EMPIRE telecom

January 26, 2017

Melanie A. Bachman
Executive Director
Connecticut Siting Council
10 Franklin Street
New Britain, CT 06051

Regarding:	Notice of Exempt Modification – Swap of 3 Remote Radio Heads
Property Address:	104 Prospect Hill Road, Windsor, CT (the "Property", AT&T Site # CT5192)
Applicant:	AT&T Mobility ("AT&T")

Dear Ms. Bachman:

AT&T currently maintains a wireless telecommunications facility on an existing 110 foot, Water Tank ("tower") at the above-referenced address, latitude 41.92612778, longitude -72.6046417. AT&T's facility consists of six (6) wireless telecommunications antennas at 88 feet. The tower is controlled and owned by Connecticut Water Company. Assessor's information is attached hereto.

AT&T desires to modify its existing telecommunications facility by swapping three (3) remote radios heads for (3) newer remote radio head models. The centerline height of said antennas is and will remain at 88 feet.

Please accept this application as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72 (b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to the First Selectman of the Town of East Windsor and the Town Planner of the Town of East Windsor. A copy of this letter is also being sent to Connecticut Water company, the owner of the structure that AT&T is located.

The planned modifications to AT&T's facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The planned modifications will not result in an increase in the height of the existing structure. AT&T's antennas and associated lines will be installed at 88 foot level of the 110 foot water tank.
2. The proposed modifications will not involve any changes to ground-mounted equipment and, therefore will not require an extension of the site boundary.
3. The proposed modification will not increase the noise level at the facility by six decibel or more, or to levels that exceed state and local criteria.

16 Esquire Road, Billerica, MA 01862 Phone 978-284-3906 Email: ncaplan@empiretelecomm.com

4. The operation of the modified facility will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. An RF emissions calculation is attached.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The tower and its foundation can support AT&T's proposed modifications. (Please see attached Structural analysis completed by Centek Engineering December 21, 2016).

For the foregoing reasons AT&T respectfully requests that the proposed swap of remote radio heads be allowed within the exempt modifications under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

Nicole Caplan
Site Acquisition Specialist
Empire Telecom

CC: The Honorable Robert Maynard, First Selectman, Town of East Windsor
Laurie P. Whitten, CZEO, AICP, Town Planner, Town of East Windsor
Connecticut Water Company, c/o Cindy F. Gaudino

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The Assessor's office is responsible for the maintenance of records on the ownership of properties. Assessments are computed at 70% of the estimated market value of real property at the time of the last revaluation which was 2012.

East Windsor CONNECTICUT

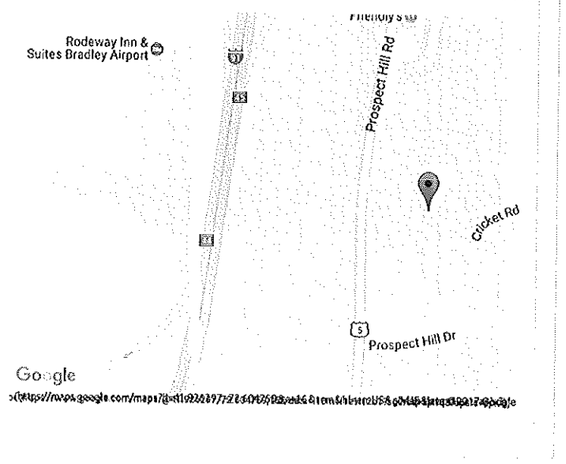
Information on the Property Records for the Municipality of East Windsor was last updated on 1/25/2017.

Property Summary Information

Parcel Data And Values | Outbuildings | Sales | Google Map

Google Map

Unique Id:	01232500
Location:	104 PROSPI
MBL:	102 17 038
Primary Use:	Commercial
Zone:	B-1
Acres:	0.65
Appraised Value:	$1,700,000
Assessed Value:	$1,190,000



Back To Search (JavaScript:window.history.back(1);)

Print View (PrintPage.aspx?towncode=047&uniqueid=01232500)

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Information on the Property Records for the Municipality of East Windsor was last updated on 1/25/2017.

Parcel Information

Location:	104 PROSPECT HILL RD	Property Use:	Vacant Land	Primary Use:	Commercial Vacant Land
Unique ID:	01232500	Map Block Lot:	102 17 038	Acres:	0.65
490 Acres:	0.00	Zone:	B-1	Volume / Page:	0073/0029
Developers Map / Lot:		Census:	4841000		

Value Information

	Appraised Value	70% Assessed Value
Land	0	0

	Appraised Value	70% Assessed Value
Buildings	0	0
Detached Outbuildings	1,700,000	1,190,000
Total	1,700,000	1,190,000

Owner's Information

Owner's Data

CONN WATER CO
93 W MAIN ST
CLINTON, CT 06413

Detached Outbuildings

Type:	Year Built:	Length:	Width:	Area:
Cell Tower Cell Tower	1990			1

Owner History - Sales

Owner Name	Volume	Page	Sale Date	Deed Type	Valid Sale	Sale Price
CONN WATER CO	0073	0029	05/22/1958		No	$0

Information Published With Permission From The Assessor

WIRELESS COMMUNICATIONS FACILITY
CT5192 - LTE BWE
WINDSOR LOCKS NORTH
104 PROSPECT HILL RD
EAST WINDSOR, CT 06088

GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2012 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2016 CONNECTICUT STATE BUILDING CODE, INCLUDING THE TIA-222 REVISION "G" STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND SUPPORTING STRUCTURES, 2016 CONNECTICUT FIRE SAFETY CODE AND, NATIONAL ELECTRICAL CODE AND LOCAL CODES.
2. THE COMPOUND, TOWER, PRIMARY GROUND RING, ELECTRICAL SERVICE TO THE METER BANK AND TELEPHONE SERVICE TO THE DEMARCATION POINT ARE PROVIDED BY SITE OWNER. AS BUILT FIELD CONDITIONS REGARDING THESE ITEMS SHALL BE CONFIRMED BY THE CONTRACTOR. SHOULD ANY FIELD CONDITIONS PRECLUDE COMPLIANCE WITH THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND SHALL NOT PROCEED WITH ANY AFFECTED WORK.
3. CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS IN THE CONTRACT DOCUMENT SET. CONTRACTOR SHALL COORDINATE ALL WORK SHOWN IN THE SET OF DRAWINGS. THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF DRAWINGS TO ALL SUBCONTRACTORS AND ALL RELATED PARTIES. THE SUBCONTRACTORS SHALL EXAMINE ALL THE DRAWINGS AND SPECIFICATIONS FOR THE INFORMATION THAT AFFECTS THEIR WORK.
4. CONTRACTOR SHALL PROVIDE A COMPLETE BUILD-OUT WITH ALL FINISHES, STRUCTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS AND PROVIDE ALL ITEMS AS SHOWN OR INDICATED ON THE DRAWINGS OR IN THE WRITTEN SPECIFICATIONS.
5. CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR AND EQUIPMENT TO COMPLETE THE WORK AND FURNISH A COMPLETED JOB ALL IN ACCORDANCE WITH LOCAL AND STATE GOVERNING AUTHORITIES AND OTHER AUTHORITIES HAVING LAWFUL JURISDICTION OVER THE WORK.
6. CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND ALL INSPECTIONS REQUIRED AND SHALL ALSO PAY FEES REQUIRED FOR THE GENERAL CONSTRUCTION, PLUMBING, ELECTRICAL AND HVAC. PERMITS SHALL BE PAID FOR BY THE RESPECTIVE SUBCONTRACTORS.
7. CONTRACTOR SHALL MAINTAIN A CURRENT SET OF DRAWINGS AND SPECIFICATIONS ON SITE AT ALL TIMES AND INSURE DISTRIBUTION OF NEW DRAWINGS TO SUBCONTRACTORS AND OTHER RELEVANT PARTIES AS SOON AS THEY ARE MADE AVAILABLE. ALL OLD DRAWINGS SHALL BE MARKED VOID AND REMOVED FROM THE CONTRACT AREA. THE CONTRACTOR SHALL FURNISH AN "AS-BUILT" SET OF DRAWINGS TO OWNER UPON COMPLETION OF PROJECT.
8. LOCATION OF EQUIPMENT, AND WORK SUPPLIED BY OTHERS THAT IS DIAGRAMMATICALLY INDICATED ON THE DRAWINGS SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL DETERMINE LOCATIONS AND DIMENSIONS SUBJECT TO STRUCTURAL CONDITIONS AND WORK OF THE SUBCONTRACTORS.
9. THE CONTRACTOR IS SOLELY RESPONSIBLE TO DETERMINE CONSTRUCTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE EXISTING STRUCTURES AND ITS COMPONENT PARTS DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY. MAINTAIN EXISTING BUILDING'S/PROPERTY'S OPERATIONS, COORDINATE WORK WITH BUILDING/PROPERTY OWNER.
10. DRAWINGS INDICATE THE MINIMUM STANDARDS, BUT IF ANY WORK SHOULD BE INDICATED TO BE SUBSTANDARD TO ANY ORDINANCES, LAWS, CODES, RULES, OR REGULATIONS BEARING ON THE WORK, THE CONTRACTOR SHALL INCLUDE IN HIS WORK AND SHALL EXECUTE THE WORK CORRECTLY IN ACCORDANCE WITH SUCH ORDINANCES, LAWS, CODES, RULES OR REGULATIONS WITH NO INCREASE IN COSTS.
11. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.
12. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUBCONTRACTORS FOR ANY CONDITION PER MFR.'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
13. ANY AND ALL ERRORS, DISCREPANCIES, AND "MISSED" ITEMS ARE TO BE BROUGHT TO THE ATTENTION OF THE AT&T CONSTRUCTION MANAGER DURING THE BIDDING PROCESS BY THE CONTRACTOR. ALL THESE ITEMS ARE TO BE INCLUDED IN THE BID. NO 'EXTRA' WILL BE ALLOWED FOR MISSED ITEMS.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE SAFETY FROM THE TIME THE JOB IS AWARDED UNTIL ALL WORK IS COMPLETE AND ACCEPTED BY THE OWNER.
15. CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ENGINEER FOR APPROVAL. DRAWINGS MUST BEAR THE CHECKER'S INITIALS BEFORE SUBMITTING TO THE CONSTRUCTION MANAGER FOR REVIEW.
16. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES, AND EXISTING CONDITIONS AT THE SITE, PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY WORK IN THE CONTRACT AREA.
17. COORDINATION, LAYOUT, FURNISHING AND INSTALLATION OF CONDUIT AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
18. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUB-CONTRACTORS FOR ANY CONDITION PER THE MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
19. ALL DAMAGE CAUSED TO ANY EXISTING STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE HELD LIABLE FOR ALL REPAIRS REQUIRED FOR EXISTING STRUCTURES IF DAMAGED DURING CONSTRUCTION ACTIVITIES.
20. THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT LEAST 48 HOURS PRIOR TO ANY EXCAVATIONS AT 1-800-922-4455. ALL UTILITIES SHALL BE IDENTIFIED AND CLEARLY MARKED PRIOR TO ANY EXCAVATION WORK. CONTRACTOR SHALL MAINTAIN AND PROTECT MARKED UTILITIES THROUGHOUT PROJECT COMPLETION.
21. CONTRACTOR SHALL COMPLY WITH OWNERS ENVIRONMENTAL ENGINEER ON ALL METHODS AND PROVISIONS FOR ALL EXCAVATION ACTIVITIES INCLUDING SOIL DISPOSAL. ALL BACKFILL MATERIALS TO BE PROVIDED BY THE CONTRACTOR.

SITE DIRECTIONS

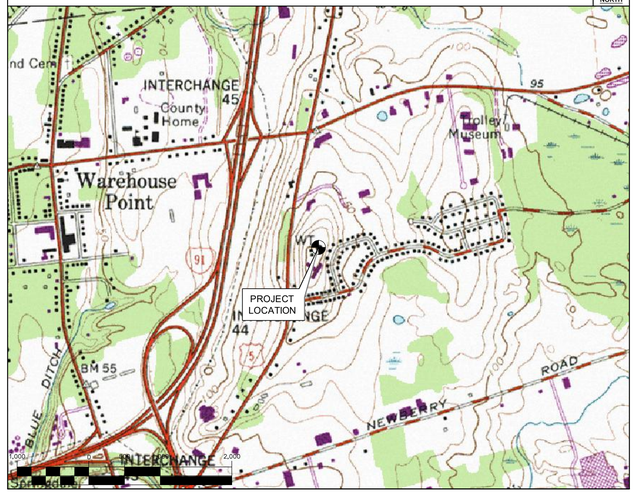
FROM: 500 ENTERPRISE DRIVE, ROCKY HILL, CONNECTICUT

TO: 104 PROSPECT HILL RD, EAST WINDSOR, CONNECTICUT

1.	HEAD NORTHEAST ON ENTERPRISE DR TOWARD CAPITAL BLVD	0.3 MI
2.	TURN LEFT ONTO CAPITAL BLVD	0.2 MI
3.	USE THE LEFT LANE TO TURN LEFT ONTO CT-411	0.2 MI
4.	TURN LEFT TO MERGE ONTO I-91 N	21.2 MI
5.	TAKE EXIT 44 FOR US-5 S TOWARD E. WINDSOR	0.3 MI
6.	USE THE LEFT 2 LANES TO TURN LEFT ONTO US-5 N	0.7 MI

VICINITY MAP

SCALE: 1" = 1000'



PROJECT SUMMARY

1. THE PROPOSED SCOPE OF WORK CONSISTS OF A MODIFICATION TO THE EXISTING UNMANNED TELECOMMUNICATIONS FACILITY INCLUDING THE FOLLOWING:

   A. INSTALL (3) NEW RRUS-12 TO REPLACE (3) RRUS-11 ON EXISTING TOWER MOUNT.

PROJECT INFORMATION

AT&T SITE NUMBER:	CT5192
AT&T SITE NAME:	WINDSOR LOCKS NORTH
SITE ADDRESS:	104 PROSPECT HILL RD EAST WINDSOR, CT 06088
LESSEE/APPLICANT:	AT&T MOBILITY 500 ENTERPRISE DRIVE, SUITE 3A ROCKY HILL, CT 06067
ENGINEER:	CENTEK ENGINEERING, INC. 63-2 NORTH BRANFORD RD. BRANFORD, CT 06405
PROJECT COORDINATES:	LATITUDE: 41°-55'-36.09084" N LONGITUDE: 72°-36'-16.91604" W GROUND ELEVATION: ±204' AMSL GROUND ELEVATION REFERENCED FROM GOOGLE EARTH. COORDINATES REFERENCED FROM RFDS DOCUMENTS.

SHEET INDEX

SHT. NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	0
N-1	NOTES AND SPECIFICATIONS	0
C-1	PLANS AND ELEVATION	0
C-2	LTE BWE EQUIPMENT DETAILS	0
E-1	ELECTRICAL DETAILS AND NOTES	0

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
0	11/17/16	HMR	CAG	CONSTRUCTION DOCUMENTS - ISSUED FOR CONSTRUCTION

PROFESSIONAL ENGINEER SEAL

STATE OF CONNECTICUT * PROFESSIONAL ENGINEER *

at&t

EMPIRE telecom

CENTEK engineering
Centered on Solutions℠
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

AT&T MOBILITY
WIRELESS COMMUNICATIONS FACILITY

WINDSOR LOCKS NORTH
CT5192 - LTE BWE
104 PROSPECT HILL ROAD
EAST WINDSOR, CT 06088

DATE: 11/10/16
SCALE: AS NOTED
JOB NO. 16071.78

TITLE SHEET

T-1

NOTES AND SPECIFICATIONS

DESIGN BASIS

1. GOVERNING CODE: 2012 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2016 CT STATE SUPPLEMENT.

2. TIA/EIA-222 REVISION "G", ASCE MANUAL NO. 72 – "DESIGN OF STEEL TRANSMISSION POLE STRUCTURES SECOND EDITION".

3. DESIGN CRITERIA:

   WIND LOAD: (TOWER & FOUNDATION)
   NOMINAL DESIGN WIND SPEED (V) = 97 MPH (2016 CSBC: APPENDIX 'N')

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE GOVERNING BUILDING CODE.

2. DRAWINGS INDICATE THE MINIMUM STANDARDS, BUT IF ANY WORK SHOULD BE INDICATED TO BE SUBSTANDARD TO ANY ORDINANCES, LAWS, CODES, RULES, OR REGULATIONS BEARING ON THE WORK, THE CONTRACTOR SHALL INCLUDE IN HIS WORK AND SHALL EXECUTE THE WORK CORRECTLY IN ACCORDANCE WITH SUCH ORDINANCES, LAWS, CODES, RULES OR REGULATIONS WITH NO INCREASE IN COSTS.

3. BEFORE BEGINNING THE WORK, THE CONTRACTOR IS RESPONSIBLE FOR MAKING SUCH INVESTIGATIONS CONCERNING PHYSICAL CONDITIONS (SURFACE AND SUBSURFACE) AT OR CONTIGUOUS TO THE SITE WHICH MAY AFFECT PERFORMANCE AND COST OF THE WORK.

4. DIMENSIONS AND DETAILS SHALL BE CHECKED AGAINST EXISTING FIELD CONDITIONS.

5. THE CONTRACTOR SHALL VERIFY AND COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS, SLEEVES AND ANCHOR BOLTS AS REQUIRED BY ALL TRADES.

6. ALL DIMENSIONS, ELEVATIONS, AND OTHER REFERENCES TO EXISTING STRUCTURES, SURFACE, AND SUBSURFACE CONDITIONS ARE APPROXIMATE. NO GUARANTEE IS MADE FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS, ELEVATIONS, ANGLES WITH EXISTING CONDITIONS AND WITH ARCHITECTURAL AND SITE DRAWINGS BEFORE PROCEEDING WITH ANY WORK.

7. AS THE WORK PROGRESSES, THE CONTRACTOR SHALL NOTIFY THE OWNER OF ANY CONDITIONS WHICH ARE IN CONFLICT OR OTHERWISE NOT CONSISTENT WITH THE CONSTRUCTION DOCUMENTS AND SHALL NOT PROCEED WITH SUCH WORK UNTIL THE CONFLICT IS SATISFACTORILY RESOLVED.

8. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING AND MAINTAINING ADEQUATE SHORING, BRACING, AND BARRICADES AS MAY BE REQUIRED FOR THE PROTECTION OF EXISTING PROPERTY, CONSTRUCTION WORKERS, AND FOR PUBLIC SAFETY.

9. THE CONTRACTOR IS SOLELY RESPONSIBLE TO DETERMINE CONSTRUCTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE EXISTING STRUCTURES AND ITS COMPONENT PARTS DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY. MAINTAIN EXISTING SITE OPERATIONS, COORDINATE WORK WITH NORTHEAST UTILITIES

10. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER FOUNDATION REMEDIATION WORK IS COMPLETE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE AND TO ENSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, TEMPORARY BRACING, GUYS OR TIEDOWNS, WHICH MIGHT BE NECESSARY.

11. ALL DAMAGE CAUSED TO ANY EXISTING STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE HELD LIABLE FOR ALL REPAIRS REQUIRED FOR EXISTING STRUCTURES IF DAMAGED DURING CONSTRUCTION ACTIVITIES.

12. SHOP DRAWINGS, CONCRETE MIX DESIGNS, TEST REPORTS, AND OTHER SUBMITTALS PERTAINING TO STRUCTURAL WORK SHALL BE FORWARDED TO THE OWNER FOR REVIEW BEFORE FABRICATION AND/OR INSTALLATION IS MADE. SHOP DRAWINGS SHALL INCLUDE ERECTION DRAWINGS AND COMPLETE DETAILS OF CONNECTIONS AS WELL AS MANUFACTURER'S SPECIFICATION DATA WHERE APPROPRIATE. SHOP DRAWINGS SHALL BE CHECKED BY THE CONTRACTOR AND BEAR THE CHECKER'S INITIALS BEFORE BEING SUBMITTED FOR REVIEW.

13. NO DRILLING WELDING OR TAPING ON CL&P OWNED EQUIPMENT.

14. REFER TO DRAWING T1 FOR ADDITIONAL NOTES AND REQUIREMENTS.

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL IS DESIGNED BY ALLOWABLE STRESS DESIGN (ASD)

   A. STRUCTURAL STEEL (W SHAPES)---ASTM A992 (FY = 50 KSI)
   B. STRUCTURAL STEEL (OTHER SHAPES)---ASTM A36 (FY = 36 KSI)
   C. STRUCTURAL HSS (RECTANGULAR SHAPES)---ASTM A500 GRADE B, (FY = 46 KSI)
   D. STRUCTURAL HSS (ROUND SHAPES)---ASTM A500 GRADE B, (FY = 42 KSI)
   E. PIPE---ASTM A53 (FY = 35 KSI)
   F. CONNECTION BOLTS---ASTM A325-N
   G. U-BOLTS---ASTM A36
   H. ANCHOR RODS---ASTM F 1554
   I. WELDING ELECTRODE---ASTM E 70XX

2. CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ENGINEER FOR APPROVAL. DRAWINGS MUST BEAR THE CHECKER'S INITIALS BEFORE SUBMITTING TO THE ENGINEER FOR REVIEW. SHOP DRAWINGS SHALL INCLUDE THE FOLLOWING: SECTION PROFILES, SIZES, CONNECTION ATTACHMENTS, REINFORCING, ANCHORAGE, SIZE AND TYPE OF FASTENERS AND ACCESSORIES. INCLUDE ERECTION DRAWINGS, ELEVATIONS AND DETAILS.

3. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST PROVISIONS OF AISC MANUAL OF STEEL CONSTRUCTION.

4. PROVIDE ALL PLATES, CLIP ANGLES, CLOSURE PIECES, STRAP ANCHORS, MISCELLANEOUS PIECES AND HOLES REQUIRED TO COMPLETE THE STRUCTURE.

5. FIT AND SHOP ASSEMBLE FABRICATIONS IN THE LARGEST PRACTICAL SECTIONS FOR DELIVERY TO SITE.

6. INSTALL FABRICATIONS PLUMB AND LEVEL, ACCURATELY FITTED, AND FREE FROM DISTORTIONS OR DEFECTS.

7. AFTER ERECTION OF STRUCTURES, TOUCHUP ALL WELDS, ABRASIONS AND NON-GALVANIZED SURFACES WITH A 95% ORGANIC ZINC RICH PAINT IN ACCORDANCE WITH ASTM 780.

8. ALL STEEL MATERIAL (EXPOSED TO WEATHER) SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT DIPPED GALVANIZED) COATINGS" ON IRONS AND STEEL PRODUCTS.

9. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC COATING (HOT-DIP) ON IRON AND STEEL HARDWARE".

10. THE ENGINEER SHALL BE NOTIFIED OF ANY INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON CONFORMING MATERIALS OR CONDITIONS TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE ENGINEER REVIEW.

11. CONNECTION ANGLES SHALL HAVE A MINIMUM THICKNESS OF 1/4 INCHES.

12. STRUCTURAL CONNECTION BOLTS SHALL CONFORM TO ASTM A325. ALL BOLTS SHALL BE 3/4" DIAMETER MINIMUM AND SHALL HAVE A MINIMUM OF TWO BOLTS, UNLESS OTHERWISE ON THE DRAWINGS.

13. LOCK WASHER ARE NOT PERMITTED FOR A325 STEEL ASSEMBLIES.

14. SHOP CONNECTIONS SHALL BE WELDED OR HIGH STRENGTH BOLTED.

15. MILL BEARING ENDS OF COLUMNS, STIFFENERS, AND OTHER BEARING SURFACES TO TRANSFER LOAD OVER ENTIRE CROSS SECTION.

16. FABRICATE BEAMS WITH MILL CAMBER UP.

17. LEVEL AND PLUMB INDIVIDUAL MEMBERS OF THE STRUCTURE TO AN ACCURACY OF 1:500, BUT NOT TO EXCEED 1/4" IN THE FULL HEIGHT OF THE COLUMN.

18. COMMENCEMENT OF STRUCTURAL STEEL WORK WITHOUT NOTIFYING THE ENGINEER OF ANY DISCREPANCIES WILL BE CONSIDERED ACCEPTANCE OF PRECEDING WORK.

19. INSPECTION AND TESTING OF ALL WELDING AND HIGH STRENGTH BOLTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY.

20. FOUR COPIES OF ALL INSPECTION TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEER WITHIN TEN (10) WORKING DAYS OF THE DATE OF INSPECTION.

PAINT NOTES

PAINTING SCHEDULE:

1. ANTENNA PANELS:

   A. SHERWIN WILLIAMS POLANE-B
   B. COLOR TO BE MATCHED WITH EXISTING TOWER STRUCTURE.

2. COAXIAL CABLES:

   A. ONE COAT OF DTM BONDING PRIMER (2-5 MILS. DRY FINISH)
   B. TWO COATS OF DTM ACRYLIC PRIMER/FINISH (2.5-5 MILS. DRY FINISH)
   C. COLOR TO BE FIELD MATCHED WITH EXISTING STRUCTURE.

EXAMINATION AND PREPARATION:

1. DO NOT APPLY PAINT IN SNOW, RAIN, FOG OR MIST OR WHEN RELATIVE HUMIDITY EXCEEDS 85%. DO NOT APPLY PAINT TO DAMP OR WET SURFACES.

2. VERIFY THAT SUBSTRATE CONDITIONS ARE READY TO RECEIVE WORK. EXAMINE SURFACE SCHEDULED TO BE FINISHED PRIOR TO COMMENCEMENT OF WORK. REPORT ANY CONDITION THAT MAY POTENTIALLY AFFECT PROPER APPLICATION.

3. TEST SHOP APPLIED PRIMER FOR COMPATIBILITY WITH SUBSEQUENT COVER MATERIALS.

4. PERFORM PREPARATION AND CLEANING PROCEDURE IN STRICT ACCORDANCE WITH COATING MANUFACTURER'S INSTRUCTIONS FOR EACH SUBSTRATE CONDITION.

5. CORRECT DEFECTS AND CLEAN SURFACES WHICH AFFECT WORK OF THIS SECTION. REMOVE EXISTING COATINGS THAT EXHIBIT LOOSE SURFACE DEFECTS.

6. IMPERVIOUS SURFACE: REMOVE MILDEW BY SCRUBBING WITH SOLUTION OF TRI-SODIUM PHOSPHATE AND BLEACH. RINSE WITH CLEAN WATER AND ALLOW SURFACE TO DRY.

7. ALUMINUM SURFACE SCHEDULED FOR PAINT FINISH: REMOVE SURFACE CONTAMINATION BY STEAM OR HIGH-PRESSURE WATER. REMOVE OXIDATION WITH ACID ETCH AND SOLVENT WASHING. APPLY ETCHING PRIMER IMMEDIATELY FOLLOWING CLEANING.

8. FERROUS METALS: CLEAN UNGALVANIZED FERROUS METAL SURFACES THAT HAVE NOT BEEN SHOP COATED; REMOVE OIL, GREASE, DIRT, LOOSE MILL SCALE, AND OTHER FOREIGN SUBSTANCES. USE SOLVENT OR MECHANICAL CLEANING METHODS THAT COMPLY WITH THE STEEL STRUCTURES PAINTING COUNCIL'S (SSPC) RECOMMENDATIONS. TOUCH UP BARE AREAS AND SHOP APPLIED PRIME COATS THAT HAVE BEEN DAMAGED. WIRE BRUSH, CLEAN WITH SOLVENTS RECOMMENDED BY PAINT MANUFACTURER, AND TOUCH UP WITH THE SAME PRIMER AS THE SHOP COAT.

9. GALVANIZED SURFACES: CLEAN GALVANIZED SURFACES WITH NON-PETROLEUM-BASED SOLVENTS SO SURFACE IS FREE OF OIL AND SURFACE CONTAMINANTS. REMOVE PRETREATMENT FROM GALVANIZED SHEET METAL FABRICATED FROM COIL STOCK BY MECHANICAL METHODS.

10. ANTENNA PANELS: REMOVE ALL OIL, DUST, GREASE, DIRT, AND OTHER FOREIGN MATERIAL TO ENSURE ADEQUATE ADHESION. PANELS MUST BE WIPED WITH METHYL ETHYL KETONE (MEK).

11. COAXIAL CABLES: REMOVE ALL OIL, DUST, GREASE. DIRT, AND OTHER FOREIGN MATERIAL TO ENSURE ADEQUATE ADHESION.

CLEANING:

1. COLLECT WASTE MATERIAL, WHICH MAY CONSTITUTE A FIRE HAZARD, PLACE IN CLOSED METAL CONTAINERS AND REMOVE DAILY FROM SITE.

APPLICATION:

1. APPLY PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

2. DO NOT APPLY FINISHES TO SURFACES THAT ARE NOT DRY.

3. APPLY EACH COAT TO UNIFORM FINISH.

4. APPLY EACH COAT OF PAINT SLIGHTLY DARKER THAN PRECEDING COAT UNLESS OTHERWISE APPROVED.

5. SAND METAL LIGHTLY BETWEEN COATS TO ACHIEVE REQUIRED FINISH.

6. VACUUM CLEAN SURFACES FREE OF LOOSE PARTICLES. USE TACK CLOTH JUST PRIOR TO APPLYING NEXT COAT.

7. ALLOW APPLIED COAT TO DRY BEFORE NEXT COAT IS APPLIED.

COMPLETED WORK:

1. SAMPLES: PREPARE 24" X 24" SAMPLE AREA FOR REVIEW.

2. MATCH APPROVED SAMPLES FOR COLOR, TEXTURE AND COVERAGE. REMOVE REFINISH OR REPAINT WORK NOT IN COMPLIANCE WITH SPECIFIED REQUIREMENTS.

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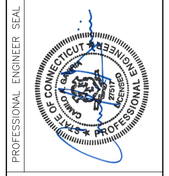

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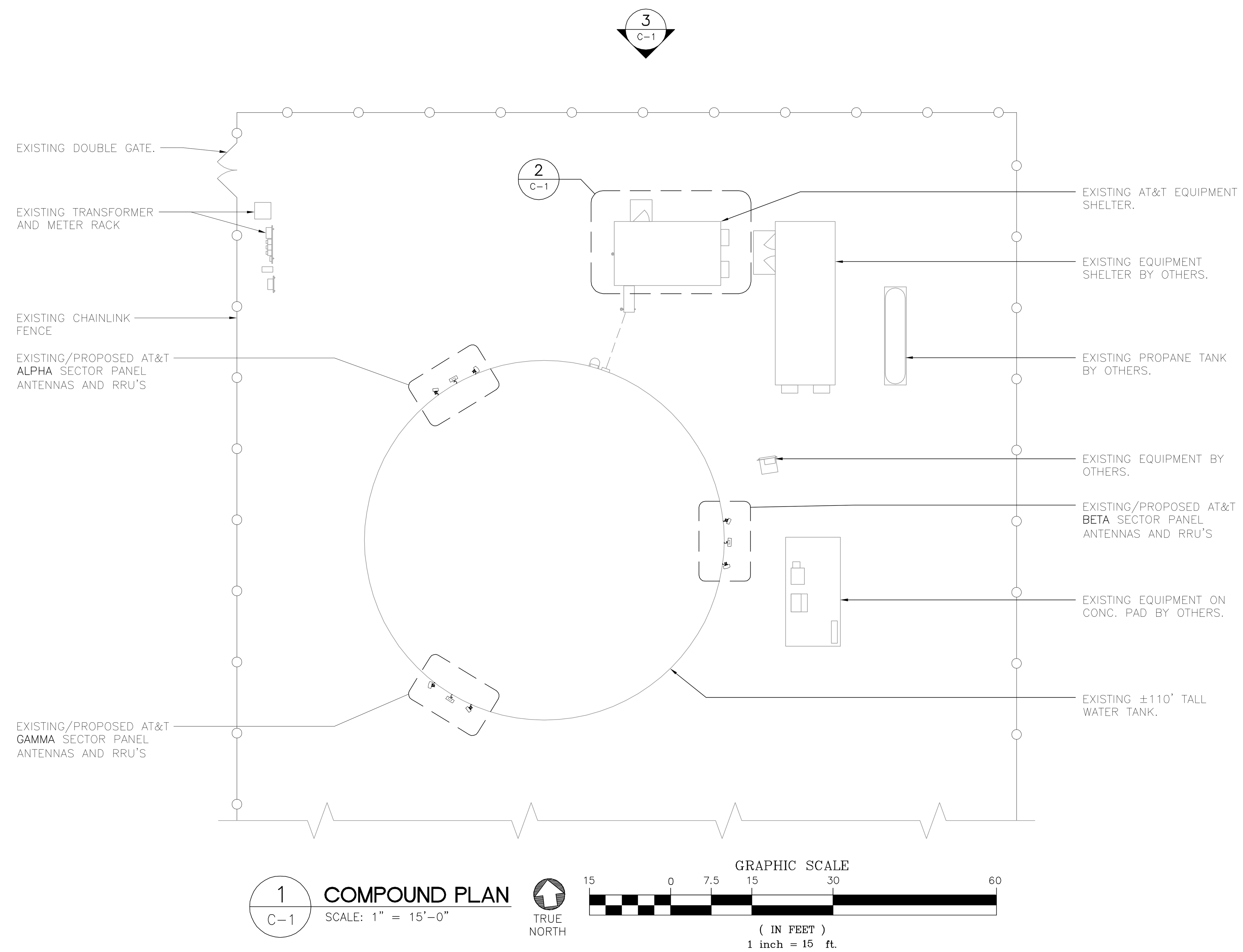
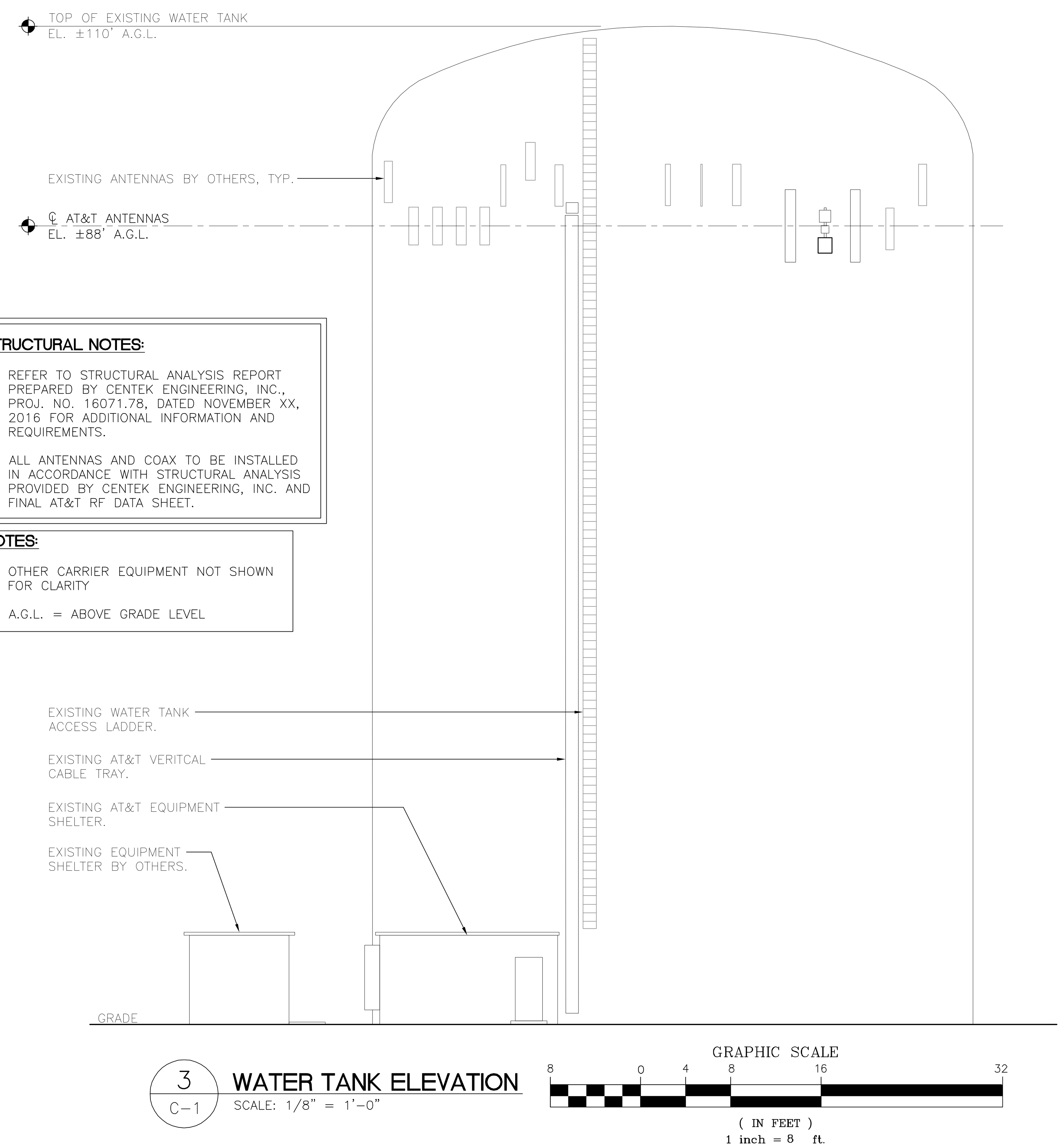
NOTES AND SPECIFICATIONS

N-1

Sheet No. 2 of 5



1 C-1 COMPOUND PLAN
SCALE: 1" = 15'-0"



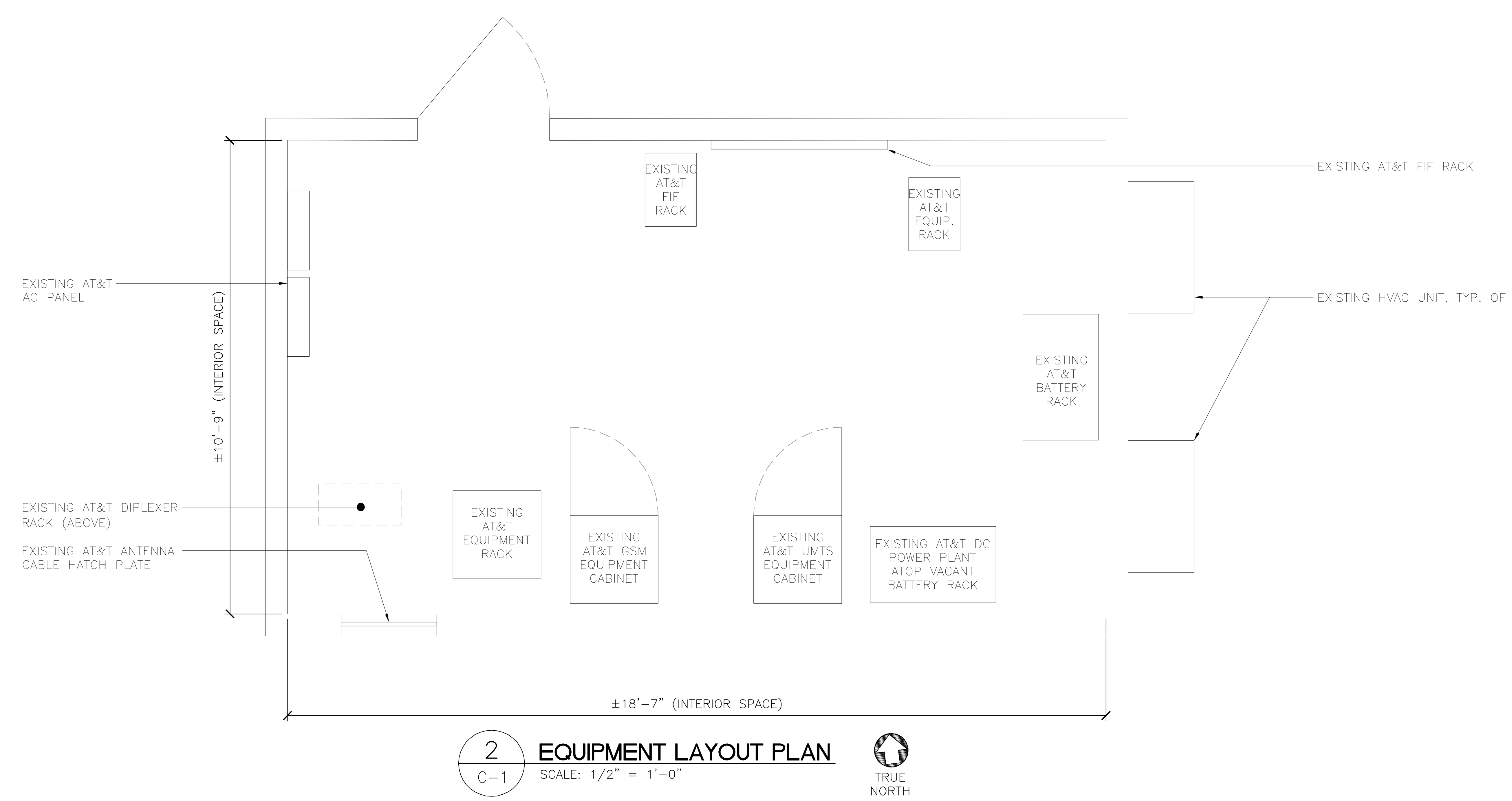
STRUCTURAL NOTES:

1. REFER TO STRUCTURAL ANALYSIS REPORT PREPARED BY CENTEK ENGINEERING, INC., PROJ. NO. 16071.78, DATED NOVEMBER XX, 2016 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
2. ALL ANTENNAS AND COAX TO BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS PROVIDED BY CENTEK ENGINEERING, INC. AND FINAL AT&T RF DATA SHEET.

