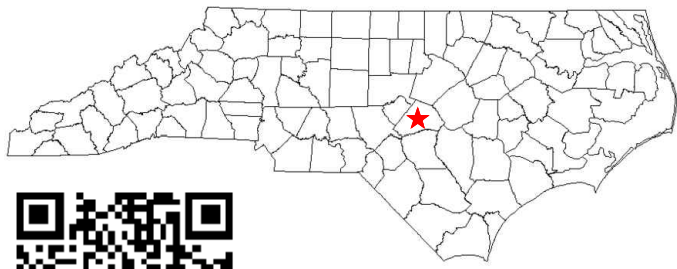


STATE LOCATION



W3 AMENDMENT DRAWINGS

SITE NAME:
ARLINGTON

SITE NUMBER:
556470

SITE ADDRESS:
**11884 US HWY 421 NORTH
BROADWAY, NC
(HARNETT COUNTY)**

SITE LOCATION



PROJECT TEAM

PROJECT CONTACT:

NAME U.S. CELLULAR CORPORATION
ADDRESS 8410 W BRYN MAWR SUITE 700
CITY, STATE, ZIP CHICAGO, IL 60631
CONTACT MICHAEL SZLAMCZYNSKI

SITE ACQUISITION:

NAME TOWER ENGINEERING PROFESSIONALS
ADDRESS 10700 SIKES PLACE, SUITE 360
CITY, STATE, ZIP CHARLOTTE, NC 28277
CONTACT NEAL FLOYD
PHONE (980) 202-5546

TOWER OWNER:

NAME US CELLULAR CORPORATION
ADDRESS 8410 W. BRYN MAWR, SUITE 700
CITY, STATE, ZIP CHICAGO, IL 60631
CONTACT MICHAEL SZLAMCZYNSKI

CIVIL ENGINEER:

NAME TOWER ENGINEERING PROFESSIONALS, INC.
ADDRESS 326 TRYON ROAD
CITY, STATE, ZIP RALEIGH, NC 27603-3530
CONTACT JOHN H. BEST III, P.E.
PHONE (919) 661-6351

PROJECT INFORMATION

LATITUDE: N 35° 26' 15.6" *
LONGITUDE: W 79° 01' 11.8" *
GROUND ELEVATION: 140.8'± (AMSL) **
* INFORMATION PROVIDED BY USCC
** INFORMATION FROM GOOGLE EARTH

TOWER TYPE: 280' GUYED
LOADING TYPE: DX1010A
ACCESS ISSUES: N/A
GATE COMBO: 0243



Know what's below.
Call before you dig.

INDEX OF SHEETS

NO.	SHEET TITLE	REV
T-1	TITLE SHEET	8
C-1	SITE SURVEY	7
C-2	COMPOUND DETAILS	7
C-3	RRU RACK DETAILS	7
C-4	EQUIPMENT PAD DETAILS	7
C-5	CABINET SPEC SHEET	7
C-6	TOWER ELEVATION	7
C-7	HATCH PLATE & ICE BRIDGE DETAILS	7
C-8	COAX LAYOUT	7
C-9	GROUND BAR DETAILS	7
C-10	ANTENNA MOUNTING DETAILS	7
C-11	RAYCAP & RRU SPEC SHEET	7
C-12	RADIO SPEC SHEET AND MOUNTING DETAILS	7
C-13	PLUMBING DIAGRAM	7
C-14	ANTENNA SPEC SHEET	7
C-15	FIBER AND COAX LABELING STANDARDS I	7
C-16	FIBER AND COAX LABELING STANDARDS II	7
E-1	ONE LINE DIAGRAM	7
N-1	GENERAL NOTES	7

STRUCTURAL NOTE

STRUCTURAL STATUS:
• TOWER SA - PASSING (JULY 22, 2021)
• MOUNT SA - FAILING (JUNE 30, 2020)
• MOUNT MODIFICATION - PASSING (OCTOBER 15, 2020)

SCOPE OF WORK

TOWER SCOPE:

EXISTING EQUIPMENT TO REMAIN:
(3) KMW AM-X-CD-17-65-00T-RET LTE PANEL ANTENNAS
(1) ANTEL BXA-80090/8 CDMA PANEL ANTENNA
(2) ANTEL BXA-80063/8CF CDMA PANEL ANTENNAS
(6) FH 1 1/2" CDMA COAX
(1) RAYCAP RUSDC-6267-PF-48
(1) 1 1/2" HYBRID CABLE
(3) ERICSSON RRU-11 B5 RRUs

PROPOSED EQUIPMENT:
(3) DENGYO OCT8-2LX2HX-BW65 LTE PANEL ANTENNAS
(2) ERICSSON RRU 4449 B12/B71 RRUs
(2) ERICSSON RRU 4415 B66 RRUs
(1) RAYCAP RUSDC-6267-PF-48
(1) 1 1/2" HYBRID CABLE

PROPOSED LTE JUMPERS:
(4) FIBER JUMPERS FROM RAYCAP TO B12/B71 RRUs
(4) FIBER JUMPERS FROM RAYCAP TO B66 RRUs
(2) FIBER JUMPERS FROM RAYCAP TO B5 RRUs
(1) FIBER JUMPERS FROM B5 TO B5 RRUs
(4) POWER JUMPERS FROM RAYCAP TO B12/B71 RRUs
(2) POWER JUMPERS FROM RAYCAP TO B66 RRUs
(3) POWER JUMPERS FROM RAYCAP TO B5 RRUs
(8) 1/2" JUMPERS FROM B12/B71 RRUs TO ANTENNAS
(8) 1/2" JUMPERS FROM B66 RRUs TO ANTENNAS
(6) 1/2" JUMPERS FROM B5 RRUs TO ANTENNAS
(2) RET JUMPERS FROM B12/B71 RRUs TO ANTENNAS
(1) RET JUMPERS FROM B66 RRUs TO ANTENNAS
(3) RET JUMPERS FROM B5 RRUs TO ANTENNAS

TOP TOWER GROUND BAR:
CANNOT ACCOMMODATE ADDITIONAL GROUND LEADS.
PROPOSED GROUND BAR REQUIRED.

MIDDLE TOWER GROUND BAR:
CAN ACCOMMODATE ADDITIONAL GROUND LEAD.

BOTTOM TOWER GROUND BAR:
CAN ACCOMMODATE ADDITIONAL GROUND LEAD.

ICE BRIDGE:
CAN ACCOMMODATE ADDITION OF (1) HYBRID CABLE,
(1) GPS ANTENNA AND (1) GPS CABLE.

ICE BRIDGE GROUND BAR:
CAN ACCOMMODATE ADDITIONAL GROUND LEAD.

LTE CABINET:
(1) EXISTING LTE CABINET AND (1) MICROWAVE CABINET TO BE REMOVED. (1) PROPOSED ERICSSON RBS 6120 TO BE INSTALLED.

EXISTING EQUIPMENT:
RAYCAP RUSDC-6267-PF-48 AND (1) 18"x18" JUNCTION BOX TO REMAIN.

PROPOSED EQUIPMENT:
(1) PROPOSED RAYCAP RUSDC-6267-PF-48

EQUIPMENT RACK GROUND BAR:
CAN ACCOMMODATE ADDITIONAL GROUND LEADS.

ANTENNA AZIMUTHS:
ANTENNAS TO BE ROTATED TO DESIGN AZIMUTHS. AZIMUTH CHANGES MUST BE PRE SCHEDULED WITH USCC FOR POTENTIAL E911 TESTING.

BEACON:
BEACON IS NESTED. CONTRACTOR TO INSTALL BEACON EXTENSION BY FLASH TECHNOLOGIES (P/N:11000016652). SEE SHEET C-6 FOR DETAILS.

LIGHTNING ROD:
LIGHTNING ROD MOUNT PIPE NESTS BEACON. CONTRACTOR TO REMOVE LIGHTNING ROD AND MOUNT PIPE, AND INSTALL 8' LIGHTNING ROD. SEE SHEET C-6 FOR DETAILS.

ANTENNA MOUNT:
EXISTING ANTENNA MOUNT HAS INSUFFICIENT CAPACITY TO SUPPORT PROPOSED LOADING AND REQUIRES MODIFICATION PRIOR TO LTE INSTALL. SEE TEP APPURTENANCE MOUNT MODIFICATION ANALYSIS FOR MODIFICATION DETAILS.

DECOMMISSIONED EQUIPMENT REMOVAL:

EQUIPMENT REMOVAL:
*(3) ERICSSON RRU-11 B12 RRUs
*(6) KAEUS COMBINERS
*(1) LTE CABINET
*(1) ELTEK EQUIPMENT CABINET

* POST-INTEGRATION

PLANS PREPARED FOR:



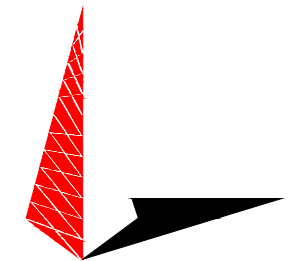
8410 W BRYN MAWR SUITE 700
CHICAGO, IL 60631
(773) 399-8900

PROJECT INFORMATION:

**556470
ARLINGTON**

11884 US HWY 421 NORTH
BROADWAY, NC
(HARNETT COUNTY)

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS

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

N.C. LICENSE # C-1794

SEAL:



August 3, 2021

REV	DATE	ISSUED FOR:
8	08-03-21	CONSTRUCTION
7	04-14-21	CONSTRUCTION
6	03-26-21	PRELIMINARY

DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:

TITLE SHEET

SHEET NUMBER:	REVISION:
T-1	8
	TEP#: 43045.453871



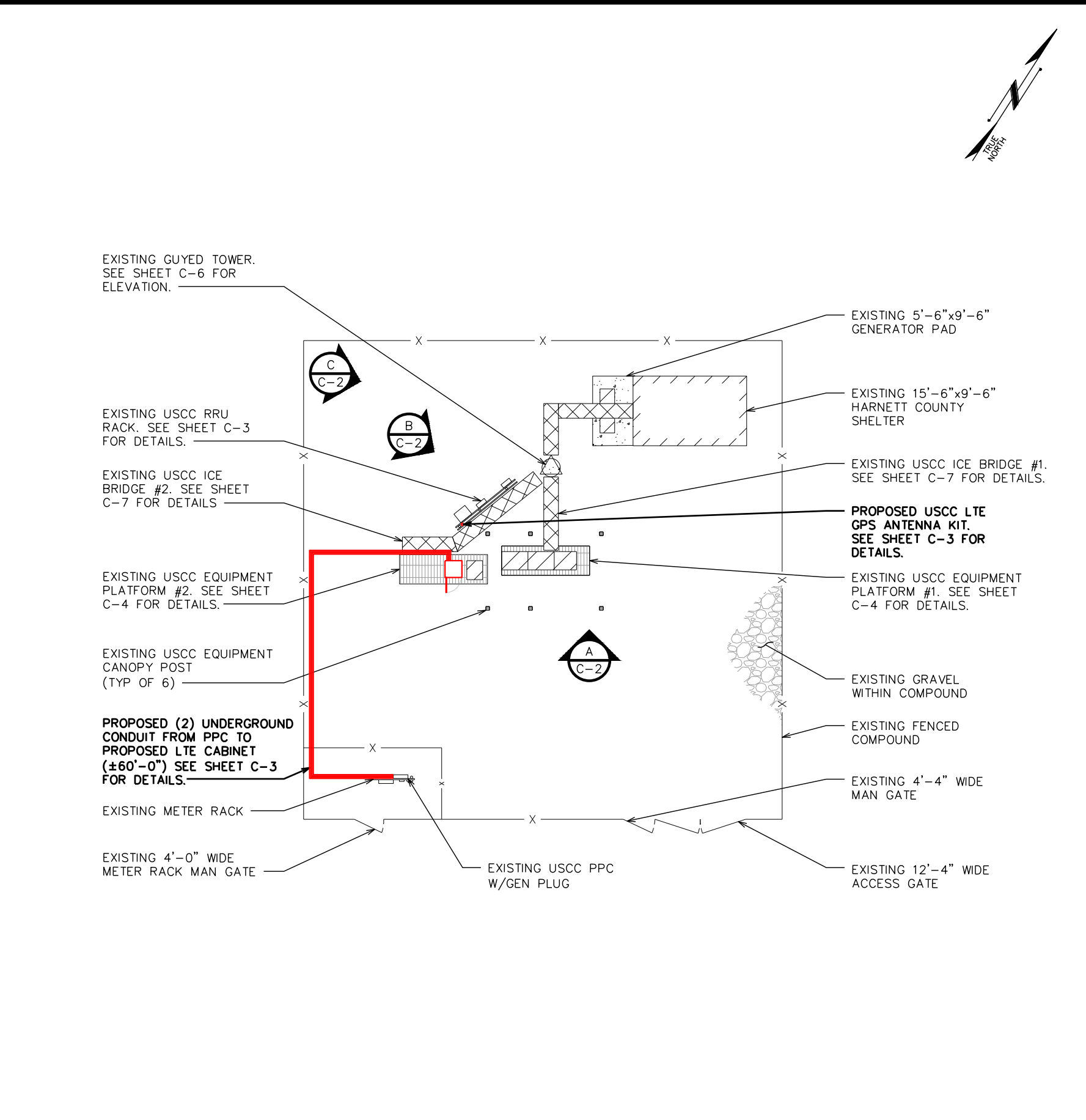
COMPOUND VIEW "A"



COMPOUND VIEW "B"



COMPOUND VIEW "C"



COMPOUND DETAIL

SCALE: 1/16" = 1'-0"



PLANS PREPARED FOR:

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 (773) 399-8900

PROJECT INFORMATION:
556470
ARLINGTON
 11884 US HWY 421 NORTH
 BROADWAY, NC
 (HARNETT COUNTY)

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
 326 TRYON ROAD
 RALEIGH, NC 27603-3530
 OFFICE: (919) 661-6351
 www.tepgroup.net
 N.C. LICENSE # C-1794

SEAL:

 April 14, 2021

7	04-14-21	CONSTRUCTION
6	03-26-21	PRELIMINARY
5	01-18-21	PRELIMINARY
REV	DATE	ISSUED FOR:

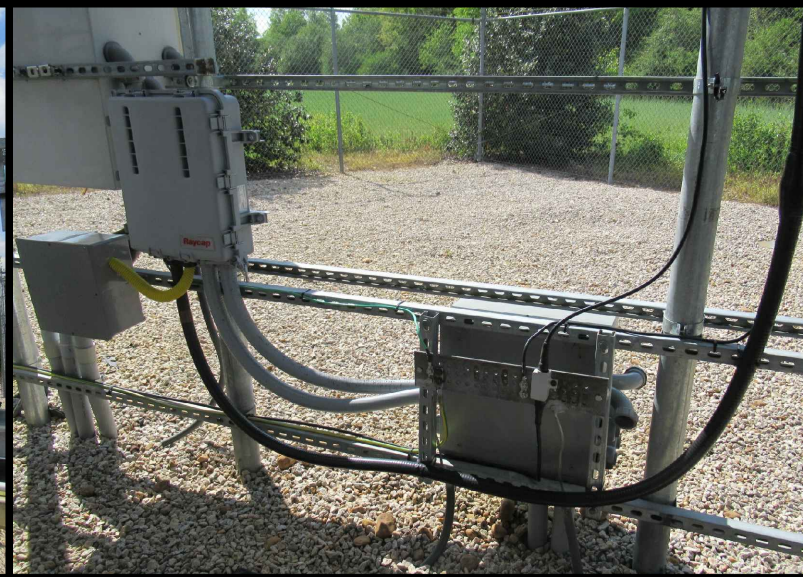
DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:
COMPOUND DETAILS

SHEET NUMBER: **C-2** REVISION: **7**
 TEP#: 43045.453871



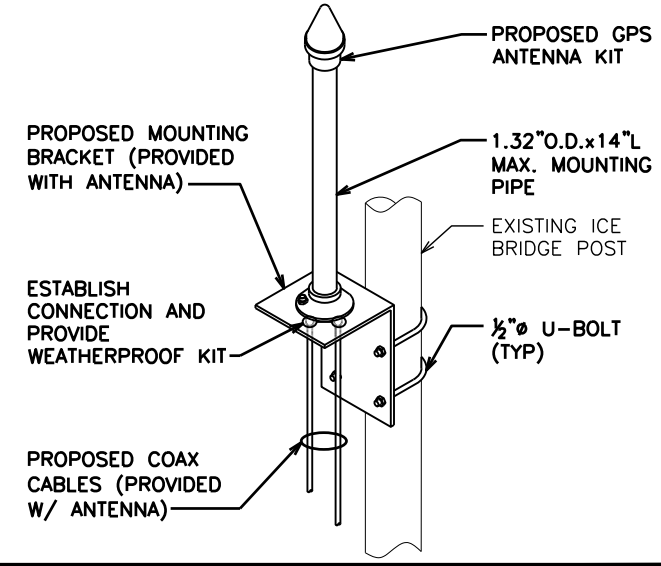
EXISTING USCC RRU RACK (FRONT)



EXISTING USCC RRU RACK (BACK)


NOTES:

1. LOCATION OF ANTENNA MUST HAVE CLEAR VIEW OF SOUTHERN SKY AND CANNOT HAVE ANY BLOCKAGES EXCEEDING 25% OF THE SURFACE AREA OF A HEMISPHERE AROUND THE GPS ANTENNA.
2. ALL GPS ANTENNA LOCATIONS MUST BE ABLE TO RECEIVE CLEAR SIGNALS FROM A MINIMUM OF FOUR (4) SATELLITES. VERIFY WITH HANDHELD GPS BEFORE FINAL LOCATION OF GPS ANTENNA.



GPS ANTENNA KIT DETAIL


SCALE: N.T.S.

