX: (703) 671-6300



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GLEN ALLEN, VA 23060

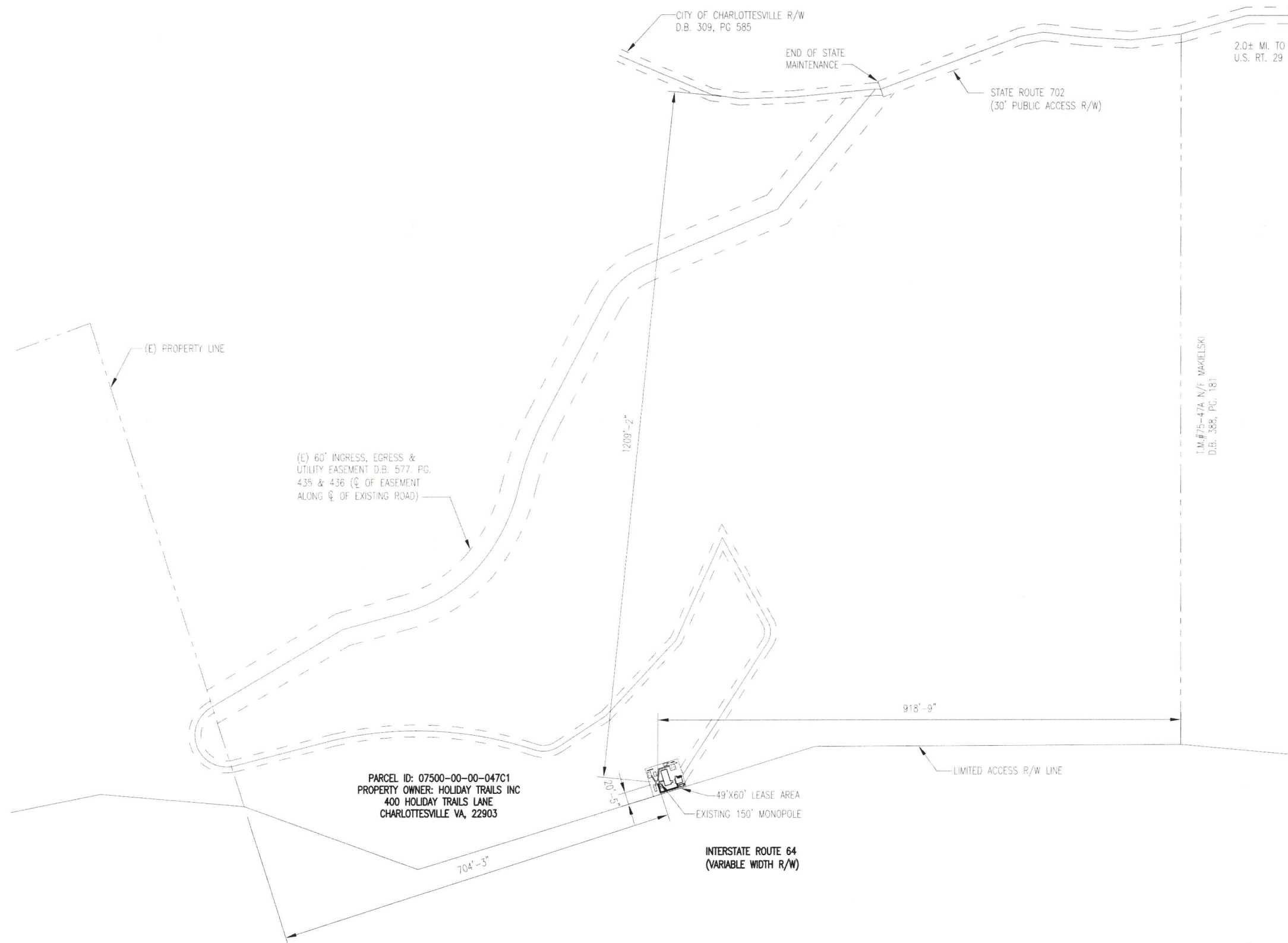
CV369
CAMP HOLIDAY
10068640
SITE ADDRESS:
700 HOLIDAY TRAILS LANE
CHARLOTTESVILLE, VA 22903



