



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

www.ct.gov/csc

VIA ELECTRONIC MAIL

July 16, 2018

Aaron Meyers
Centerline Communications
750 W. Center Street, Floor 3
West Bridgewater, MA 02379

RE: **EM-CING-082-180702** - New Cingular Wireless, PCS, LLC notice of intent to modify an existing telecommunications facility located at 134 Kickapoo Road, Middlefield, Connecticut.

Dear Mr. Meyers:

The Connecticut Siting Council (Council) is in receipt of your email correspondence of July 16, 2018 submitted in response to the Council's July 12, 2018 notification of an incomplete request for exempt modification with regard to the above-referenced matter.

The submission renders the request for exempt modification complete and the Council will process the request in accordance with the Federal Communications Commission 60-day timeframe.

Thank you for your attention and cooperation.

Sincerely,

Melanie A. Bachman
Executive Director

MAB/CMW/jmb

c: David Ford, Centerline Communications



From: David Ford [mailto:dford@clinellc.com]

Sent: Monday, July 16, 2018 9:56 AM

To: Barton, Jenna <Jenna.Barton@ct.gov>

Cc: Aaron Meyers <ameyers@clinellc.com>; David Ford <dford@clinellc.com>; CSC-DL Siting Council <Siting.Council@ct.gov>

Subject: RE: Council Incomplete Letter for EM-CING-082-180702-KickapooRd-Middlefield - CT1016

Good Morning Jenna,

In regards to the attached correspondence issued on 7/13, please find the updated drawings referencing the proposed mount configuration.

Please advise if you'd like hard copies forwarded or if anything further is required to complete the review.

Thanks

PROJECT INFORMATION

SCOPE OF WORK: REPLACE (3) EXISTING ANTENNAS WITH (3) NEW ANTENNAS. INSTALL (3) RRU-32 WCS, (3) RRU-32 AWS, AND (3) B14 700 RADIOS ON EXISTING MONOPOLE. REPLACE (3) EXISTING RRU & A2 MODULES WITH (3) NEW RRUS-32 PCS RADIOS. INSTALL (2) DC6 SQUIDS ON TOWER AND RUN NEW FIBER/DC/& ALARM CABLING. INSTALL NEW SUPPORTING EQUIPMENT AT GRADE & WITHIN SHELTER.

SITE ADDRESS: 134 KICKAPOO ROAD
MIDDLEFIELD CT, 06455

LATITUDE: 41° 30' 48.97" N (NAD 83)*
LONGITUDE: 72° 44' 44.00" W (NAD 83)*
*PER EXISTING AT&T PLANS

CURRENT USE: TELECOMMUNICATIONS FACILITY
PROPOSED USE: TELECOMMUNICATIONS FACILITY

NAME OF APPLICANT: AT&T MOBILITY
500 ENTERPRISE DRIVE
SUITE 3A
ROCKY HILL, CT 06067

TOWER OWNER: AMERICAN TOWER CORPORATION

SITE ID: 302485 - MDFD MIDDLEFIELD CT



at&t
Mobility

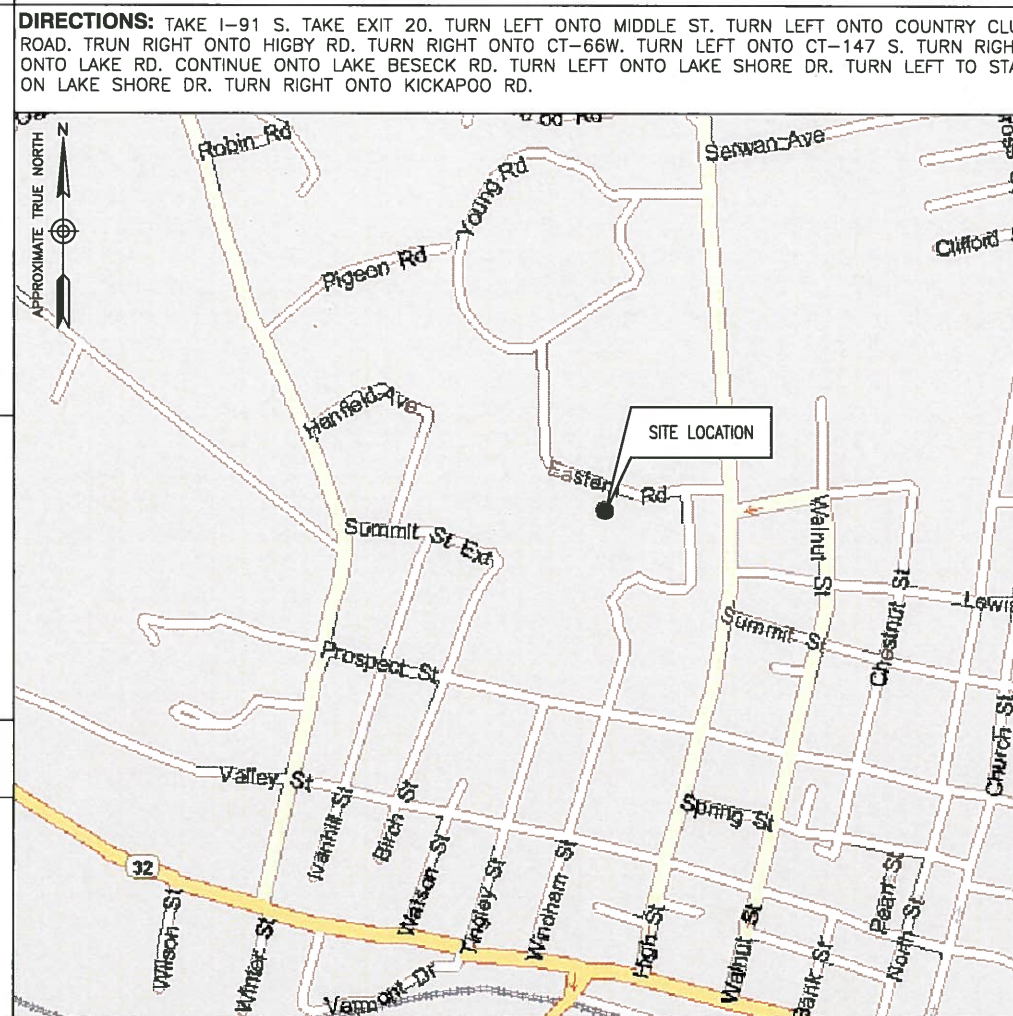
SITE NAME: MIDDLEFIELD KICKAPOO - 3C/4C/5C/RETROFIT
SITE NUMBER: CT1016

DRAWING INDEX

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VICINITY MAP



APPLICABLE BUILDING CODES AND STANDARDS

CONTRACTOR'S WORK SHALL COMPLY WITH PROJECT STANDARD NOTES, SYMBOLS AND DETAILS (SEE DRAWING INDEX FOR STANDARD NOTES AND DETAILS INCLUDED WITH TYPICAL DRAWING PACKAGE). CONTRACTOR 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.