NOTES:

1. OTHER CARRIER EQUIPMENT NOT SHOWN FOR CLARITY
2. A.G.L. = ABOVE GRADE LEVEL

3 C-1 WATER TANK ELEVATION
SCALE: 1/8" = 1'-0"



2 C-1 EQUIPMENT LAYOUT PLAN
SCALE: 1/2" = 1'-0"

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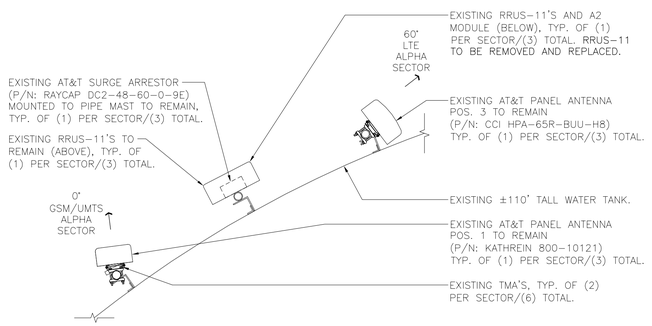
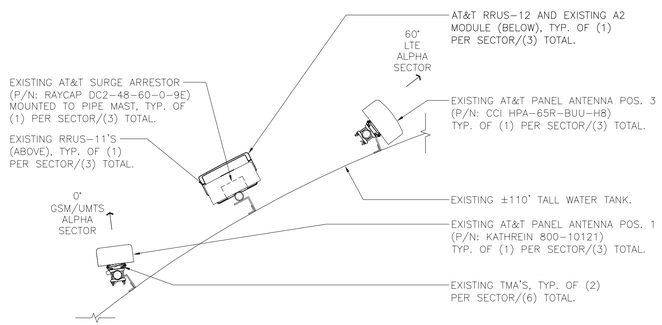
PLANS AND ELEVATION

C-1

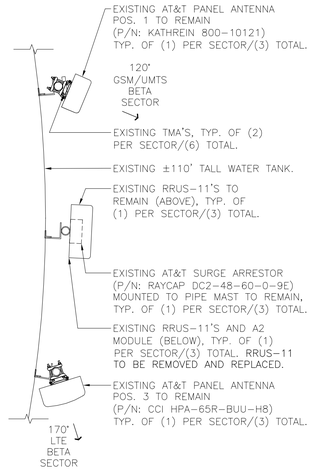
Sheet No. 3 of 5



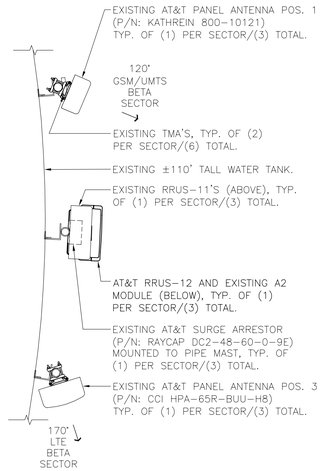
1 C-2 **EXISTING ANTENNA PLAN** (ALPHA SECTOR)
SCALE: 1/2" = 1'-0" NORTH



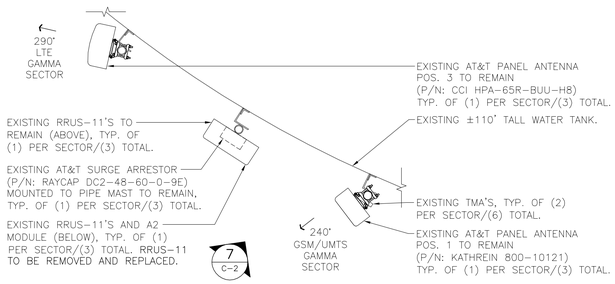
2 C-2 **PROPOSED ANTENNA PLAN** (ALPHA SECTOR)
SCALE: 1/2" = 1'-0" NORTH



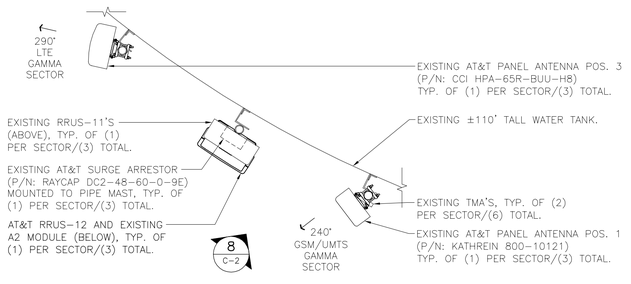
3 C-2 **EXISTING ANTENNA PLAN** (BETA SECTOR)
SCALE: 1/2" = 1'-0" NORTH



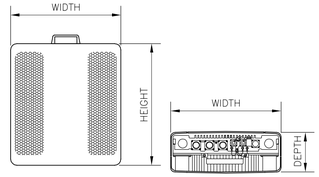
4 C-2 **PROPOSED ANTENNA PLAN** (BETA SECTOR)
SCALE: 1/2" = 1'-0" NORTH



5 C-2 **EXISTING ANTENNA PLAN** (GAMMA SECTOR)
SCALE: 1/2" = 1'-0" NORTH



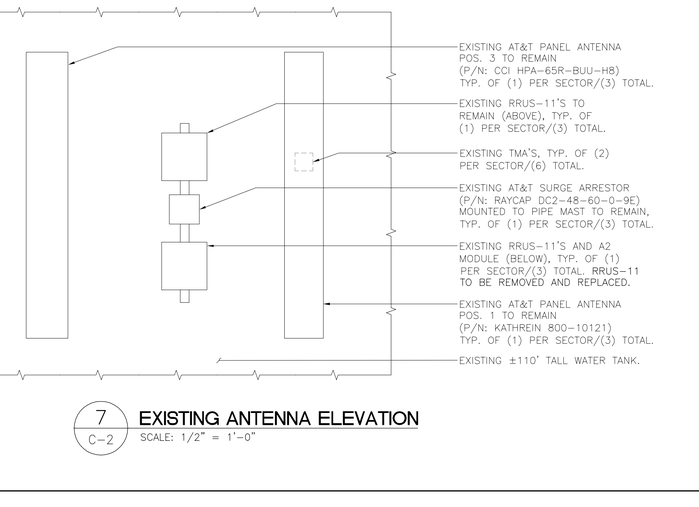
6 C-2 **PROPOSED ANTENNA PLAN** (GAMMA SECTOR)
SCALE: 1/2" = 1'-0" NORTH



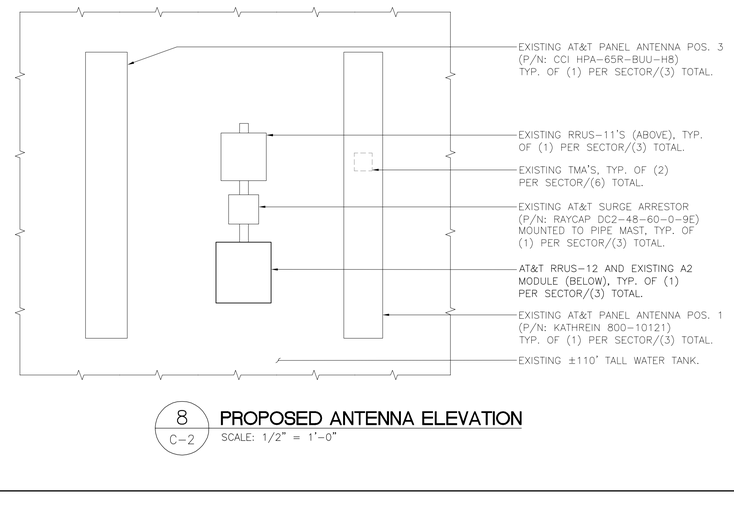
RRU (REMOTE RADIO UNIT)			
EQUIPMENT	DIMENSIONS	WEIGHT	CLEARANCES
MAKE: ERICSSON MODEL: RRUS 12	20.4"L x 18.5"W x 7.5"D	50 LBS.	ABOVE: 16" MIN. BELOW: 12" MIN. FRONT: 36" MIN.

NOTES:
1. CONTRACTOR TO COORDINATE FINAL EQUIPMENT MODEL SELECTION WITH AT&T CONSTRUCTION MANAGER PRIOR TO ORDERING.

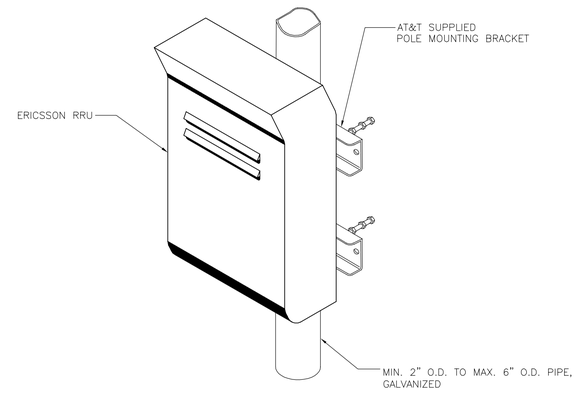
9 C-2 **ERICSSON RRUS 12 DETAIL**
SCALE: 1" = 1'-0"



7 C-2 **EXISTING ANTENNA ELEVATION**
SCALE: 1/2" = 1'-0"



8 C-2 **PROPOSED ANTENNA ELEVATION**
SCALE: 1/2" = 1'-0"



ISOMETRIC VIEW

NOTES:

1. AT&T SHALL SUPPLY RRU, AND RRU POLE-MOUNTING BRACKET. CONTRACTOR SHALL SUPPLY POLE/PIPE AND INSTALL ALL MOUNTING HARDWARE INCLUDING ERICSSON RRU POLE-MOUNTING BRACKET. CONTRACTOR SHALL INSTALLS RRU AND MAKES CABLE TERMINATIONS.
2. NO PAINTING OF THE RRU OR SOLAR SHIELD IS ALLOWED.

10 C-2 **TYPICAL RRUS MOUNTING DETAILS**
SCALE: NTS

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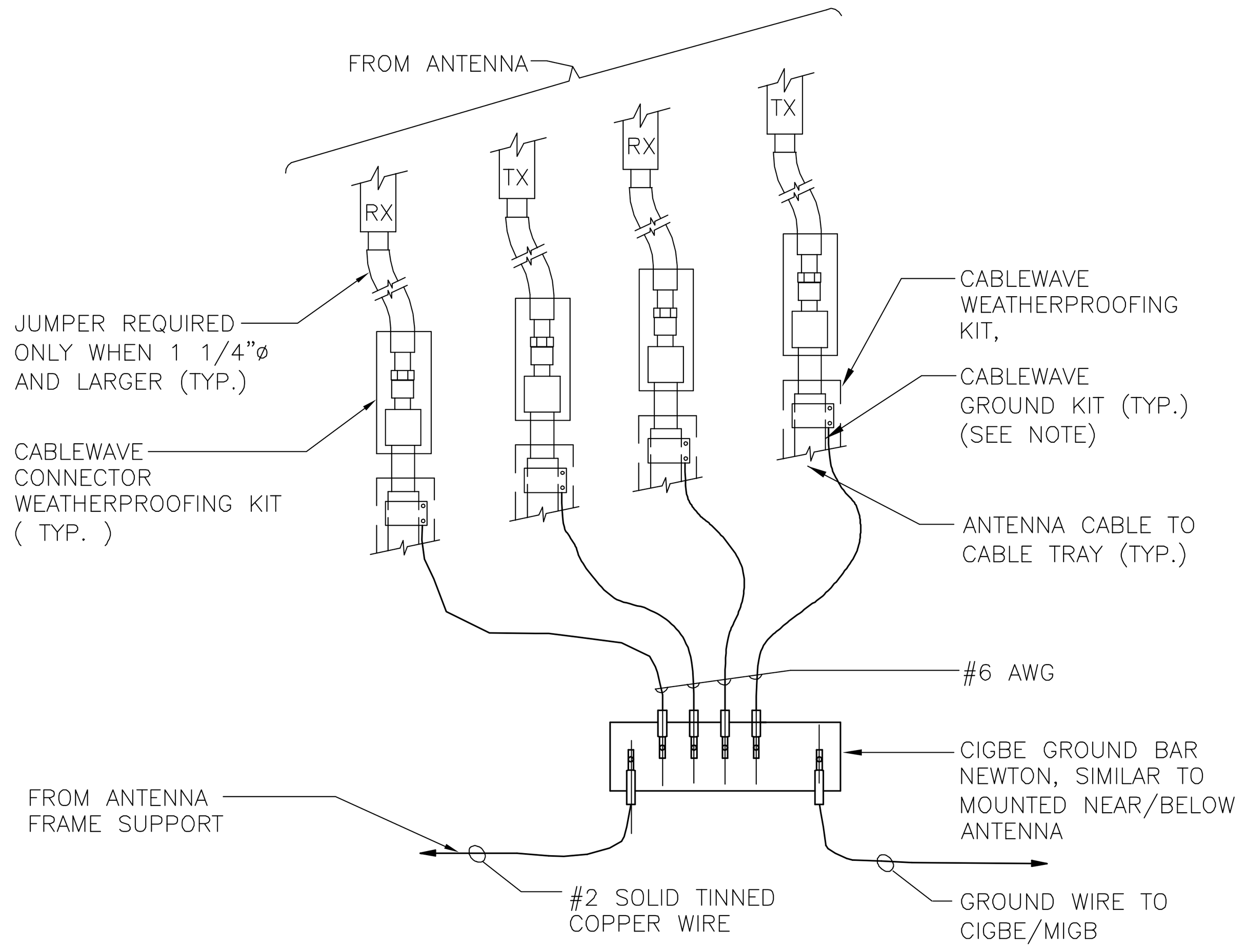
LTE BWE EQUIPMENT DETAILS

C-2
Sheet No. 4 of 5

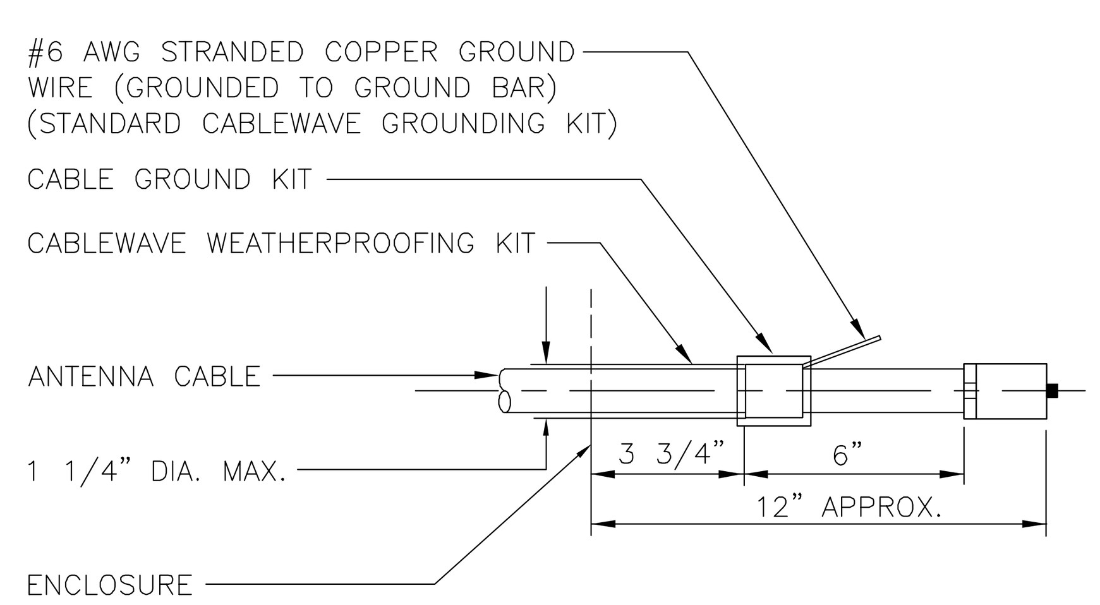


NOTE:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE

4 / E-1 — **CONNECTION OF GROUND WIRES TO GROUND BAR**

NOT TO SCALE

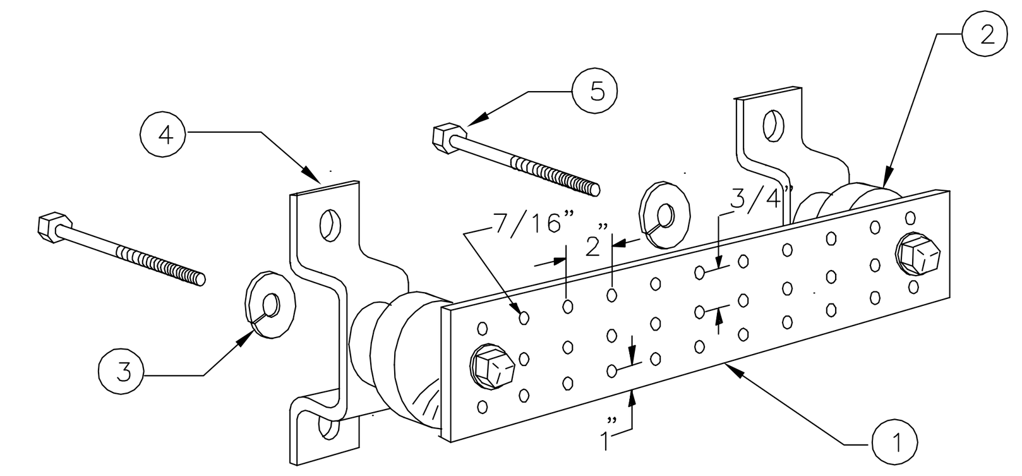


NOTE:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.

3 / E-1 — **ANTENNA CABLE GROUNDING DETAIL**

NOT TO SCALE

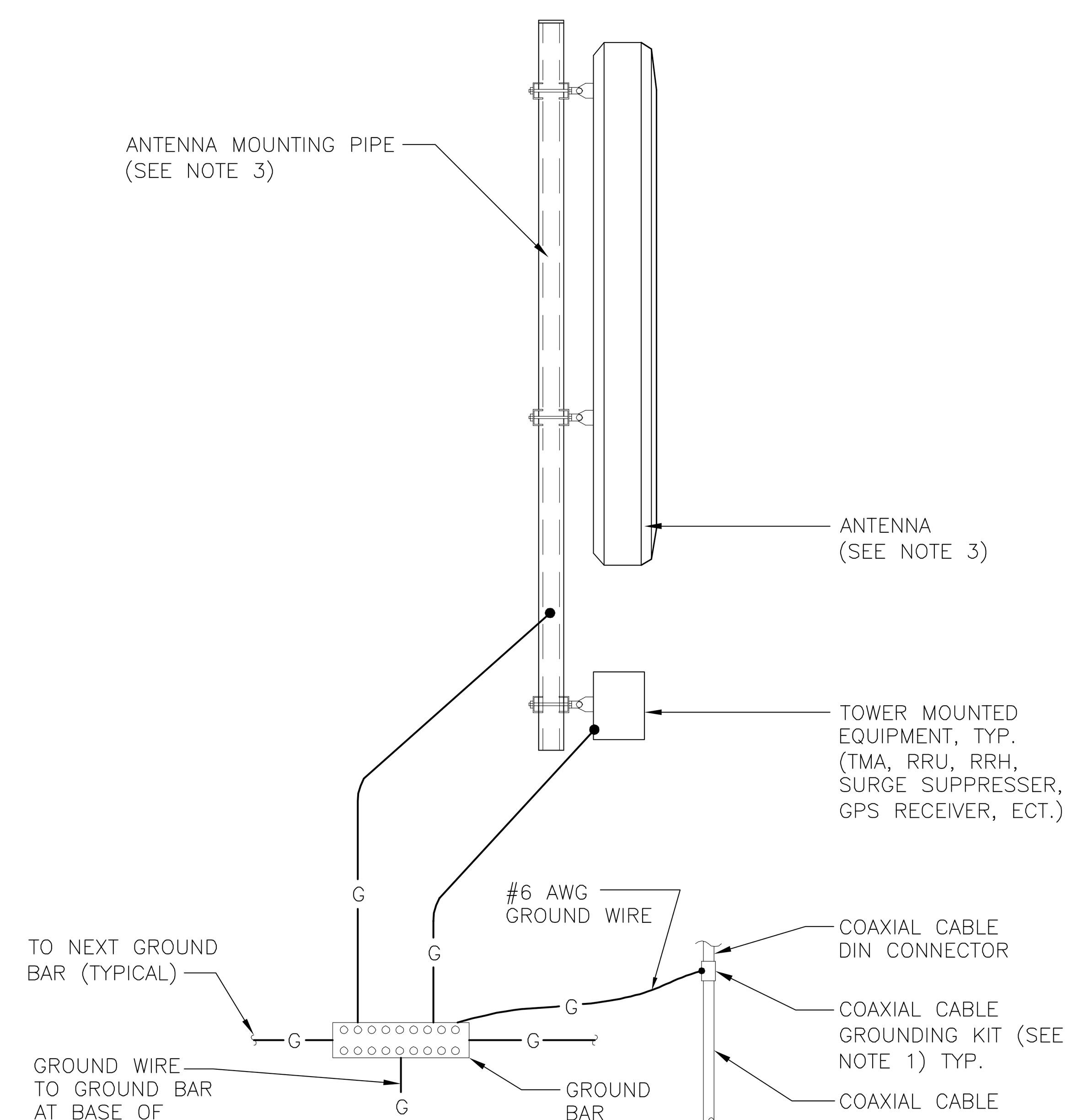


LEGEND

1. TINNED COPPER GROUND BAR, 1/4"x 4"x 20", NEWTON INSTRUMENT CO. HOLE CENTERS TO MATCH NEMA DOUBLE LUG .
2. INSULATORS, NEWTON INSTRUMENT CAT. NO. 2. 3061-4.
3. 3. 5/8" LOCK WASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8.
4. WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. 4. CAT NO. A-6056.
5. STAINLESS STEEL SECURITY SCREWS.