at&t
4801 COX ROAD
GLEN ALLEN, VA 23060

2	02-18-20	FINAL CONSTRUCTION DRAWINGS	MP	NP	CDM	AT&T PROJECTS
1	11-08-19	FINAL CONSTRUCTION DRAWINGS	ME	NP	CDM	TITLE SHEET
0	11-05-19	FINAL CONSTRUCTION DRAWINGS	BPC	NP	CDM	DRAWING NUMBER
A	06-25-19	PRELIMINARY CONSTRUCTION DRAWINGS	YT	ZS	CDM	T-1
NO.	DATE	REVISIONS	BY	CHK	APP'D	REV
SCALE:	AS SHOWN	DESIGNED YEMESERACH TADDELE	DRAWN YT			2

12-18-20 MPRAD 12:14:13 Y:/Drawings - 2019/Jacobs/Richmond/CV369/CD's -REV 2/A0.dwg



SITE PLAN
SCALE: 1"=200' (11x17)
SCALE: 1"=100' (24x36)



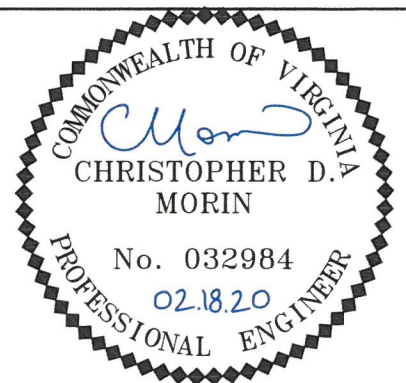
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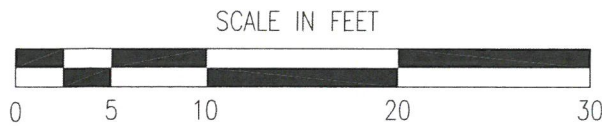
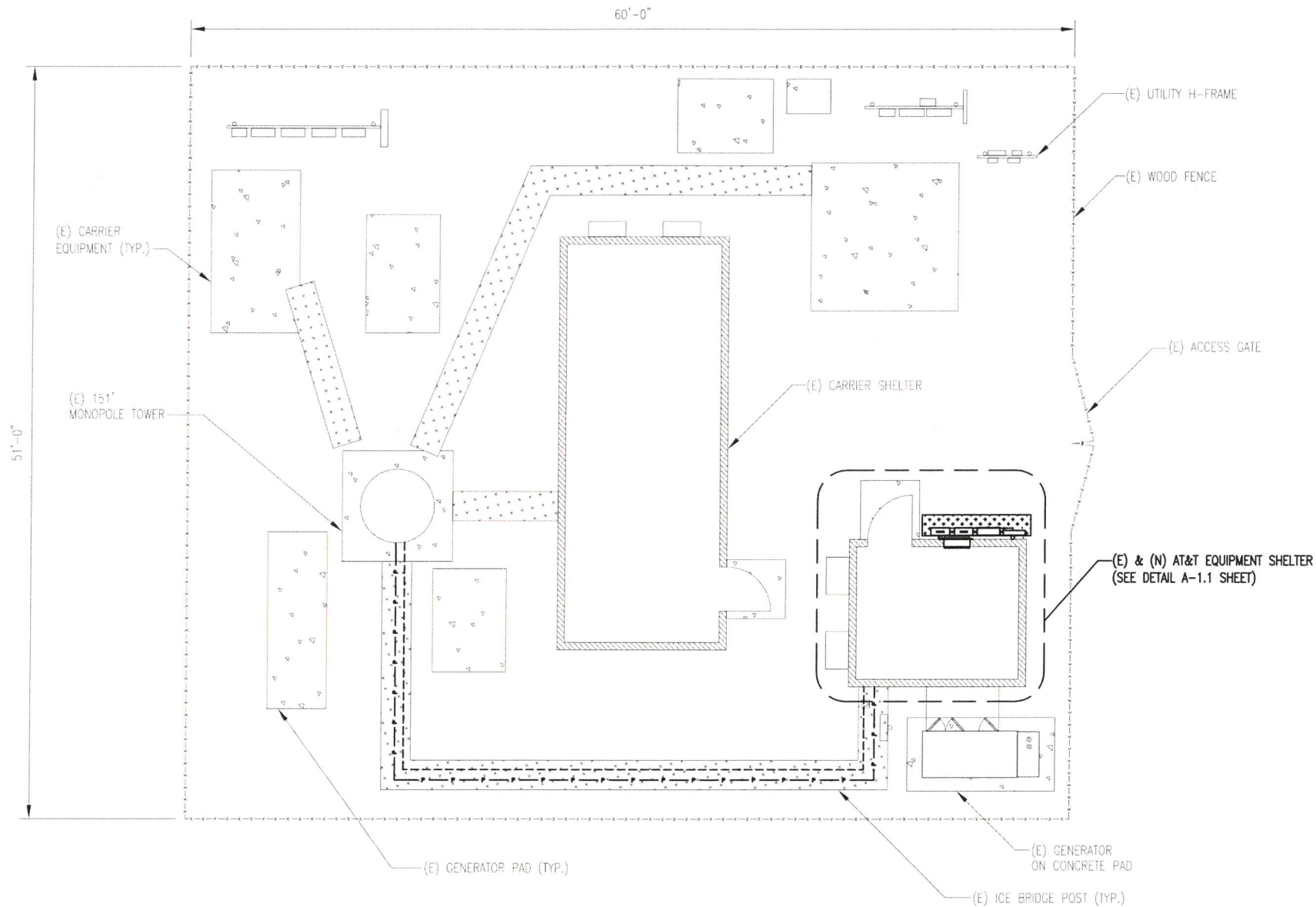