BUILDING CODE:
INTERNATIONAL BUILDING CODE (IBC 2012)

ELECTRICAL CODE:
NATIONAL ELECTRICAL CODE (NEC 2014)

CONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS.
AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION
TELECOMMUNICATIONS INDUSTRY ASSOCIATION (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) 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM
IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC EQUIPMENT
IEEE C62.41, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND "HIGH SYSTEM EXPOSURE")
TELCORDIA GR-1503, COAXIAL CABLE CONNECTIONS
ANSI T1.311, FOR TELECOM - DC POWER SYSTEMS - TELECOM, ENVIRONMENTAL PROTECTION

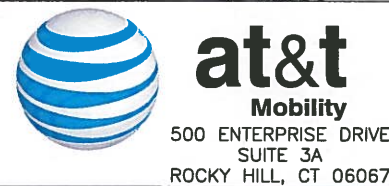
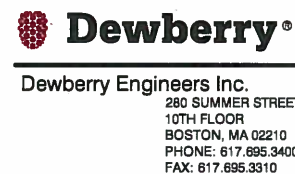
FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

THIS DOCUMENT WAS DEVELOPED TO REFLECT A SPECIFIC SITE AND ITS SITE CONDITIONS AND IS NOT TO BE USED FOR ANOTHER SITE OR WHEN OTHER CONDITIONS PERTAIN. REUSE OF THIS DOCUMENT IS AT THE SOLE RISK OF THE USER.

- STRUCTURAL NOTE:**
- AS REQUIRED UNDER TIA/EIA 222G - STANDARD, CENTERLINE COMMUNICATIONS SHALL PROVIDE A STRUCTURAL ANALYSIS OF THE TOWER PREPARED BY A LICENSED CONNECTICUT STRUCTURAL ENGINEER CERTIFYING THAT, THE EXISTING TOWER AND ANY REQUIRED IMPROVEMENTS AND REINFORCEMENTS HAVE SUFFICIENT CAPACITY TO SUPPORT ALL EXISTING AND PROPOSED ANTENNAS, SUPPORTS AND APPURTENANCES AND COMPLIES WITH THE CURRENT CONNECTICUT STATE BUILDING CODE AND EIA/TIA CRITERIA. THE CONTRACTOR IS RESPONSIBLE TO CONFIRM THAT ANY IMPROVEMENTS AND REINFORCEMENTS REQUIRED BY THE STRUCTURAL ANALYSIS CERTIFICATION ARE PROPERLY INSTALLED PRIOR TO THE ADDITION OF ANTENNAS, SUPPORTS AND APPURTENANCES PROPOSED ON THESE DRAWINGS OR OTHERWISE NOTED IN THE STRUCTURAL ANALYSIS.

CONTACT INFORMATION

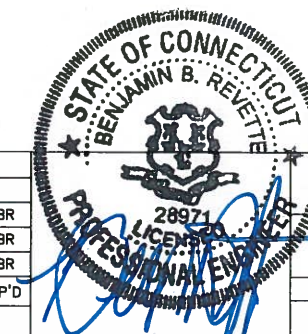
CONTACT	CONTACT	COMPANY	PHONE NO.
ENGINEERING: SAC:	BENJAMIN REVETTE, P.E. MEREDITH PAYNTER	DEWBERRY ENGINEERS INC. CENTERLINE COMMUNICATIONS	(617) 531-0800 (508) 673-9116



**MIDDLEFIELD KICKAPOO-
3C/4C/5C/RETROFIT**
SITE NO. CT1016
134 KICKAPOO ROAD
MIDDLEFIELD CT, 06455

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	06/25/18	ISSUED FOR CONSTRUCTION	SK	DAS	BBR
0	06/20/18	ISSUED FOR CSC APPROVAL	SK	DAS	BBR
A	12/08/17	ISSUED FOR REVIEW	SK	DAS	BBR

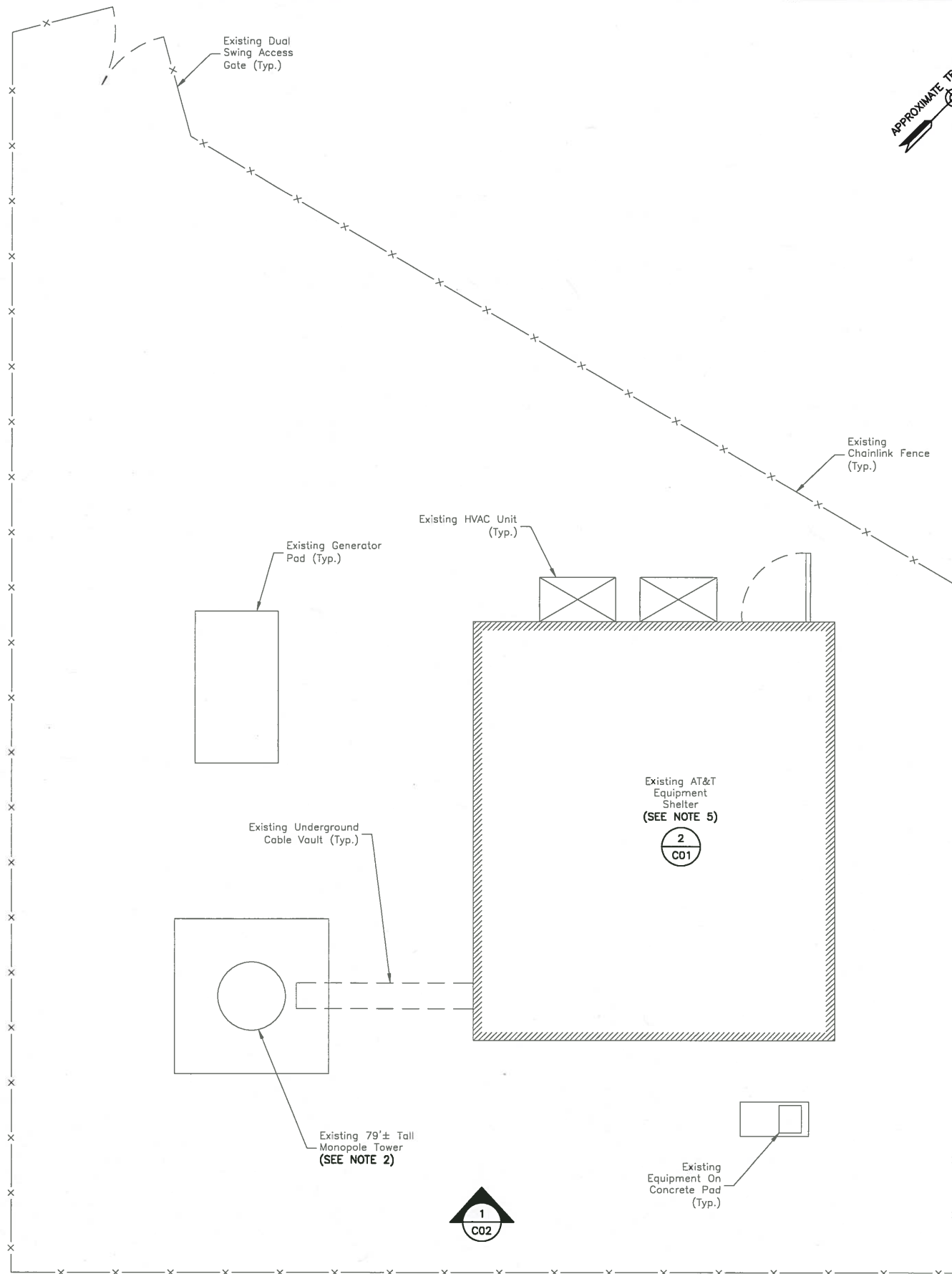
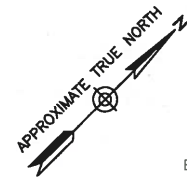
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AT&T MOBILITY
ROCKY HILL, CT 06067