2 / E-1 — **GROUND BAR DETAIL**

NOT TO SCALE



NOTES:

1. BOND COAXIAL CABLE GROUND KITS TO EACH OWNER'S GROUND BAR ALONG ENTIRE COAX RUN FROM ANTENNA TO SHELTER.
2. BOND ALL EQUIPMENT TO GROUND PER NEC AND MANUFACTURERS SPECIFICATIONS.
3. DETAIL IS TYPICAL FOR ALL ANTENNA SECTORS, INCLUDING GPS ANTENNA.

1 / E-1 — **TYPICAL ANTENNA GROUNDING DETAIL**

NOT TO SCALE

ELECTRICAL NOTES

1. PRIOR TO START OF CONSTRUCTION CONTRACTOR SHALL COORDINATE WITH OWNER FOR ALL CONSTRUCTION STANDARDS AND SPECIFICATIONS, AND ALL MANUFACTURER DOCUMENTATION FOR ALL EQUIPMENT TO BE INSTALLED.
2. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH LOCAL BUILDING CODE, NATIONAL ELECTRIC CODE, OWNER AND MANUFACTURER'S SPECIFICATIONS.
3. CONNECT ALL NEW EQUIPMENT TO EXISTING TELCO AS REQUIRED BY MANUFACTURER.
4. MAINTAIN ALL CLEARANCES REQUIRED BY NEC AND EQUIPMENT MANUFACTURER.
5. PRIOR TO INSTALLATION CONTRACTOR SHALL MEASURE EXISTING ELECTRICAL LOAD AND VERIFY EXISTING AVAILABLE CAPACITY FOR PROPOSED INSTALLATION. IF INADEQUATE CAPACITY IS AVAILABLE, CONTRACTOR SHALL COORDINATE WITH LOCAL ELECTRIC UTILITY COMPANY TO UPGRADE EXISTING ELECTRIC SERVICE.
6. CONTRACTOR SHALL INSPECT EXISTING GROUNDING AND LIGHTNING PROTECTION SYSTEM AND ENSURE THAT IT IS IN COMPLIANCE WITH NEC, AND SITE OWNER'S SPECIFICATIONS. THE RESULTS OF THIS INSPECTION SHALL BE PRESENTED TO OWNERS REPRESENTATIVE, AND ANY DEFICIENCIES SHALL BE CORRECTED.
7. ALL TRANSMISSION TOWER SITES CONTAIN AN EXTENSIVE BURIED GROUNDING SYSTEM. ALL GROUNDING WORK MUST BE COORDINATED WITH, AND APPROVED BY, THE TOWER OWNER'S SITE REPRESENTATIVE. ALL OF THE TOWER OWNER'S SPECIFICATIONS MUST BE STRICTLY FOLLOWED.
8. PROVIDE AND INSTALL GROUND KITS FOR ALL NEW COAXIAL CABLES AND BOND TO EXISTING OWNERS GROUNDING SYSTEM PER OWNERS SPECIFICATIONS AND NEC.
9. ALL CONDUCTORS SHALL BE TYPE THWN (INT. APPLICATION) AND XHHW (EXT. APPLICATION), 75 DEGREE C, 600 VOLT INSULATION, SOFT ANNEALED STRANDED COPPER. #10 AWG AND SMALLER SHALL BE SPLICED USING ACCEPTABLE SOLDERLESS PRESSURE CONNECTORS. #8 AWG AND LARGER SHALL BE SPLICED USING COMPRESSION SPLIT-BOLT TYPE CONNECTORS, #12 AWG SHALL BE THE MINIMUM SIZE CONDUCTOR FOR LINE VOLTAGE BRANCH CIRCUITS. REFER TO PANEL SCHEDULE FOR BRANCH CIRCUIT CONDUCTOR SIZE(S). CONDUCTORS SHALL BE COLOR CODED FOR CONSISTENT PHASE IDENTIFICATION.
10. MINIMUM BENDING RADIUS FOR CONDUCTORS SHALL BE 12 TIMES THE LARGEST DIAMETER OF BRANCH CIRCUIT CONDUCTOR.
11. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE MADE IN STRICT ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES AND REGULATIONS WHICH MAY APPLY AND NOTHING IN THE DRAWINGS OR SPECIFICATIONS SHALL BE INTERPRETED AS AN INFRINGEMENT OF SUCH CODES OR REGULATIONS.
12. THE ELECTRICAL CONTRACTOR IS TO BE RESPONSIBLE FOR THE COMPLETE INSTALLATION AND COORDINATION OF THE ENTIRE ELECTRICAL SERVICE. ALL ACTIVITIES TO BE COORDINATED THROUGH OWNER'S REPRESENTATIVE, DESIGN ENGINEER AND OTHER AUTHORITIES HAVING JURISDICTION OF TRADES.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND PAY ALL FEES AS MAY BE REQUIRED FOR THE ELECTRICAL WORK AND FOR SCHEDULING OF ALL INSPECTIONS AS MAY BE REQUIRED BY THE LOCAL AUTHORITY.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE SITE AND/OR BUILDING OWNER FOR NEW AND/OR DEMOLITION WORK INVOLVED.
15. THE CONTRACTOR SHALL GUARANTEE ALL NEW WORK FOR A PERIOD OF ONE YEAR FROM THE ACCEPTANCE DATE BY THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING WARRANTIES FROM ALL EQUIPMENT MANUFACTURERS FOR SUBMISSION TO THE OWNER.
16. DRAWINGS INDICATE GENERAL ARRANGEMENT OF WORK INCLUDED IN CONTRACT. CONTRACTOR SHALL WITHOUT EXTRA CHARGE, MAKE MODIFICATIONS TO THE LAYOUT OF THE WORK TO PREVENT CONFLICT WITH WORK OF OTHER TRADES AND FOR THE PROPER INSTALLATION OF WORK. CHECK ALL DRAWINGS AND VISIT JOB SITE TO VERIFY SPACE AND TYPE OF EXISTING CONDITIONS IN WHICH WORK WILL BE DONE, PRIOR TO SUBMITTAL OF BID.
17. ALL NON-CURRENT CARRYING PARTS OF THE ELECTRICAL AND TELEPHONE CONDUIT SYSTEMS SHALL BE MECHANICALLY AND ELECTRICALLY CONNECTED TO PROVIDE AN INDEPENDENT RETURN PATH TO THE EQUIPMENT GROUNDING SOURCES.
18. GROUNDING SYSTEM WILL BE IN ACCORDANCE WITH THE LATEST ACCEPTABLE EDITION OF THE NATIONAL ELECTRICAL CODE AND REQUIREMENTS PER LOCAL INSPECTOR HAVING JURISDICTION.
19. EACH EQUIPMENT GROUND CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH THE N.E.C. ARTICLE 250-122. (MIN. #12 AWG).
20. CONTRACTOR SHALL PROVIDE A CELLULAR GROUNDING SYSTEM WITH THE MAXIMUM AC RESISTANCE TO GROUND OF 5 OHM BETWEEN ANY POINT ON THE GROUNDING SYSTEM AS MEASURED BY 3-POINT GROUNDING TEST. (REFER TO SECTION 16960).

TESTS BY INDEPENDENT ELECTRICAL TESTING FIRM

A. CONTRACTOR SHALL RETAIN THE SERVICES OF A LOCAL INDEPENDENT ELECTRICAL TESTING FIRM (WITH MINIMUM 5 YEARS COMMERCIAL EXPERIENCE IN THE ELECTRICAL TESTING INDUSTRY) AS SPECIFIED BY OWNER TO PERFORM:

   TEST 1: RESISTANCE TO GROUND TEST ON THE CELLULAR GROUNDING SYSTEM.

   THE TESTING FIRM SHALL INCLUDE THE FOLLOWING INFORMATION WITH THE REPORT:

   1. TESTING PROCEDURE INCLUDING THE MAKE AND MODEL OF TEST EQUIPMENT.
   2. CERTIFICATION OF TESTING EQUIPMENT CALIBRATION WITHIN SIX (6) MONTHS OF DATE OF TESTING. INCLUDE CERTIFICATION LAB ADDRESS AND TELEPHONE NUMBER.
   3. GRAPHICAL DESCRIPTION OF TESTING METHOD ACTUALLY IMPLEMENTED.

B. TESTING SHALL BE PERFORMED IN THE PRESENCE AND TO THE SATISFACTION OF OWNERS CONSTRUCTION REPRESENTATIVE. TESTING DATA SHALL BE INITIALED AND DATED BY THE CONSTRUCTION AND INCLUDED WITH THE WRITTEN REPORT/ANALYSIS.

C. THE CONTRACTOR SHALL FORWARD SIX (6) COPIES OF THE INDEPENDENT ELECTRICAL TESTING FIRM REPORT/ANALYSIS TO ENGINEER A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO THE JOB TURNOVER.

D. CONTRACTOR TO PROVIDE A MINIMUM OF ONE (1) WEEK NOTICE TO OWNER AND ENGINEER FOR ALL TESTS REQUIRING WITNESSING.

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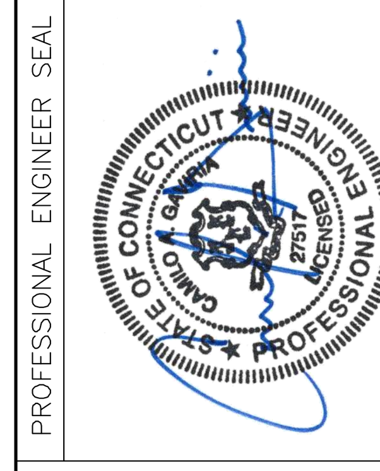

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SCALE: AS NOTED
JOB NO. 16071.78

ELECTRICAL DETAILS AND NOTES

E-1

Sheet No. 5 of 5

CENTEK engineering

Centered on Solutions℠

Structural Analysis Report

110-ft Existing Water Tank

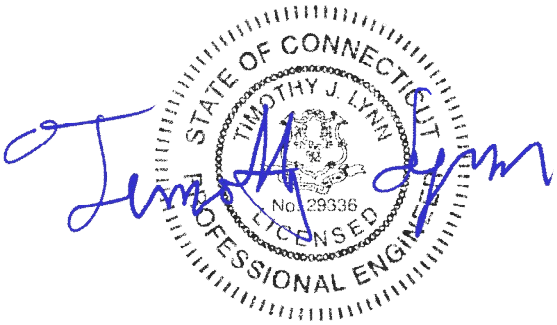
Proposed AT&T Mobility
Antenna Upgrade

AT&T Site Ref: CT5192

104 Prospect Hill Rd.
East Windsor, CT 06088

Centek Project No. 16071.78

Date: December 21, 2016



Prepared for:

AT&T Mobility
500 Enterprise Drive, Suite 3A
Rocky Hill, CT 06067

Table of Contents

SECTION 1 – REPORT

- INTRODUCTION
- ANTENNA AND APPURTENANCE SUMMARY
- PRIMARY ASSUMPTIONS USED IN THE ANALYSIS
- ANALYSIS
- STRUCTURE LOADING
- RESULTS
- CONCLUSION

SECTION 2 – CONDITIONS & SOFTWARE

- STANDARD ENGINEERING CONDITIONS
- GENERAL DESCRIPTION OF STRUCTURAL ANALYSIS PROGRAM

SECTION 3 – CALCULATIONS

- SUMMARY: ANTENNA MOUNT SUPPORT
- SUMMARY: CD STUD CAPACITY
- WIND LOAD ANALYSIS
- RISA3D OUTPUT: MEMBER FRAMING
- RISA3D OUTPUT: DEAD LOAD FORCE
- RISA3D OUTPUT: WIND LOAD FORCE (X-DIRECTION)
- RISA3D OUTPUT: WIND LOAD FORCE (Z-DIRECTION)
- RISA3D OUTPUT REPORT
- RISA3D OUTPUT: REACTION FORCES

SECTION 4 – REFERENCE MATERIALS

- AT&T RF DATA SHEET
- AT&T EQUIPMENT CUT SHEETS

Introduction

The purpose of this report is to summarize the results of the non-linear, P-Δ structural analysis of the antenna upgrade proposed by AT&T on the existing water tank located in East Windsor, Connecticut.

The host structure is a 110-ft tall, 66-ft diameter steel water tank with AT&T's existing/proposed equipment mounted as part of three (3) sectors at center line elevation of 88 feet above grade level. The analysis of the proposed upgrade is limited to the local supports of the antennas/appurtenances.

Antenna and appurtenance information was taken from a RF data sheet dated 08/25/2016 provided by AT&T and visual verification from grade by Centek personnel on September 2, 2016.

Antenna and Appurtenance Summary

The existing and proposed loads considered in the analysis consist of the following:

- AT&T (Existing):
  Antennas: Three (3) Kathrein 800-10121 panel antennas, three (3) CCI HPA-65R-BUU-H8 panel antennas, six (6) Powerwave LGP21401 tower mounted amplifiers, three (3) Ericsson RRUS-11 remote radio units, three (3) Ericsson RRUS-11 + RRUS-A2 remote radio units and three (3) Raycap DC2-48-60-0-9E surge arrestors mounted to the face of water tank with a RAD center elevation of ±88-ft above grade level (AGL).
  Cables: Nine (9) 1-5/8"Ø coax antenna cable and one 2"Ø flexible conduit running within a cable tray on the exterior of the existing water tank.

- *AT&T (To be Removed):*
  Antennas: Three (3) Ericsson RRUS-11 remote radio units mounted to the face of water tank with a RAD center elevation of ±88-ft above grade level (AGL).
  Cables: Three (3) 1-5/8"Ø coax antenna cable running within a cable tray on the exterior of the existing water tank.

- **AT&T (Proposed):**
  Antennas: Three (3) Ericsson RRUS-12 remote radio units mounted to the face of water tank with a RAD center elevation of ±88-ft above grade level (AGL).

Primary Assumptions Used in the Analysis

- The structure's theoretical capacity did not including any assessment of the condition of the existing structure.
- The antenna supports carry the horizontal and vertical loads due to the weight of antennas, ice load and wind.
- Antenna supports and existing structure have been properly installed and maintained.
- Existing structure is in plumb condition.
- Loading for antennas and mounts as listed in this report.
- All bolts are appropriately tightened providing the necessary connection continuity.
- All welds are fabricated with ER-70S-6 electrodes.
- All members are assumed to be as specified in the original tower design documents.
- All members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
- All member protective coatings are in good condition.
- All tower members were properly designed, detailed, fabricated, installed and have been properly maintained since erection.
- Any deviation from the analyzed antenna loading will require a new analysis for verification of structural adequacy.

Analysis

The existing water tank antenna support mounts were analyzed using a comprehensive computer program titled Risa3D. The program analyzes the mounts, considering the worst case loading condition. The antenna support mounts were considered as loaded by concentric forces along the pipe masts and the model assumes that members are subjected to bending, axial, and shear forces.

Structure Loading

Loading was determined per the requirements of the 2012 International Building Code as modified by the 2016 CT State Building Code and ASCE 7-10 “Minimum Design Loads for Buildings and Other Structures”.

Ultimate Wind Speed, V_{ult}:	Windsor Locks; V_{ult} = 125 mph	*[Appendix N of the 2016 CSBC]*

Results

Frame stresses were calculated utilizing the structural analysis software RISA3D

- Calculated stresses were found to be within allowable limits.

Component	Stress Ratio (percentage of capacity)	Result
2" Dia. Schedule 40 Pipe (Vertical Member)	12.8%	**PASS**
Connection Plate to Tank	24.9%	**PASS**

Conclusion

This analysis shows that the subject antenna mounts **are adequate** to support the proposed modified antenna configuration.

The analysis is based, in part, on the information provided to this office by AT&T. If the existing conditions are different than the information in this report, Centek Engineering, Inc. must be contacted for resolution of any potential issues.

Please feel free to call with any questions or comments.

Respectfully Submitted by:

Timothy J. Lynn, PE
Structural Engineer

STATE OF CONNECTICUT
TIMOTHY J. LYNN
No. 29336
LICENSED
PROFESSIONAL ENGINEER

Prepared by:

Luigi V. Peronace
Structural Engineer

Standard Conditions for Furnishing of Professional Engineering Services on Existing Structures

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessarily limited to:

- Information supplied by the client regarding the structure itself, its foundations, the soil conditions, the antenna and feed line loading on the structure and its components, or other relevant information.
- Information from the field and/or drawings in the possession of Centek Engineering, Inc. or generated by field inspections or measurements of the structure.
- It is the responsibility of the client to ensure that the information provided to Centek Engineering, Inc. and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and are in an un-corroded condition and have not deteriorated. It is therefore assumed that its capacity has not significantly changed from the “as new” condition.
- All services will be performed to the codes specified by the client, and we do not imply to meet any other codes or requirements unless explicitly agreed in writing. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement. In the absence of information to the contrary, all work will be performed in accordance with the latest revision of ANSI/ASCE10 & ANSI/EIA-222
- All services performed, results obtained, and recommendations made are in accordance with generally accepted engineering principles and practices. Centek Engineering, Inc. is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.

GENERAL DESCRIPTION OF STRUCTURAL ANALYSIS PROGRAM ~ RISA-3D

- RISA-3D Structural Analysis Program is an integrated structural analysis and design software package for buildings, bridges, tower structures, etc.

Modeling Features:

- Comprehensive CAD-like graphic drawing/editing capabilities that let you draw, modify and load elements as well as snap, move, rotate, copy, mirror, scale, split, merge, mesh, delete, apply, etc.
- Versatile drawing grids (orthogonal, radial, skewed)
- Universal snaps and object snaps allow drawing without grids
- Versatile general truss generator
- Powerful graphic select/unselect tools including box, line, polygon, invert, criteria, spreadsheet selection, with locking
- Saved selections to quickly recall desired selections
- Modification tools that modify single items or entire selections
- Real spreadsheets with cut, paste, fill, math, sort, find, etc.
- Dynamic synchronization between spreadsheets and views so you can edit or view any data in the plotted views or in the spreadsheets
- Simultaneous view of multiple spreadsheets
- Constant in-stream error checking and data validation
- Unlimited undo/redo capability
- Generation templates for grids, disks, cylinders, cones, arcs, trusses, tanks, hydrostatic loads, etc.
- Support for all units systems & conversions at any time
- Automatic interaction with RISASection libraries
- Import DXF, RISA-2D, STAAD and ProSteel 3D files
- Export DXF, SDNF and ProSteel 3D files

Analysis Features:

- Static analysis and P-Delta effects
- Multiple simultaneous dynamic and response spectra analysis using Gupta, CQC or SRSS mode combinations
- Automatic inclusion of mass offset (5% or user defined) for dynamic analysis
- Physical member modeling that does not require members to be broken up at intermediate joints
- State of the art 3 or 4 node plate/shell elements
- High-end automatic mesh generation — draw a polygon with any number of sides to create a mesh of well-formed quadrilateral (NOT triangular) elements.
- Accurate analysis of tapered wide flanges - web, top and bottom flanges may all taper independently
- Automatic rigid diaphragm modeling
- Area loads with one-way or two-way distributions
- Multiple simultaneous moving loads with standard AASHTO loads and custom moving loads for bridges, cranes, etc.
- Torsional warping calculations for stiffness, stress and design
- Automatic Top of Member offset modeling
- Member end releases & rigid end offsets
- Joint master-slave assignments
- Joints detachable from diaphragms
- Enforced joint displacements

- 1-Way members, for tension only bracing, slipping, etc.
- 1-Way springs, for modeling soils and other effects
- Euler members that take compression up to their buckling load, then turn off.
- Stress calculations on any arbitrary shape
- Inactive members, plates, and diaphragms allows you to quickly remove parts of structures from consideration
- Story drift calculations provide relative drift and ratio to height
- Automatic self-weight calculations for members and plates
- Automatic subgrade soil spring generator

Graphics Features:

- Unlimited simultaneous model view windows
- Extraordinary “true to scale” rendering, even when drawing
- High-speed redraw algorithm for instant refreshing
- Dynamic scrolling stops right where you want
- Plot & print virtually everything with color coding & labeling
- Rotate, zoom, pan, scroll and snap views
- Saved views to quickly restore frequent or desired views
- Full render or wire-frame animations of deflected model and dynamic mode shapes with frame and speed control
- Animation of moving loads with speed control
- High quality customizable graphics printing

Design Features:

- Designs concrete, hot rolled steel, cold formed steel and wood
- ACI 1999/2002, BS 8110-97, CSA A23.3-94, IS456:2000,EC 2-1992 with consistent bar sizes through adjacent spans
- Exact integration of concrete stress distributions using parabolic or rectangular stress blocks
- Concrete beam detailing (Rectangular, T and L)
- Concrete column interaction diagrams
- Steel Design Codes: AISC ASD 9th, LRFD 2nd & 3rd, HSS Specification, CAN/CSA-S16.1-1994 & 2004, BS 5950-1-2000, IS 800-1984, Euro 3-1993 including local shape databases
- AISI 1999 cold formed steel design
- NDS 1991/1997/2001 wood design, including Structural Composite Lumber, multi-ply, full sawn
- Automatic spectra generation for UBC 1997, IBC 2000/2003
- Generation of load combinations: ASCE, UBC, IBC, BOCA, SBC, ACI
- Unbraced lengths for physical members that recognize connecting elements and full lengths of members
- Automatic approximation of K factors
- Tapered wide flange design with either ASD or LRFD codes
- Optimization of member sizes for all materials and all design codes, controlled by standard or user-defined lists of available sizes and criteria such as maximum depths
- Automatic calculation of custom shape properties
- Steel Shapes: AISC, HSS, CAN, ARBED, British, Euro, Indian, Chilean
- Light Gage Shapes: AISI, SSMA, Dale / Incor, Dietrich, Marino\WARE
- Wood Shapes: Complete NDS species/grade database
- Full seamless integration with RISAFoot (Ver 2 or better) for advanced footing design and detailing
- Plate force summation tool

Results Features:

- Graphic presentation of color-coded results and plotted designs
- Color contours of plate stresses and forces with quadratic smoothing, the contours may also be animated
- Spreadsheet results with sorting and filtering of: reactions, member & joint deflections, beam & plate forces/stresses, optimized sizes, code designs, concrete reinforcing, material takeoffs, frequencies and mode shapes
- Standard and user-defined reports
- Graphic member detail reports with force/stress/deflection diagrams and detailed design calculations and expanded diagrams that display magnitudes at any dialed location
- Saved solutions quickly restore analysis and design results.