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0	11-05-19	FINAL CONSTRUCTION DRAWINGS	BPC	NP	CDM						
A	06-25-19	PRELIMINARY CONSTRUCTION DRAWINGS	YT	ZS	CDM						
SCALE: AS SHOWN DESIGNED YEMESERACH TADDELE DRAWN Y/T											



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12-18-20 MPRAD 11:10:10



COMPOUND PLAN 1
SCALE: 1"=10' (11x17)
SCALE: 1"=5' (24x36) A-1



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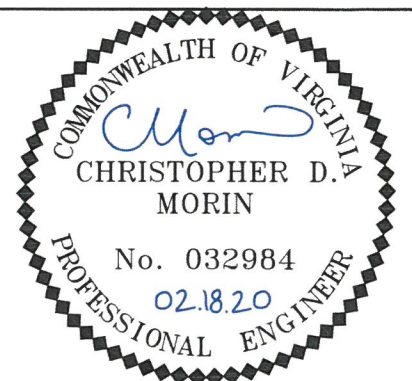
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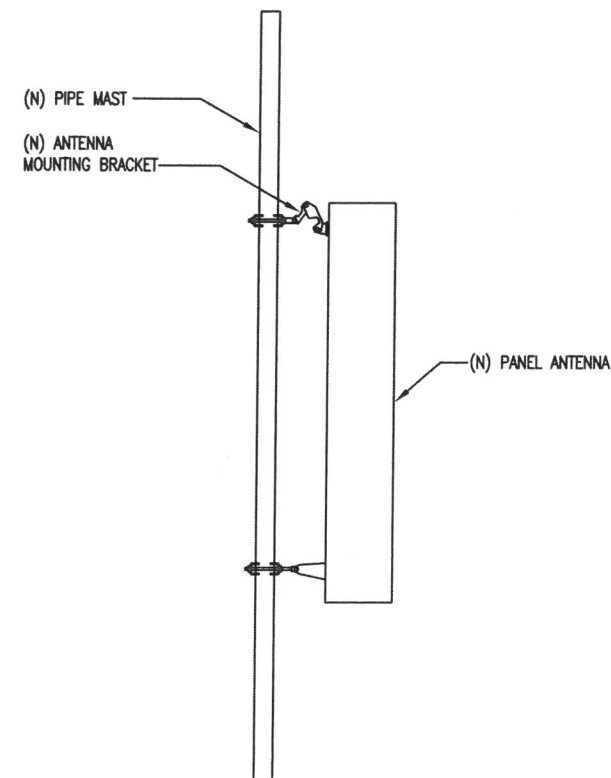
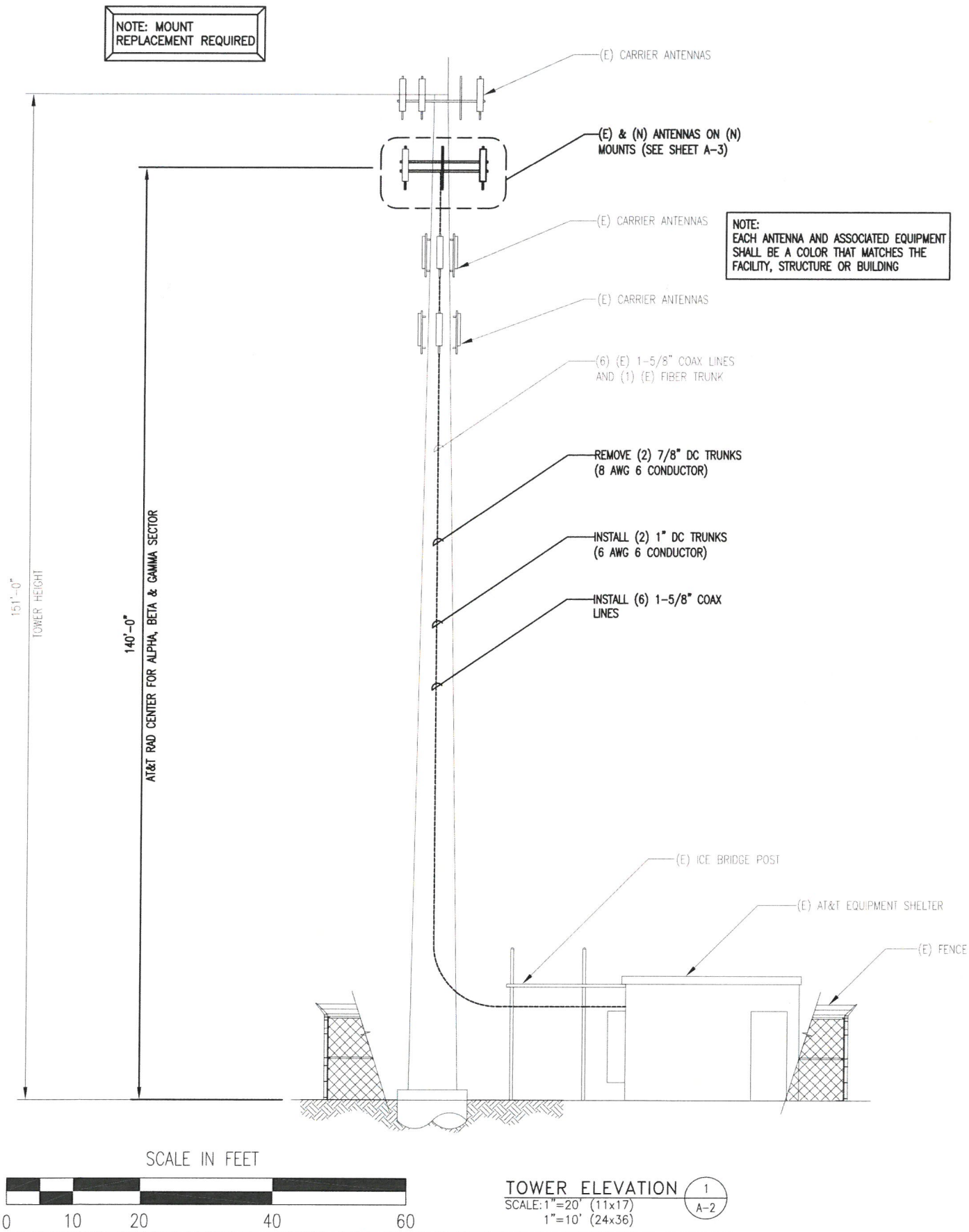
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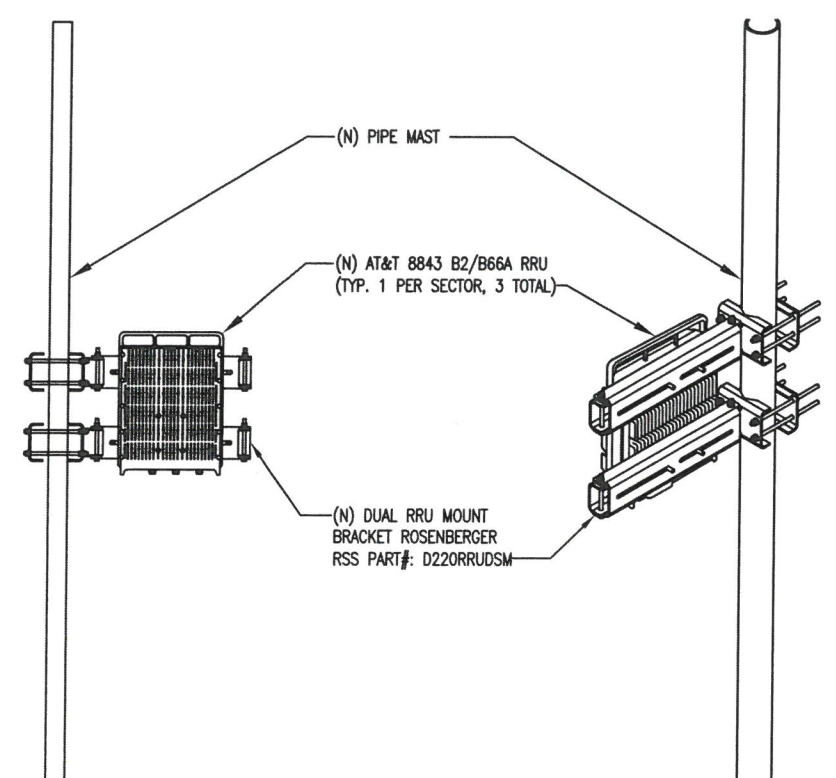
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A	06-25-19	PRELIMINARY CONSTRUCTION DRAWINGS	YT	ZS	CDM																		
SCALE: AS SHOWN			DESIGNED YEMESERACH TADDELE			DRAWN YT												A-1			2		