TITLE SHEET

DEWBERRY NO.	DRAWING NUMBER	REV
50093723/50093823	T01	1

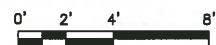


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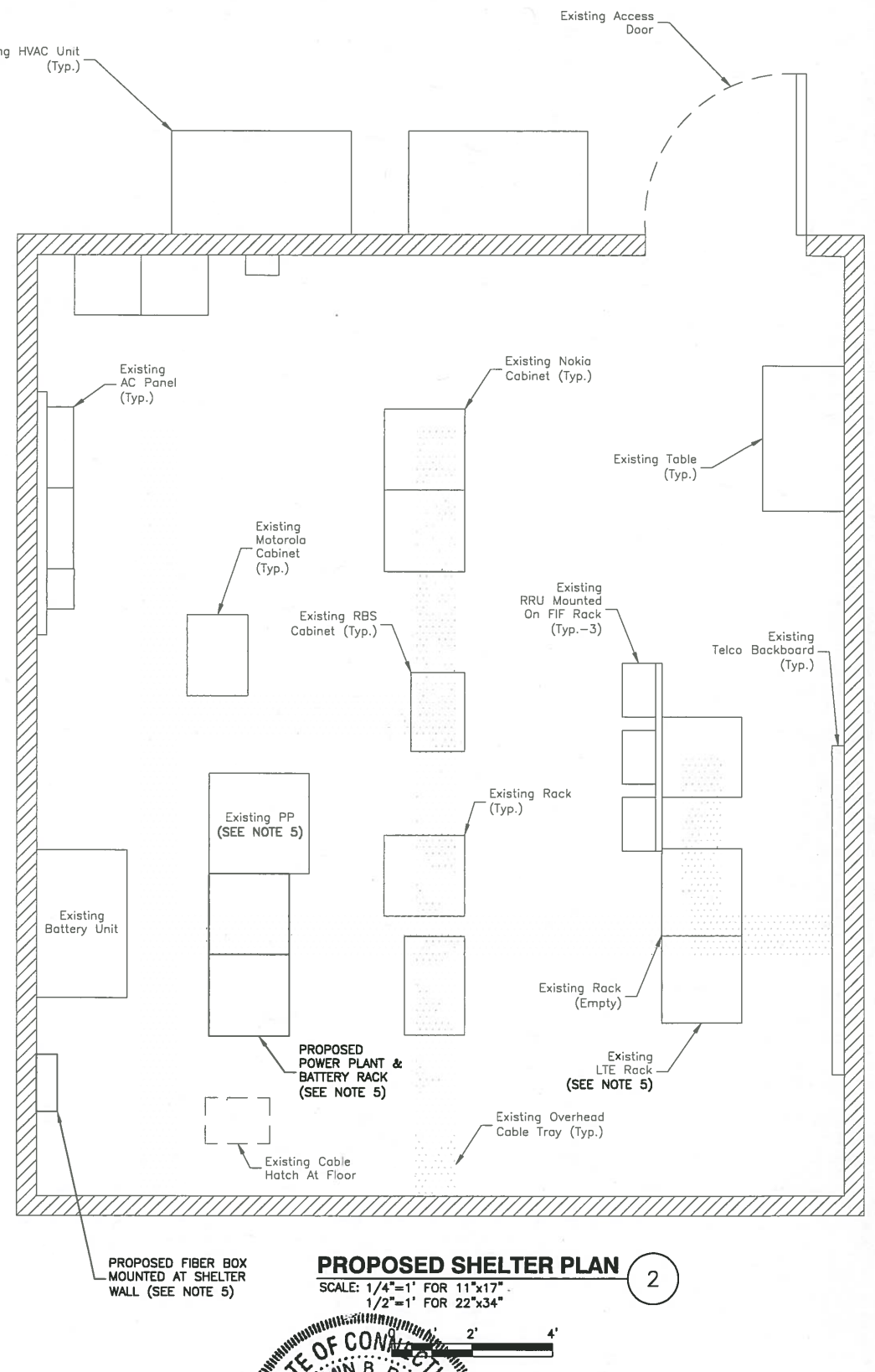
1. NORTH SHOWN AS APPROXIMATE.
2. ALL PROPOSED EQUIPMENT INCLUDING ANTENNAS, COAX, SURGE ARRESTORS, RRU'S, ETC. SHALL BE MOUNTED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS & THE MOUNT ASSESSMENT LETTER BY DEWBERRY ENGINEERS INC. DATED 06-25-18. THE EXISTING MOUNT IS TO BE REPLACED SINCE THE EXISTING MOUNTING FACE IS NOT LARGE ENOUGH TO ACCOMMODATE THE REQUIRED AT&T SPACING BETWEEN ANTENNAS.
3. DEWBERRY WAS NOT PROVIDED WITH OR CONTRACTED TO PERFORM A STRUCTURAL ANALYSIS ON THIS TOWER. TOWER RELATED IMPROVEMENTS ARE NOT TO BE INSTALLED WITHOUT A PASSING STRUCTURAL ANALYSIS. SEE STRUCTURAL NOTE ON SHEET T01.
4. NOT ALL INFORMATION SHOWN FOR CLARITY.
5. EQUIPMENT MODIFICATIONS SCOPE OF WORK:
 - SWAP GSM ANTENNA & INSTALL (3) ANTENNAS AT POSITION 4.
 - INSTALL (3) RRUS-32 (WCS), (3) RRUS-32 B66, & (3) B14 RRUS.
 - SWAP PCS RRU/A2 MODULES, WITH (3) RRUS-32 (PCS).
 - INSTALL (2) DC6 SQUIDS.
 - INSTALL (1) 18 PAIR FIBER, (4) DC, & (2) ALARM CABLES.
 - INSTALL (1) 18 PAIR, (4) DC TRUNKS, & (2) ALARM CABLES.
 - INSTALL (1) FIBER BOX WITHIN SHELTER.
 - INSTALL FIBER TRAY IN LTE RACK & (1) DC12 MOUNTED TO LTE RACK.
 - SWAP DUS TO 5216 & ADD 2ND XMU.
 - REPLACE EXISTING 2000 POWER PLANT WITH NEW EMERSON 721 & BATTERY STAND. INSTALL NEW PP NEXT TO EXISTING MINIMIZE DOWNTIME.
 - REWIRE ALL TECHNOLOGIES & 48V CONVERTER SHELF TO NEW PP & DECOM OLD UNIT UPON COMPLETION.
 - INSTALL (12) 30A BREAKERS & (1) 25 A BREAKER.