PLANS PREPARED FOR:

 8410 W BRYN MAWR SUITE 700
 CHICAGO, IL 60631
 (773) 399-8900

PROJECT INFORMATION:
556470
ARLINGTON
 11884 US HWY 421 NORTH
 BROADWAY, NC
 (HARNETT COUNTY)

PLANS PREPARED BY:

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 326 TRYON ROAD
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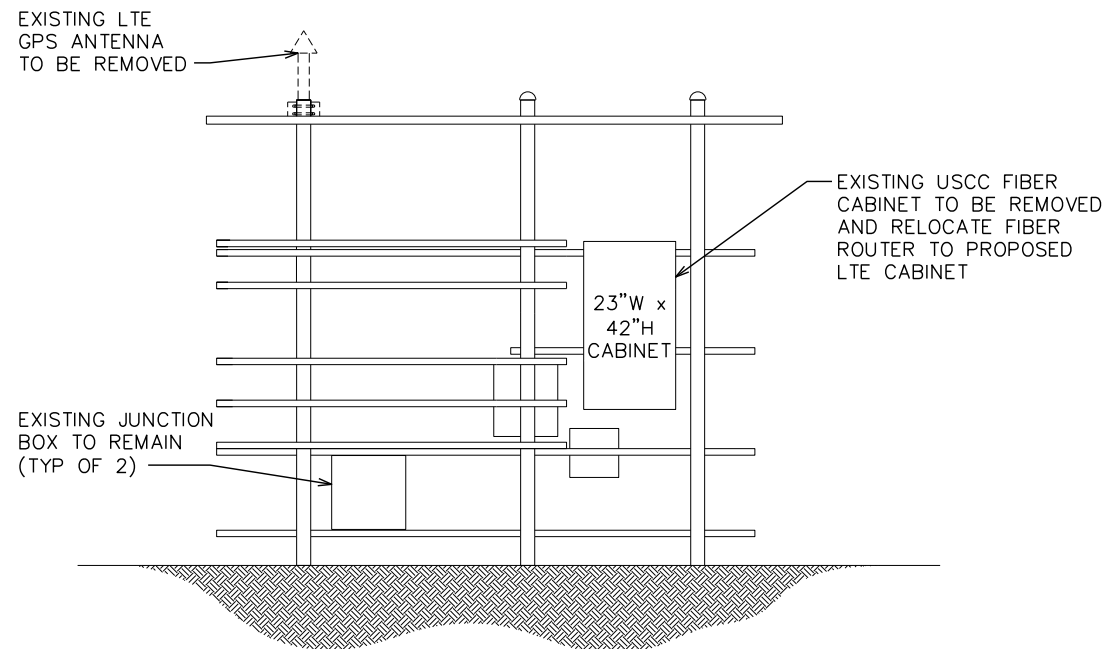
DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:
RRU RACK DETAILS

SHEET NUMBER: **C-3** REVISION: **7**
 TEP#: 43045.453871

NOTES:

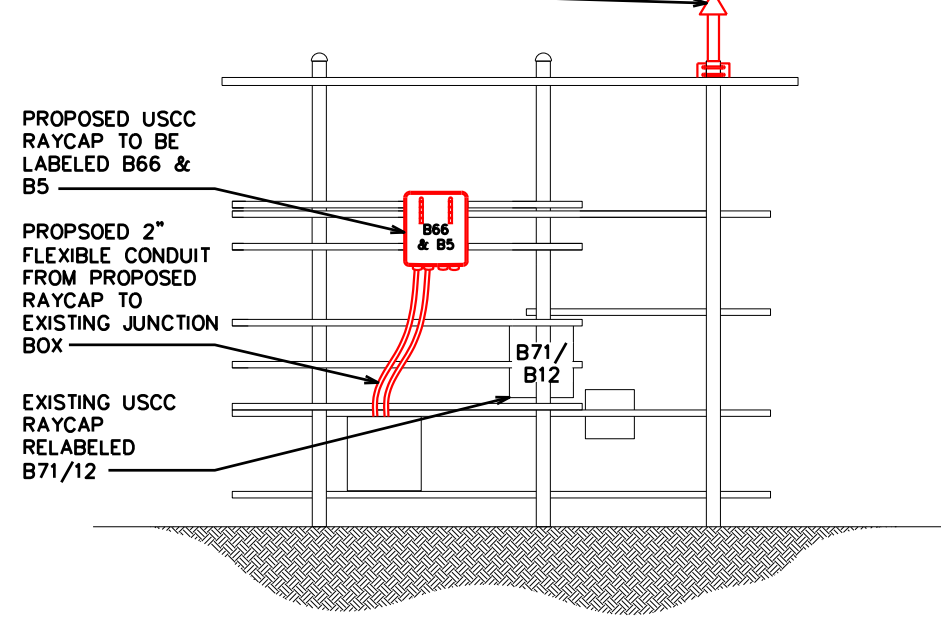
1. CONTRACTOR TO ADJUST EXISTING UNISTRUTS AS NEEDED.
2. THE HYBRID JUMPERS SHOULD BE PROTECTED WITH INNERDUCT IF THEY ENTER THE CABINET HIGH. IF THEY ENTER THE CABINET LOW, THEN USE A LIQUID TIGHT FLEXIBLE METAL CONDUIT.
3. CONTRACTOR TO ADJUST EXISTING RRU LOCATIONS IN ORDER TO PROVIDE SPACE FOR PROPOSED RAYCAP AS NEEDED.



EXISTING RRU RACK ELEVATION

SCALE: N.T.S.

PROPOSED GPS ANTENNA MOUNTED ON ICE BRIDGE. SEE THIS SHEET FOR DETAILS.



PROPOSED RRU RACK ELEVATION

SCALE: N.T.S.



EXTERIOR USCC EQUIPMENT PAD #1



EXTERIOR USCC EQUIPMENT PAD #2

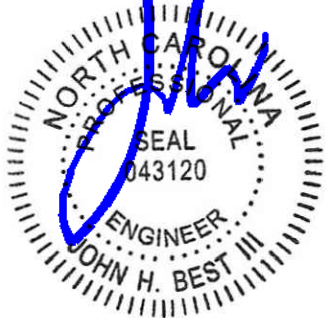
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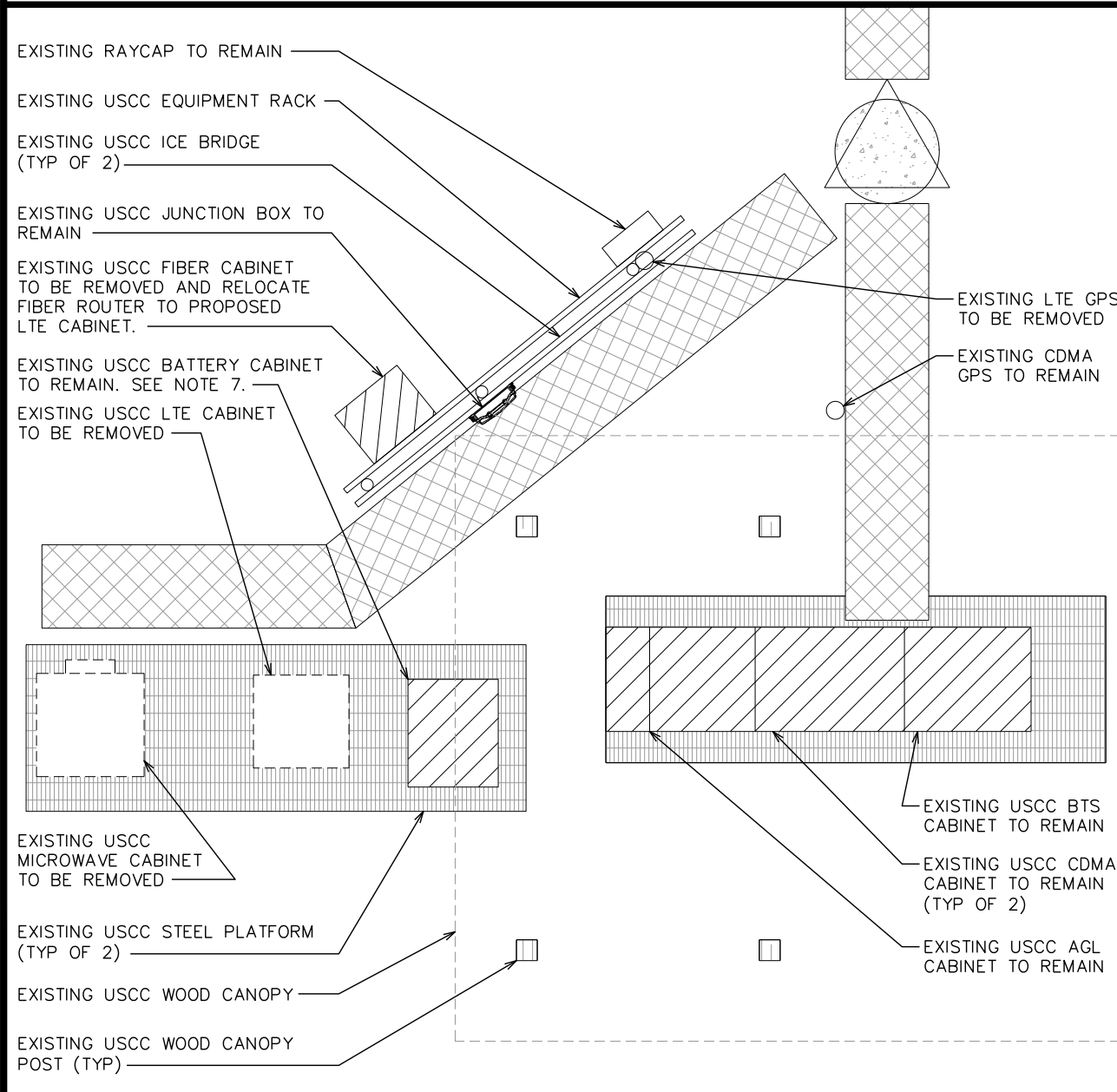
 8410 W BRYN MAWR SUITE 700
 CHICAGO, IL 60631
 (773) 399-8900

PROJECT INFORMATION:
556470
ARLINGTON
 11884 US HWY 421 NORTH
 BROADWAY, NC
 (HARNETT COUNTY)

PLANS PREPARED BY:

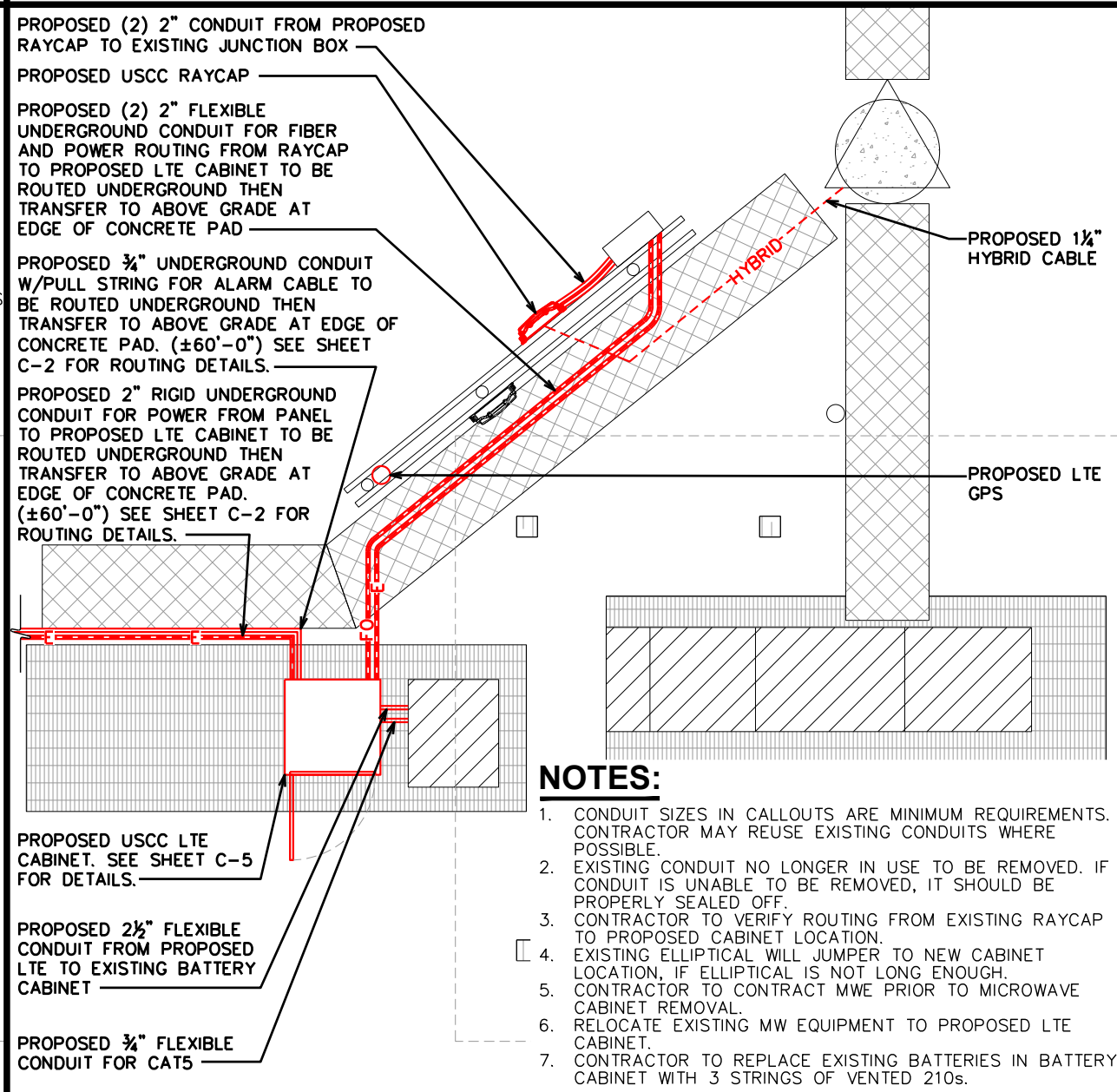
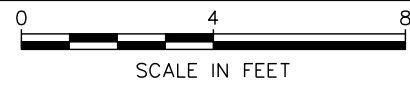
TOWER ENGINEERING PROFESSIONALS
 326 TRYON ROAD
 RALEIGH, NC 27603-3530
 OFFICE: (919) 661-6351
 www.tepgroup.net
 N.C. LICENSE # C-1794

SEAL:

 April 14, 2021



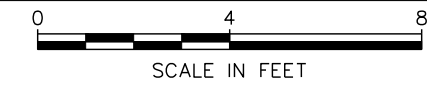
EXISTING EQUIPMENT PAD DETAILS

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



PROPOSED EQUIPMENT PAD DETAILS

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



NOTES:

1. CONDUIT SIZES IN CALLOUTS ARE MINIMUM REQUIREMENTS. CONTRACTOR MAY REUSE EXISTING CONDUITS WHERE POSSIBLE.
2. EXISTING CONDUIT NO LONGER IN USE TO BE REMOVED. IF CONDUIT IS UNABLE TO BE REMOVED, IT SHOULD BE PROPERLY SEALED OFF.
3. CONTRACTOR TO VERIFY ROUTING FROM EXISTING RAYCAP TO PROPOSED CABINET LOCATION.
4. EXISTING ELLIPTICAL WILL JUMPER TO NEW CABINET LOCATION, IF ELLIPTICAL IS NOT LONG ENOUGH.
5. CONTRACTOR TO CONTRACT MWE PRIOR TO MICROWAVE CABINET REMOVAL.
6. RELOCATE EXISTING MW EQUIPMENT TO PROPOSED LTE CABINET.
7. CONTRACTOR TO REPLACE EXISTING BATTERIES IN BATTERY CABINET WITH 3 STRINGS OF VENTED 210s.

REV	DATE	ISSUED FOR:
7	04-14-21	CONSTRUCTION
6	03-26-21	PRELIMINARY
5	01-18-21	PRELIMINARY

DRAWN BY: JGC CHECKED BY: JHB

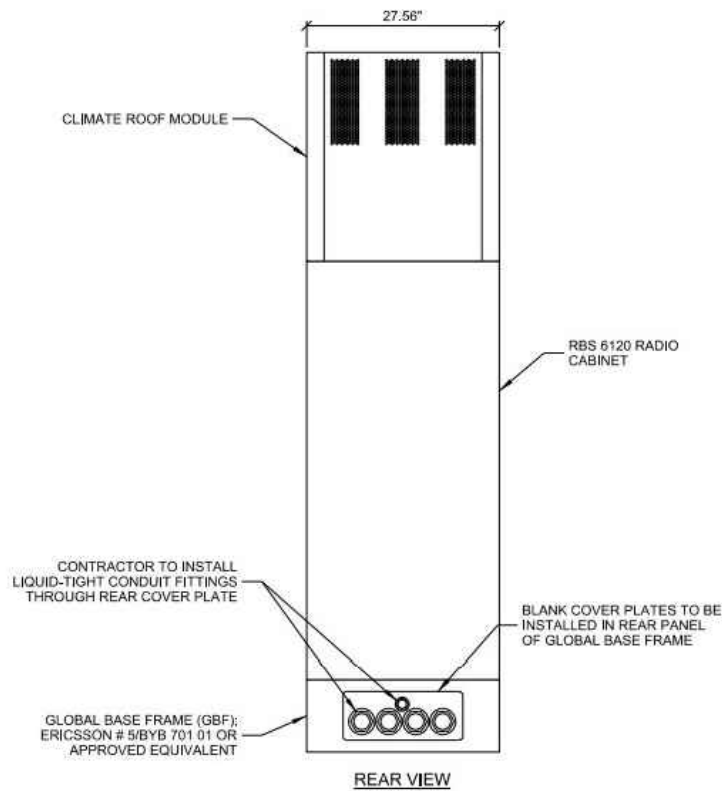
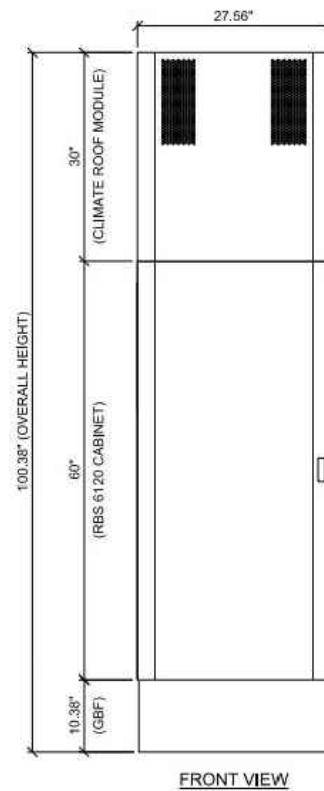
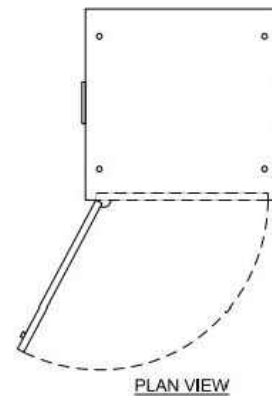
SHEET TITLE:
EQUIPMENT PAD DETAILS

SHEET NUMBER: **C-4** REVISION: **7**
 TEP#: 43045.453871

DESCRIPTION: RADIO BASE STATION
 MANUFACTURER: ERICSSON
 MODEL: RBS 6120
 DIMENSIONS: 60"x27.56"x27.56" (HxWxD)
 WEIGHT: 837.8 LBS

CLEARANCE REQUIREMENTS
 FRONT: 47.24" (1200mm)
 REAR: 7.87" (200mm)
 LEFT: 3.94" (100mm)
 RIGHT: 3.94" (100mm)

DESCRIPTION: GLOBAL BASE FRAME (GBF)
 MANUFACTURER: ERICSSON
 MODEL: 5/BYB 701 01
 DIMENSIONS: 10.38"x27.09"x27.56" (HxWxD)
 WEIGHT: 80.5 LBS




PLANS PREPARED FOR:

 8410 W BRYN MAWR SUITE 700
 CHICAGO, IL 60631
 (773) 399-8900

PROJECT INFORMATION:
556470
ARLINGTON
 11884 US HWY 421 NORTH
 BROADWAY, NC
 (HARNETT COUNTY)

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
 326 TRYON ROAD
 RALEIGH, NC 27603-3530
 OFFICE: (919) 661-6351
 www.tepgroup.net
 N.C. LICENSE # C-1794

SEAL:

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DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:
CABINET SPEC SHEET

SHEET NUMBER: **C-5** REVISION: **7**
 TEP#: 43045.453871

EUPEN HYBRID CABLE LENGTH

PROPOSED RAYCAP QUANTITY ON RACK:	1
EXISTING RAYCAP QUANTITY ON RACK:	1
ICE BRIDGE LENGTH:	21-FT
RAYCAP CENTERLINE + 12-FT BUFFER:	279-FT
TOTAL ESTIMATED LENGTH OF HYBRID CABLE:	300-FT
TOTAL EST. LENGTH OF HYBRID CABLE (ROUNDED UP):	350-FT