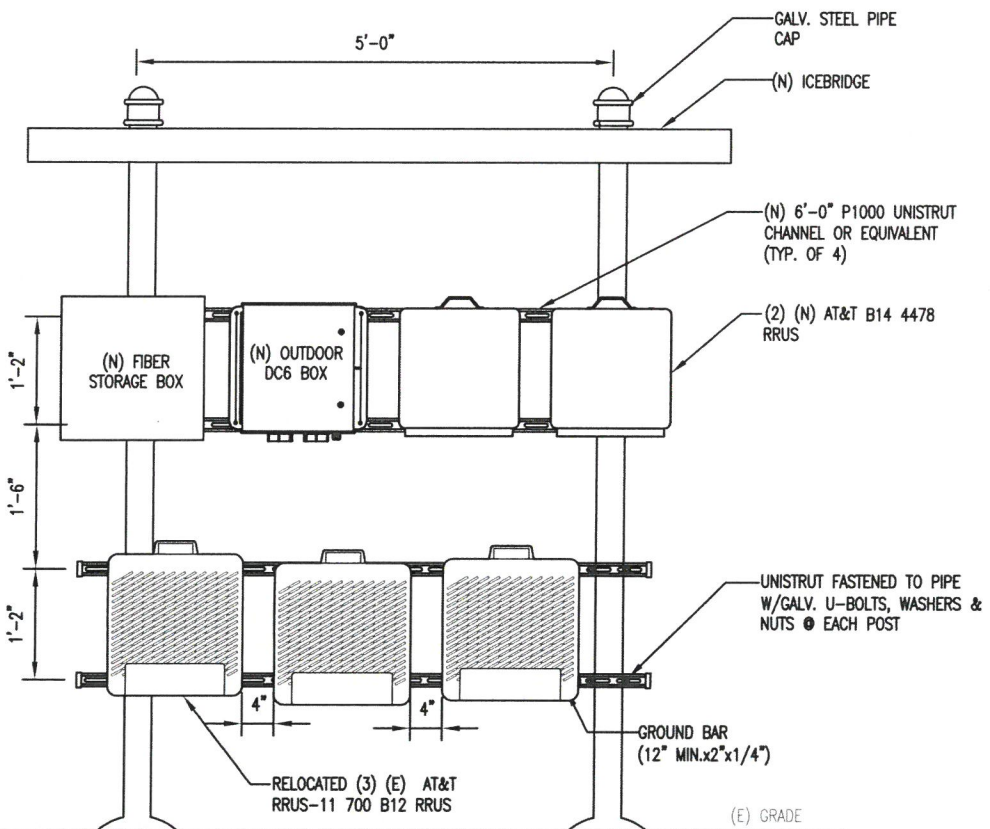
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ANTENNA MOUNTING DETAIL 2
SCALE: N.T.S. A-2