Section 3.0
STRUCTURAL ELEMENT ANALYSIS

Summary: Antenna Mount Support

The following structural analysis was performed based on field observations and existing antenna mount documentation. Earlier structural documentation denotes the vertical mounting pipe as a 3" diameter schedule 40 pipe. A conservative pipe diameter of 2" was assumed based on Centek's on-site observations. Additionally, all equipment dead loading was based on a worst-case condition for the equipment being installed.

Summary: CD Stud Capacity

Stud weld connections to the existing tank were reviewed for their capability to resist loading transferred from the antenna mount support framing to the existing water tank. Configuration and size was based on existing documentation and on-site observations. Industry standards were referenced for stud capacities and can be found attached for reference.

WIND LOADING ANALYSIS - Main Wind-Force Resisting System

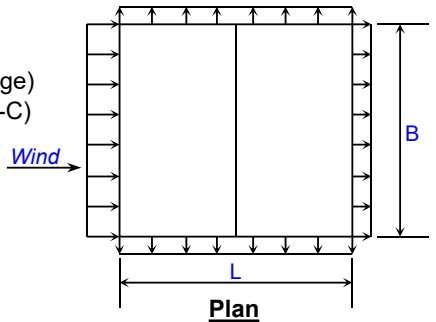
Per ASCE 7-10 Code for Enclosed or Partially Enclosed Buildings

Using Method 2: Analytical Procedure (Section 27) for Buildings of Any Height

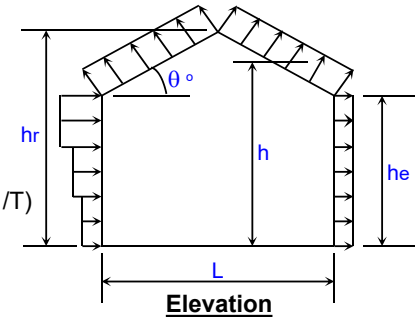
Job Name:	Windsor Locks North	Subject:	Mount Analysis		
Job Number:	CT5192 (16071.78)	Originator:	LVP	Checker:	TJL

Input Data:

Wind Direction =	Normal	(Normal or Parallel to building ridge)
Wind Speed, V =	125	mph (Wind Map, Figure 26.5-1A-C)
Bldg. Classification =	II	(Table 1.4-1 Risk Cat.)
Exposure Category =	B	(Sect. 26.7)
Ridge Height, hr =	110.00	ft. (hr >= he)
Eave Height, he =	110.00	ft. (he <= hr)
Building Width =	66.00	ft. (Normal to Building Ridge)
Building Length =	66.00	ft. (Parallel to Building Ridge)
Roof Type =	Gable	(Gable or Monoslope)
Topo. Factor, Kzt =	1.00	(Sect. 26.8 & Table 26.8-1)
Direct. Factor, Kd =	0.85	(Table 26.6-1)
Enclosed? (Y/N)	Y	(Sect. 6.2 & Figure 6-5)
Hurricane Region?	Y	
Damping Ratio, β =	0.020	(Suggested Range = 0.010-0.070)
Period Coef., Ct =	0.0350	(Suggested Range = 0.020-0.035)
		(Assume: T = Ct*h^(3/4) , and f = 1/T)



Plan



Elevation

Resulting Parameters and Coefficients:

L = 66 ft.
B = 66 ft.

Roof Angle, θ =	0.00		deg.	
Mean Roof Ht., h =	110.00		ft. (h = he, for roof angle <=10 deg.)	
Windward Wall Cp =	0.80		(Fig. 27.4-1)	
Leeward Wall Cp =	-0.50		(Fig. 27.4-1)	
Side Walls Cp =	-0.70		(Fig. 27.4-1)	
Roof Cp (zone #1) =	-1.04	-0.18	(Fig. 27.4-1)	(zone #1 for 0 to h/2)
Roof Cp (zone #2) =	-0.70	-0.18	(Fig. 27.4-1)	(zone #2 for h/2 to h)
Roof Cp (zone #3) =	N.A.	N.A.	(Fig. 27.4-1)	(zone #3 for h to 2*h)
Roof Cp (zone #4) =	N.A.	N.A.	(Fig. 27.4-1)	(zone #4 for > 2*h)
+GCpi Coef. =	0.18		(Table 26.11- (positive internal pressure)	
-GCpi Coef. =	-0.18		(Table 26.11- (negative internal pressure)	

If z <= 15 then: Kz = 2.01*(15/zg)^(2/α) , If z > 15 then: Kz = 2.01*(z/zg)^(2/α) (Table 27.3-1)

α =	7.00	zg =	1200 (Table 26.9-1)
Kh =	1.02	(Kh = Kz evaluated at z = h)	

Velocity Pressure: qz = 0.00256*Kz*Kzt*Kd*V^2*I (Eq. 27.3-1)

qh =	34.53 psf	qh = 0.00256*Kh*Kzt*Kd*V^2 (qz evaluated at z = h)	
Ratio h/L =	1.667	freq., f = 0.841 hz.	(f < 1, Flexible structure)
Gust Factor, G =	0.897	(Sect. 26.9)	

Design Net External Wind Pressures (Sect. 27.4):

p = qz*G*Cp - qi*(+/-GCpi) for windward wall (psf), where: qi =qh (Eq. 27.4-1)

p = qh*G*Cp - qi*(+/-GCpi) for leeward wall, sidewalls, and roof (psf), where: qi = qh (Eq. 27.4-1)

Normal to Ridge Wind Load Tabulation for MWFRS - Buildings of Any Height						
Surface	z (ft.)	Kz	qz (psf)	Cp	p = Net Design Press. (psf) (w/ +GCpi)	p = Net Design Press. (psf) (w/ -GCpi)
Windward Wall	0	0.57	19.54	0.80	7.81	20.24
	15.00	0.57	19.54	0.80	7.81	20.24
	20.00	0.62	21.21	0.80	9.01	21.44
	25.00	0.67	22.61	0.80	10.01	22.44
	30.00	0.70	23.82	0.80	10.88	23.31
	35.00	0.73	24.89	0.80	11.65	24.08
	40.00	0.76	25.86	0.80	12.35	24.78
	45.00	0.79	26.75	0.80	12.98	25.41
	50.00	0.81	27.56	0.80	13.57	26.00
	55.00	0.83	28.32	0.80	14.11	26.54
	60.00	0.85	29.04	0.80	14.63	27.06
	70.00	0.89	30.34	0.80	15.56	27.99
	80.00	0.93	31.52	0.80	16.41	28.84
	90.00	0.96	32.60	0.80	17.19	29.62
	100.00	0.99	33.60	0.80	17.90	30.33
For z = hr:	110.00	1.02	34.53	0.80	18.57	31.00
For z = he:	110.00	1.02	34.53	0.80	18.57	31.00
For z = h:	110.00	1.02	34.53	0.80	18.57	31.00
Leeward Wall	All	-	-	-0.50	-21.70	-9.27
Side Walls	All	-	-	-0.70	-27.90	-15.47
Roof (zone #1) cond. 1	-	-	-	-1.04	-38.43	-26.00
Roof (zone #1) cond. 2	-	-	-	-0.18	-11.79	0.64
Roof (zone #2) cond. 1	-	-	-	-0.70	-27.90	-15.47
Roof (zone #2) cond. 2	-	-	-	-0.18	-11.79	0.64

Notes: 1. (+) and (-) signs signify wind pressures acting toward & away from respective surfaces.
2. Per Code Section 27.4.7, the minimum wind load for MWFRS shall not be less than 16 psf.

4. Roof zone #1 is applied for horizontal distance of 0 to h/2 from windward edge.
5. Roof zone #2 is applied for horizontal distance of h/2 to h from windward edge.

Determination of Gust Effect Factor, G:

Is Building Flexible?	Yes	f < 1 Hz.

1: Simplified Method for Rigid Building

G =	N.A.	

Parameters Used in Both Item #2 and Item #3 Calculations (from Table 26.9-1):

α^ =	0.143	
b^ =	0.84	
α(bar) =	0.250	
b(bar) =	0.45	
c =	0.30	
l =	320	ft.
ε(bar) =	0.333	
z(min) =	30	ft.

Calculated Parameters Used in Both Rigid and/or Flexible Building Calculations:

z(bar) =	66.00	= 0.6*h , but not < z(min) , ft. Table 26.9-1
Iz(bar) =	0.267	= c*(33/z(bar))^(1/6) , Eq. 26.9-7
Lz(bar) =	403.17	= l*(z(bar)/33)^(ε(bar)) , Eq. 26.9-9
gq =	3.4	(3.4, per Sect. 26.9.4)
gv =	3.4	(3.4, per Sect. 26.9.4)
gr =	4.148	= (2*(LN(3600*f)))^(1/2)+0.577/(2*LN(3600*f))^(1/2) , Eq. 26.9-11
Q =	0.853	= (1/(1+0.63*((B+h)/Lz(bar))^0.63))^(1/2) , Eq. 26.9-8

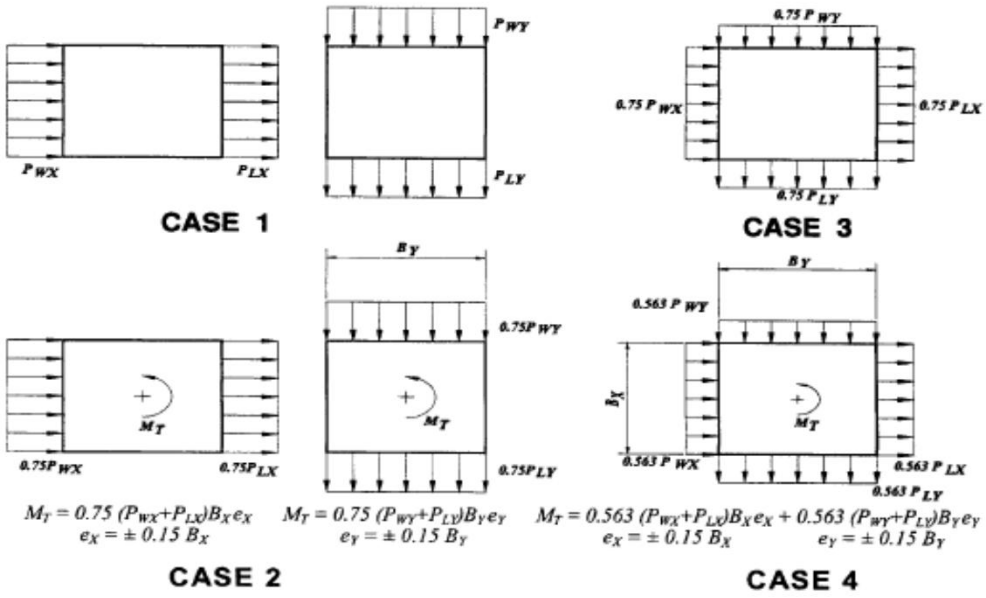
2: Calculation of G for Rigid Building

G =	N.A.	= 0.925*((1+1.7*gq*Iz(bar)*Q)/(1+1.7*gv*Iz(bar))) , Eq. 26.9-6

3: Calculation of Gf for Flexible Building

β =	0.020	Damping Ratio
Ct =	0.035	Period Coefficient
T =	1.189	= Ct*h^(3/4) , sec. (Approximate fundamental period)
f =	0.841	= 1/T , Hz. (Natural Frequency)
V(fps) =	183.33	= V(mph)*(88/60) , ft./sec.
V(bar,zbar) =	98.11	= b(bar)*(z(bar)/33)^(α(bar))*V*(88/60) , ft./sec. , Eq. 26.9-16
N1 =	3.457	= f*Lz(bar)/(V(bar,zbar)) , Eq. 26.9-14
Rn =	0.064	= 7.47*N1/(1+10.3*N1)^(5/3) , Eq. 26.9-13
ηh =	4.338	= 4.6*f*h/(V(bar,zbar))
Rh =	0.204	= ($1/\eta$h)-1/(2*ηh^2)*(1-e^(-2*ηh)) for ηh>0, or = 1 for ηh=0 ,Eq. 26.9-15a, b
ηb =	2.603	= 4.6*f*B/(V(bar,zbar))
RB =	0.311	= ($1/\eta$b)-1/(2*ηb^2)*(1-e^(-2*ηb)) for ηb>0, or = 1 for ηb=0,Eq. 26.9-15a, b
ηd =	8.714	= 15.4*f*L/(V(bar,zbar))
RL =	0.108	= ($1/\eta$d)-1/(2*ηd^2)*(1-e^(-2*ηd)) for ηd>0, or = 1 for ηd=0 ,Eq. 26.9-15a, b
R =	0.343	= ((1/β)*Rn*Rh*RB*(0.53+0.47*RL))^(1/2) , Eq. 26.9-12
Gf =	0.897	= 0.925*(1+1.7*Iz(bar)*(gq^2*Q^2+gr^2*R^2)^(1/2))/(1+1.7*gv*Iz(bar)) , Eq. 26.9-10
Use: G =	0.897	

Figure 27.4-1 - Design Wind Load Cases of MWFRS for Buildings of All Heights



Case 1: Full design wind pressure acting on the projected area perpendicular to each principal axis of the structure, considered separately along each principal axis.

Case 2: Three quarters of the design wind pressure acting on the projected area perpendicular to each principal axis of the structure in conjunction with a torsional moment as shown, considered separately for each principal axis.

Case 3: Wind pressure as defined in Case 1, but considered to act simultaneously at 75% of the specified value.

Case 4: Wind pressure as defined in Case 2, but considered to act simultaneously at 75% of the specified value.

Notes: 1. Design wind pressures for windward (Pw) and leeward (PL) faces shall be determined in accordance with the provisions of Section 27.4.1 and 27.4.2 as applicable for buildings of all heights.

2. Above diagrams show plan views of building.

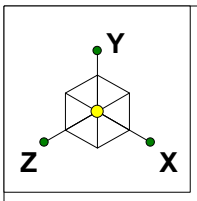
3. Notation:

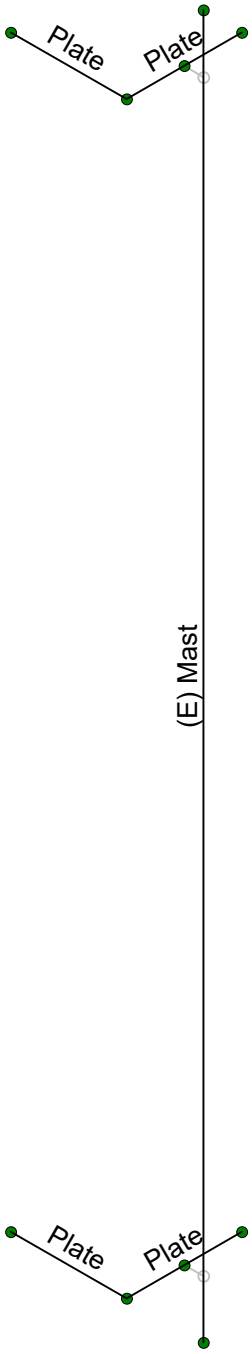
P_{wx}, P_{wy} = Windward face pressure acting in the X, Y principal axis, respectively.

P_{Lx}, P_{Ly} = Leeward face pressure acting in the X, Y principal axis, respectively.

e (e_x, e_y) = Eccentricity for the X, Y principal axis of the structure, respectively.

M_T = Torsional moment per unit height acting about a vertical axis of the building.





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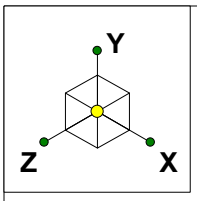
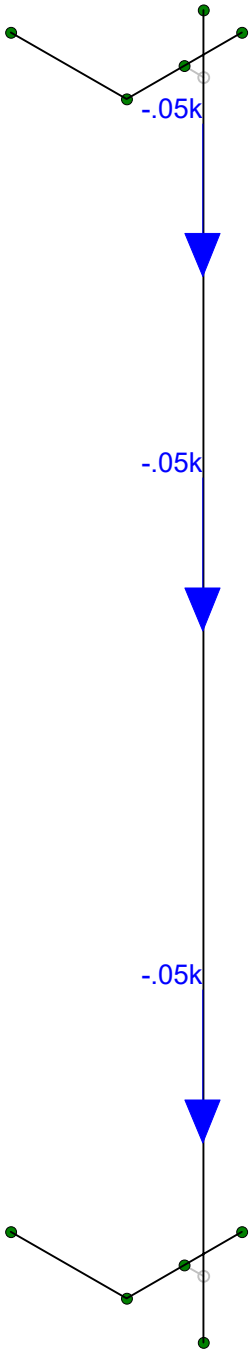
Centek Engineering Inc.		
LVP	Windsor Locks North CT5192	Dec 21, 2016 at 1:58 PM
16071.78	Member Framing	16071.78 CT5192 - Mount Analysis...





Loads: BLC 2, Dead: Equipment
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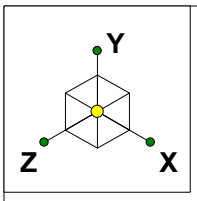
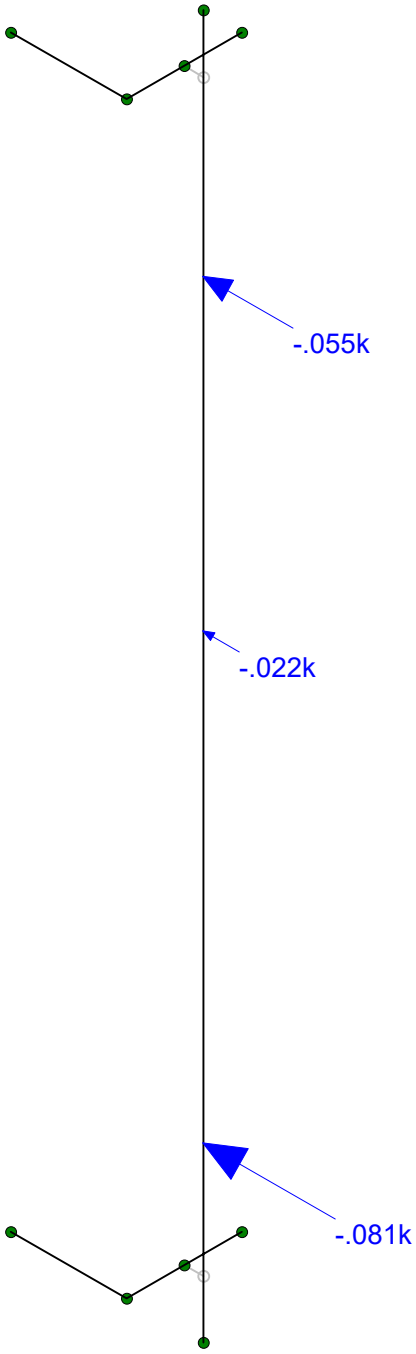
Centek Engineering Inc.		
LVP	Windsor Locks North CT5192	Dec 21, 2016 at 2:05 PM
16071.78	Equipment Dead Load	16071.78 CT5192 - Mount Analysis...