JUMPER INFO

JUMPER QUANTITIES	
FIBER JUMPERS:	11
COAX JUMPERS:	22
RET JUMPERS:	6




1/2" JUMPER LENGTH FROM B12/B71 RRUs TO ANTENNAS	
ALPHA SECTOR:	25-FT
BETA SECTOR:	25-FT
GAMMA SECTOR:	25-FT

1/2" JUMPER LENGTH FROM B66 RRUs TO ANTENNAS	
ALPHA SECTOR:	25-FT
BETA SECTOR:	25-FT
GAMMA SECTOR:	25-FT

1/2" JUMPER LENGTH FROM B5 RRUs TO ANTENNAS	
ALPHA SECTOR:	25-FT
BETA SECTOR:	25-FT
GAMMA SECTOR:	25-FT

RET JUMPER INFO

	RRU TO ANTENNA
ALPHA SECTOR:	10-M
BETA SECTOR:	10-M
GAMMA SECTOR:	10-M

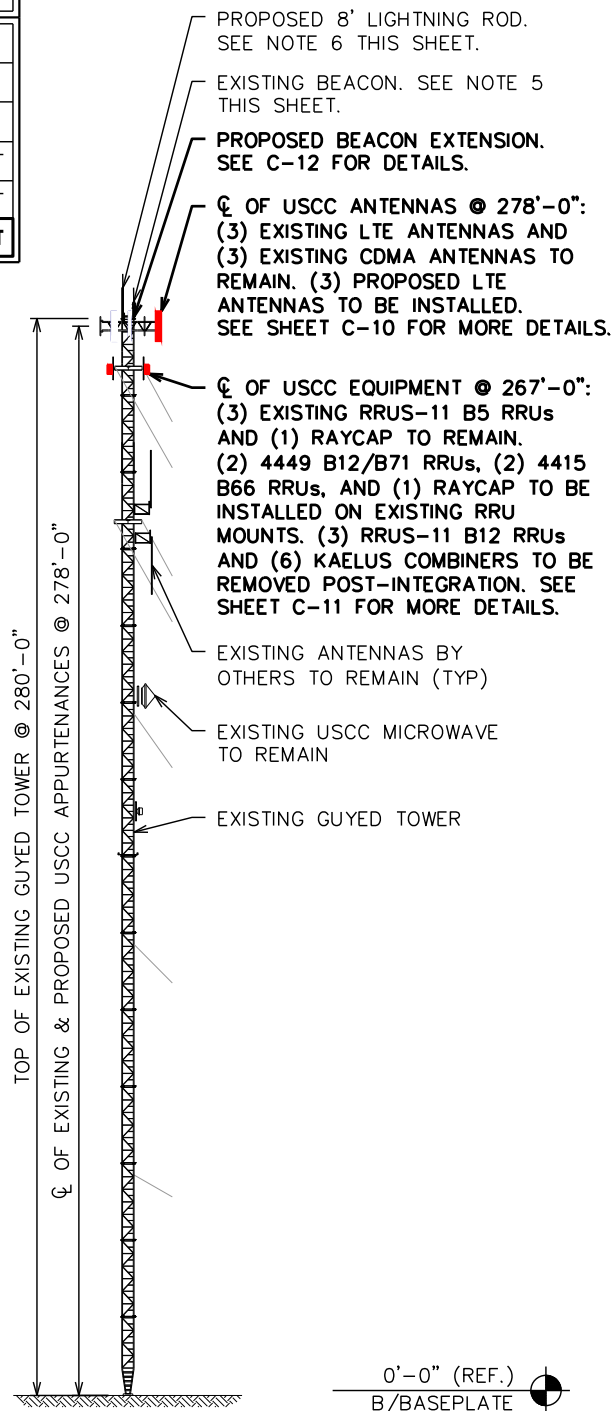
EXISTING LTE PANEL TO REMAIN:	
EXISTING CDMA PANEL TO REMAIN:	
PROPOSED LTE PANEL TO BE INSTALLED:	

NOTES:

- PROPOSED EQUIPMENT TO BE INSTALLED PRIOR TO LTE DECOMMISSION.
- USCC CENTERLINE OVER 200-FT REQUIRES THE USE OF A MIDDLE GROUND BAR.
- EXISTING T/APPURTENANCE = 296'-6"
- PROPOSED T/APPURTENANCE = 288'-0"
- BEACON IS NESTED BY EXISTING AND PROPOSED ANTENNAS. CONTRACTOR TO INSTALL ADJUSTABLE BEACON EXTENSION BRACKET FOR MITIGATION. CONTRACTOR TO ENSURE T/ANTENNAS AND T/MOUNT DOES NOT EXTEND ABOVE BEACON.
- LIGHTNING ROD MOUNT PIPE ALSO NESTS BEACON. CONTRACTOR TO REMOVE LIGHTNING ROD AND MOUNT PIPE, AND INSTALL PROPOSED 8' LIGHTNING ROD. CONTRACTOR TO ENSURE 2' CLEARANCE ABOVE NEXT HIGHEST APPURTENANCE.

PROPOSED TOWER ELEVATION

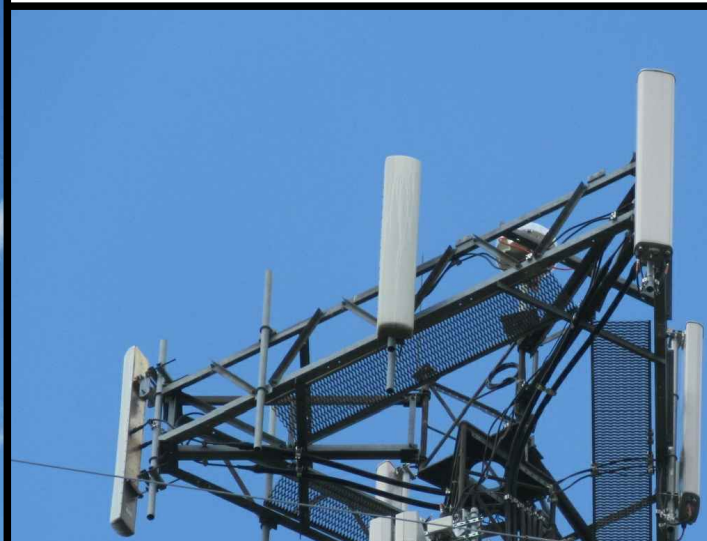
SCALE: 1" = 50'



EXISTING TOWER ELEV.



EXISTING ALPHA SECTOR



EXISTING BETA SECTOR



EXISTING GAMMA SECTOR

PLANS PREPARED FOR:



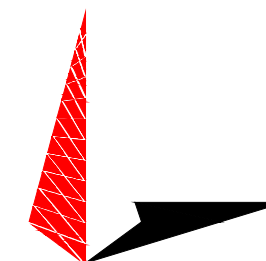
8410 W BRYN MAWR SUITE 700
CHICAGO, IL 60631
(773) 399-8900

PROJECT INFORMATION:

556470 ARLINGTON

11884 US HWY 421 NORTH
BROADWAY, NC
(HARNETT COUNTY)

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS

326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE # C-1794

SEAL:



April 14, 2021

7	04-14-21	CONSTRUCTION
6	03-26-21	PRELIMINARY
5	01-18-21	PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:

TOWER ELEVATION

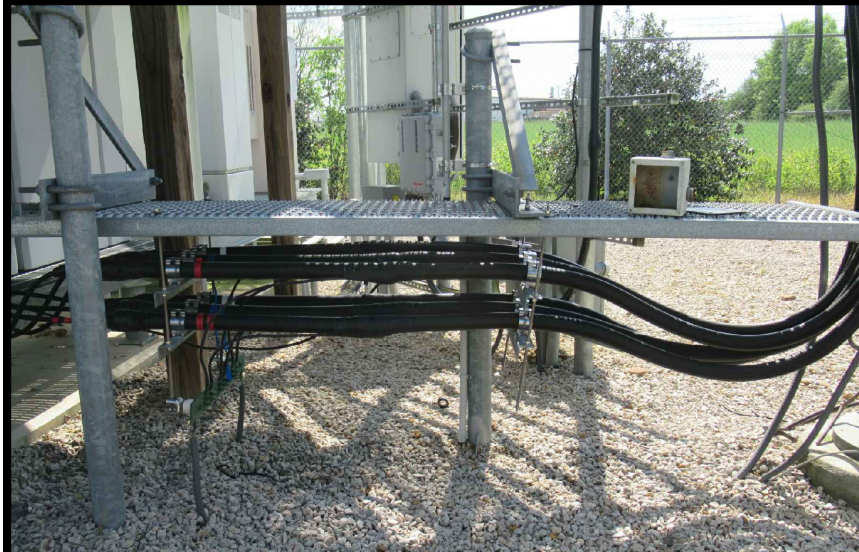
SHEET NUMBER:	REVISION:
C-6	7
TEP#: 43045.453871	

NOTE:

ANALOG COAX (IF APPLICABLE) TO BE REMOVED IS LABELED WITH GREEN TAPE.

LEGEND

EMPTY PORT	
EXISTING COAX TO REMAIN	
EXISTING COAX TO BE REMOVED	
EXISTING HYBRID TO REMAIN	
PROPOSED HYBRID	
EXISTING EWG	



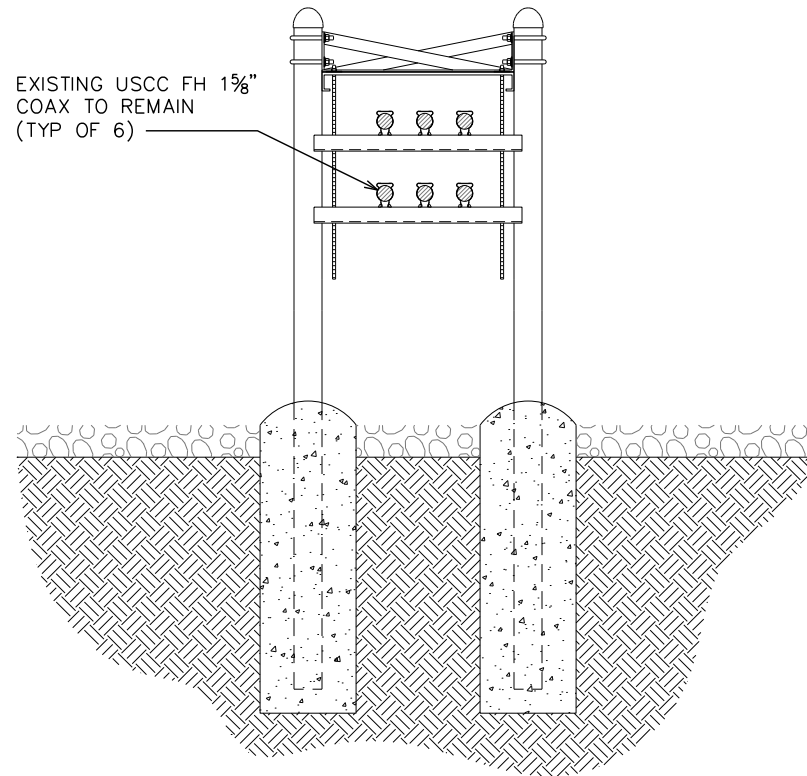
EXISTING ICE BRIDGE #1 ELEVATION

SCALE: N.T.S.

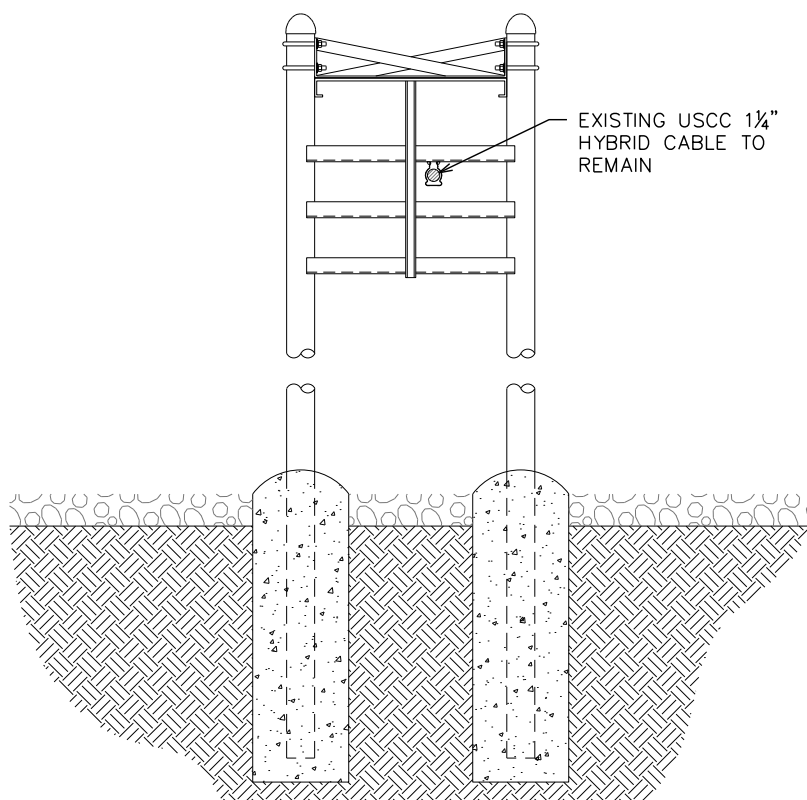


EXISTING ICE BRIDGE #2 ELEVATION

SCALE: N.T.S.



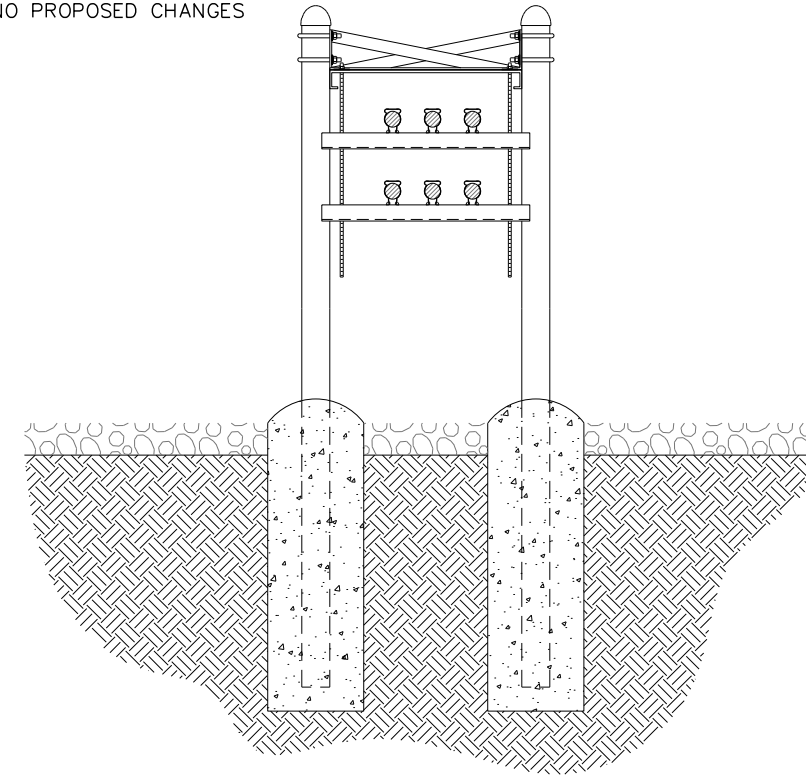
EXISTING ICE BRIDGE #1 CONFIGURATION



EXISTING ICE BRIDGE #2 CONFIGURATION

NOTE:

NO PROPOSED CHANGES

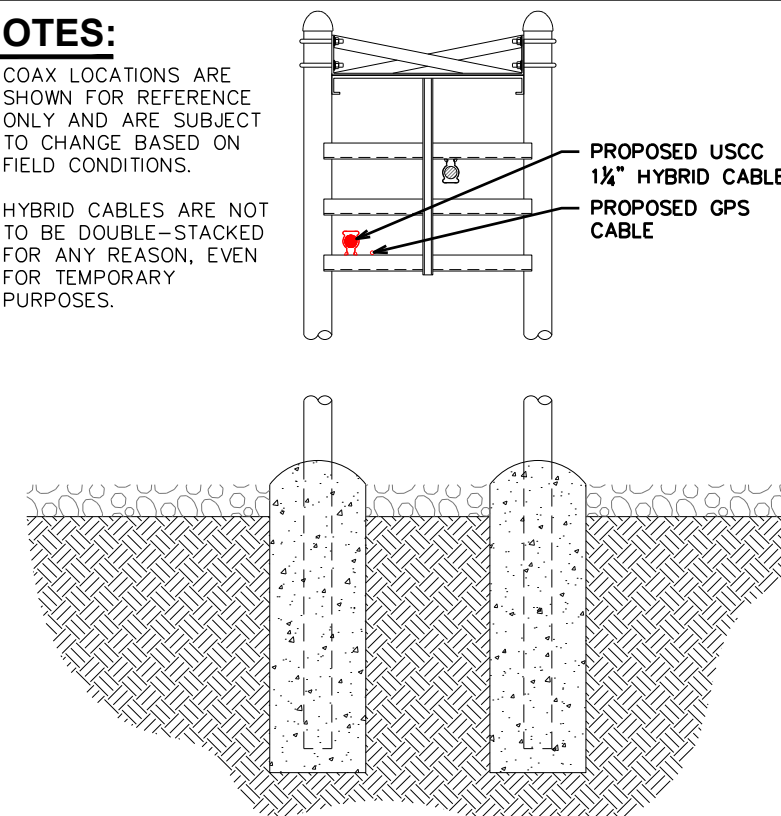


PROP. ICE BRIDGE #1 CONFIGURATION

SCALE: N.T.S.

NOTES:

1. COAX LOCATIONS ARE SHOWN FOR REFERENCE ONLY AND ARE SUBJECT TO CHANGE BASED ON FIELD CONDITIONS.
2. HYBRID CABLES ARE NOT TO BE DOUBLE-STACKED FOR ANY REASON, EVEN FOR TEMPORARY PURPOSES.



PROP. ICE BRIDGE #2 CONFIGURATION

SCALE: N.T.S.

PLANS PREPARED FOR:



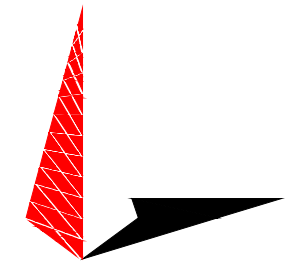
8410 W BRYN MAWR SUITE 700
CHICAGO, IL 60631
(773) 399-8900

PROJECT INFORMATION:

556470
ARLINGTON

11884 US HWY 421 NORTH
BROADWAY, NC
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PLANS PREPARED BY:



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OFFICE: (919) 661-6351
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N.C. LICENSE # C-1794

SEAL:



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6	03-26-21	PRELIMINARY
5	01-18-21	PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:

**HATCH PLATE
& ICE BRIDGE
DETAILS**

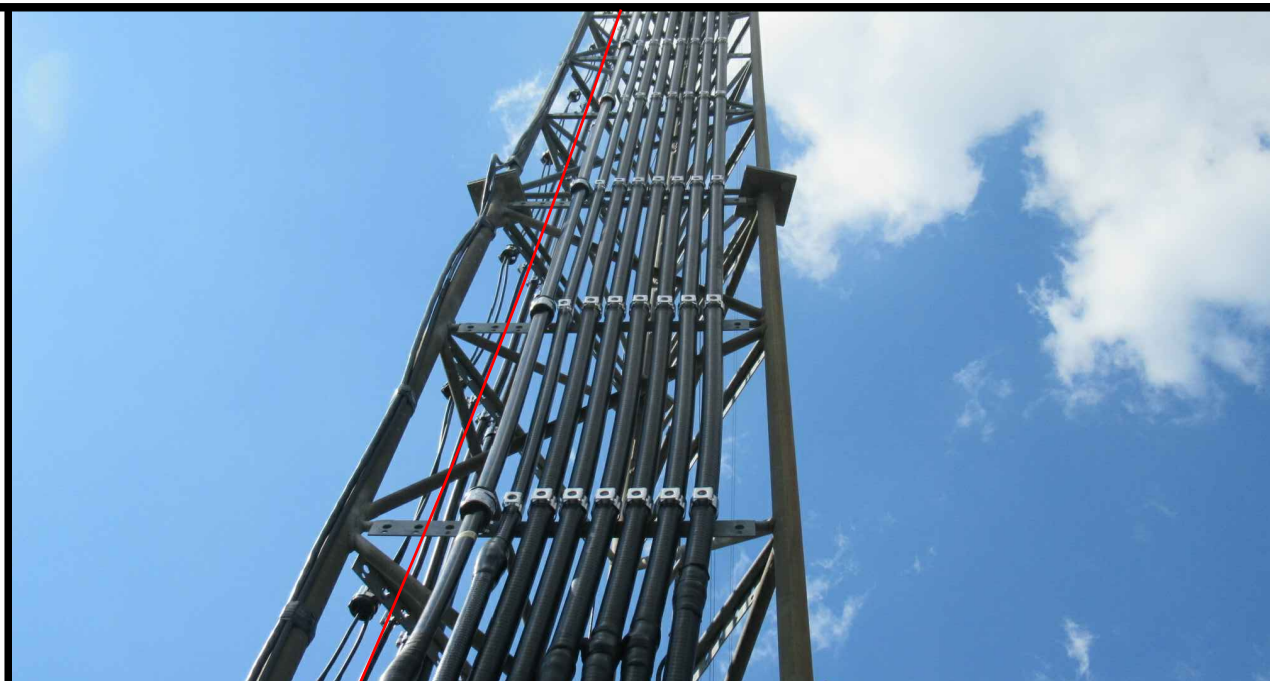
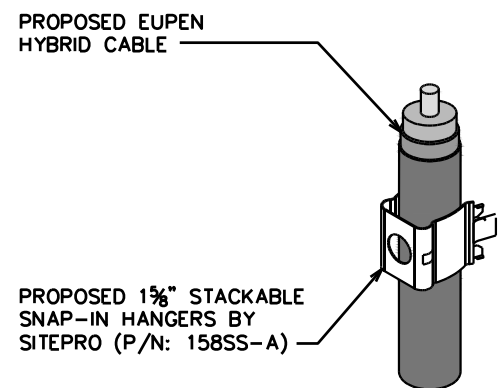
SHEET NUMBER: REVISION:

C-7

7

TEP#: 43045.453871

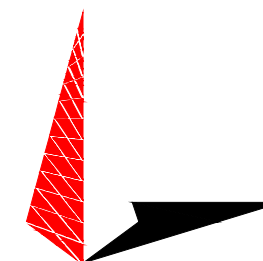
LEGEND	
EXISTING COAX TO REMAIN	
EXISTING COAX TO BE REMOVED	
PROPOSED HYBRID CABLE	
EXISTING EWG	
PROPOSED EWG	



PLANS PREPARED FOR:
U.S. Cellular
 8410 W BRYN MAWR SUITE 700
 CHICAGO, IL 60631
 (773) 399-8900

PROJECT INFORMATION:
556470
ARLINGTON
 11884 US HWY 421 NORTH
 BROADWAY, NC
 (HARNETT COUNTY)

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS
 326 TRYON ROAD
 RALEIGH, NC 27603-3530
 OFFICE: (919) 661-6351
 www.tepgroup.net
 N.C. LICENSE # C-1794

LEGEND

SCALE: N.T.S.