PROPOSED SITE PLAN

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



1



PROPOSED SHELTER PLAN

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



2



Dewberry Engineers Inc.
280 SUMMER STREET
10TH FLOOR
BOSTON, MA 02210
PHONE: 617.695.3400
FAX: 617.695.3310



95 RYAN DRIVE, SUITE 1
RAYNHAM, MA 02767

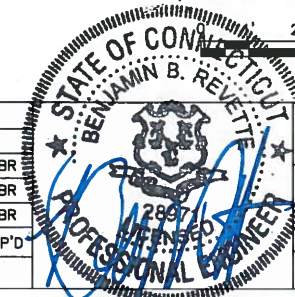


at&t
Mobility
500 ENTERPRISE DRIVE
SUITE 3A
ROCKY HILL, CT 06067

**MIDDLEFIELD KICKAPOO-
3C/4C/5C/RETROFIT
SITE NO. CT1016**
134 KICKAPOO ROAD
MIDDLEFIELD CT, 06455

NO.	DATE	REVISIONS	BY	CHK	APP'D
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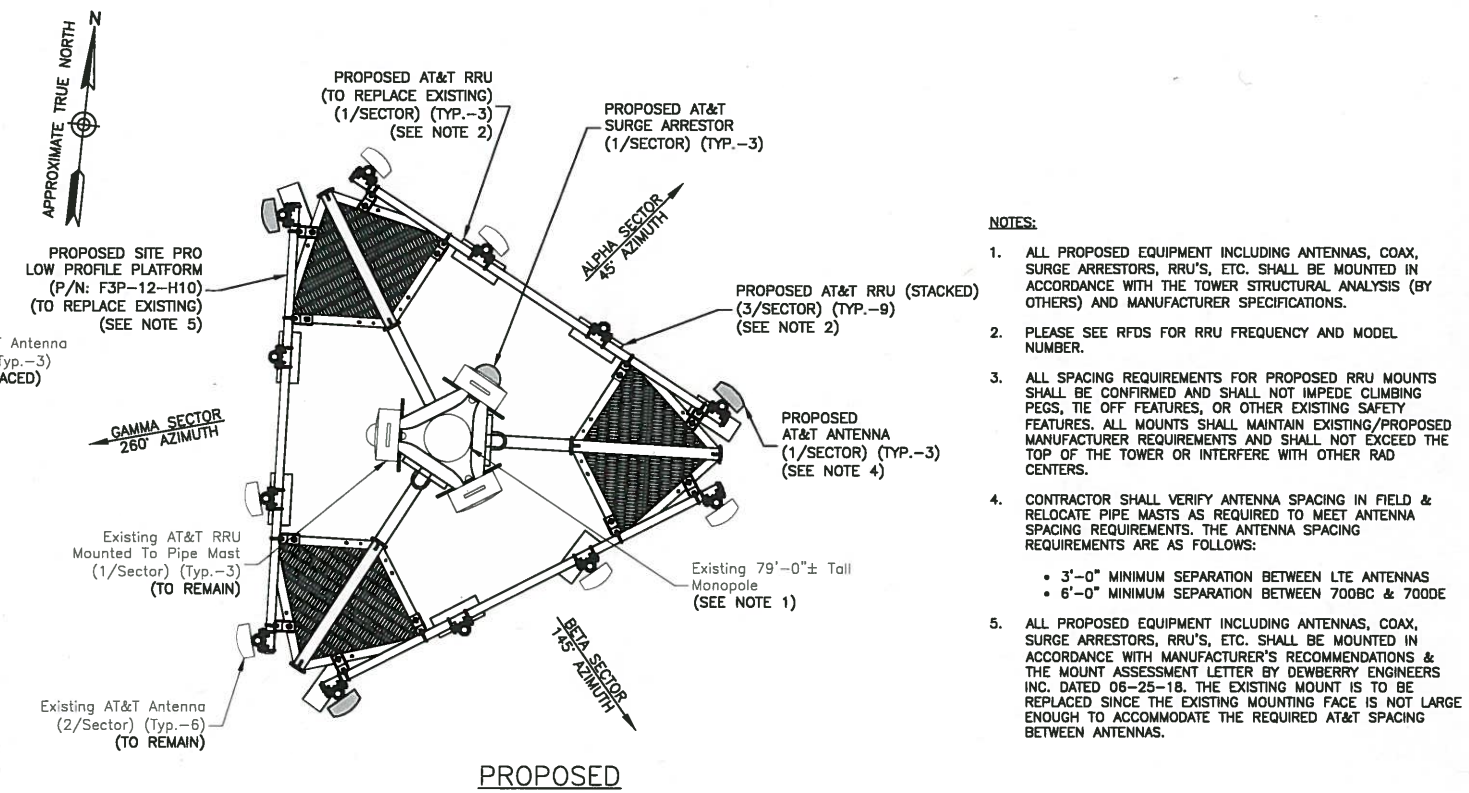
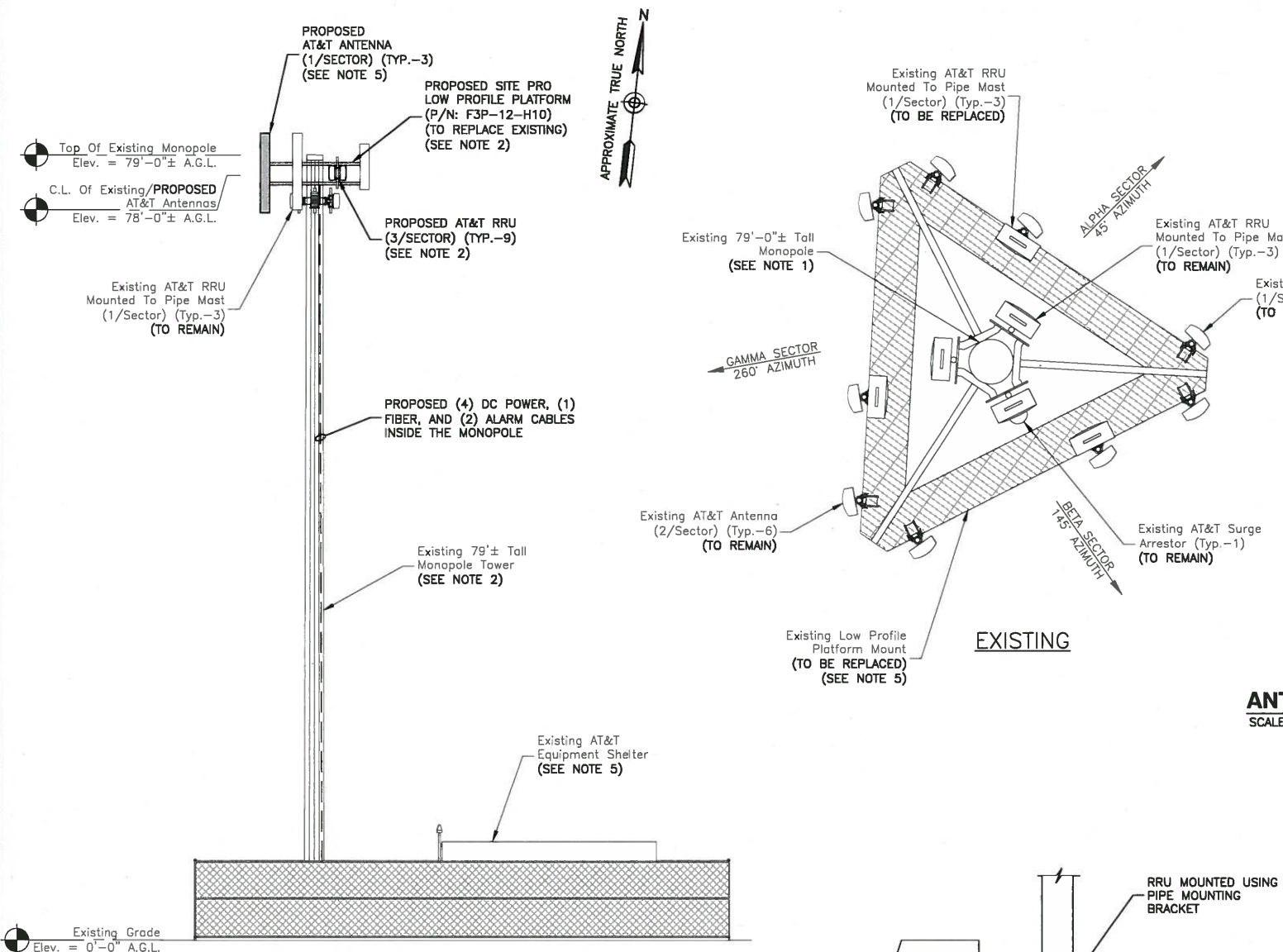
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AT&T MOBILITY
ROCKY HILL, CT 06067