Loads: BLC 3, Wind X Dir (31 psf)
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Centek Engineering Inc.		
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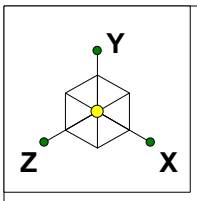
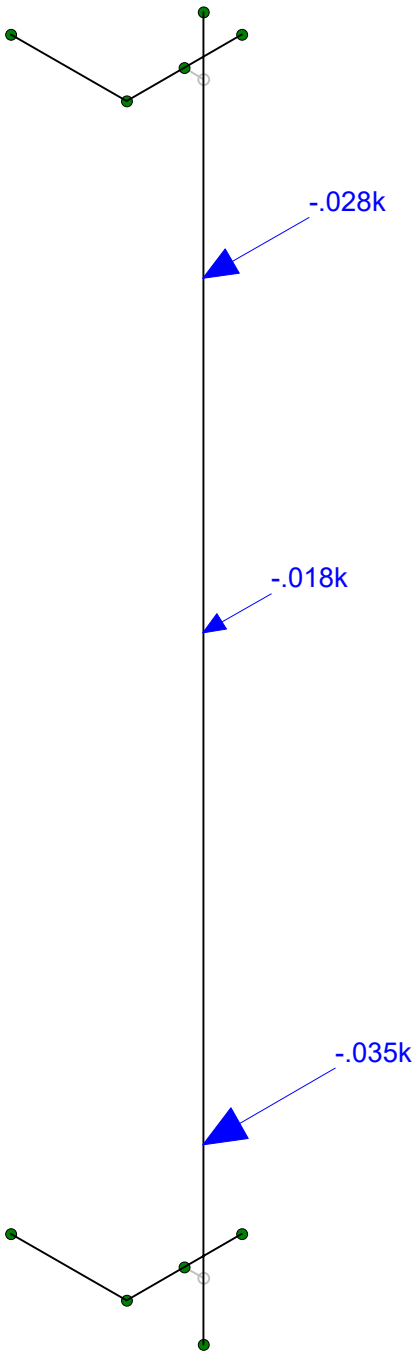
16071.78	Wind Load: X Direction	16071.78 CT5192 - Mount Analysis...





Loads: BLC 4, Wind Z Dir (31 psf)
Envelope Only Solution

Centek Engineering Inc.		
LVP	Windsor Locks North CT5192	Dec 21, 2016 at 2:15 PM
16071.78	Wind Load: Z Direction	16071.78 CT5192 - Mount Analysis...

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rules	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	(E) Mast	PIPE 1.5	Beam	Pipe	ASTM F1083	Typical	.749	.293	.293	.586
2	Plate	0.25 x 4 PL	Beam	None	A36 Gr.36	Typical	1	.005	1.333	.02

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1E..	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
2	ASTM F1083	29000	11154	.3	.65	.49	30	1.5	48	1.2

Hot Rolled Steel Design Parameters

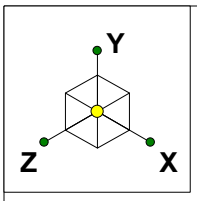
	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
1	M5	(E) Mast	5			Lbyy						Lateral
2	M2	Plate	.5			Lbyy						Lateral
3	M3	Plate	.5			Lbyy						Lateral
4	M4	Plate	.5			Lbyy						Lateral
5	M5A	Plate	.5			Lbyy						Lateral

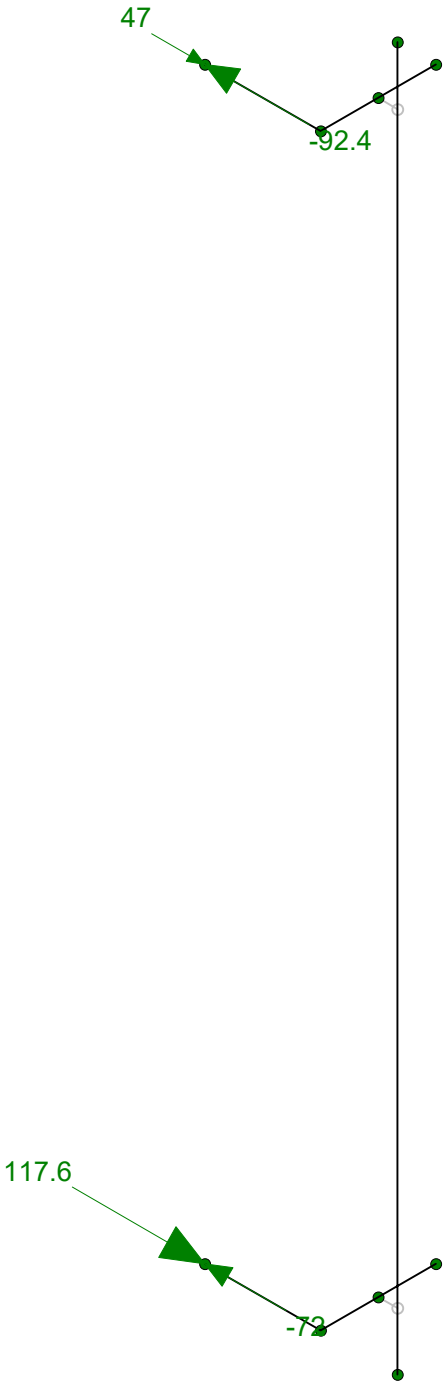
Envelope Joint Reactions

	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N2	max	.047	32	.124	22	.048	23	0	1	.021	33	0	1
2		min	-.092	22	.055	32	-.029	33	0	1	-.025	23	0	1
3	N1	max	.118	20	.123	20	.036	35	0	1	.028	21	0	1
4		min	-.072	34	.054	34	-.055	21	0	1	-.023	35	0	1
5	Totals:	max	.158	32	.237	1	.081	23						
6		min	-.158	22	.153	34	-.081	33						

Envelope AISC 14th(360-10): ASD Steel Code Checks

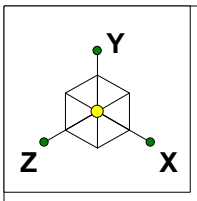
	Member	Shape	Code C...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	Pnc/om [k]	Pnt/om [k]	Mnyy/om ...	Mnzz/om ...	Cb	Eqn
1	M5	PIPE 1.5	.128	4.74	20	.039	4.323		20	8.986	13.455	.63	.63	1....	H1-1b
2	M2	0.25 x 4 PL	.232	.5	22	.014	0	y	22	14.982	21.557	.112	1.796	1....	H1-1b
3	M3	0.25 x 4 PL	.196	0	22	.716	0	y	22	14.982	21.557	.112	1.796	1....	H1-1b
4	M4	0.25 x 4 PL	.249	.5	20	.014	0	y	20	14.982	21.557	.112	1.796	1....	H1-1b
5	M5A	0.25 x 4 PL	.211	0	20	.730	0	y	20	14.982	21.557	.112	1.796	1....	H1-1b

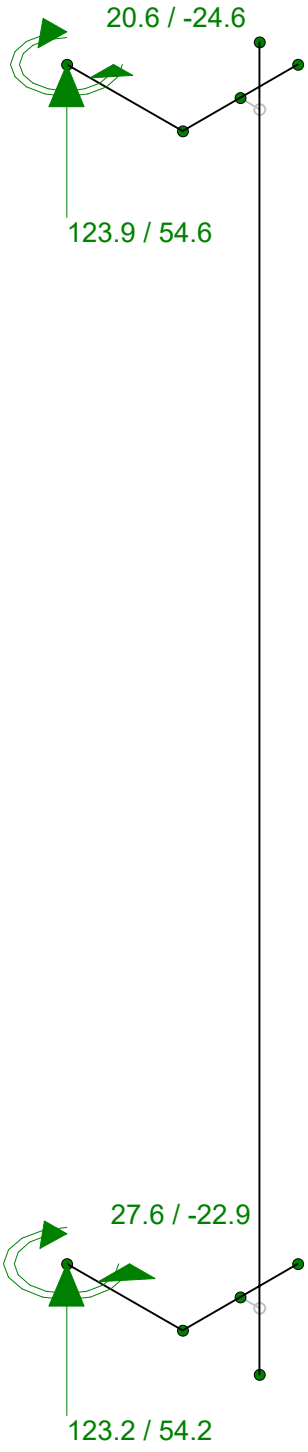




Envelope Only Solution
X-direction Reaction Units are lb and lb-ft (Enveloped)

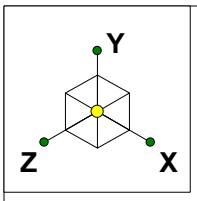
Centek Engineering Inc.		
LVP	Windsor Locks North CT5192	Dec 21, 2016 at 3:00 PM
16071.78	Maximum Forces: X Direction	16071.78 CT5192 - Mount Analysis...

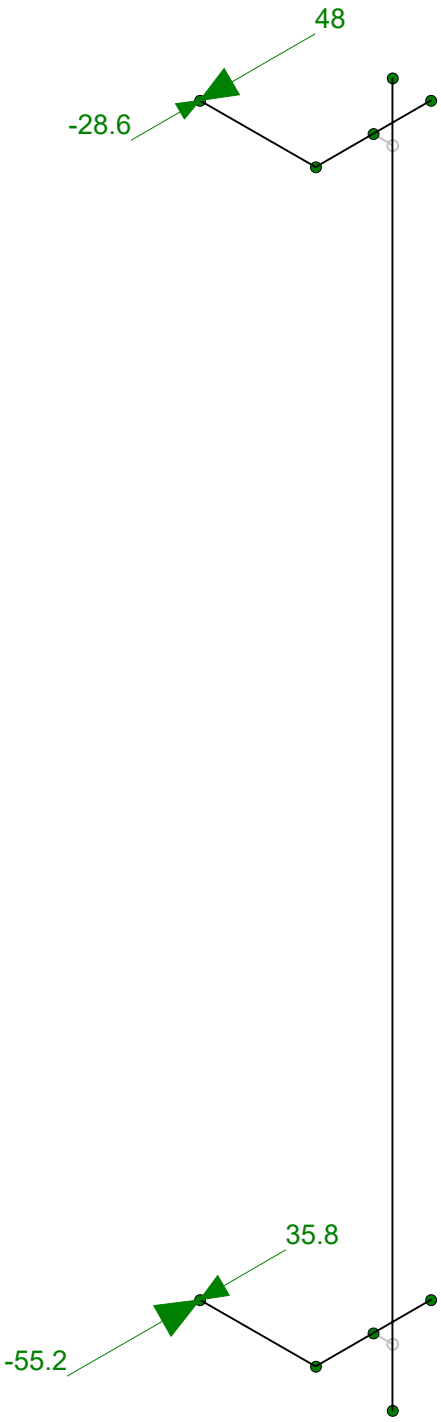




Envelope Only Solution
Y-moment Reaction Units are lb and lb-ft (Enveloped)

Centek Engineering Inc.		
LVP	Windsor Locks North CT5192	Dec 21, 2016 at 3:03 PM
16071.78	Maximum Forces: Y Direction	16071.78 CT5192 - Mount Analysis...





Envelope Only Solution
Z-direction Reaction Units are lb and lb-ft (Enveloped)

Centek Engineering Inc.		
LVP	Windsor Locks North CT5192	Dec 21, 2016 at 3:12 PM
16071.78	Maximum Forces: Z Direction	16071.78 CT5192 - Mount Analysis...

Section 1 - RFDS GENERAL INFORMATION

RFDS NAME:	CTV5192	DATE:	08/25/2016	RF DESIGN ENG:	Md Mateen	RF PERF ENG:		RFDS PROGRAM TYPE:	2017 LTE Multi Carrier
ISSUE:	1xBBU RRH ADD	Approved? (Y/N):	Yes	RF DESIGN PHONE:	8602586382	RF PERF PHONE:		RFDS TECHNOLOGY:	1xBBU RRH Add
REVISION:	Preliminary	RF MANAGER:	John Benedetto	RF DESIGN EMAIL:	mm093q@att.com	RF PERF EMAIL:		State:	Final
INITIATIVE /PROJECT:	LTE 1900 A3-A4 & E - BWE + RRUS 12.					TRIDENT:		Status:	RF Approval
						GSM FREQUENCY:	1900	RFDS ID:	1365218
						UMTS FREQUENCY:	850, 1900	RFDS Version:	1.00
						LTE FREQUENCY:	700, 1900	Created By:	mm093q
								Date Created:	8/25/2016 12:25:28 PM
								Date Updated:	9/2/2016 1:59:26 PM
								Updated By:	mm093q
						I-PLAN JOB # 1:	NER-RCTB-16-03058	IPLAN PRD GRP || SUB GRP #1:	LTE Multi Carrier || LTE BWE
						I-PLAN JOB # 2:		IPLAN PRD GRP || SUB GRP #2:	
						I-PLAN JOB # 3:		IPLAN PRD GRP || SUB GRP #3:	
						I-PLAN JOB # 4:		IPLAN PRD GRP || SUB GRP #4:	

Section 2 - LOCATION INFORMATION

USID:	4566	FA LOCATION CODE:	10071335	LOCATION NAME:	WINDSOR LOCKS NORTH	ORACLE PTN # 1:		PACE JOB # 1:	MRCTB019727
REGION:	NORTHEAST	MARKET CLUSTER:	NEW ENGLAND	MARKET:	CONNECTICUT	ORACLE PTN # 2:		PACE JOB # 2:	
ADDRESS:	104 PROSPECT HILL ROAD	CITY:	EAST WINDSOR	STATE:	CT	ORACLE PTN # 3:		PACE JOB # 3:	
ZIP CODE:	06088	COUNTY:	HARTFORD	MSA / RSA:		ORACLE PTN # 4:		PACE JOB # 4:	
LATITUDE (D-M-S):	41d 55m 36.09084s	LONGITUDE (D-M-S):	-72d -36m -16.91604s	LAT (DEC. DEG.):	41.9266919	SEARCH RING NAME:			
DIRECTIONS, ACCESS AND EQUIPMENT LOCATION:	I-91 NORTH TO EXIT 44,BEAR NORTH AT THE END OF THE EXIT,WHICH IS PROSPECT HILL ROAD.GO ABOUT 6/10TNTHS OF MILE,THE ACCESS ROAD IS ON THE RIGHT.THE ACCESS ROAD IS RIGHT AFTER YOU PASS THE KETTLE BROOK CARE CENTER. DEMARC IS IN THE TELCO BOX INSIDE OF GATE AREA.. GATE COMBO:9110,1452,2500SHELTER;GROUND LEVELCIPHER LOCK;3534 AND MASTER CODEON LTE ALARMS:7/6/14LTE RADIOS;ON WATER TANKADDRESS: 104 PROSPECT HILL ROAD,EAST WINDSOR,CT.ACCESS : WATER COMPANY ASKING FOR 48 HOUR NOTICE FOR ROUTINE WORK,AT NIGHT YOU CAN GO IN JUST CALL AND LEAVE A MESSAGE ON AL'S VOICEMAIL THAT YOU WERE AT THE SITECONTACT: 860-669-8630 X 3057;AL-DAYTIME ONLYSECURITY: NO ISSUESPOWER COMPANY: NORTHEAST UTILITIES (800) 286-2000METER:089-085-359FIRE: (860) 745-1878 POLICE: (860) 763-6400T-1:GSM:HCGS-737362-ET-107T-1:GSM:HCGS:727136-ET-52UMTS:ON FIBER					SEARCH RING ID:		CASPR INITIATIVE # 1:	
						BTA:		CASPR INITIATIVE # 2:	
						LONG (DEC. DEG.):	-72.6046989	CASPR INITIATIVE # 3:	
						BORDER CELL WITH CONTOUR COORD:		CASPR INITIATIVE # 4:	
						AM STUDY REQ'D (Y/N):	No		
						FREQ COORD:			

Section 3 - LICENSE COVERAGE/FILING INFORMATION

CGSA - NO FILING TRIGGERED (Yes/No):	No	CGSA LOSS:		PCS REDUCED - UPS ZIP:		CGSA CALL SIGNS:	z_KNLB312,z_KNLB312,z_KNLB312
CGSA - MINOR FILING NEEDED (Yes/No)::	No	CGSA EXT AGMT NEEDED:		PCS POPS REDUCED:			
CGSA - MAJOR FILING NEEDED (Yes/No):	Yes	CGSA SCORECARD UPDATED:					

Section 4 - TOWER/REGULATORY INFORMATION

STRUCTURE AT&T OWNED?:	Yes	GROUND ELEVATION (ft):		STRUCTURE TYPE:	WATER TANK	MARKET LOCATION 700 MHz Band:		
ADDITIONAL REGULATORY?:	Yes	HEIGHT OVERALL (ft):	140.00	FCC ASR NUMBER:	NR	MARKET LOCATION 850 MHz Band:		
SUB-LEASE RIGHTS?:	Yes	STRUCTURE HEIGHT (ft):	140.00			MARKET LOCATION 1900 MHz Band:		
LIGHTING TYPE:	NOT REQUIRED					MARKET LOCATION AWS Band:		
						MARKET LOCATION WCS Band:		
						MARKET LOCATION Future Band:		

Section 5 - E-911 INFORMATION - existing

	PSAP NAME:	PSAP ID:	E911 PHASE:	MPC SVC PROVIDER:	LMU REQUIRED:	ESRN:	DATE LIVE PH1:	DATE LIVE PH2:
SECTOR A E-911	CONNECTICUT STATE POLICE-H TROOP	1320		INTRADO_MIAMI		0		
SECTOR B	EAST WINDSOR POLICE DEPARTMENT	1337		INTRADO_MIAMI		0		
SECTOR C	CONNECTICUT STATE POLICE-H TROOP	1320		INTRADO_MIAMI		0		
SECTOR D								
SECTOR E								
SECTOR F								
OMNI								

Section 5 - E-911 INFORMATION - final

	PSAP NAME:	PSAP ID:	E911 PHASE:	MPC SVC PROVIDER:	LMU REQUIRED:	ESRN:	DATE LIVE PH1:	DATE LIVE PH2:
SECTOR A E-911	CONNECTICUT STATE POLICE-H TROOP	1320		INTRADO_MIAMI		0		
SECTOR B	EAST WINDSOR POLICE DEPARTMENT	1337		INTRADO_MIAMI		0		
SECTOR C	CONNECTICUT STATE POLICE-H TROOP	1320		INTRADO_MIAMI		0		
SECTOR D								
SECTOR E								
SECTOR F								
OMNI								

Section 6 - RBS GENERAL INFORMATION - existing

	GSM 1ST RBS	UMTS 1ST RBS	UMTS 2ND RBS	LTE 1ST RBS								
RBS ID:	43700	208908	300987	367050								
CTS COMMON ID:	184P5192	CTV5192	CTU5192	CTL05192								
CELL ID / BCF:	NYNYCT0192	CTV5192	CTV5192	CTL05192								
BTA/TID:	184P	184U	184W	184L								
4-DIGIT SITE ID:	5192	5192	5192	5192								
COW OR TOY?:	No	No	No	No								
CELL SITE TYPE:												
SITE TYPE:												
BTS LOCATION ID:												
ORIGINATING CO:												
CELLULAR NETWORK:												
OPS DISTRICT:												
RF DISTRICT:			NPO TRIAGE									
OPS ZONE:												
RF ZONE:			BCT05									
BASE STATION TYPE:												
EQUIPMENT NAME:	GSM-WINDSOR LOCKS NORTH	WINDSOR LOCKS NORTH	WINDSOR LOCKS NORTH	WINDSOR LOCKS NORTH								
DISASTER PRIORITY:												

Section 6 - RBS GENERAL INFORMATION - final

	GSM 1ST RBS	UMTS 1ST RBS	UMTS 2ND RBS	LTE 1ST RBS								
RBS ID:	43700	208908	300987	367050								
CTS COMMON ID:	184P5192	CTV5192	CTU5192	CTL05192								
CELL ID / BCF:	NYNYCT0192	CTV5192	CTV5192	CTL05192								
BTA/TID:	184P	184U	184W	184L								
4-DIGIT SITE ID:	5192	5192	5192	5192								
COW OR TOY?:	No	No	No	No								
CELL SITE TYPE:	SECTORIZED	SECTORIZED	SECTORIZED	SECTORIZED								
SITE TYPE:	BTS-CONVENTIONAL	MACRO-CONVENTIONAL	MACRO-CONVENTIONAL	MACRO-CONVENTIONAL								
BTS LOCATION ID:	GROUND	INTERNAL	INTERNAL	INTERNAL								
ORIGINATING CO:	CINGULAR	CINGULAR	CINGULAR	CINGULAR								
CELLULAR NETWORK:	GOLD	GOLD	GOLD	GOLD								
OPS DISTRICT:	CT-North	CT-North	CT-North	CT-North								
RF DISTRICT:	NPO Triage	Middletown	NPO Triage	NPO Triage								
OPS ZONE:	NE_CT_N_TLDN_N_CS	NE_CT_N_TLDN_N_CS	NE_CT_N_TLDN_N_CS	NE_CT_N_TLDN_N_CS								
RF ZONE:	Hotseat	BCT05	BCT05	Hotseat								
BASE STATION TYPE:	BASE	BASE	OVERLAY	BASE								
EQUIPMENT NAME:	GSM-WINDSOR LOCKS NORTH	WINDSOR LOCKS NORTH	WINDSOR LOCKS NORTH	WINDSOR LOCKS NORTH								
DISASTER PRIORITY:	1	1	0	3								

Section 7 - RBS SPECIFIC INFORMATION - existing

	GSM 1ST RBS	UMTS 1ST RBS	UMTS 2ND RBS	LTE 1ST RBS								
MSC:												
BSC/RNC/MME POOL ID:	BCT05	MDTWCTNICR0R04	MDTWCTNICR0R04	FF01								
LAC:	05005	05993	05993									
RAC:												
EQUIPMENT VENDOR:												
EQUIPMENT TYPE:	ULTRASITE											
BASEBAND CONFIGURATION:												
LOCATION:												
CABINET LOCATION:												
MARKET STATE CODE:												
AGPS:	Yes	Yes	Yes	Yes								
NODE B NUMBER:	0	0	0	5192								
PARENT NAME:	BCT05	MDTWCTNICR0R04	MDTWCTNICR0R04	FF01								