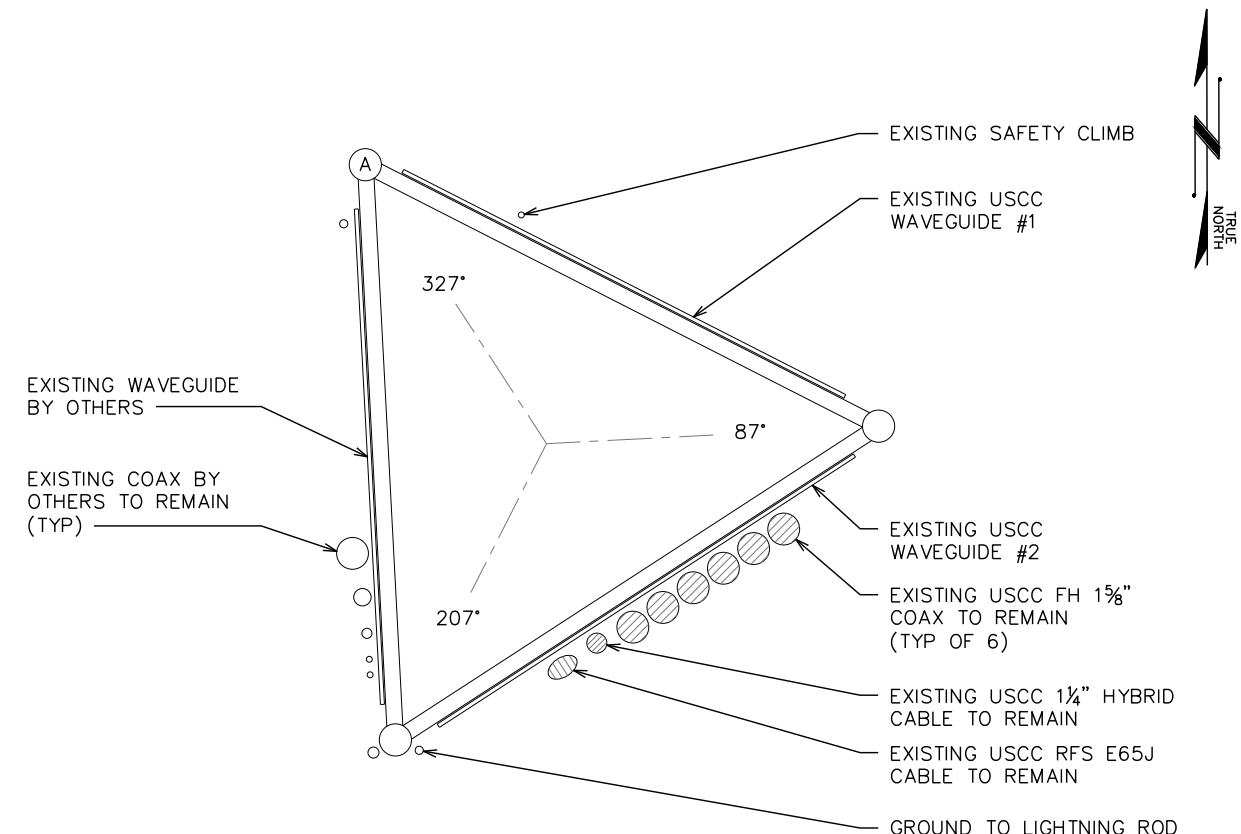
SNAPSTAK HANGER

SCALE: N.T.S.

USCC WAVEGUIDE #2

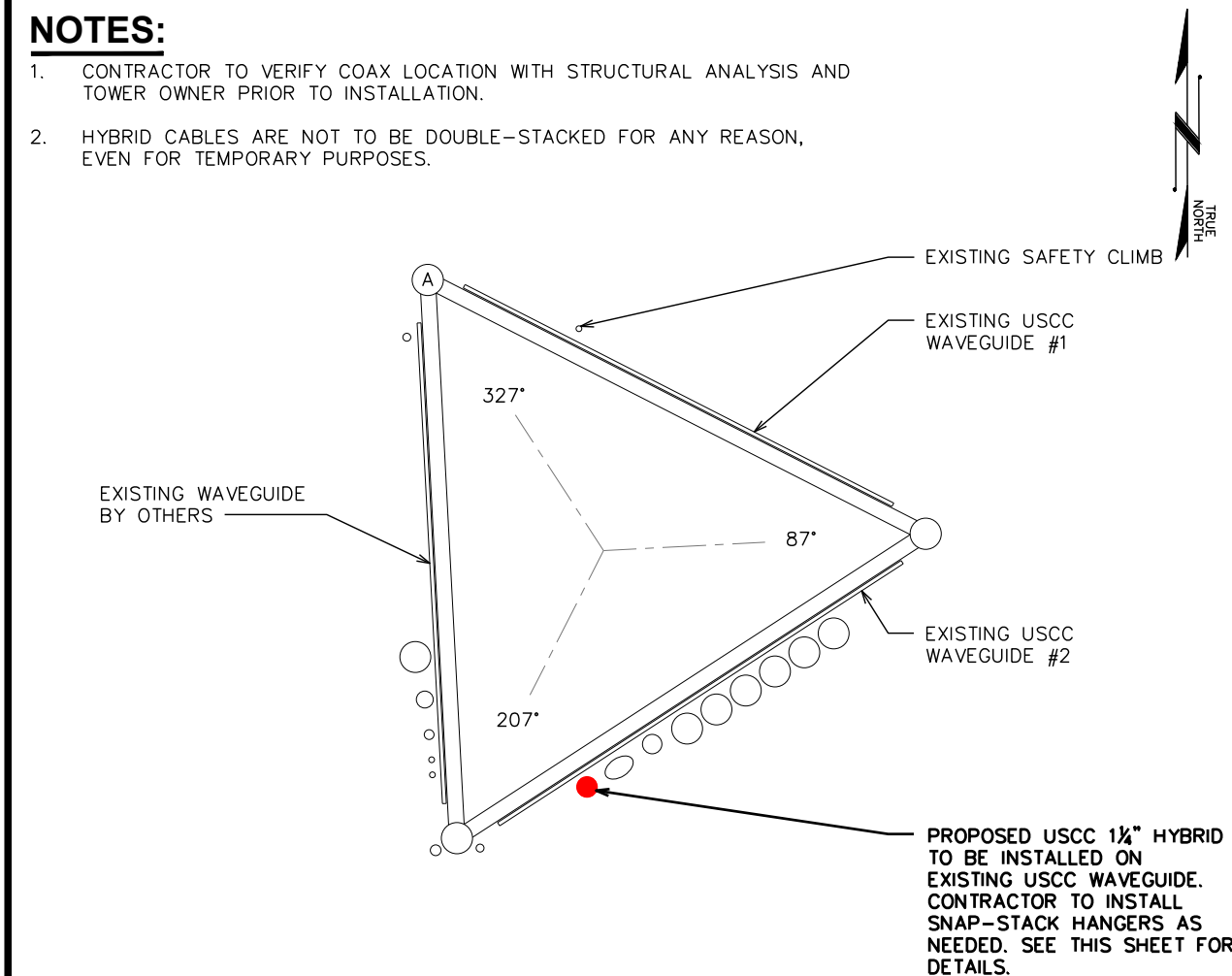
NOTES:

- CONTRACTOR TO VERIFY COAX LOCATION WITH STRUCTURAL ANALYSIS AND TOWER OWNER PRIOR TO INSTALLATION.
- HYBRID CABLES ARE NOT TO BE DOUBLE-STACKED FOR ANY REASON, EVEN FOR TEMPORARY PURPOSES.



EXISTING COAX LAYOUT

SCALE: 1" = 1'

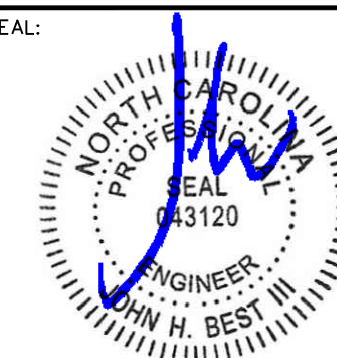


PROPOSED COAX LAYOUT

SCALE: 1" = 1'



SEAL:



April 14, 2021

7	04-14-21	CONSTRUCTION
6	03-26-21	PRELIMINARY
5	01-18-21	PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: JGC CHECKED BY: JHB

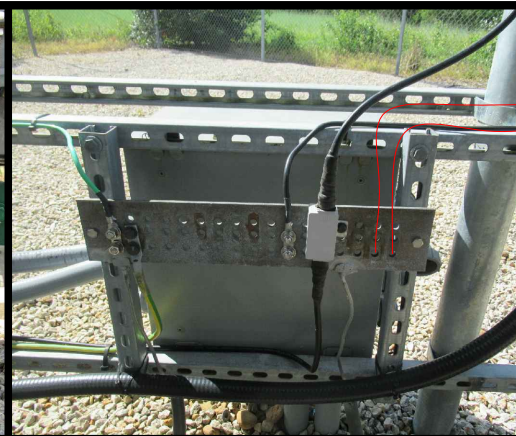
SHEET TITLE:

COAX LAYOUT

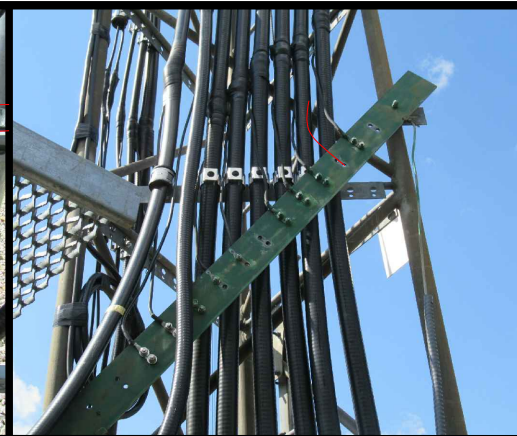
SHEET NUMBER: C-8	REVISION: 7
TEP#: 43045.453871	



EXIST. ICE BRIDGE



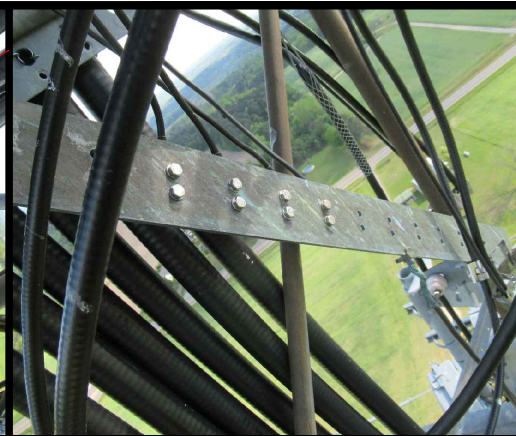
EXIST. EQUIPMENT RACK



EXIST. BOTTOM TOWER



EXISTING MIDDLE TOWER



EXISTING TOP TOWER

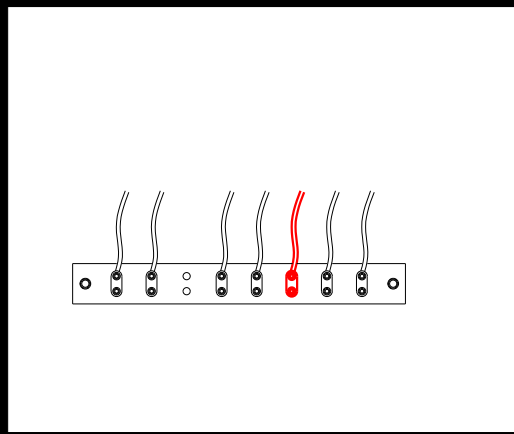
PLANS PREPARED FOR:

 8410 W BRYN MAWR SUITE 700
 CHICAGO, IL 60631
 (773) 399-8900

PROJECT INFORMATION:
556470
ARLINGTON
 11884 US HWY 421 NORTH
 BROADWAY, NC
 (HARNETT COUNTY)

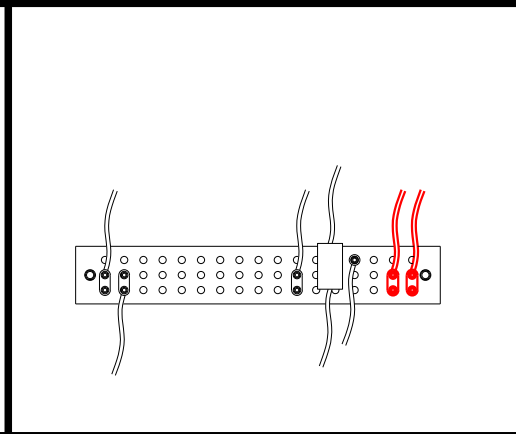
PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
 326 TRYON ROAD
 RALEIGH, NC 27603-3530
 OFFICE: (919) 661-6351
 www.tepgroup.net
 N.C. LICENSE # C-1794



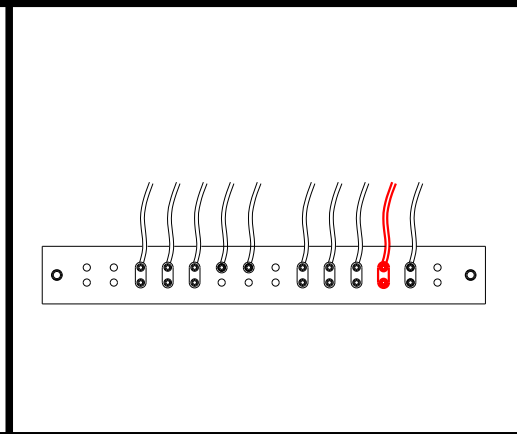
PROP. ICE BRIDGE

SCALE: N.T.S.



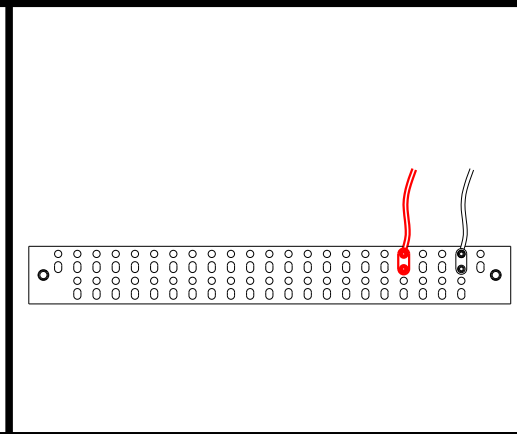
PROP. EQUIPMENT RACK

SCALE: N.T.S.



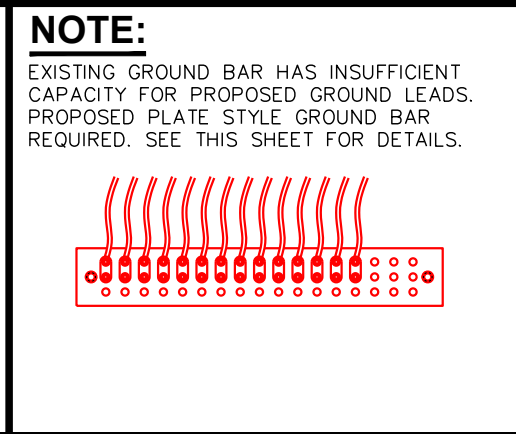
PROP. BOTTOM TOWER

SCALE: N.T.S.



PROP. MIDDLE TOWER

SCALE: N.T.S.



PROPOSED TOP TOWER


SCALE: N.T.S.

NOTE:

EXISTING GROUND BAR HAS INSUFFICIENT CAPACITY FOR PROPOSED GROUND LEADS. PROPOSED PLATE STYLE GROUND BAR REQUIRED. SEE THIS SHEET FOR DETAILS.

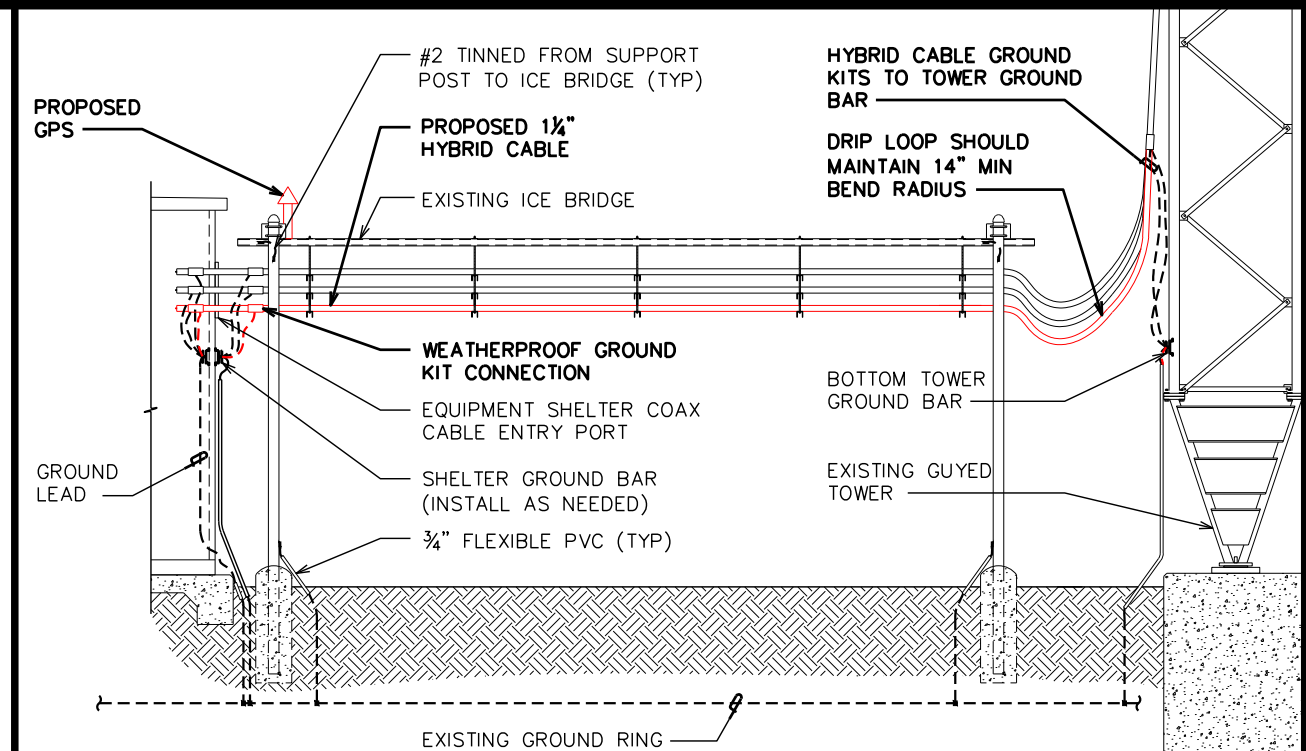
NOTES:

- MAX 20" GROUND BAR BY SITE PRO P/N: MG42051-K
- ACCEPTS 3/8" LUGS
- 51-HOLES ALLOWS UP TO 17 RUNS
- 0.75", 0.815" OR 1" HOLE SPACING
- KIT INCLUDES INSULATORS AND STAINLESS STEEL BRACKETS
- CONTRACTOR TO REPLACE EXISTING LUGS AND GROUND LUG WASHERS AS NEEDED.