RRU MOUNTING DETAIL 3
SCALE: N.T.S. A-2



EQUIPMENT MOUNTING ELEVATION DETAIL 4
SCALE: N.T.S. A-2

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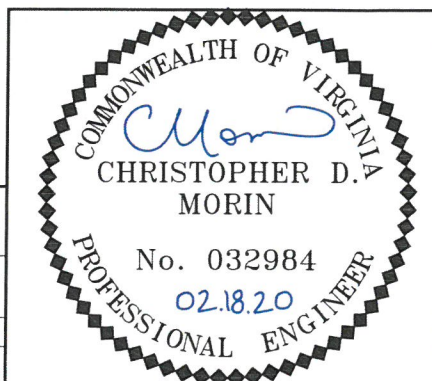
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NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE:	AS SHOWN	DESIGNED YEMESERACH TADDELE	DRAWN	YT	

AT&T PROJECTS		
TOWER ELEVATION & EQUIPMENT MOUNTING DETAILS		
DRAWING NUMBER	REV	
A-2	2	

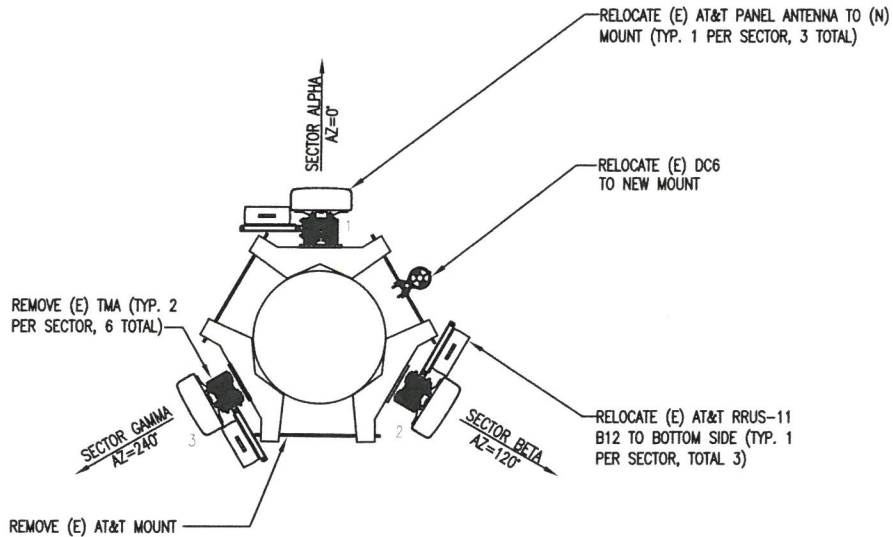


NOTES:

1. GENERAL CONTRACTOR IS TO FIELD VERIFY ALL EXISTING ANTENNA RAD CENTERS, ANTENNA TIP HEIGHTS WITH A PRE-TAPE DROP, AND AZIMUTHS PRIOR TO CONSTRUCTION. ALL CHANGES TO THE ANTENNA POSITIONS, AZIMUTHS, AND RAD CENTERS NEED TO BE DISCUSSED WITH RF AND AT&T FIELD CONSTRUCTION MANAGER. ALL CHANGES SHALL BE NOTED ON CONSTRUCTION AS BUILTS.
2. TOWER AND TOWER FOUNDATION DESIGN HAS BEEN PREPARED AND PROVIDED BY OTHERS. REFER TO MANUFACTURER'S APPROVED TOWER DRAWINGS OR CURRENT STRUCTURAL ANALYSIS. THE RF RAD CENTER OF THE PROPOSED ANTENNAS AND MOUNTING PLATFORM ARE BASED ON INFORMATION PROVIDED THROUGH AT&T.
3. THIS DRAWING IS A GRAPHICAL REPRESENTATION OF THE TOWER, THE RF RAD CENTER OF THE PROPOSED ANTENNAS AND PROPOSED MOUNTING PLATFORM/SECTOR FRAME BASED ON INFORMATION PROVIDED THROUGH AT&T, AND /OR ANALYZED BY OTHERS. BC ARCHITECTS ENGINEERS CERTIFIES ONLY THAT INFORMATION PROVIDED TO BC ARCHITECTS ENGINEERS FOR THE PREPARATION OF THESE PLANS AND IS NOT CERTIFYING NOR WARRANTING THE DESIGN NOR VERIFYING THE ANALYTICAL RESULTS OF THE STRUCTURAL ANALYSIS PERFORMED BY OTHERS
4. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE PROPOSED CABLES, CABLE LADDER, AND/OR OTHER CABLE SUPPORTING SYSTEM PER CURRENT STRUCTURAL ANALYSIS.
5. ALL COAX CABLES SHALL BE STACKED IN ACCORDANCE WITH THE CURRENT STRUCTURAL ANALYSIS. THE CONTRACTOR OR SUBCONTRACTOR SHALL FURNISH AND INSTALL CABLE LADDER RACK, CABLE TRAYS, ETC., AND/OR CONDUIT AS REQUIRED TO SUPPORT CABLES
6. THE CONTRACTOR SHALL VERIFY WITH CONSTRUCTION TURF VENDORS 48 HOURS PRIOR TO INSTALLATION OF ALL EQUIPMENT/RF CONFIGURATION AND ANY RELATED WORK RELATED TO THE COMPLETION OF THIS PROJECT.
7. THIS DRAWING IS FOR GENERAL INFORMATION ONLY

TOWER SCOPE OF WORK:

1. REMOVE (3) RRUS-11 (700) RRUS (TO BE USED BOTTOMSIDE) (1 PER SECTOR)
2. REMOVE (2) 7/8" DC TRUNKS (8 AWG 6 CONDUCTOR)
3. REMOVE (6) TMA'S (2 PER SECTOR)
4. REMOVE (1) FLUSH MOUNT
5. INSTALL (1) COMMSCOPE MTC4047M6996 MOUNT
6. INSTALL (3) HPA-45R-BUU-H4-K ANTENNAS ON (N) MOUNTS (1 PER SECTOR)
7. RE-INSTALL (3) 80010891 ON (N) MOUNTS (1 PER SECTOR)
8. INSTALL (6) 1-5/8" COAX LINES
9. INSTALL (3) TMA192123B68-21 TMA'S (1 PER SECTOR)
10. INSTALL (3) DUAL RRH MOUNTS BEHIND (E) ANTENNAS (1 PER SECTOR)
11. INSTALL (3) 8843 B2/B66A (1900/2100) RRU'S ON (N) DUAL RRU MOUNT (1 PER SECTOR)
12. INSTALL (6) SFP7 CARDS IN (N) 8843 B2/B66A RRU'S (2 PER RRU)
13. RE-INSTALL (1) DC6/DOME
14. INSTALL (24) 1/2" JUMPERS FROM (N) RRU'S TO (E) ANTENNAS (8 PER SECTOR)
15. INSTALL (12) 1/2" JUMPERS FROM (N) TMA'S TO (E) AND (N) ANTENNAS (4 PER SECTOR)
16. INSTALL (6) 1/2" JUMPERS FROM (N) 1-5/8" COAX LINES TO (N) ANTENNAS (2 PER SECTOR)
17. INSTALL (6) 1/2" JUMPERS FROM (E) 1-5/8" COAX LINES TO (N) TMA'S (2 PER SECTOR)
18. INSTALL (3) RET CABLES FROM (N) 8843 B2/B66A RRUS TO (E) ANTENNAS (1 PER SECTOR)
19. INSTALL (3) RET CABLES FROM (N) ANTENNA TO (E) ANTENNAS (1 PER SECTOR)
20. INSTALL (2) 1" DC TRUNKS (6 AWG 6 CONDUCTOR) FROM (E) DC12 TO (E) DC6/DOME
21. RE-INSTALL (1) FIBER TRUNK TO (E) DC6/DOME
22. INSTALL (3) DUAL PAIR FIBER JUMPERS FROM (E) DC6/DOME TO (N) 8843 B2/B66A RRUS (1 PER RRU)
23. INSTALL (6) 2/C #10 DC POWER CABLES FROM (E) DC6/DOME TO (N) 8843 B2/B66A RRUS (2 PER RRU)
24. LABEL ALL ANTENNAS/RRUS WITH P-TOUCH LABELS
25. INSTALL RF LOADS ON ALL UNUSED RRU PORTS. (6 TOTAL)
26. SECURE RET CABLES AND FIBERS WITH SNAPS INS AND GROMMETS.
27. COLOR CODE JUMPERS PER DETAILS.N (E) LTE RACK
28. LABEL ALL POWER/FIBER