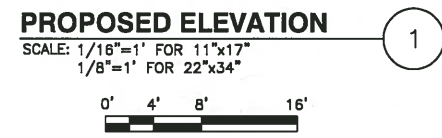
PROPOSED SITE PLAN & SHELTER PLAN

DEWBERRY NO.	DRAWING NUMBER	REV
50093723/50093823	C01	1

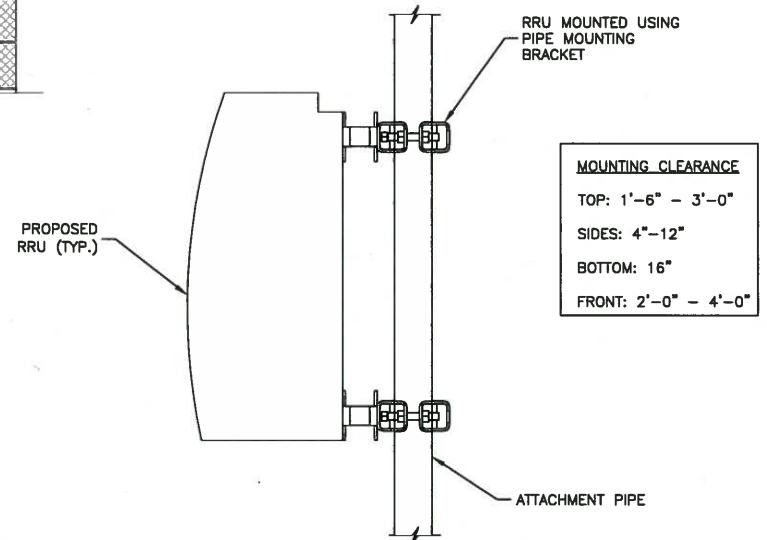


- NOTES:**
- ALL PROPOSED EQUIPMENT INCLUDING ANTENNAS, COAX, SURGE ARRESTORS, RRU'S, ETC. SHALL BE MOUNTED IN ACCORDANCE WITH THE TOWER STRUCTURAL ANALYSIS (BY OTHERS) AND MANUFACTURER SPECIFICATIONS.
 - PLEASE SEE RFDS FOR RRU FREQUENCY AND MODEL NUMBER.
 - ALL SPACING REQUIREMENTS FOR PROPOSED RRU MOUNTS SHALL BE CONFIRMED AND SHALL NOT IMPEDE CLIMBING PEGS, TIE OFF FEATURES, OR OTHER EXISTING SAFETY FEATURES. ALL MOUNTS SHALL MAINTAIN EXISTING/PROPOSED MANUFACTURER REQUIREMENTS AND SHALL NOT EXCEED THE TOP OF THE TOWER OR INTERFERE WITH OTHER RAD CENTERS.
 - CONTRACTOR SHALL VERIFY ANTENNA SPACING IN FIELD & RELOCATE PIPE MASTS AS REQUIRED TO MEET ANTENNA SPACING REQUIREMENTS. THE ANTENNA SPACING REQUIREMENTS ARE AS FOLLOWS:
 - 3'-0" MINIMUM SEPARATION BETWEEN LTE ANTENNAS
 - 6'-0" MINIMUM SEPARATION BETWEEN 700BC & 700DE
 - ALL PROPOSED EQUIPMENT INCLUDING ANTENNAS, COAX, SURGE ARRESTORS, RRU'S, ETC. SHALL BE MOUNTED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS & THE MOUNT ASSESSMENT LETTER BY DEWBERRY ENGINEERS INC. DATED 06-25-18. THE EXISTING MOUNT IS TO BE REPLACED SINCE THE EXISTING MOUNTING FACE IS NOT LARGE ENOUGH TO ACCOMMODATE THE REQUIRED AT&T SPACING BETWEEN ANTENNAS.

ANTENNA ORIENTATION PLAN
SCALE: N.T.S.



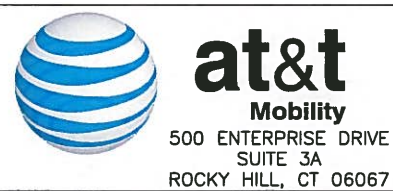
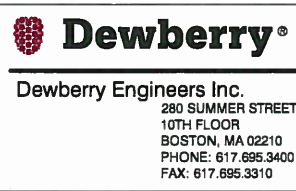
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 - DEWBERRY WAS NOT PROVIDED WITH OR CONTRACTED TO PERFORM A STRUCTURAL ANALYSIS ON THIS TOWER. TOWER RELATED IMPROVEMENTS ARE NOT TO BE INSTALLED WITHOUT A PASSING STRUCTURAL ANALYSIS. SEE STRUCTURAL NOTE ON SHEET 101.
 - NOT ALL INFORMATION SHOWN FOR CLARITY.
 - EQUIPMENT MODIFICATIONS SCOPE OF WORK:
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 - INSTALL (3) RRUS-32 (WCS), (3) RRUS-32 B66, & (3) B14 RRUS.
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REMOTE ATTACHMENT DETAIL
SCALE: N.T.S.

SECTOR	BAND	ANTENNA	SIZE (INCHES) (LxWxD)	RAD. CENTER	AZIMUTH	TMA	RRU	SIZE (INCHES) (LxWxD)	COAX JUMPERS	FIBER JUMPERS
ALPHA	UMTS DB	(E) POWERWAVE 7770	55.0x11.0x5.0	78'-0"	145°	(2) LPG21401	-	-	-	-
	LTE WCS/700 B14/AWS	(E) CCI HPA-65R-BUU-HB	92.4X14.8X7.4	78'-0"	45°	-	(E) RRUS-11 700 (B/C) (E) RRUS-32 B2 PCS	19.7 x 17.0 x 7.2 27.2 x 12.1 x 7.0	(E) 2	(E) 1
	LTE 700 BC/PCS	(P) CCI TPA-65R-LCUUUU-HB	96.0X14.4X8.6	78'-0"	45°	-	(P) 4478 700 B14 (P) RRUS-32 WCS (E) RRUS-32 B66 AWS	15.0 x 13.2 x 7.4	-	-
BETA	UMTS DB	(E) POWERWAVE 7770	55.0x11.0x5.0	78'-0"	260°	(2) LPG21401	-	-	-	-
	LTE WCS/700 B14/AWS	(E) CCI HPA-65R-BUU-HB	92.4X14.8X7.4	78'-0"	145°	-	(E) RRUS-11 700 (B/C) (E) RRUS-32 B2 PCS	19.7 x 17.0 x 7.2 27.2 x 12.1 x 7.0	(E) 2	(E) 1
	LTE 700 BC/PCS	(P) CCI TPA-65R-LCUUUU-HB	96.0X14.4X8.6	78'-0"	145°	-	(P) 4478 700 B14 (P) RRUS-32 WCS (E) RRUS-32 B66 AWS	15.0 x 13.2 x 7.4	-	-
GAMMA	UMTS DB	(E) POWERWAVE 7770	55.0x11.0x5.0	78'-0"	45°	(2) LPG21401	-	-	-	-
	LTE WCS/700 B14/AWS	(E) CCI HPA-65R-BUU-HB	92.4X14.8X7.4	78'-0"	260°	-	(E) RRUS-11 700 (B/C) (E) RRUS-32 B2 PCS	19.7 x 17.0 x 7.2 27.2 x 12.1 x 7.0	(E) 2	(E) 1
	LTE 700 BC/PCS	(P) CCI TPA-65R-LCUUUU-HB	96.0X14.4X8.6	78'-0"	260°	-	(P) 4478 700 B14 (P) RRUS-32 WCS (E) RRUS-32 B66 AWS	15.0 x 13.2 x 7.4	-	-

FINAL EQUIPMENT CONFIGURATION
SCALE: N.T.S.