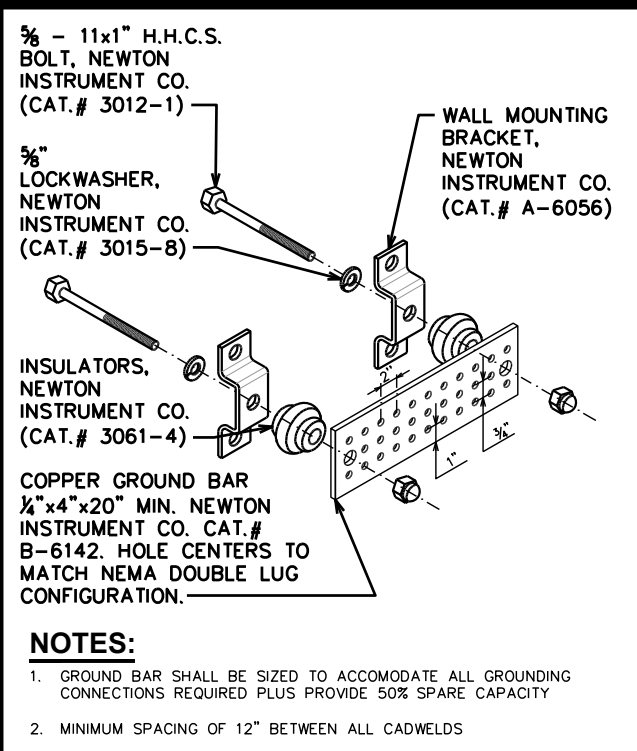
PROPOSED GND. BAR DETAIL

SCALE: N.T.S.



SIDE VIEW

SCALE: N.T.S.




STANDARD GND. BAR DETAIL

SCALE: N.T.S.

NOTES:

1. GROUND BAR SHALL BE SIZED TO ACCOMMODATE ALL GROUNDING CONNECTIONS REQUIRED PLUS PROVIDE 50% SPARE CAPACITY
2. MINIMUM SPACING OF 12" BETWEEN ALL CADWELDS

SEAL:

 JOHN H. BEST III
 ENGINEER
 043120
 APRIL 14, 2021

REV	DATE	ISSUED FOR:
7	04-14-21	CONSTRUCTION
6	03-26-21	PRELIMINARY
5	01-18-21	PRELIMINARY

DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:
GROUND BAR DETAILS

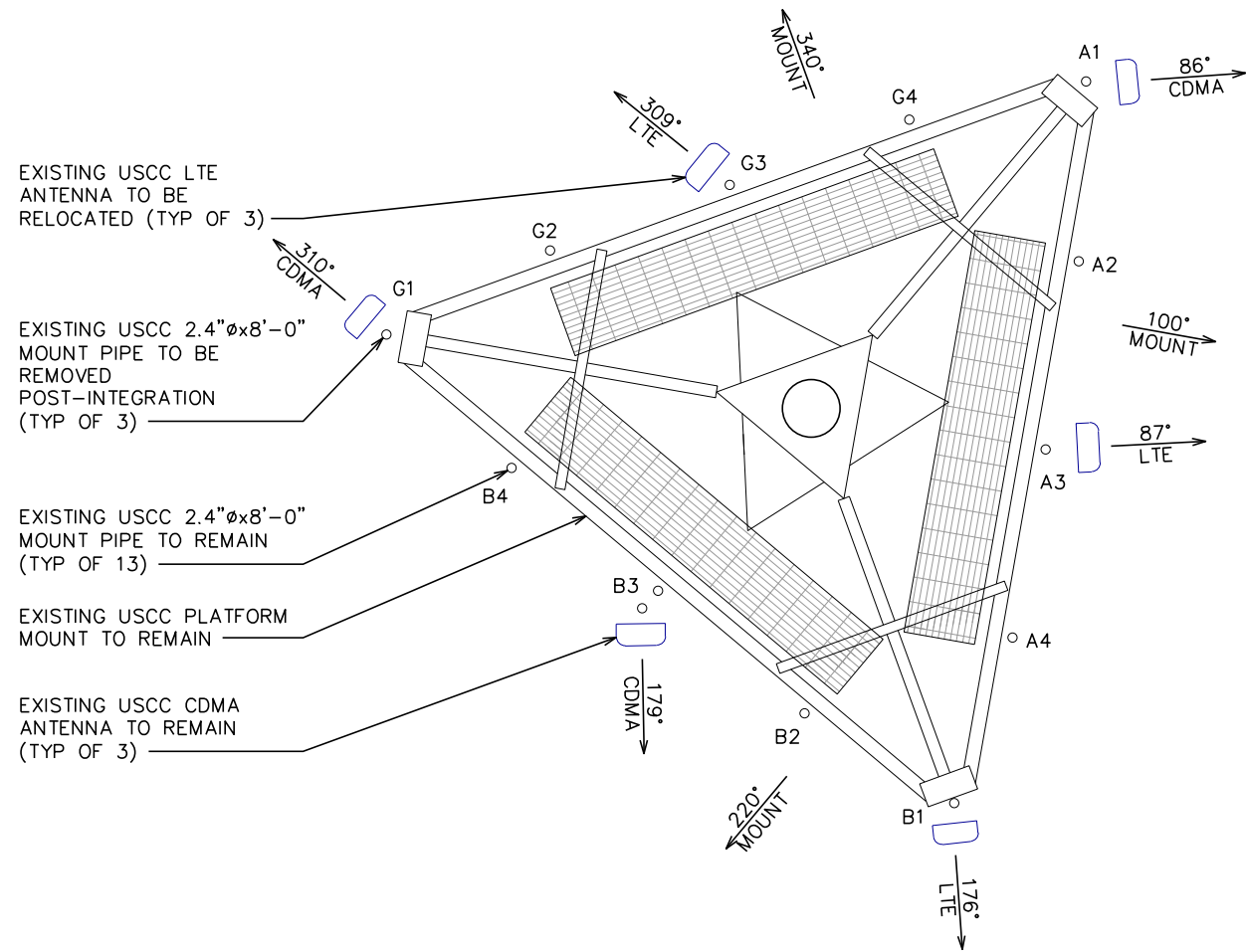
SHEET NUMBER: **C-9** REVISION: **7**
 TEP#: 43045.453871

LEGEND

- EXISTING CDMA PANEL TO REMAIN
- EXISTING LTE PANEL TO REMAIN

NOTE:

USCC ANTENNAS AND EQUIPMENT TO BE REMOVED POST-INTEGRATION.



EXISTING LOADING														
ANTENNA POSITION	TECHNOLOGY	ANTENNA MODEL	ANTENNA QTY.	RAD CENTER	AZIMUTH	MECH. D-TILT	SURGE PROTECTOR QTY.	DIPLEXER QTY.	TMA QTY.	BIAS-T QTY.	RADIO	RADIO QTY.	CABLE TYPE	CABLE QTY.
A1	CDMA	BXA 80063/8	1	278'-0"	86°	0.1°	-	-	-	-	-	-	1 3/8" COAX	2
A2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A3	LTE	AM-X-CD-17-65-00T-RET	1	278'-0"	87°	0°	SHARED	2	-	-	RRUS-11 B5 RRUS-11 B12	1	1 1/2" HYBRID	SHARED
A4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B1	LTE	AM-X-CD-17-65-00T-RET	1	278'-0"	176°	0.2°	1	2	-	-	RRUS-11 B5 RRUS-11 B12	1	1 1/2" HYBRID	1
B2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B3	CDMA	BXA 80063/8	1	278'-0"	179°	0.6°	-	-	-	-	-	-	1 3/8" COAX	2
B4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G1	CDMA	BXA 80090/BCF	1	278'-0"	310°	0.3°	-	-	-	-	-	-	1 3/8" COAX	2
G2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G3	LTE	AM-X-CD-17-65-00T-RET	1	278'-0"	309°	0.6°	SHARED	2	-	-	RRUS-11 B5 RRUS-11 B12	1	1 1/2" HYBRID	SHARED
G4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTALS:			6				3	6	0	0		6		7

* BLUE TEXT DENOTES EQUIPMENT TO BE REMOVED

EXISTING ANTENNA ASSIGNMENT

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

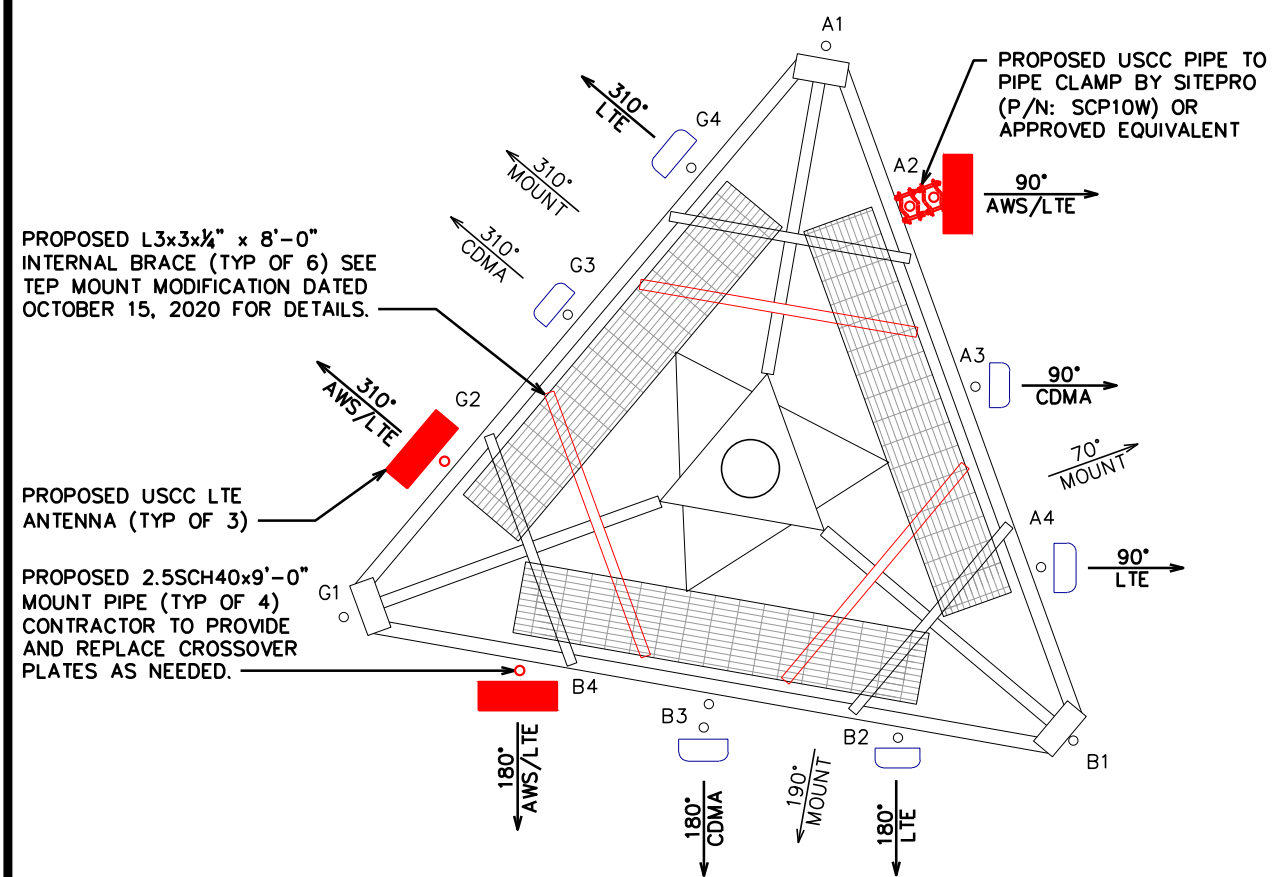


LEGEND

- EXISTING CDMA PANEL ANTENNA
- EXISTING LTE PANEL ANTENNA
- PROPOSED LTE PANEL ANTENNA

NOTES:

- EXISTING MOUNT HAS INSUFFICIENT CAPACITY TO SUPPORT PROPOSED LOADING AND REQUIRES MODIFICATION. SEE TEP APPURTENANCE MOUNT MODIFICATION ANALYSIS DATED OCTOBER 15, 2020 FOR MODIFICATION DETAILS.
- MOUNT ANTENNAS & EQUIPMENT PER MANUFACTURERS SPECIFICATIONS.
- CDMA & LTE ADJUSTMENTS REQUIRED.



PROPOSED LOADING																	
ANTENNA POSITION	TECH	ANTENNA MODEL	ANTENNA QTY.	RAD CENTER	AZIMUTH	MECH. D-TILT	LB ELEC. D-TILT	MB ELEC. D-TILT	SURGE PROTECTOR QTY.	B71/B12 RADIO	RADIO QTY.	B66 RADIO	RADIO QTY.	B5 RADIO	RADIO QTY.	CABLE TYPE	CABLE QTY.
A1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A2	AWS/LTE	OCT8-2LX2HX-BW65	1	278'-0"	90°	0°	2°	2°	1	RRU 4449	1	RRU 4415	1	-	-	1 1/2" HYBRID	1
A3	CDMA	BXA 80090/BCF	1	278'-0"	90°	0°	-	-	-	-	-	-	-	-	-	1 3/8" COAX	2
A4	LTE	AM-X-CD-17-65-00T-RET	1	278'-0"	90°	0°	2°	-	SHARED	-	-	-	RRUS-11	1	1 1/2" HYBRID	SHARED	
B1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B2	LTE	AM-X-CD-17-65-00T-RET	1	278'-0"	180°	0°	2°	-	1	-	-	-	RRUS-11	1	1 1/2" HYBRID	SHARED	
B3	CDMA	BXA 80063/8	1	278'-0"	180°	0°	-	-	-	-	-	-	-	-	-	1 3/8" COAX	2
B4	AWS/LTE	OCT8-2LX2HX-BW65	1	278'-0"	180°	0°	2°	2°	SHARED	RRU 4449	SHARED	RRU 4415	SHARED	-	-	1 1/2" HYBRID	SHARED
G1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G2	AWS/LTE	OCT8-2LX2HX-BW65	1	278'-0"	310°	0°	2°	2°	SHARED	RRU 4449	1	RRU 4415	1	-	-	1 1/2" HYBRID	1
G3	CDMA	BXA 80063/BCF	1	278'-0"	310°	0°	-	-	-	-	-	-	-	-	-	1 3/8" COAX	2
G4	LTE	AM-X-CD-17-65-00T-RET	1	278'-0"	310°	0°	2°	-	SHARED	-	-	-	RRUS-11	1	1 1/2" HYBRID	SHARED	
TOTALS:			9						2		2		2		3		8

* RED TEXT DENOTES PROPOSED EQUIPMENT
 ** CONTRACTOR TO CONFIRM FINAL LOADING PRIOR TO INSTALL.
 *** CONTRACTOR TO REPLACE TOP HARDLINE CONNECTOR AND JUMPER ON CDMA ANTENNAS WHERE CONNECTION MUST BE BROKEN TO RELOCATE WHEN APPLICABLE.

PROPOSED ANTENNA ASSIGNMENT

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



PLANS PREPARED FOR:

 8410 W BRYN MAWR SUITE 700
 CHICAGO, IL 60631
 (773) 399-8900

PROJECT INFORMATION:
556470
ARLINGTON
 11884 US HWY 421 NORTH
 BROADWAY, NC
 (HARNETT COUNTY)

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
 326 TRYON ROAD
 RALEIGH, NC 27603-3530
 OFFICE: (919) 661-6351
 www.tepgroup.net
 N.C. LICENSE # C-1794

SEAL:

 JOHN H. BEST III
 ENGINEER
 SEAL
 043120
 NORTH CAROLINA
 PROFESSIONAL

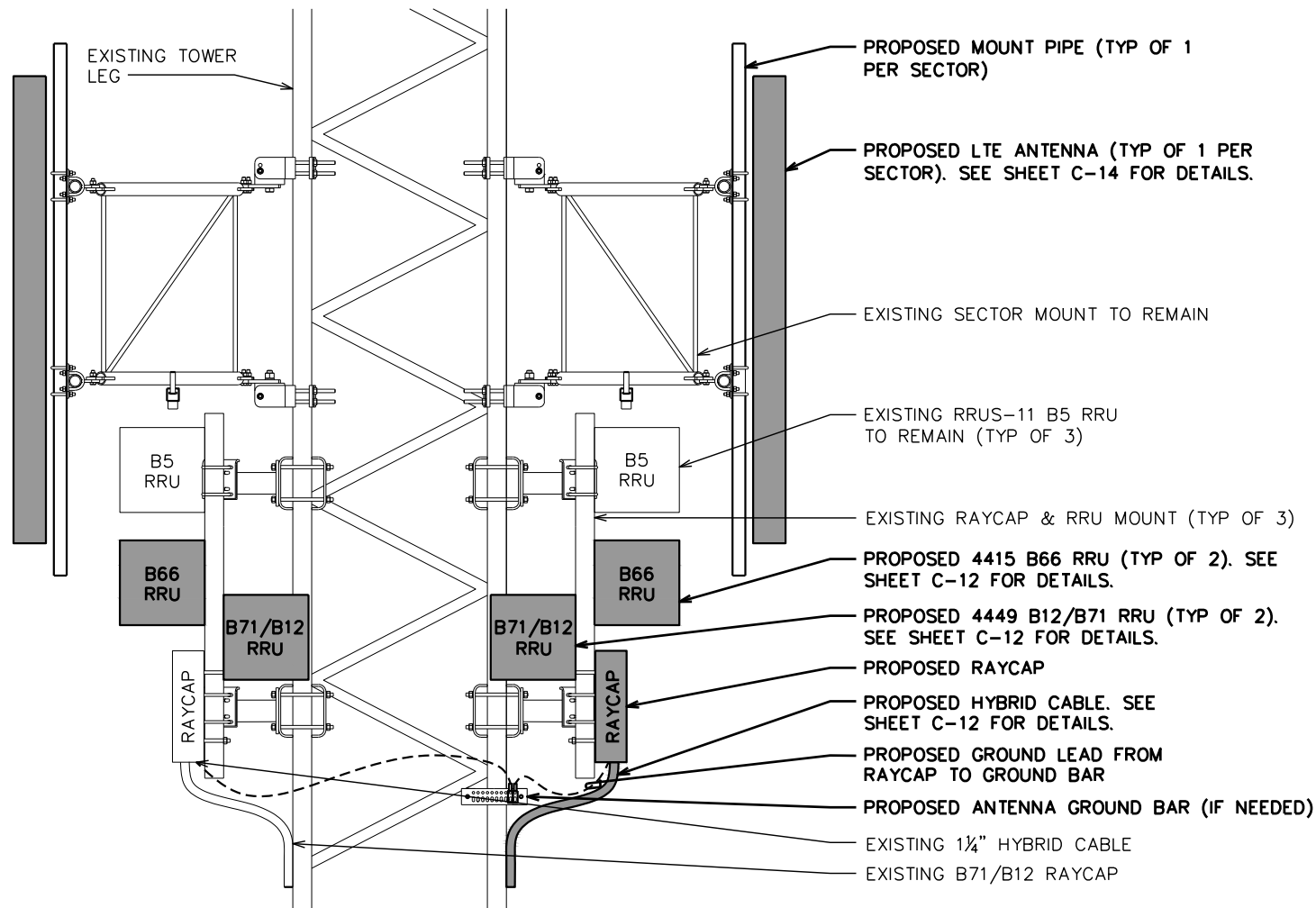
April 14, 2021

7	04-14-21	CONSTRUCTION
6	03-26-21	PRELIMINARY
5	01-18-21	PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:
ANTENNA MOUNTING DETAILS