Section 7 - RBS SPECIFIC INFORMATION - final

	GSM 1ST RBS	UMTS 1ST RBS	UMTS 2ND RBS	LTE 1ST RBS								
MSC:												
BSC/RNC/MME POOL ID:	BCT05	MDTWCTNICR0R04	MDTWCTNICR0R04	FF01								
LAC:	05005	05993	05993									
RAC:												
EQUIPMENT VENDOR:	NOKIA	ERICSSON	ERICSSON	ERICSSON								
EQUIPMENT TYPE:	ULTRASITE	3206 INDOOR	3206 INDOOR	6601 INDOOR MU								
BASEBAND CONFIGURATION:												
LOCATION:												
CABINET LOCATION:												
MARKET STATE CODE:				CT								
AGPS:	Yes	Yes	Yes	Yes								
NODE B NUMBER:	0	0	0	5192								
PARENT NAME:	MIDDLETOWN-GSM MTSO-BSC-5	MIDDLETOWN RNC04	MIDDLETOWN RNC04									

Section 8 - RBS/SECTOR ASSOCIATION - existing

	GSM 1ST RBS	UMTS 1ST RBS	UMTS 2ND RBS	LTE 1ST RBS																
CTS Common ID	184P5192	CTV5192	CTU5192	CTL05192																
Soft Sector IDs	184P51921	CTV51921	CTU51927	CTL05192_7A_1																
	184P51922	CTV51922	CTU51928	CTL05192_7B_1																
	184P51923	CTV51923	CTU51929	CTL05192_7C_1																
				CTL05192_9A_1																
				CTL05192_9B_1																
				CTL05192_9C_1																

Section 8 - RBS/SECTOR ASSOCIATION - final

	GSM 1ST RBS	UMTS 1ST RBS	UMTS 2ND RBS	LTE 1ST RBS																
CTS Common ID	184P5192	CTV5192	CTU5192	CTL05192																
Soft Sector IDs	184P51921	CTV51921	CTU51927	CTL05192_7A_1																
	184P51922	CTV51922	CTU51928	CTL05192_7B_1																
	184P51923	CTV51923	CTU51929	CTL05192_7C_1																
				CTL05192_9A_1																
				CTL05192_9B_1																
				CTL05192_9C_1																

Section 9 - SOFT SECTOR ID - existing

	GSM 1ST 1900	UMTS 1ST 850	UMTS 1ST 1900	LTE 1ST 700	LTE 1ST 1900																					
USEID (excluding Hard Sector)	4566.1900.25G.1	4566.850.3G.1	4566.1900.3G.2																							
SECTOR A SOFT SECTOR ID	184P51921	CTV51921	CTU51927	CTL05192_7A_1	CTL05192_9A_1																					
SECTOR B	184P51922	CTV51922	CTU51928	CTL05192_7B_1	CTL05192_9B_1																					
SECTOR C	184P51923	CTV51923	CTU51929	CTL05192_7C_1	CTL05192_9C_1																					
SECTOR D																										
SECTOR E																										
SECTOR F																										
OMNI																										

Section 9 - SOFT SECTOR ID - final

	GSM 1ST 1900	UMTS 1ST 850	UMTS 1ST 1900	LTE 1ST 700	LTE 1ST 1900																					
USEID (excluding Hard Sector)	4566.1900.25G.1	4566.850.3G.1	4566.1900.3G.2																							
SECTOR A SOFT SECTOR ID	184P51921	CTV51921	CTU51927	CTL05192_7A_1	CTL05192_9A_1																					
SECTOR B	184P51922	CTV51922	CTU51928	CTL05192_7B_1	CTL05192_9B_1																					
SECTOR C	184P51923	CTV51923	CTU51929	CTL05192_7C_1	CTL05192_9C_1																					
SECTOR D																										
SECTOR E																										
SECTOR F																										
OMNI																										

Section 9 - Cell Number - existing

	GSM 1ST 1900	UMTS 1ST 850	UMTS 1ST 1900	LTE 1ST 700	LTE 1ST 1900																				
USEID (excluding Hard Sector)	4566.1900.25G.1	4566.850.3G.1	4566.1900.3G.2																						
SECTOR A CELL NUMBER	0	0	0	15	8																				
SECTOR B	0	0	0	16	9																				
SECTOR C	0	0	0	17	10																				
SECTOR D																									
SECTOR E																									
SECTOR F																									
OMNI																									

Section 9 - Cell Number - final

	GSM 1ST 1900	UMTS 1ST 850	UMTS 1ST 1900	LTE 1ST 700	LTE 1ST 1900																				
USEID (excluding Hard Sector)	4566.1900.25G.1	4566.850.3G.1	4566.1900.3G.2																						
SECTOR A CELL NUMBER	0	0	0	15	8																				
SECTOR B	0	0	0	16	9																				
SECTOR C	0	0	0	17	10																				
SECTOR D																									
SECTOR E																									
SECTOR F																									
OMNI																									

Section 10 - CID/SAC - existing

		GSM 1ST 1900	UMTS 1ST 850	UMTS 1ST 1900	LTE 1ST 700	LTE 1ST 1900																						
SECTOR A	CID/SAC	51921	51921	51927																								
SECTOR B		51922	51922	51928																								
SECTOR C		51923	51923	51929																								
SECTOR D																												
SECTOR E																												
SECTOR F																												
OMNI																												

Section 10 - CID/SAC - final

		GSM 1ST 1900	UMTS 1ST 850	UMTS 1ST 1900	LTE 1ST 700	LTE 1ST 1900																						
SECTOR A	CID/SAC	51921	51921	51927																								
SECTOR B		51922	51922	51928																								
SECTOR C		51923	51923	51929																								
SECTOR D																												
SECTOR E																												
SECTOR F																												
OMNI																												

Section 12 - CURRENT T1 COUNTS existing

	LTE 1ST Cabinet															
# T1s																
LINK PROFILE																
RF COMBINING																
FIBER or ETHERNET?																
Tx Board Model																
Tx Board QTY																
RAX/ECU Board Model																
RAX/ECU Board QTY																
BBU Board Model	DUS41															
BBU Board QTY	1															
RRU - location																
FIBER JUMPER																
DC CABLE																
DC/Fiber Dem. Box																
Bundled Fiber Cable																
Bundled DC Cable																

Section 14 - NEW/PROPOSED T1 COUNTS

	LTE 1ST Cabinet															
# T1s																
LINK PROFILE																
RF COMBINING																
FIBER or ETHERNET?																
Tx Board Model																
Tx Board QTY																
RAX/ECU Board Model																
RAX/ECU Board QTY																
BBU Board Model	DUS41															
BBU Board QTY	1															
RRU - location																
FIBER JUMPER																
DC CABLE																
DC/Fiber Dem. Box																
Bundled Fiber Cable																
Bundled DC Cable																

Section 15A - CURRENT SECTOR/CELL INFORMATION - SECTOR A (OR OMNI)

ANTENNA COMMON FIELDS	ANTENNA POSITION 1	ANTENNA POSITION 2	ANTENNA POSITION 3	ANTENNA POSITION 4	ANTENNA POSITION 5	ANTENNA POSITION 6	ANTENNA POSITION 7
ANTENNA MAKE - MODEL	800-10121		HPA-65R-BUU-H8				
ANTENNA VENDOR	Kathrein		CCI Antennas				
ANTENNA SIZE (H x W x D)	54.5X10.3X5.9		92.4X14.8X7.4				
ANTENNA WEIGHT	44.1		68				
AZIMUTH	0		60				
MAGNETIC DECLINATION							
RADIATION CENTER (feet)	78		78				
ANTENNA TIP HEIGHT	80						
MECHANICAL DOWNTILT	0		0				
FEEDER AMOUNT	2						
VERTICAL SEPARATION from ANTENNA ABOVE (TIP to TIP)							
VERTICAL SEPARATION from ANTENNA BELOW (TIP to TIP)							
HORIZONTAL SEPARATION from CLOSEST ANTENNA to LEFT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION from CLOSEST ANTENNA to RIGHT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION from ANOTHER ANTENNA (which antenna # / # of inches)							
Antenna RET Motor (QTY/MODEL)	2 Kathrein 860-10025						
SURGE ARRESTOR (QTY/MODEL)			1 DC Fiber Squid				
DIPLEXER (QTY/MODEL)	2 Powerwave / LGP 21901						
DUPLEXER (QTY/MODEL)							
Antenna RET CONTROL UNIT (QTY/MODEL)	1 Kathrein / 860-10006						
DC BLOCK (QTY/MODEL)							
TMA/LNA (QTY/MODEL)	2 Powerwave LGP 21401 (DB - 850 Bypass)						
CURRENT INJECTORS FOR TMA (QTY/MODEL)	2 Polyphaser 1000860						
PDU FOR TMAS (QTY/MODEL)	1 LGP 12104 (1900 AND 850 Bypass TMA)						
FILTER (QTY/MODEL)							
SQUID (QTY/MODEL)							
FIBER TRUNK (QTY/MODEL)							
DC TRUNK (QTY/MODEL)							
RRH - 700 band (QTY/MODEL)			1 RRUS-11				
RRH - 850 band (QTY/MODEL)							
RRH - 1900 band (QTY/MODEL)			1 RRUS-11+RRUS-A2				
RRH - AWS band (QTY/MODEL)							
RRH - WCS band (QTY/MODEL)							
Additional RRH #1 - any band (QTY/MODEL)							
Additional RRH #2 - any band (QTY/MODEL)							
Additional Component 1 (QTY/MODEL)							
Additional Component 2 (QTY/MODEL)							
Additional Component 3 (QTY/MODEL)							
Local Market Note 1							
Local Market Note 2							
Local Market Note 3							

PORT SPECIFIC FIELDS	PORT NUMBER	USEID (CSSng)	USEID (Atoll)	ATOLL TXID	ATOLL CELL ID	TX/RX ?	TECHNOLOGY/FREQUENCY	ANTENNA ATOLL	ANTENNA GAIN	ELECTRICAL AZIMUTH	ELECTRICAL TILT	RRH LOCATION (Top/Bottom/Integrated/None)	FEEDERS TYPE	FEEDER LENGTH (feet)	RXAIT KIT MODULE?	TRIPLEXER or LLC (QTY)	TRIPLEXER or LLC (MODEL)	SCPA/MCPA MODULE?	HATCHPLATE POWER (Watts)	ERP (Watts)	Antenna RET Name	CABLE NUMBER	CABLE ID (CSSNG)
ANTENNA POSITION 1	PORT 1		4566.A.850.3G.1	CTV51921	CTV51921		UMTS 850	800 10121 @850MHz_04DT	16.2		4	None	Andrew 1-5/8 (850)	165.042252	NO	0		NO		533.33		1	
	PORT 3		4566.A.1900.3G.2	CTU51927	CTU51927		UMTS 1900	800 10121 @1950_Xpol_2dt	18		2	None	Andrew 1-5/8 (850)	165.042252	RXAIT 1900	0		NO		729.46		1	
	PORT 5		4566.A.1900.25G.1	184P51921	184P51921		GSM 1900	800 10121 @1950_Xpol_2dt	17.03		1	None	Andrew 1-5/8 (850)	165.042252	RXAIT 1900	0		NO	11.22	285.1		1	
ANTENNA POSITION 3	PORT 1		4566.A.700.4G.1	CTL05192_7A_1	CTL05192_7A_1		LTE 700	HPA-65R-BUU-H8_725MHz_04DT	15.6		4	TOP	FIBER	0	NO	0				1044.7202		3	
	PORT 3		4566.A.1900.4G.1	CTL05192_9A_1_P	CTL05192_9A_1_P		LTE 1900	HPA-65R-BUU-H8_1948MHz_05DT	17.29		5	TOP	FIBER	0	NO	0				2233.5722		3	

Section 15B - CURRENT SECTOR/CELL INFORMATION - SECTOR B

ANTENNA COMMON FIELDS	ANTENNA POSITION 1	ANTENNA POSITION 2	ANTENNA POSITION 3	ANTENNA POSITION 4	ANTENNA POSITION 5	ANTENNA POSITION 6	ANTENNA POSITION 7
ANTENNA MAKE - MODEL	800-10121		HPA-65R-BUU-H8				
ANTENNA VENDOR	Kathrein		CCI Antennas				
ANTENNA SIZE (H x W x D)	54.5X10.3X5.9		92.4X14.8X7.4				
ANTENNA WEIGHT	44.1		68				
AZIMUTH	120		170				
MAGNETIC DECLINATION							
RADIATION CENTER (feet)	78		78				
ANTENNA TIP HEIGHT	80						
MECHANICAL DOWNTILT	0		0				
FEEDER AMOUNT	2						
VERTICAL SEPARATION from ANTENNA ABOVE (TIP to TIP)							
VERTICAL SEPARATION from ANTENNA BELOW (TIP to TIP)							
HORIZONTAL SEPARATION from CLOSEST ANTENNA to LEFT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION from CLOSEST ANTENNA to RIGHT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION from ANOTHER ANTENNA (which antenna # / # of inches)							
Antenna RET Motor (QTY/MODEL)	2 Kathrein 860-10025						
SURGE ARRESTOR (QTY/MODEL)			1 DC Fiber Squid				
DIPLEXER (QTY/MODEL)	2 Powerwave / LGP 21901						
DUPLEXER (QTY/MODEL)							
Antenna RET CONTROL UNIT (QTY/MODEL)							
DC BLOCK (QTY/MODEL)							
TMA/LNA (QTY/MODEL)	2 Powerwave LGP 21401 (DB - 850 Bypass)						
CURRENT INJECTORS FOR TMA (QTY/MODEL)	2 Polyphaser 1000860						
PDU FOR TMAS (QTY/MODEL)							
FILTER (QTY/MODEL)							
SQUID (QTY/MODEL)							
FIBER TRUNK (QTY/MODEL)							
DC TRUNK (QTY/MODEL)							
RRH - 700 band (QTY/MODEL)			1 RRUS-11				
RRH - 850 band (QTY/MODEL)							
RRH - 1900 band (QTY/MODEL)			1 RRUS-11+RRUS-A2				
RRH - AWS band (QTY/MODEL)							
RRH - WCS band (QTY/MODEL)							
Additional RRH #1 - any band (QTY/MODEL)							
Additional RRH #2 - any band (QTY/MODEL)							
Additional Component 1 (QTY/MODEL)							
Additional Component 2 (QTY/MODEL)							
Additional Component 3 (QTY/MODEL)							
Local Market Note 1							
Local Market Note 2							
Local Market Note 3							

PORT SPECIFIC FIELDS	PORT NUMBER	USEID (CSSng)	USEID (Atoll)	ATOLL TXID	ATOLL CELL ID	TX/RX ?	TECHNOLOGY/FREQUENCY	ANTENNA ATOLL	ANTENNA GAIN	ELECTRICAL AZIMUTH	ELECTRICAL TILT	RRH LOCATION (Top/Bottom/Integrated/None)	FEEDERS TYPE	FEEDER LENGTH (feet)	RXAIT KIT MODULE?	TRIPLEXER or LLC (QTY)	TRIPLEXER or LLC (MODEL)	SCPA/MCPA MODULE?	HATCHPLATE POWER (Watts)	ERP (Watts)	Antenna RET Name	CABLE NUMBER	CABLE ID (CSSNG)
ANTENNA POSITION 1	PORT 1		4566.B.850.3G.1	CTV51922	CTV51922		UMTS 850	800 10121 @1950_840MHz_04DT	17.2		4	None	Andrew 1-5/8 (850)	165.042252	NO	0		NO		770.9		9	
	PORT 3		4566.B.1900.3G.2	CTU51928	CTU51928		UMTS 1900	800 10121 @1950_Xpol_2dt	17.5		2	None	Andrew 1-5/8 (850)	165.042252	RXAIT 1900	0		NO		650.13		9	
	PORT 5		4566.B.1900.25G.1	184P51922	184P51922		GSM 1900	800 10121 @1950_Xpol_7dt	16.45		7	None	Andrew 1-5/8 (850)	165.042252	RXAIT 1900	0		NO	28.18	626.61		9	
ANTENNA POSITION 3	PORT 1		4566.B.700.4G.1	CTL05192_7B_1	CTL05192_7B_1		LTE 700	HPA-65R-BUU-H8_719MHz_04DT	16.39		4	TOP	FIBER	0	NO	0				1044.7202		11	
	PORT 3		4566.B.1900.4G.1	CTL05192_9B_1_P	CTL05192_9B_1_P		LTE 1900	HPA-65R-BUU-H8_1948MHz_02DT	16.89		2	TOP	FIBER	0	NO	0				2233.5722		11	

Section 15C - CURRENT SECTOR/CELL INFORMATION - SECTOR C

ANTENNA COMMON FIELDS	ANTENNA POSITION 1	ANTENNA POSITION 2	ANTENNA POSITION 3	ANTENNA POSITION 4	ANTENNA POSITION 5	ANTENNA POSITION 6	ANTENNA POSITION 7
ANTENNA MAKE - MODEL	800-10121		HPA-65R-BUU-H8				
ANTENNA VENDOR	Kathrein		CCI Antennas				
ANTENNA SIZE (H x W x D)	54.5X10.3X5.9		92.4X14.8X7.4				
ANTENNA WEIGHT	44.1		68				
AZIMUTH	240		290				
MAGNETIC DECLINATION							
RADIATION CENTER (feet)	78		78				
ANTENNA TIP HEIGHT	80						
MECHANICAL DOWNTILT	0		0				
FEEDER AMOUNT	2						
VERTICAL SEPARATION from ANTENNA ABOVE (TIP to TIP)							
VERTICAL SEPARATION from ANTENNA BELOW (TIP to TIP)							
HORIZONTAL SEPARATION from CLOSEST ANTENNA to LEFT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION from CLOSEST ANTENNA to RIGHT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION from ANOTHER ANTENNA (which antenna # / # of inches)							
Antenna RET Motor (QTY/MODEL)	2 Kathrein 860-10025						
SURGE ARRESTOR (QTY/MODEL)			1 DC Fiber Squid				
DIPLEXER (QTY/MODEL)	2 Powerwave / LGP 21901						
DUPLEXER (QTY/MODEL)							
Antenna RET CONTROL UNIT (QTY/MODEL)							
DC BLOCK (QTY/MODEL)							
TMA/LNA (QTY/MODEL)	2 Powerwave LGP 21401 (DB - 850 Bypass)						
CURRENT INJECTORS FOR TMA (QTY/MODEL)	2 Polyphaser 1000860						
PDU FOR TMAS (QTY/MODEL)							
FILTER (QTY/MODEL)							
SQUID (QTY/MODEL)							
FIBER TRUNK (QTY/MODEL)							
DC TRUNK (QTY/MODEL)							
RRH - 700 band (QTY/MODEL)			1 RRUS-11				
RRH - 850 band (QTY/MODEL)							
RRH - 1900 band (QTY/MODEL)			1 RRUS-11+RRUS-A2				
RRH - AWS band (QTY/MODEL)							
RRH - WCS band (QTY/MODEL)							
Additional RRH #1 - any band (QTY/MODEL)							
Additional RRH #2 - any band (QTY/MODEL)							
Additional Component 1 (QTY/MODEL)							
Additional Component 2 (QTY/MODEL)							
Additional Component 3 (QTY/MODEL)							
Local Market Note 1							
Local Market Note 2							
Local Market Note 3							

PORT SPECIFIC FIELDS	PORT NUMBER	USEID (CSSng)	USEID (Atoll)	ATOLL TXID	ATOLL CELL ID	TX/RX ?	TECHNOLOGY/FREQUENCY	ANTENNA ATOLL	ANTENNA GAIN	ELECTRICAL AZIMUTH	ELECTRICAL TILT	RRH LOCATION (Top/Bottom/Integrated/None)	FEEDERS TYPE	FEEDER LENGTH (feet)	RXAIT KIT MODULE?	TRIPLEXER or LLC (QTY)	TRIPLEXER or LLC (MODEL)	SCPA/MCPA MODULE?	HATCHPLATE POWER (Watts)	ERP (Watts)	Antenna RET Name	CABLE NUMBER	CABLE ID (CSSNG)
ANTENNA POSITION 1	PORT 1		4566.C.850.3G.1	CTV51923	CTV51923		UMTS 850	800 10121 @850MHz_04DT	16.2		4	None	Andrew 1-5/8 (850)	165.042252	NO	0		NO		533.33		17	
	PORT 3		4566.C.1900.3G.2	CTU51929	CTU51929		UMTS 1900	800 10121 @1950_Xpol_2dt	18		2	None	Andrew 1-5/8 (850)	165.042252	RXAIT 1900	0		NO		729.46		17	
	PORT 5		4566.C.1900.25G.1	184P51923	184P51923		GSM 1900	800 10121 @1950_Xpol_7dt	16.45		7	None	Andrew 1-5/8 (850)	165.042252	RXAIT 1900	0		NO	28.18	626.61		17	
ANTENNA POSITION 3	PORT 1		4566.C.700.4G.1	CTL05192_7C_1	CTL05192_7C_1		LTE 700	HPA-65R-BUU-H8_725MHz_09DT	15.6		9	TOP	FIBER	0	NO	0				1044.7202		19	
	PORT 3		4566.C.1900.4G.1	CTL05192_9C_1_P	CTL05192_9C_1_P		LTE 1900	HPA-65R-BUU-H8_1948MHz_06DT	17.39		6	TOP	FIBER	0	NO	0				2233.5722		19	