MIDDLEFIELD KICKAPOO-3C/4C/5C/RETROFIT
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134 KICKAPOO ROAD
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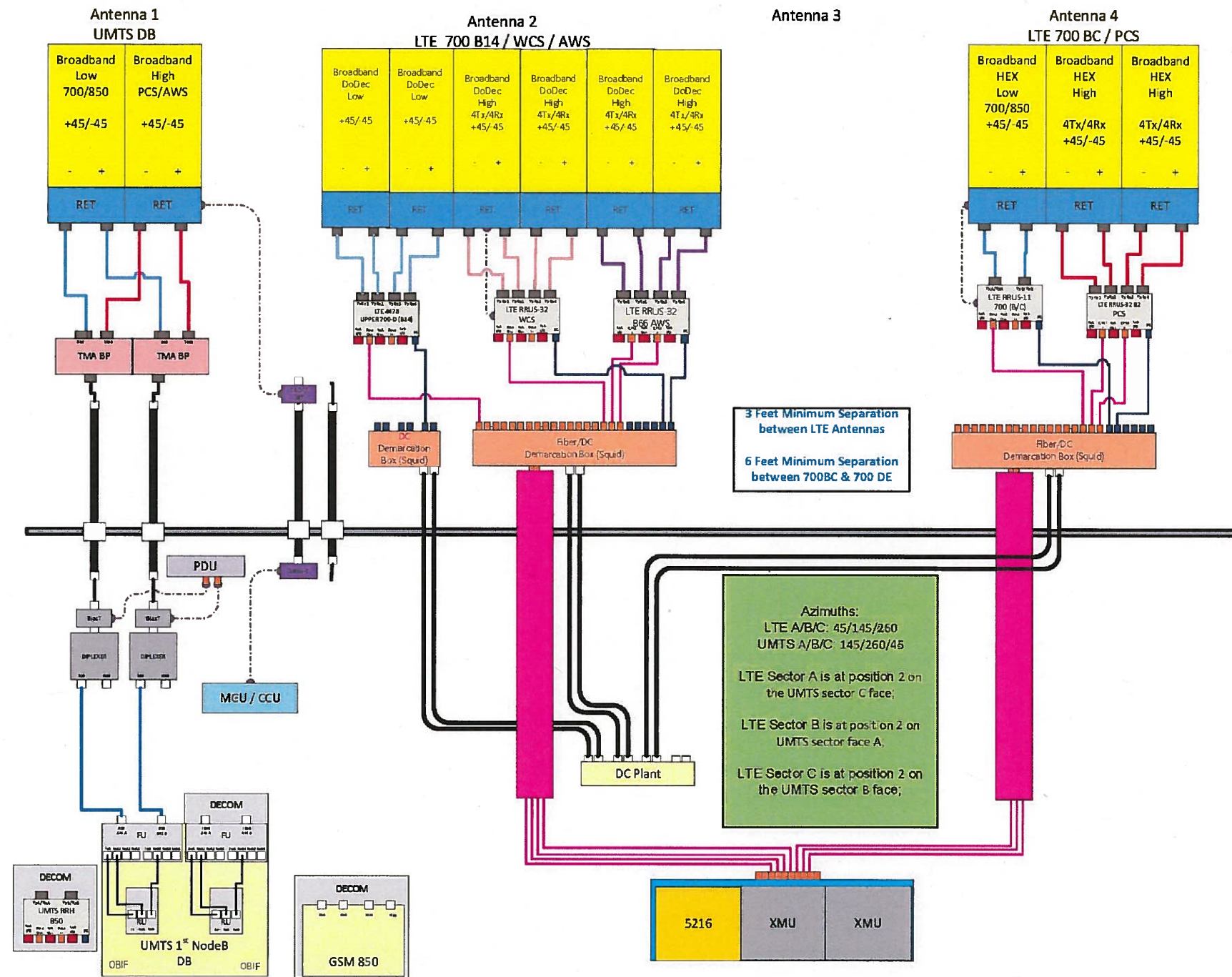
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AT&T MOBILITY
ROCKY HILL, CT 06067

PROPOSED ELEVATION & CONSTRUCTION DETAILS

DEWBERRY NO.	DRAWING NUMBER	REV
50093723/50093823	C02	1



EQUIPMENT PLUMBING DIAGRAM
 SCALE: N.T.S.

1

- NOTES:
- EQUIPMENT PLUMBING DIAGRAM PER RFDS VERSION 1 DATED 08/19/17.
 - CONTRACTOR TO VERIFY FINAL EQUIPMENT CONFIGURATION AND SEPARATIONS WITH AT&T PRIOR TO CONSTRUCTION.

Dewberry
 Dewberry Engineers Inc.
 280 SUMMER STREET
 10TH FLOOR
 BOSTON, MA 02210
 PHONE: 617.695.3400
 FAX: 617.695.3310

CENTERLINE
 COMMUNICATIONS
 95 RYAN DRIVE, SUITE 1
 RAYNHAM, MA 02767

at&t
 Mobility
 500 ENTERPRISE DRIVE
 SUITE 3A
 ROCKY HILL, CT 06067

MIDDLEFIELD KICKAPOO-3C/4C/5C/RETROFIT
SITE NO. CT1016
 134 KICKAPOO ROAD
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SCALE: AS SHOWN DESIGNED BY: DAS DRAWN BY: SK