SHEET NUMBER: **C-10** REVISION: **7**
 TEP#: 43045.453671

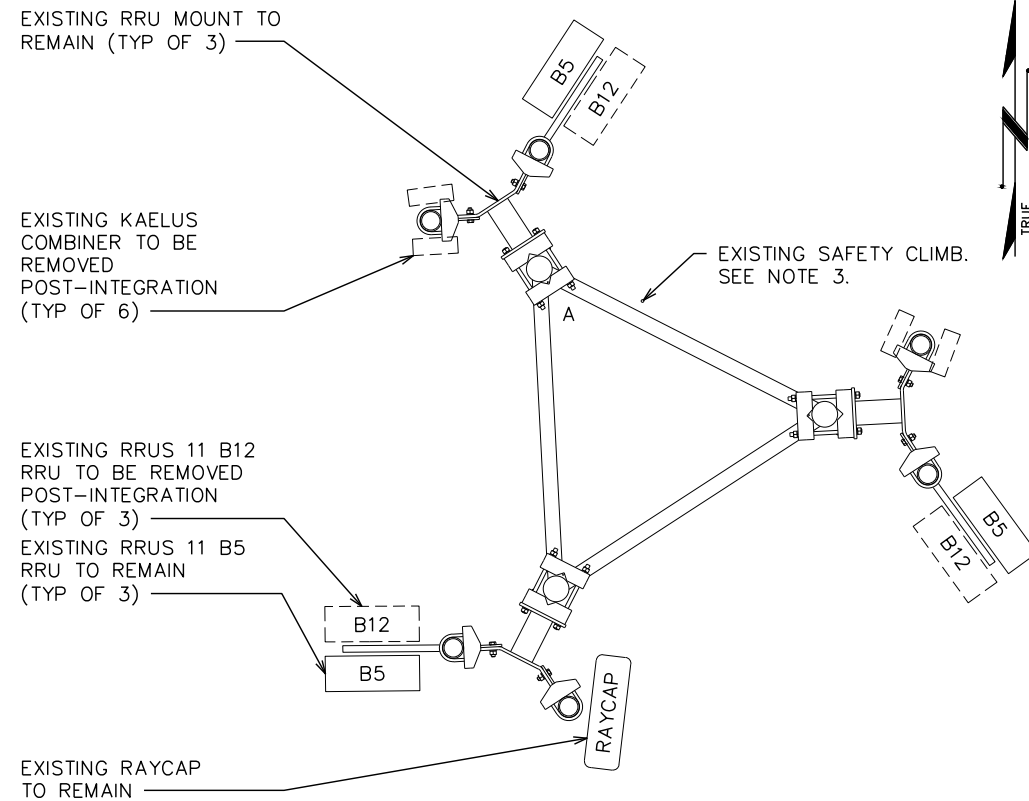


NOTES:

- ERICSSON RRUs TO BE PROVIDED BY USCC.
- SEE SHEET C-12 FOR SUPPORT KIT DETAILS.
- CONTRACTOR TO LEAVE OPENING FOR SAFETY CLIMB AND ENSURE THAT SAFETY CLIMB IS NOT OBSTRUCTED/COMPROMISED.
- TOWER TOP FIBER/POWER CONNECTIONS FROM RAYCAP TO RADIOS SHOULD BE SHIELDED IN 1" INNERDUCT (75' PROVIDED IN HYBRID KIT).

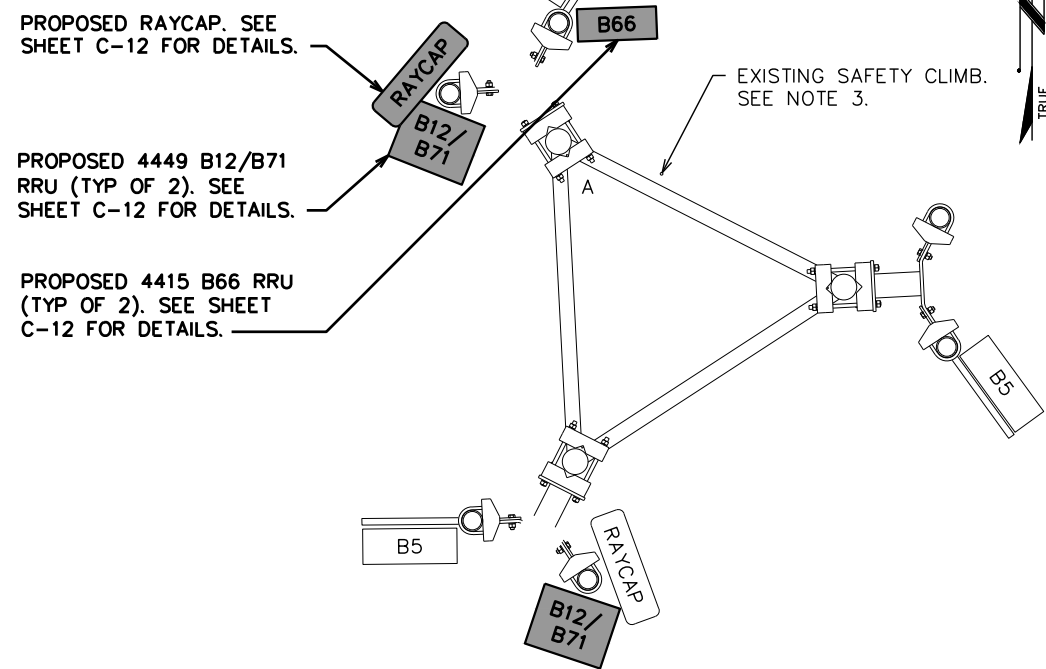
RAYCAP & RRU MOUNTING DETAIL (ELEVATION)

SCALE: N.T.S.



EXISTING RAYCAP & RRU MOUNTING DETAIL (PLAN)

SCALE: N.T.S.



PROPOSED RAYCAP & RRU MOUNTING DETAIL (PLAN)

SCALE: N.T.S.

PLANS PREPARED FOR:

8410 W BRYN MAWR SUITE 700
CHICAGO, IL 60631
(773) 399-8900

PROJECT INFORMATION:

556470
ARLINGTON

11884 US HWY 421 NORTH
BROADWAY, NC
(HARNETT COUNTY)

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
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N.C. LICENSE # C-1794

SEAL:

April 14, 2021

REV	DATE	ISSUED FOR:
7	04-14-21	CONSTRUCTION
6	03-26-21	PRELIMINARY
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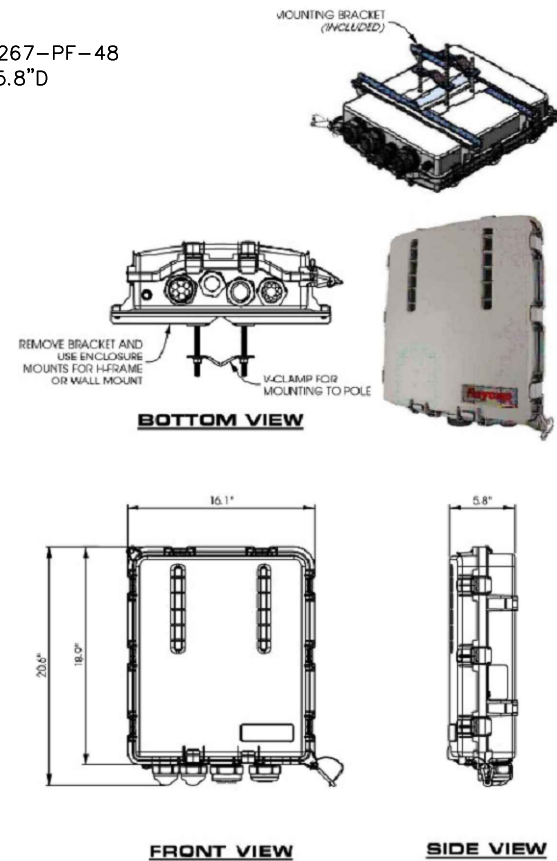
DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:
RAYCAP & RRU SPEC SHEET

SHEET NUMBER: **C-11** REVISION: **7**
TEP#: 43045.453871

NOTES:

- P/N: RUSDC-6267-PF-48
- 20.6"Hx18.9"Wx5.8"D
- 19.95 LBS.



RAYCAP SPEC SHEET

SCALE: N.T.S.

NOTES:

1. SINGLE SUPPORT KIT:
- ERICSSON P/N SXX1072839/1
- WEIGHT: 11 LBS
2. EXPANSION KIT ORDERED IN ADDITION TO SINGLE SUPPORT KIT FOR DUAL MOUNT:
- ERICSSON P/N SXX1072839/2
- WEIGHT: 4.4 LBS
3. ALL HARDWARE INCLUDED
4. INSTALL PER MANUFACTURER RECOMMENDATIONS



RRU SUPPORT KIT

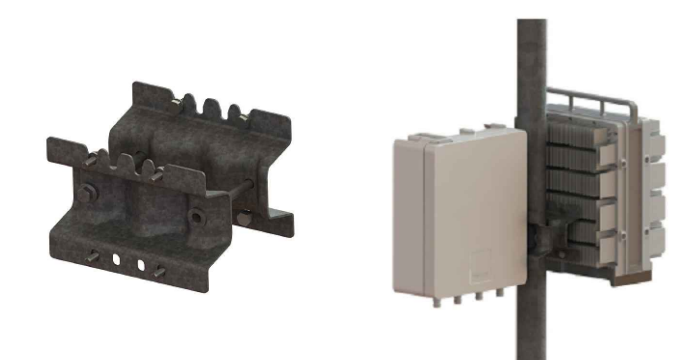
SCALE: N.T.S.

RRU SPEC SHEET

SCALE: N.T.S.

NOTES:

1. DUAL ERS BRACKET ERICSSON P/N: SXX 109 1973/2, WEIGHT: 3.75 LBS
2. CAN BE USED TO ATTACH TWO STANDARD OR HEAVY ERS UNITS TO POLE, WALL, ANGLE TOWER, OR SQUARE TUBE.
3. ALL HARDWARE INCLUDED.
4. INSTALL PER MANUFACTURER RECOMMENDATIONS.



DUAL ERS KIT

SCALE: N.T.S.

NOTES:

- 1¼" FIBER OPTIC CABLE WITH 48V ENERGY FEEDER IN CORRUGATED ALUMINUM SHIELDING WITH UV RESISTANT PE JACKET.
- MINIMUM BENDING RADIUS: 360mm (14")
- MAXIMUM PULLING STRENGTH: 150daN
- MAXIMUM HANGER SPACING: 1,0m
- APPROX WEIGHT: 2300kg/km (1.55LB/FT)
- SHIPPED W/4' PROTECTED JACKET (2.25" O.D.) AT EACH END
- NON-ARMORED ENDS ARE 3" IN LENGTH (2' O.D.)

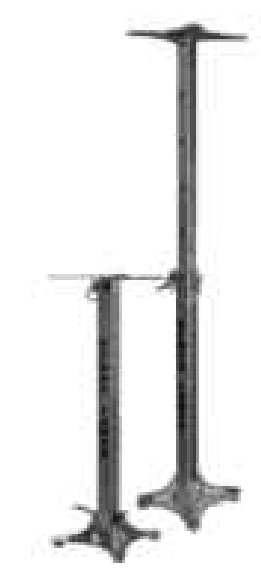


EUPEN HYBRID CABLE

SCALE: N.T.S.

NOTES:

- BEACON EXTENSION BRACKET (P/N:11000016652) BY FLASH TECHNOLOGY
- WEIGHT: 45 LBS (20.4 KG)
- 36-66" EXTENDABLE LENGTH
- INSTALL PER MANUFACTURER RECOMMENDATIONS.



BEACON EXTENSION BRACKET

SCALE: N.T.S.

PLANS PREPARED FOR:

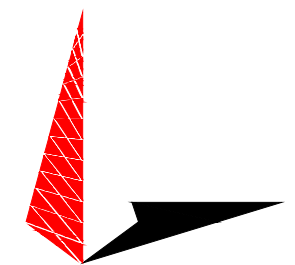


PROJECT INFORMATION:

556470 ARLINGTON

11884 US HWY 421 NORTH BROADWAY, NC (HARNETT COUNTY)

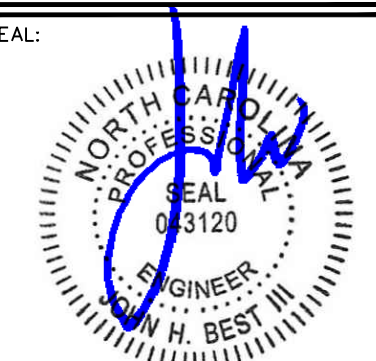
PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS

326 TRYON ROAD RALEIGH, NC 27603-3530 OFFICE: (919) 661-6351 www.tepgroup.net N.C. LICENSE # C-1794

SEAL:



April 14, 2021

7	04-14-21	CONSTRUCTION
6	03-26-21	PRELIMINARY
5	01-18-21	PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:
RADIO SPEC SHEET AND MOUNTING DETAILS

SHEET NUMBER: **C-12** REVISION: **7**
TEP#: 43045.453871

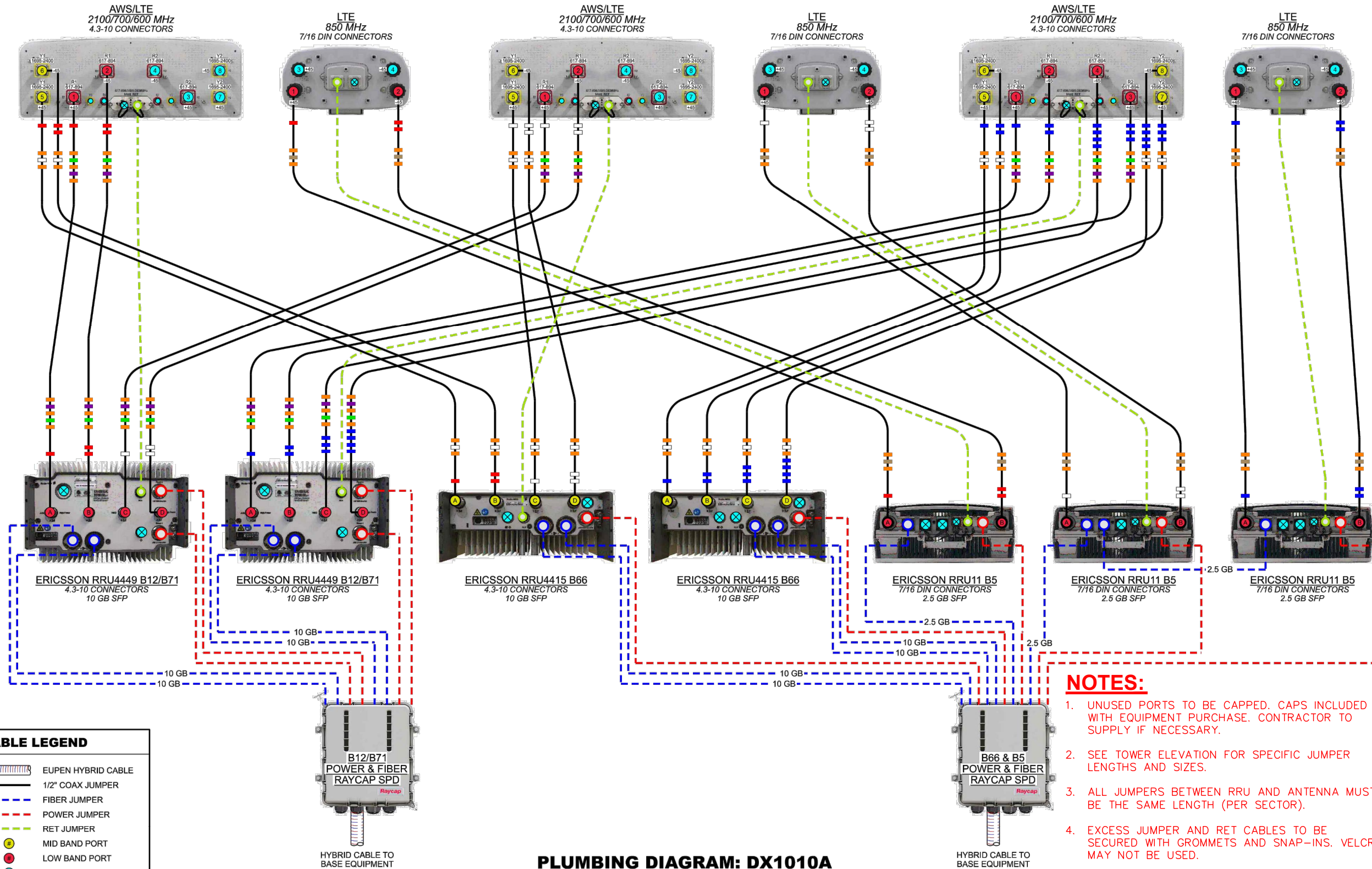


E// B12/B71 2T2R / B66 2T2R / B5 2T2R

ALPHA SECTOR

BETA SECTOR

GAMMA SECTOR



PLUMBING DIAGRAM: DX1010A 2T2R DESIGN: Yes-1

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NOTES:

1. UNUSED PORTS TO BE CAPPED. CAPS INCLUDED WITH EQUIPMENT PURCHASE. CONTRACTOR TO SUPPLY IF NECESSARY.
2. SEE TOWER ELEVATION FOR SPECIFIC JUMPER LENGTHS AND SIZES.
3. ALL JUMPERS BETWEEN RRU AND ANTENNA MUST BE THE SAME LENGTH (PER SECTOR).
4. EXCESS JUMPER AND RET CABLES TO BE SECURED WITH GROMMETS AND SNAP-INS. VELCRO MAY NOT BE USED.
5. CONTRACTOR TO USE STRANDED INSULATED GROUND LEAD #6. SPECIFIED BY MANUFACTURER.

PLANS PREPARED FOR:



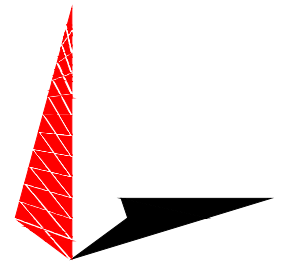
8410 W BRYN MAWR SUITE 700 CHICAGO, IL 60631 (773) 399-8900

PROJECT INFORMATION:

556470 ARLINGTON

11884 US HWY 421 NORTH BROADWAY, NC (HARNETT COUNTY)

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS

326 TRYON ROAD RALEIGH, NC 27603-3530 OFFICE: (919) 661-6351 www.tepgroup.net N.C. LICENSE # C-1794

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6	03-26-21	PRELIMINARY
5	01-18-21	PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:

PLUMBING DIAGRAM

SHEET NUMBER: C-13 REVISION: 7

TEP#: 43045.453871

PLUMBING DIAGRAM

SCALE: N.T.S.

DATE CREATED: 11/16/2020



Base Station Antennas

Frequency Range	617-894x2 1695-2400x2
Polarization	±45°
Half-Power Beam Width	65°
Electrical Downtilt	2° - 12°x4

Type OCT8-2LX2HX-BW65



Base Station Antennas

Frequency Range	617-894x2 1695-2400x2
Polarization	±45°
Half-Power Beam Width	65°
Electrical Downtilt	2° - 12°x4

Type OCT8-2LX2HX-BW65

Base Station Antenna

8-ports 617-894 / 617-894 / 1695-2400 / 1695-2400 MHz 65°, 16 / 16 / 18 / 18 dBi, 2°-12° / 2°-12° / 2°-12° / 2° - 12° Tilt Antenna With 4 Integrated RCUs.