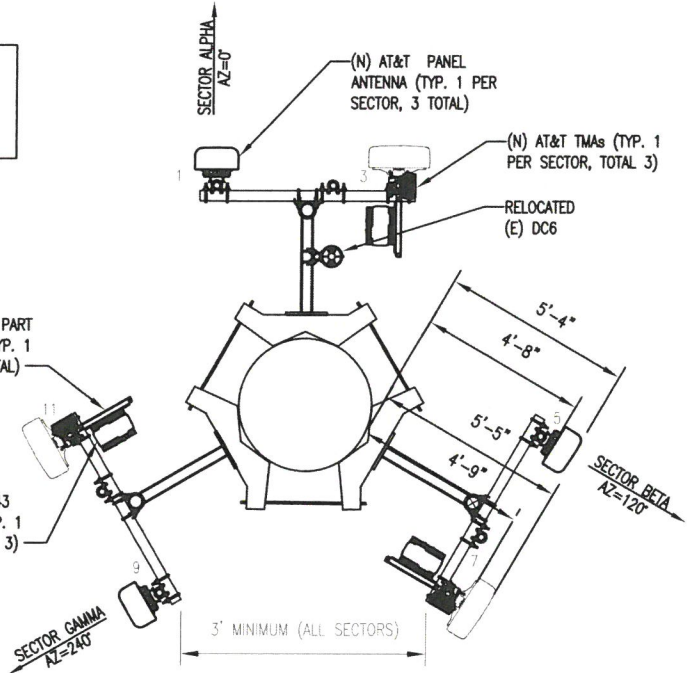


NOTE: MOUNT REPLACEMENT REQUIRED

NOTE:
1. HPA-45R-BUU-H4 ANTENNA
AREA= 943.11 SQ. INCHES
2. 80010891 ANTENNA
AREA= 1201.76 SQ. INCHES

INSTALL (N) AT&T ROSENBERGER RSS PART #: D220RRUDSM (TYP. 1 PER SECTOR, 3 TOTAL)

(N) AT&T RRUS 8843 B2/B66A RRUS (TYP. 1 PER SECTOR, TOTAL 3)



NOTE:
EACH ANTENNA AND ASSOCIATED EQUIPMENT SHALL BE A COLOR THAT MATCHES THE FACILITY, STRUCTURE OR BUILDING



EXISTING ANTENNA PLAN 1
SCALE: 3/16"=1' (11x17)
SCALE: 3/8"=1' (24x36)



PROPOSED ANTENNA PLAN 2
SCALE: 3/16"=1' (11x17)
SCALE: 3/8"=1' (24x36)



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			DRAWN YT		

AT&T PROJECTS	
EXISTING & PROPOSED ANTENNA PLANS	
DRAWING NUMBER	REV
A-3	2

COMMONWEALTH OF VIRGINIA

CHRISTOPHER D. MORIN
No. 032984
02.18.20
PROFESSIONAL ENGINEER