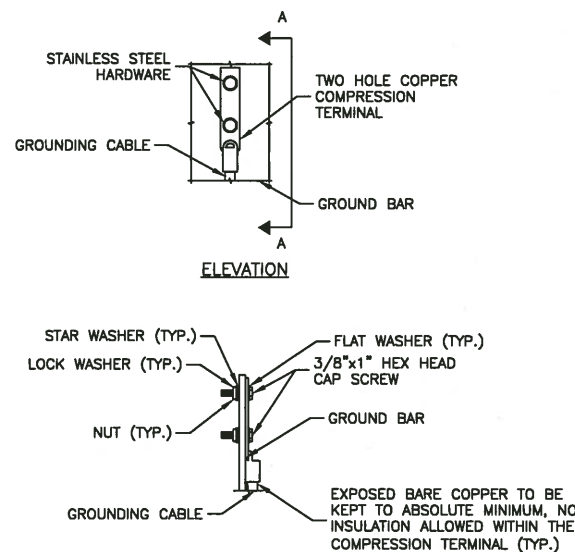
AT&T MOBILITY
 ROCKY HILL, CT 06067

EQUIPMENT PLUMBING DIAGRAM

DEWBERRY NO.	DRAWING NUMBER	REV
50093723/50093823	C03	1

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 CONTRACTOR FOR RESOLUTION.
- ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS. ALL AVAILABLE GROUNDING ELECTRODES SHALL BE CONNECTED TOGETHER IN ACCORDANCE WITH THE NEC.
- THE CONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS. USE OF OTHER METHODS MUST BE PRE-APPROVED BY CONTRACTOR IN WRITING.
- THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS ON TOWER SITES AND 10 OHMS OR LESS ON ROOFTOP SITES. WHEN ADDING ELECTRODES, CONTRACTOR SHALL MAINTAIN A MINIMUM DISTANCE BETWEEN THE ADDED ELECTRODE AND ANY OTHER EXISTING ELECTRODE EQUAL TO THE BURIED LENGTH OF THE ROD. IDEALLY, CONTRACTOR SHALL STRIVE TO KEEP THE SEPARATION DISTANCE EQUAL TO TWICE THE BURIED LENGTH OF THE RODS.
- THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT.
- METAL CONDUIT AND TRAY SHALL BE GROUNDING AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWG COPPER WIRE AND UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
- 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 TRANSMISSION EQUIPMENT.
- CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED. BACK-TO-BACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BUS ARE PERMITTED.
- ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
- USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED. IN ALL CASES, BENDS SHALL BE MADE WITH A MINIMUM BEND RADIUS OF 8 INCHES.
- EACH INTERIOR TRANSMISSION CABINET FRAME/PLINTH SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH 6 AWG STRANDED, GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRE UNLESS NOTED OTHERWISE IN THE DETAILS. EACH OUTDOOR CABINET FRAME/PLINTH SHALL BE DIRECTLY CONNECTED TO THE BURIED GROUND RING WITH 2 AWG SOLID TIN-PLATED COPPER WIRE UNLESS NOTED OTHERWISE IN THE DETAILS.
- ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING, SHALL BE 2 AWG SOLID TIN-PLATED COPPER UNLESS OTHERWISE INDICATED.
- EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE. CONNECTIONS TO ABOVE GRADE UNITS SHALL BE MADE WITH EXOTHERMIC WELDS WHERE PRACTICAL OR WITH 2 HOLE MECHANICAL TYPE BRASS CONNECTORS WITH STAINLESS STEEL HARDWARE, INCLUDING SET SCREWS. HIGH PRESSURE CRIMP CONNECTORS MAY ONLY BE USED WITH WRITTEN PERMISSION FROM CENTERLINE COMMUNICATIONS MARKET REPRESENTATIVE.
- EXOTHERMIC WELDS SHALL BE PERMITTED ON TOWERS ONLY WITH THE EXPRESS APPROVAL OF THE TOWER MANUFACTURER OR THE CONTRACTORS STRUCTURAL ENGINEER.
- ALL WIRE TO WIRE GROUND CONNECTIONS TO THE INTERIOR GROUND RING SHALL BE FORMED USING HIGH PRESS CRIMPS OR SPLIT BOLT CONNECTORS WHERE INDICATED IN THE DETAILS.
- ON ROOFTOP SITES WHERE EXOTHERMIC WELDS ARE A FIRE HAZARD COPPER COMPRESSION CAP CONNECTORS MAY BE USED FOR WIRE TO WIRE CONNECTORS. 2 HOLE MECHANICAL TYPE BRASS CONNECTORS WITH STAINLESS STEEL HARDWARE, INCLUDING SET SCREWS SHALL BE USED FOR CONNECTION TO ALL ROOFTOP TRANSMISSION EQUIPMENT AND STRUCTURAL STEEL.
- COAX BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR USING TWO-HOLE MECHANICAL TYPE BRASS CONNECTORS AND STAINLESS STEEL HARDWARE.
- APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
- ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
- MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
- BOND ALL METALLIC OBJECTS WITHIN 6 FT OF THE BURIED GROUND RING WITH 2 AWG SOLID TIN-PLATED COPPER GROUND CONDUCTOR. DURING EXCAVATION FOR NEW GROUND CONDUCTORS, IF EXISTING GROUND CONDUCTORS ARE ENCOUNTERED, BOND EXISTING GROUND CONDUCTORS TO NEW CONDUCTORS.
- 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 WITH LISTED BONDING FITTINGS.



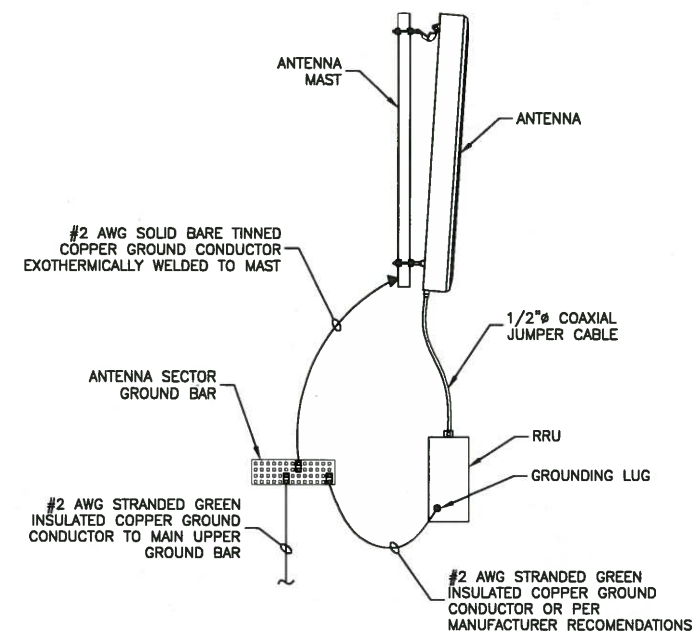
NOTES:

- DOUBLING UP OR STACKING OF CONNECTIONS IS NOT PERMITTED.
- OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.

TYPICAL GROUND BAR MECHANICAL CONNECTION DETAIL

SCALE: N.T.S.

1



NOTES:

- VERIFY EXISTING GROUNDING SYSTEM IS INSTALLED PER AT&T STANDARDS.
- BOND NEW EQUIPMENT INTO EXISTING GROUND SYSTEM IN ACCORDANCE WITH AT&T STANDARDS & MANUFACTURER RECOMMENDATIONS.

TYPICAL ANTENNA/RRU GROUNDING DETAIL

SCALE: N.T.S.

2

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SITE NO. CT1016
134 KICKAPOO ROAD
MIDDLEFIELD CT, 06455

1	06/25/18	ISSUED FOR CONSTRUCTION	SK	DAS	BBR
0	06/20/18	ISSUED FOR CSC APPROVAL	SK	DAS	BBR
A	12/08/17	ISSUED FOR REVIEW	SK	DAS	BBR
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: DAS	DRAWN BY: SK		



AT&T MOBILITY
ROCKY HILL, CT 06067

GROUNDING DETAILS

DEWBERRY NO.	DRAWING NUMBER	REV
50093723/50093823	E01	1