Electrical Specifications

Frequency Range(MHz)	2x617-894			2x1695-2400		
	617-698	698-824	824-894	1695-1920	1920-2180	2300-2400
Polarization	±45°					
Horizontal 3dB Beamwidth(°)	70	63	60	66	63	58
Vertical 3dB Beamwidth(°)	10.4	9.1	8.0	5.5	5	4.3
Gain (dBi)	15.0	15.5	16.0	17.6	18.0	18.1
Electrical Downtilt	2°-12°			2°-12°		
Upper Sidelobe Suppression(dB)	First	≥16	≥16	≥16	≥16	≥16
Front-to-Back Ratio Total Power, ±30° (dB)	≥23	≥24	≥25	≥25	≥25	≥25
Cross polar ratio	Main direction(dB)	≥17	≥17	≥17	≥17	≥17
	±60° (dB)	≥7	≥7	≥7	≥7	≥7
Isolation ports	≥25 dB					
Isolation Frequency	≥30 dB					
VSWR	< 1.5					
Intermodulation IM3	< -150 dBc(2x43dBm carrier)					
Impedance	50 Ω					
Max. Power per Input (at 50°C ambient temperature)	500 W			300 W		
Lightning Protection	DC Ground					

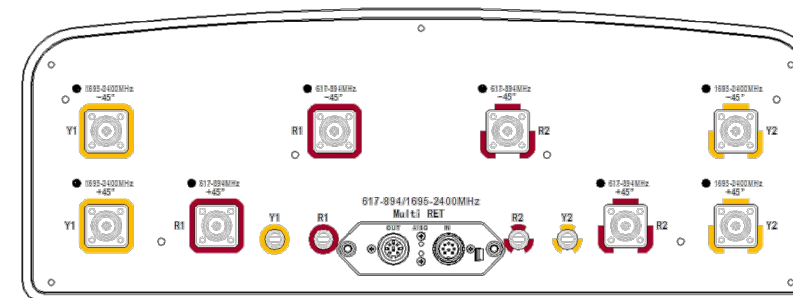
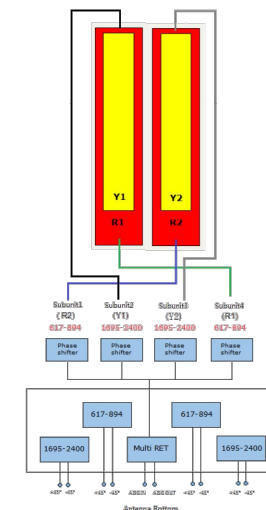
Mechanical Specifications

Redome Material	Fiberglass
Connector Type and Location	4,3-10x8 ,Bottom iRCU in:1 x 8 pin male iRCU out:1 x 8 pin female
Dimensions,HxWxD(mm)/(inches)	2438 x 499 x 180 / 95.9 x 19.6 x 7.1
Packing Size(mm)/(inches)	2750 x 620 x 325 / 108.3 x 24.4 x 12.8
Weight ,w/o Mounting kit(kg)/(lbs)	47 / 103.4
Weight,with Mounting kit(kg)/(lbs)	53 / 116.6
Packing Weight(kg)/(lbs)	63 / 138.6
Max. Wind Velocity(mph)	150
Mounting hardware	ϕ 50 mm ~ ϕ 115 mm
Operational Temperature(°C)	-40 to +65
Operational Humidity(%)	<95
Wind Load at 100mph (Frontal/lateral/Rearside(N))	1416/280/1027

Integrated RET Properties

Protocols	Compliant to AISG 2.0/3GPP
Input voltage range	+10~+30VDC(pin 6)
Power consumption	<2W(stand by);<13W(motor activated)
Connectors	AISG 2 x 8 pin connector acc. To IEC 60130-9 Acc.to AISG Daisy chain in:male Daisy chain out:female
Hardware interface	Antenna Two motor shaft(Embedded motor)
Adjustment time(full range)	RS485A/B(pin5/pin3);Power supply(pin6); DC return(pin7)Acc.to AISG
Adjustment Cycles	40 sec(typically,depending on antenna)
Torque Max	≥160mN.m
Lightning Protection Rating	IEC 61000-4-5 Current Pulse Profile,8/20 μs 10 Repetitions Min.@ 6kA IEC 61312-1 Annex B Current Pulse Profile, 10/350 μs,200 Repetitions Min. @ 0.6KA

COMPREHENSIVE TILT CONFIGURATION



PLANS PREPARED FOR:



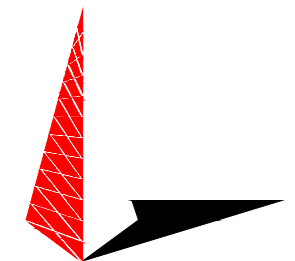
8410 W BRYN MAWR SUITE 700
CHICAGO, IL 60631
(773) 399-8900

PROJECT INFORMATION:

556470
ARLINGTON

11884 US HWY 421 NORTH
BROADWAY, NC
(HARNETT COUNTY)

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS

326 TRYON ROAD
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OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE # C-1794

SEAL:



April 14, 2021

7	04-14-21	CONSTRUCTION
6	03-26-21	PRELIMINARY
5	01-18-21	PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:

ANTENNA SPEC SHEET

SHEET NUMBER:	REVISION:
C-14	7
TEP#:	43045.453871

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OCT8-2LX2HX-BW65 Rev.3

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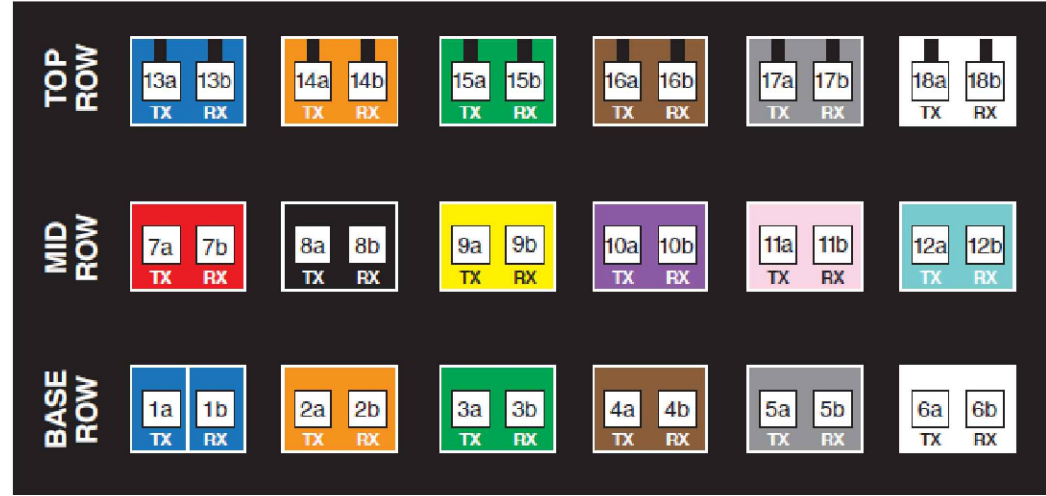
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SCALE: N.T.S.

NOTE:

REFER TO USCC DOCUMENT "TOWER MOUNTED EQUIPMENT AND TOWER CABLE STANDARDS AT CELL SITES" FOR COMPLETE COLOR CODING STANDARDS.

CONNECTOR 13 13A: BLUE TX 13B: BLUE RX with TRACERS	CONNECTOR 14 14A: ORANGE TX 14B: ORANGE RX with TRACERS	CONNECTOR 15 15A: GREEN TX 15B: GREEN RX with TRACERS	CONNECTOR 16 16A: BROWN TX 16B: BROWN RX with TRACERS	CONNECTOR 17 17A: SLATE TX 17B: SLATE RX with TRACERS	CONNECTOR 18 18A: WHITE TX 18B: WHITE RX with TRACERS
CONNECTOR 7 7A: RED TX 7B: RED RX	CONNECTOR 8 8A: BLACK TX 8B: BLACK RX	CONNECTOR 9 9A: YELLOW TX 9B: YELLOW RX	CONNECTOR 10 10A: VIOLET TX 10B: VIOLET RX	CONNECTOR 11 11A: ROSE TX 11B: ROSE RX	CONNECTOR 12 12A: AQUA TX 12B: AQUA RX
CONNECTOR 1 1A: BLUE TX 1B: BLUE RX	CONNECTOR 2 2A: ORANGE TX 2B: ORANGE RX	CONNECTOR 3 3A: GREEN TX 3B: GREEN RX	CONNECTOR 4 4A: BROWN TX 4B: BROWN RX	CONNECTOR 5 5A: SLATE TX 5B: SLATE RX	CONNECTOR 6 6A: WHITE TX 6B: WHITE RX



FIBER CABLE LABELING

SCALE: N.T.S.

PROPOSED (24) FIBER CABLES

PROPOSED (12) TERMINAL BLOCK
6-20 AWG

PROPOSED (18) FIBER COUPLERS ON
FIBER LANDING

PROPOSED (6) STRIKESORB MODULE

PROPOSED (6) FIBER CABLES

PROPOSED (5) BEND PROTECTORS

PROPOSED GROUND STRIP FOR SHIELD
AND DRAIN WIRES

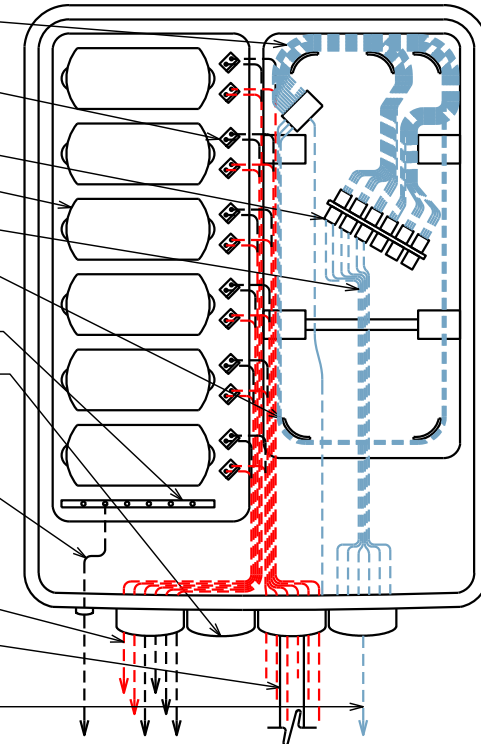
PROPOSED EMPTY PORT

PROPOSED #6 INSULATED GROUND LEAD
WITH 2 LUG MECHANICAL CONNECTION
BETWEEN PROPOSED RAYCAP AND
EXISTING RF GROUND BAR

PROPOSED POWER JUMPER CABLES
TO RRHS

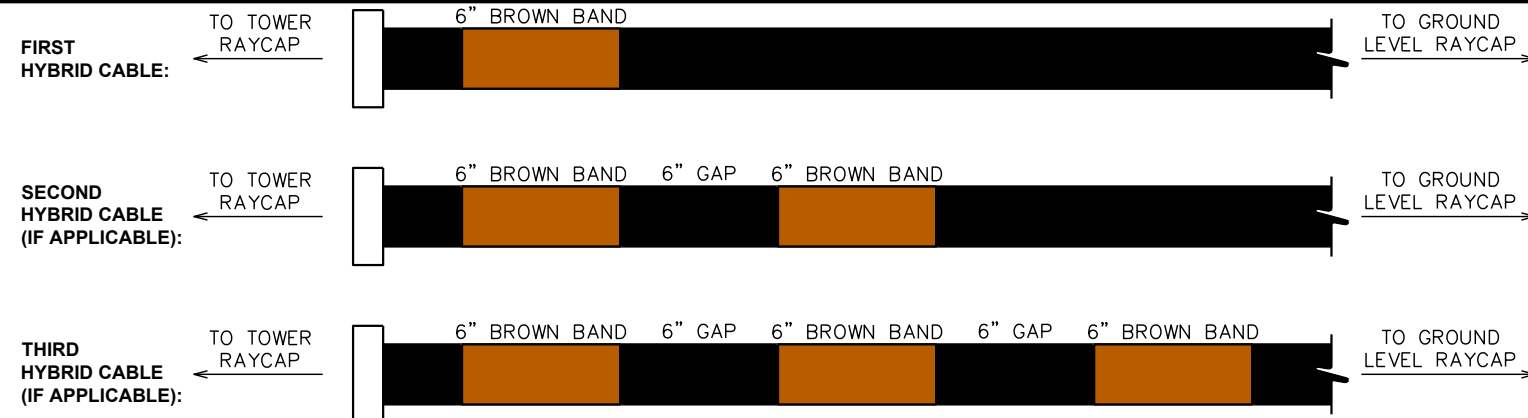
PROPOSED 1/4" HYBRID CABLE

PROPOSED FIBER OPTIC JUMPER CABLE
TO RRHS



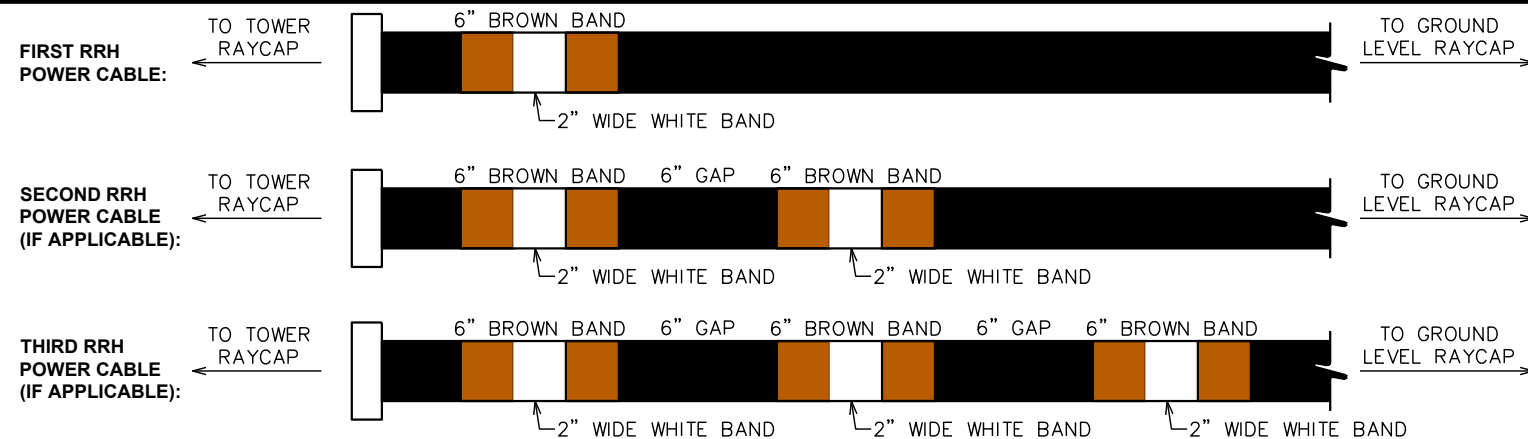
RAYCAP CABLING

SCALE: N.T.S.



HYBRID CABLE BANDING

SCALE: N.T.S.



FIBER CABLE BANDING

SCALE: N.T.S.

PLANS PREPARED FOR:

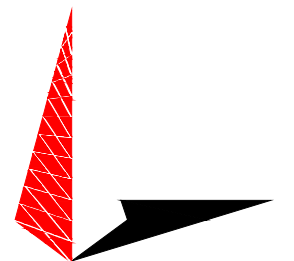
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SHEET TITLE:
FIBER AND COAX LABELING STANDARDS I

SHEET NUMBER: **C-15** REVISION: **7**
TEP#: 43045.453871

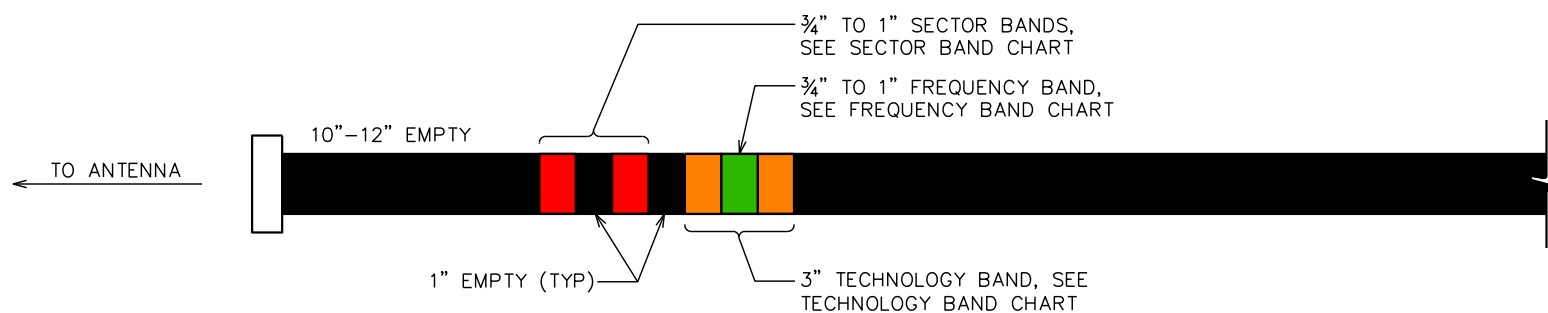
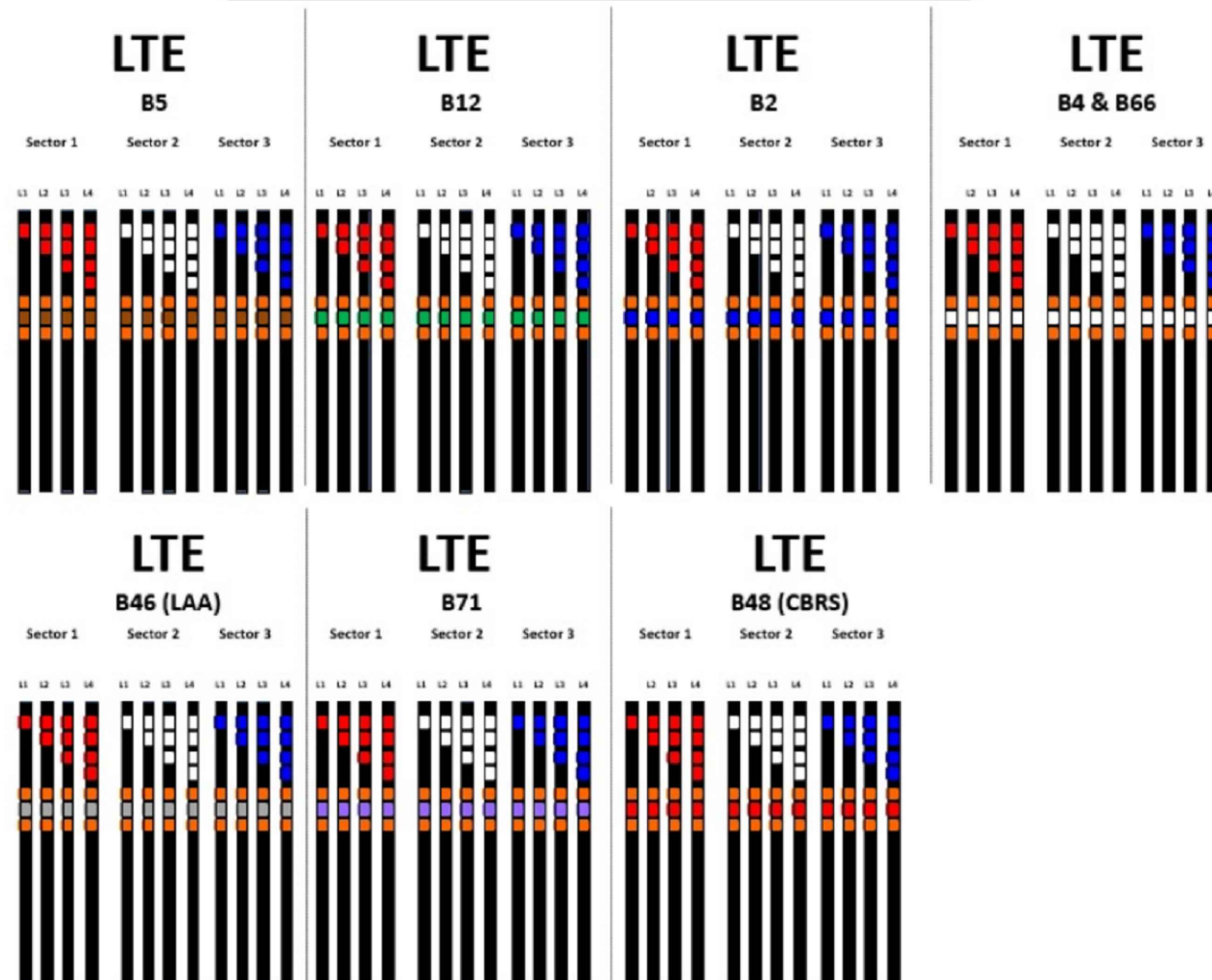
Sector Band Assignments (Most Common Case: Single Technology within the Sector)					
Sector Band	Assigned Color	Line 1	Line 2	Line 3	Line 4
Alpha (Sector 1)	red	1 red band	2 red bands	3 red bands	4 red bands
Beta (Sector 2)	white	1 white band	2 white bands	3 white bands	4 white bands
Gamma (Sector 3)	blue	1 blue band	2 blue bands	3 blue bands	4 blue bands
Delta (Sector 4, if applicable)	green	1 green band	2 green bands	3 green bands	4 green bands
Epsilon (Sector 5, if applicable)	violet	1 violet band	2 violet bands	3 violet bands	4 violet bands
Zeta (Sector 6, if applicable)	brown	1 brown band	2 brown bands	3 brown bands	4 brown bands

FREQUENCY BAND	
FREQUENCY	FREQUENCY BAND
700 (B12)	GREEN
800 (B5)	BROWN
1900 (B2)	BLUE
2100 (B4 & B66)	WHITE
5100 (B66)-LAA	GREY
600 (B71)	VIOLET
3500 (B48)-CBRS	RED

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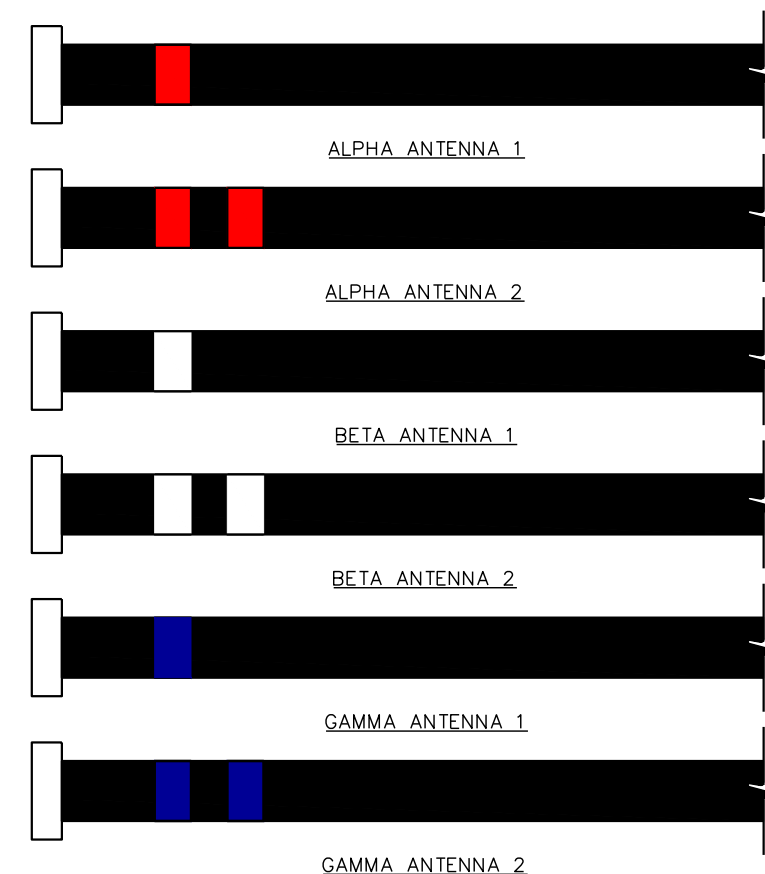
PROJECT INFORMATION:
556470
ARLINGTON
 11884 US HWY 421 NORTH
 BROADWAY, NC
 (HARNETT COUNTY)

USC COAX Color Code Standard

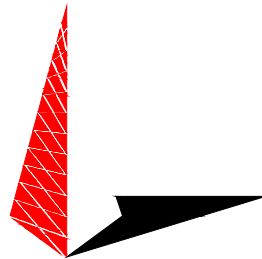



COAX CABLE BANDING
 SCALE: N.T.S.

RET SECTOR BAND		
SECTOR	LINE 1 - FIRST TECHNOLOGY	LINE 2 - FIRST TECHNOLOGY
ALPHA	(1) RED BAND	(2) RED BAND
BETA	(1) WHITE BAND	(2) WHITE BAND
GAMMA	(1) BLUE BAND	(2) BLUE BAND



RET CABLE BANDING
 SCALE: N.T.S.

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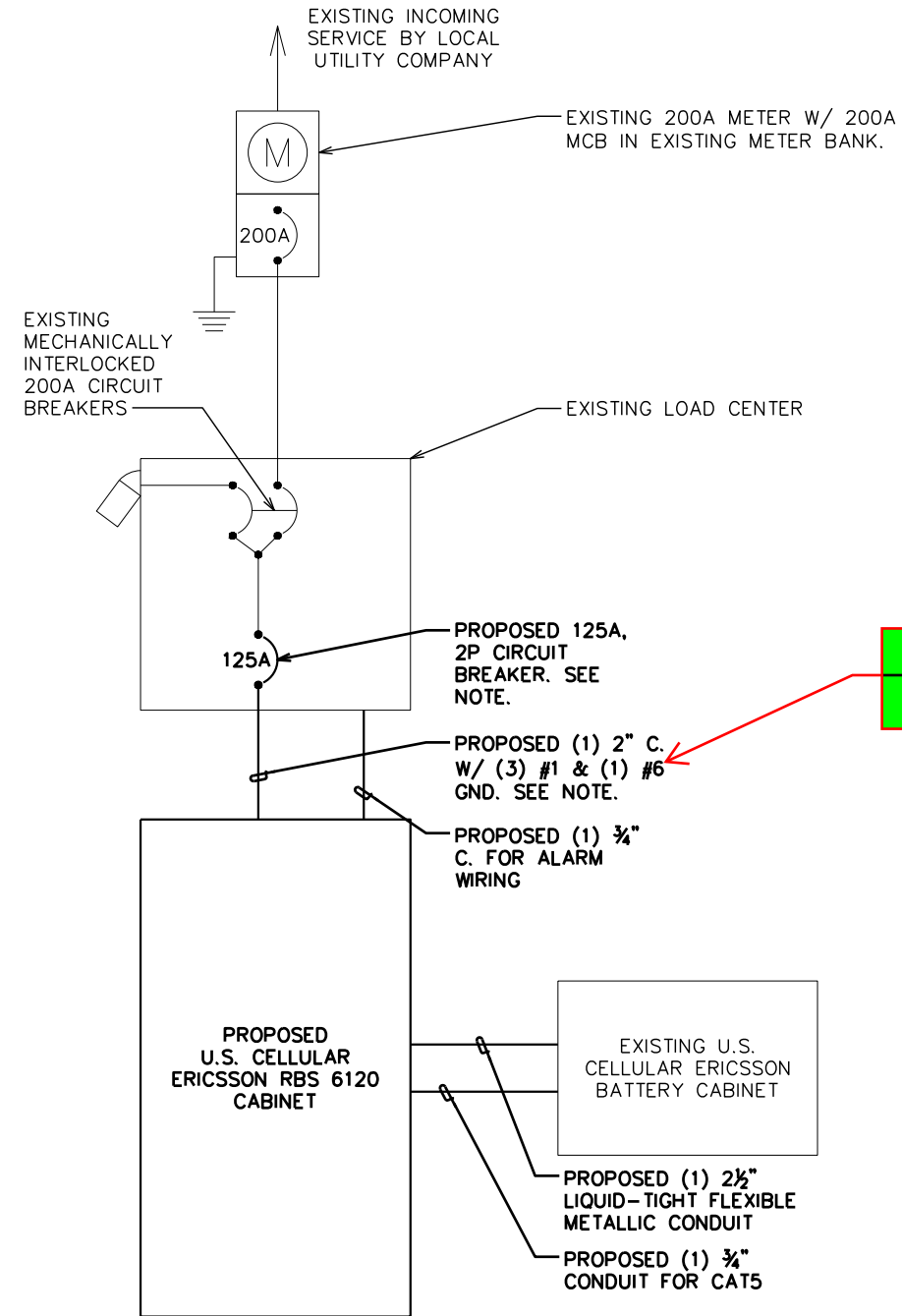
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SHEET TITLE:
FIBER AND COAX LABELING STANDARDS II

SHEET NUMBER: **C-16** REVISION: **7**
 TEP#: 43045.453871

NOTES:



1. CONTRACTOR TO VERIFY CABINET AMPERAGE RATING. PROPOSED CIRCUIT BREAKER AND CONDUCTORS TO FEED NEW CABINET SHOULD BE SIZED PER CABINET RATING.
2. MAX RUN LENGTH FROM THE POWER PANEL TO THE LTE CABINET IS 180'-0" (ASSUMING 150A FEED)
3. THIS SITE IS DESIGNED IN ACCORDANCE WITH THE 2020 NATIONAL ELECTRIC CODE.



NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.

Reviewed for Code Compliance

09/13/2021

Copper conductors only

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SHEET TITLE:

ONE-LINE DIAGRAM

SHEET NUMBER: **E-1** REVISION: **7**

TEP#: 43045.453871

PROPOSED ERICSSON RBS + BATTERY CABINET ONE-LINE DIAGRAM

SCALE: N.T.S.

GENERAL NOTES:

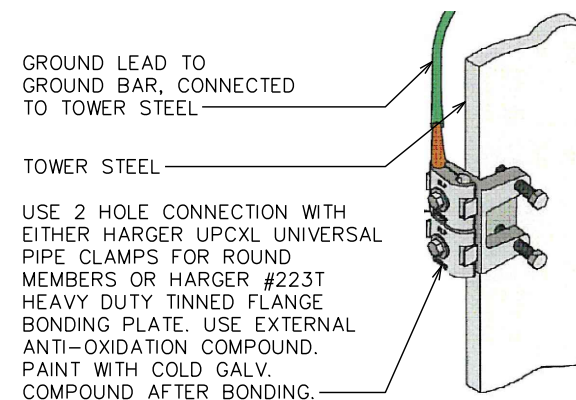
- ALL REFERENCES TO OWNER IN THESE DOCUMENTS SHALL BE CONSIDERED U.S. CELLULAR OR ITS DESIGNATED REPRESENTATIVE.
- ALL WORK PRESENTED ON THESE DRAWINGS MUST BE COMPLETED BY THE CONTRACTOR UNLESS NOTED OTHERWISE. THE CONTRACTOR MUST HAVE CONSIDERABLE EXPERIENCE IN PERFORMANCE OF WORK SIMILAR TO THAT DESCRIBED HEREIN. BY ACCEPTANCE OF THIS ASSIGNMENT, THE CONTRACTOR IS ATTESTING THAT HE DOES HAVE SUFFICIENT EXPERIENCE AND ABILITY, THAT HE IS KNOWLEDGEABLE OF THE WORK TO BE PERFORMED AND THAT HE IS PROPERLY LICENSED AND PROPERLY REGISTERED TO DO THIS WORK IN THE STATE OF NORTH CAROLINA.
- STRUCTURE IS DESIGNED IN ACCORDANCE WITH ANSI/TIA-222-H, AND THE REQUIREMENTS OF THE NORTH CAROLINA STATE BUILDING CODE, 2018 EDITION.
- WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE NORTH CAROLINA STATE BUILDING CODE, 2018 EDITION.
- UNLESS SHOWN OR NOTED OTHERWISE ON THE CONTRACT DRAWINGS, OR IN THE SPECIFICATIONS, THE FOLLOWING NOTES SHALL APPLY TO THE MATERIALS LISTED HEREIN, AND TO THE PROCEDURES TO BE USED ON THIS PROJECT.
- ALL HARDWARE ASSEMBLY MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED EXACTLY AND SHALL SUPERCEDE ANY CONFLICTING NOTES ENCLOSED HEREIN.
- IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION AND/OR FIELD MODIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF TEMPORARY BRACING, GUYS OR TIE DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER THE COMPLETION OF THE PROJECT.
- ALL DIMENSIONS, ELEVATIONS, AND EXISTING CONDITIONS SHOWN ON THE DRAWINGS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING ANY MATERIALS ORDERING, FABRICATION OR CONSTRUCTION WORK ON THIS PROJECT. CONTRACTOR SHALL NOT SCALE CONTRACT DRAWINGS IN LIEU OF FIELD VERIFICATIONS. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND THE OWNER'S ENGINEER. THE DISCREPANCIES MUST BE RESOLVED BEFORE THE CONTRACTOR IS TO PROCEED WITH THE WORK. THE OWNER SHALL HAVE A SET OF APPROVED PLANS AVAILABLE AT THE SITE AT ALL TIMES WHILE WORK IS BEING PERFORMED. A DESIGNATED RESPONSIBLE EMPLOYEE SHALL BE AVAILABLE FOR CONTACT BY GOVERNING AGENCY INSPECTORS. THE CONTRACT DOCUMENTS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE OWNER AND/OR THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE PROTECTIVE MEASURES OR THE PROCEDURES.
- ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW AND OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY AND ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED IN WRITING BY THE OWNER AND ENGINEER PRIOR TO INSTALLATION. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF THE MATERIALS AND EQUIPMENT BEING SUBSTITUTED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR INSURING THAT THIS PROJECT AND RELATED WORK COMPLIES WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY CODES AND REGULATIONS GOVERNING THIS WORK.
- ACCESS TO THE PROPOSED WORK SITE MAY BE RESTRICTED. THE CONTRACTOR SHALL COORDINATE INTENDED CONSTRUCTION ACTIVITY, INCLUDING WORK SCHEDULE AND MATERIALS ACCESS, WITH THE RESIDENT LEASING AGENT FOR APPROVAL.
- BILL OF MATERIALS AND PART NUMBERS LISTED ON CONSTRUCTION DRAWINGS ARE INTENDED TO AID CONTRACTOR. CONTRACTOR SHALL VERIFY PARTS AND QUANTITIES WITH MANUFACTURER PRIOR TO BIDDING AND/OR ORDERING MATERIALS.
- ALL PERMITS THAT MUST BE OBTAINED ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.
- 24 HOURS PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, THE CONTRACTOR MUST NOTIFY THE APPLICABLE JURISDICTIONAL (STATE, COUNTY OR CITY) ENGINEER.
- THE CONTRACTOR SHALL REWORK (DRY, SCARIFY, ETC.) ALL MATERIAL NOT SUITABLE FOR SUBGRADE IN IT PRESENT STATE. AFTER REWORKING, IF THE MATERIAL REMAINS UNSUITABLE, THE CONTRACTOR SHALL UNDERCUT THIS MATERIAL AND REPLACE WITH APPROVED MATERIAL. ALL SUBGRADES SHALL BE PROOFROLLED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK PRIOR TO PAVING. ANY SOFTER MATERIAL SHALL BE REWORKED OR REPLACED.

STRUCTURAL STEEL NOTES:

- THE FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC SPECIFICATIONS AND MANUAL OF STEEL CONSTRUCTION, 14TH EDITION.
- UNLESS OTHERWISE NOTED, ALL STRUCTURAL ELEMENTS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
 - STRUCTURAL STEEL, ASTM DESIGNATION A36 OR GR50.
 - ALL BOLTS, ASTM A325 TYPE I GALVANIZED HIGH STRENGTH BOLTS.
 - ALL NUTS, ASTM A563 CARBON AND ALLOY STEEL NUTS.
 - ALL WASHERS, ASTM F436 HARDENED STEEL WASHERS.
- ALL CONNECTIONS NOT FULLY DETAILED ON THESE PLANS SHALL BE DETAILED BY THE STEEL FABRICATOR IN ACCORDANCE WITH AISC SPECIFICATIONS AND MANUAL OF STEEL CONSTRUCTION, 13TH EDITION.
- HOLES SHALL NOT BE FLAME CUT THRU STEEL UNLESS APPROVED BY THE ENGINEER.
- HOT-DIP GALVANIZE ALL ITEMS UNLESS OTHERWISE NOTED, AFTER FABRICATION WHERE PRACTICABLE. GALVANIZING: ASTM A123, ASTM, A153/A153M OR ASTM A653/A653M, G90, AS APPLICABLE.
- REPAIR DAMAGED SURFACES WITH GALVANIZING REPAIR METHOD AND PAINT CONFORMING TO ASTM A780 OR BY APPLICATION OF STICK OR THICK PASTED MATERIAL SPECIFICALLY DESIGNED FOR REPAIR OF GALVANIZING. CLEAN AREAS TO BE REPAIRED AND REMOVE SLAG FROM WELDS. HEAT SURFACES TO WHICH STICK OR PASTE MATERIAL IS APPLIED, WITH A TORCH TO A TEMPERATURE SUFFICIENT TO MELT THE METALLICS IN STICK OR PASTED; SPREAD MOLTEN MATERIAL UNIFORMLY OVER SURFACES TO BE COATED AND WIPE OFF EXCESS MATERIAL.
- A NUT LOCKING DEVICE SHALL BE INSTALLED ON ALL PROPOSED AND/OR REPLACED BOLTS.
- ALL PROPOSED AN/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH TO EXCLUDE THE THREADS FROM THE SHEAR PLANE.
- ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT BE AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.
- ALL ASSEMBLY AND ANCHOR BOLTS ARE TO BE TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED IN SECTION 8.1 OF THE AISC, "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", DATED JUNE 30, 2004.
- FLAT WASHERS ARE TO BE INSTALLED WITH BOLTS OVER SLOTTED HOLES.
- DO NOT OVER TORQUE ASSEMBLY BOLTS. GALVANIZING ON BOLTS, NUTS, AND STEEL PARTS MAY ACT AS A LUBRICANT, THUS OVER TIGHTENING MAY OCCUR AND MAY CAUSE BOLTS TO CRACK AND SNAP OFF.
- PAL NUTS ARE TO BE INSTALLED AFTER NUTS ARE TIGHT AND WITH EDGE LIP OUT. PAL NUTS ARE NOT REQUIRED WHEN SELF-LOCKING NUTS ARE PROVIDED.
- GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
- ALL WELDING SHALL BE IN ACCORDANCE WITH THE AWS D1.1:2010, STRUCTURAL WELDING CODE--REINFORCING STEEL. ALL WELDERS SHALL DISPLAY PROPER CERTIFICATION OF QUALIFICATION.

GROUNDING NOTES:

- ALL CADWELD CONNECTIONS TO GALVANIZED MATERIAL SHALL BE PROPERLY PREPARED TO ASSURE A SATISFACTORY CADWELD.
- CADWELD CONNECTION SHALL BE COATED WITH COLD GALVANIZING SPRAY.
- ALL VERTICAL JUMPERS SHALL NOT BE WELDED WITHIN TWO FT OF THE GROUND ROD.
- SECTOR GROUNDING DIAGRAM:



PLANS PREPARED FOR:



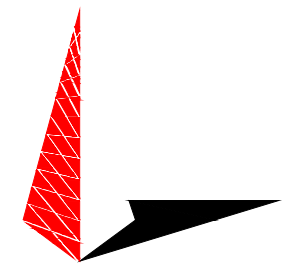
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