Section 16A - NEW/PROPOSED SECTOR/CELL INFORMATION - SECTOR A (OR OMNI)

ANTENNA COMMON FIELDS	ANTENNA POSITION 1	ANTENNA POSITION 2	ANTENNA POSITION 3	ANTENNA POSITION 4	ANTENNA POSITION 5	ANTENNA POSITION 6	ANTENNA POSITION 7
Existing Antenna?			Yes				
ANTENNA MAKE - MODEL							
ANTENNA VENDOR							
ANTENNA SIZE (H x W x D)							
ANTENNA WEIGHT							
AZIMUTH							
MAGNETIC DECLINATION							
RADIATION CENTER (feet)							
ANTENNA TIP HEIGHT							
MECHANICAL DOWNTILT							
FEEDER AMOUNT							
VERTICAL SEPARATION from ANTENNA ABOVE (TIP to TIP)							
VERTICAL SEPARATION from ANTENNA BELOW (TIP to TIP)							
HORIZONTAL SEPARATION from CLOSEST ANTENNA to LEFT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION from CLOSEST ANTENNA to RIGHT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION from ANOTHER ANTENNA (which antenna # / # of inches)							
Antenna RET Motor (QTY/MODEL)							
SURGE ARRESTOR (QTY/MODEL)							
DIPLEXER (QTY/MODEL)							
DUPLEXER (QTY/MODEL)							
Antenna RET CONTROL UNIT (QTY/MODEL)							
DC BLOCK (QTY/MODEL)							
TMA/LNA (QTY/MODEL)							
CURRENT INJECTORS FOR TMA (QTY/MODEL)							
PDU FOR TMAS (QTY/MODEL)							
FILTER (QTY/MODEL)							
SQUID (QTY/MODEL)							
FIBER TRUNK (QTY/MODEL)							
DC TRUNK (QTY/MODEL)							
RRH - 700 band (QTY/MODEL)							
RRH - 850 band (QTY/MODEL)							
RRH - 1900 band (QTY/MODEL)			1 RRUS-12				
RRH - AWS band (QTY/MODEL)							
RRH - WCS band (QTY/MODEL)							
Additional RRH #1 - any band (QTY/MODEL)							
Additional RRH #2 - any band (QTY/MODEL)							
Additional Component 1 (QTY/MODEL)							
Additional Component 2 (QTY/MODEL)							
Additional Component 3 (QTY/MODEL)							
Local Market Note 1	LTE 1900 A3-A4 & E - BWE- 1xBBU RRH ADD //Replace LTE 1900 Radio w/ RRUS-12 on existing LTE Antenna // Add XMU.						
Local Market Note 2							
Local Market Note 3	Baseband Config - 1 DUS + XMU DUS-1 7A:7B:7C:X1P1:X1P2:AC XMU-1 PA:_:PB:_:PC:_:AC:AB:_:_:_:_:_:_:D1E:D1D						

PORT SPECIFIC FIELDS	PORT NUMBER	USEID (CSSng)	USEID (Atoll)	ATOLL TXID	ATOLL CELL ID	TX/RX ?	TECHNOLOGY/FREQUENCY	ANTENNA ATOLL	ANTENNA GAIN	ELECTRICAL AZIMUTH	ELECTRICAL TILT	RRH LOCATION (Top/Bottom/Integrated/None)	FEEDERS TYPE	FEEDER LENGTH (feet)	RXAIT KIT MODULE?	TRIPLEXER or LLC (QTY)	TRIPLEXER or LLC (MODEL)	SCPA/MCPA MODULE?	HATCHPLATE POWER (Watts)	ERP (Watts)	Antenna RET Name	CABLE NUMBER	CABLE ID (CSSNG)
ANTENNA POSITION 3	PORT 3		4566.A.1900.4G.1	CTL05192_9A_1	CTL05192_9A_1		LTE 1900	HPA-65R-BUU-H8_1948MHz_05DT	17.29	60	5	TOP	FIBER	0	NO								

Section 16B - NEW/PROPOSED SECTOR/CELL INFORMATION - SECTOR B

ANTENNA COMMON FIELDS	ANTENNA POSITION 1	ANTENNA POSITION 2	ANTENNA POSITION 3	ANTENNA POSITION 4	ANTENNA POSITION 5	ANTENNA POSITION 6	ANTENNA POSITION 7
Existing Antenna?			Yes				
ANTENNA MAKE - MODEL							
ANTENNA VENDOR							
ANTENNA SIZE (H x W x D)							
ANTENNA WEIGHT							
AZIMUTH							
MAGNETIC DECLINATION							
RADIATION CENTER (feet)							
ANTENNA TIP HEIGHT							
MECHANICAL DOWNTILT							
FEEDER AMOUNT							
VERTICAL SEPARATION from ANTENNA ABOVE (TIP to TIP)							
VERTICAL SEPARATION from ANTENNA BELOW (TIP to TIP)							
HORIZONTAL SEPARATION from CLOSEST ANTENNA to LEFT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION from CLOSEST ANTENNA to RIGHT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION from ANOTHER ANTENNA (which antenna # / # of inches)							
Antenna RET Motor (QTY/MODEL)							
SURGE ARRESTOR (QTY/MODEL)							
DIPLEXER (QTY/MODEL)							
DUPLEXER (QTY/MODEL)							
Antenna RET CONTROL UNIT (QTY/MODEL)							
DC BLOCK (QTY/MODEL)							
TMA/LNA (QTY/MODEL)							
CURRENT INJECTORS FOR TMA (QTY/MODEL)							
PDU FOR TMAS (QTY/MODEL)							
FILTER (QTY/MODEL)							
SQUID (QTY/MODEL)							
FIBER TRUNK (QTY/MODEL)							
DC TRUNK (QTY/MODEL)							
RRH - 700 band (QTY/MODEL)							
RRH - 850 band (QTY/MODEL)							
RRH - 1900 band (QTY/MODEL)			1 RRUS-12				
RRH - AWS band (QTY/MODEL)							
RRH - WCS band (QTY/MODEL)							
Additional RRH #1 - any band (QTY/MODEL)							
Additional RRH #2 - any band (QTY/MODEL)							
Additional Component 1 (QTY/MODEL)							
Additional Component 2 (QTY/MODEL)							
Additional Component 3 (QTY/MODEL)							
Local Market Note 1	LTE 1900 A3-A4 & E - BWE- 1xBBU RRH ADD //Replace LTE 1900 Radio w/ RRUS-12 on existing LTE Antenna // Add XMU.						
Local Market Note 2							
Local Market Note 3	Baseband Config - 1 DUS + XMU DUS-1 7A:7B:7C:X1P1:X1P2:AC XMU-1 PA:_:PB:_:PC:_:AC:AB:_:_:_:_:_:_:D1E:D1D						

PORT SPECIFIC FIELDS	PORT NUMBER	USEID (CSSng)	USEID (Atoll)	ATOLL TXID	ATOLL CELL ID	TX/RX ?	TECHNOLOGY/FREQUENCY	ANTENNA ATOLL	ANTENNA GAIN	ELECTRICAL AZIMUTH	ELECTRICAL TILT	RRH LOCATION (Top/Bottom/Integrated/None)	FEEDERS TYPE	FEEDER LENGTH (feet)	RXAIT KIT MODULE?	TRIPLEXER or LLC (QTY)	TRIPLEXER or LLC (MODEL)	SCPA/MCPA MODULE?	HATCHPLATE POWER (Watts)	ERP (Watts)	Antenna RET Name	CABLE NUMBER	CABLE ID (CSSNG)
ANTENNA POSITION 3	PORT 3		4566.B.1900.4G.1	CTL05192_9B_1	CTL05192_9B_1		LTE 1900	HPA-65R-BUU-H8_1948MHz_02DT	16.89	170	2	TOP	FIBER	0	NO								

Section 16C - NEW/PROPOSED SECTOR/CELL INFORMATION - SECTOR C

ANTENNA COMMON FIELDS	ANTENNA POSITION 1	ANTENNA POSITION 2	ANTENNA POSITION 3	ANTENNA POSITION 4	ANTENNA POSITION 5	ANTENNA POSITION 6	ANTENNA POSITION 7
Existing Antenna?			Yes				
ANTENNA MAKE - MODEL							
ANTENNA VENDOR							
ANTENNA SIZE (H x W x D)							
ANTENNA WEIGHT							
AZIMUTH							
MAGNETIC DECLINATION							
RADIATION CENTER (feet)							
ANTENNA TIP HEIGHT							
MECHANICAL DOWNTILT							
FEEDER AMOUNT							
VERTICAL SEPARATION from ANTENNA ABOVE (TIP to TIP)							
VERTICAL SEPARATION from ANTENNA BELOW (TIP to TIP)							
HORIZONTAL SEPARATION from CLOSEST ANTENNA to LEFT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION from CLOSEST ANTENNA to RIGHT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION from ANOTHER ANTENNA (which antenna # / # of inches)							
Antenna RET Motor (QTY/MODEL)							
SURGE ARRESTOR (QTY/MODEL)							
DIPLEXER (QTY/MODEL)							
DUPLEXER (QTY/MODEL)							
Antenna RET CONTROL UNIT (QTY/MODEL)							
DC BLOCK (QTY/MODEL)							
TMA/LNA (QTY/MODEL)							
CURRENT INJECTORS FOR TMA (QTY/MODEL)							
PDU FOR TMAS (QTY/MODEL)							
FILTER (QTY/MODEL)							
SQUID (QTY/MODEL)							
FIBER TRUNK (QTY/MODEL)							
DC TRUNK (QTY/MODEL)							
RRH - 700 band (QTY/MODEL)							
RRH - 850 band (QTY/MODEL)							
RRH - 1900 band (QTY/MODEL)			1 RRUS-12				
RRH - AWS band (QTY/MODEL)							
RRH - WCS band (QTY/MODEL)							
Additional RRH #1 - any band (QTY/MODEL)							
Additional RRH #2 - any band (QTY/MODEL)							
Additional Component 1 (QTY/MODEL)							
Additional Component 2 (QTY/MODEL)							
Additional Component 3 (QTY/MODEL)							
Local Market Note 1	LTE 1900 A3-A4 & E - BWE- 1xBBU RRH ADD //Replace LTE 1900 Radio w/ RRUS-12 on existing LTE Antenna // Add XMU.						
Local Market Note 2							
Local Market Note 3	Baseband Config - 1 DUS + XMU DUS-1 7A:7B:7C:X1P1:X1P2:AC XMU-1 PA:_:PB:_:PC:_:AC:AB:_:_:_:_:_:_:D1E:D1D						

PORT SPECIFIC FIELDS	PORT NUMBER	USEID (CSSng)	USEID (Atoll)	ATOLL TXID	ATOLL CELL ID	TX/RX ?	TECHNOLOGY/FREQUENCY	ANTENNA ATOLL	ANTENNA GAIN	ELECTRICAL AZIMUTH	ELECTRICAL TILT	RRH LOCATION (Top/Bottom/Integrated/None)	FEEDERS TYPE	FEEDER LENGTH (feet)	RXAIT KIT MODULE?	TRIPLEXER or LLC (QTY)	TRIPLEXER or LLC (MODEL)	SCPA/MCPA MODULE?	HATCHPLATE POWER (Watts)	ERP (Watts)	Antenna RET Name	CABLE NUMBER	CABLE ID (CSSNG)
ANTENNA POSITION 3	PORT 3		4566.C.1900.4G.1	CTL05192_9C_1	CTL05192_9C_1		LTE 1900	HPA-65R-BUU-H8_1948MHz_06DT	17.39	290	6	TOP	FIBER	0	NO								

Section 17A - FINAL SECTOR/CELL INFORMATION - SECTOR A (OR OMNI)

ANTENNA COMMON FIELDS	ANTENNA POSITION 1	ANTENNA POSITION 2	ANTENNA POSITION 3	ANTENNA POSITION 4	ANTENNA POSITION 5	ANTENNA POSITION 6	ANTENNA POSITION 7
ANTENNA MAKE - MODEL	800-10121		HPA-65R-BUU-H8				
ANTENNA VENDOR	Kathrein		CCI Antennas				
ANTENNA SIZE (H x W x D)	54.5X10.3X5.9		92.4X14.8X7.4				
ANTENNA WEIGHT	44.1		68				
AZIMUTH	0		60				
MAGNETIC DECLINATION							
RADIATION CENTER (feet)	78		78				
ANTENNA TIP HEIGHT	80						
MECHANICAL DOWNTILT	0		0				
FEEDER AMOUNT	2						
VERTICAL SEPARATION from ANTENNA ABOVE (TIP to TIP)							
VERTICAL SEPARATION from ANTENNA BELOW (TIP to TIP)							
HORIZONTAL SEPARATION from CLOSEST ANTENNA to LEFT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION from CLOSEST ANTENNA to RIGHT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION from ANOTHER ANTENNA (which antenna # / # of inches)							
Antenna RET Motor (QTY/MODEL)	2 Kathrein 860-10025						
SURGE ARRESTOR (QTY/MODEL)			1 DC Fiber Squid				
DIPLEXER (QTY/MODEL)	2 Powerwave / LGP 21901						
DUPLEXER (QTY/MODEL)							
Antenna RET CONTROL UNIT (QTY/MODEL)	1 Kathrein / 860-10006						
DC BLOCK (QTY/MODEL)							
TMA/LNA (QTY/MODEL)	2 Powerwave LGP 21401 (DB - 850 Bypass)						
CURRENT INJECTORS FOR TMA (QTY/MODEL)	2 Polyphaser 1000860						
PDU FOR TMAS (QTY/MODEL)	1 LGP 12104 (1900 AND 850 Bypass TMA)						
FILTER (QTY/MODEL)							
SQUID (QTY/MODEL)							
FIBER TRUNK (QTY/MODEL)							
DC TRUNK (QTY/MODEL)							
RRH - 700 band (QTY/MODEL)			1 RRUS-11				
RRH - 850 band (QTY/MODEL)							
RRH - 1900 band (QTY/MODEL)			1 RRUS-12+RRUS-A2				
RRH - AWS band (QTY/MODEL)							
RRH - WCS band (QTY/MODEL)							
Additional RRH #1 - any band (QTY/MODEL)							
Additional RRH #2 - any band (QTY/MODEL)							
Additional Component 1 (QTY/MODEL)							
Additional Component 2 (QTY/MODEL)							
Additional Component 3 (QTY/MODEL)							
Local Market Note 1	LTE 1900 A3-A4 & E - BWE- 1xBBU RRH ADD //Replace LTE 1900 Radio w/ RRUS-12 on existing LTE Antenna // Add XMU.						
Local Market Note 2							
Local Market Note 3	Baseband Config - 1 DUS + XMUDUS-1 7A:7B:7C:X1P1:X1P2:ACXMU-1 PA:_:PB:_:PC:_:AC:AB:_:_:_:_:_:_:D1E:D1D						

PORT SPECIFIC FIELDS	PORT NUMBER	USEID (CSSng)	USEID (Atoll)	ATOLL TXID	ATOLL CELL ID	TX/RX ?	TECHNOLOGY/FREQUENCY	ANTENNA ATOLL	ANTENNA GAIN	ELECTRICAL AZIMUTH	ELECTRICAL TILT	RRH LOCATION (Top/Bottom/Integrated/None)	FEEDERS TYPE	FEEDER LENGTH (feet)	RXAIT KIT MODULE?	TRIPLEXER or LLC (QTY)	TRIPLEXER or LLC (MODEL)	SCPA/MCPA MODULE?	HATCHPLATE POWER (Watts)	ERP (Watts)	Antenna RET Name	CABLE NUMBER	CABLE ID (CSSNG)
ANTENNA POSITION 1	PORT 1	4566.A.850.3G.1	4566.A.850.3G.1	CTV51921	CTV51921		UMTS 850	800 10121 @850MHz_04DT	16.2	0	4	None	Andrew 1-5/8 (850)	165.042252	NO					533.33		1	
	PORT 3	4566.A.1900.3G.2	4566.A.1900.3G.2	CTU51927	CTU51927		UMTS 1900	800 10121 @1950_Xpol_2dt	18	0	2	None	Andrew 1-5/8 (850)	165.042252	RXAIT 1900					729.46		2	
	PORT 5	4566.A.1900.25G.1	4566.A.1900.25G.1	184P51921	184P51921		GSM 1900	800 10121 @1950_Xpol_2dt	17.03	0	1	None	Andrew 1-5/8 (850)	165.042252	RXAIT 1900				11.22	285.1		2	
ANTENNA POSITION 3	PORT 1	4566.A.700.4G.1	4566.A.700.4G.1	CTL05192_7A_1	CTL05192_7A_1		LTE 700	HPA-65R-BUU-H8_725MHz_04DT	15.6	60	4	TOP	FIBER	0	NO					1044.7202		5	
	PORT 3	4566.A.1900.4G.1	4566.A.1900.4G.1	CTL05192_9A_1_P	CTL05192_9A_1_P		LTE 1900	HPA-65R-BUU-H8_1948MHz_05DT	17.29	60	5	TOP	FIBER	0	NO					2233.5722		5	

Section 17B - FINAL SECTOR/CELL INFORMATION - SECTOR B

ANTENNA COMMON FIELDS	ANTENNA POSITION 1	ANTENNA POSITION 2	ANTENNA POSITION 3	ANTENNA POSITION 4	ANTENNA POSITION 5	ANTENNA POSITION 6	ANTENNA POSITION 7
ANTENNA MAKE - MODEL	800-10121		HPA-65R-BUU-H8				
ANTENNA VENDOR	Kathrein		CCI Antennas				
ANTENNA SIZE (H x W x D)	54.5X10.3X5.9		92.4X14.8X7.4				
ANTENNA WEIGHT	44.1		68				
AZIMUTH	120		170				
MAGNETIC DECLINATION							
RADIATION CENTER (feet)	78		78				
ANTENNA TIP HEIGHT	80						
MECHANICAL DOWNTILT	0		0				
FEEDER AMOUNT	2						
VERTICAL SEPARATION from ANTENNA ABOVE (TIP to TIP)							
VERTICAL SEPARATION from ANTENNA BELOW (TIP to TIP)							
HORIZONTAL SEPARATION from CLOSEST ANTENNA to LEFT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION from CLOSEST ANTENNA to RIGHT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION from ANOTHER ANTENNA (which antenna # / # of inches)							
Antenna RET Motor (QTY/MODEL)	2 Kathrein 860-10025						
SURGE ARRESTOR (QTY/MODEL)			1 DC Fiber Squid				
DIPLEXER (QTY/MODEL)	2 Powerwave / LGP 21901						
DUPLEXER (QTY/MODEL)							
Antenna RET CONTROL UNIT (QTY/MODEL)							
DC BLOCK (QTY/MODEL)							
TMA/LNA (QTY/MODEL)	2 Powerwave LGP 21401 (DB - 850 Bypass)						
CURRENT INJECTORS FOR TMA (QTY/MODEL)	2 Polyphaser 1000860						
PDU FOR TMAS (QTY/MODEL)							
FILTER (QTY/MODEL)							
SQUID (QTY/MODEL)							
FIBER TRUNK (QTY/MODEL)							
DC TRUNK (QTY/MODEL)							
RRH - 700 band (QTY/MODEL)			1 RRUS-11				
RRH - 850 band (QTY/MODEL)							
RRH - 1900 band (QTY/MODEL)			1 RRUS-12+RRUS-A2				
RRH - AWS band (QTY/MODEL)							
RRH - WCS band (QTY/MODEL)							
Additional RRH #1 - any band (QTY/MODEL)							
Additional RRH #2 - any band (QTY/MODEL)							
Additional Component 1 (QTY/MODEL)							
Additional Component 2 (QTY/MODEL)							
Additional Component 3 (QTY/MODEL)							
Local Market Note 1	LTE 1900 A3-A4 & E - BWE- 1xBBU RRH ADD //Replace LTE 1900 Radio w/ RRUS-12 on existing LTE Antenna // Add XMU.						
Local Market Note 2							
Local Market Note 3	Baseband Config - 1 DUS + XMUDUS-1 7A:7B:7C:X1P1:X1P2:ACXMU-1 PA:_:PB:_:PC:_:AC:AB:_:_:_:_:_:_:D1E:D1D						

PORT SPECIFIC FIELDS	PORT NUMBER	USEID (CSSng)	USEID (Atoll)	ATOLL TXID	ATOLL CELL ID	TX/RX ?	TECHNOLOGY/FREQUENCY	ANTENNA ATOLL	ANTENNA GAIN	ELECTRICAL AZIMUTH	ELECTRICAL TILT	RRH LOCATION (Top/Bottom/Integrated/None)	FEEDERS TYPE	FEEDER LENGTH (feet)	RXAIT KIT MODULE?	TRIPLEXER or LLC (QTY)	TRIPLEXER or LLC (MODEL)	SCPA/MCPA MODULE?	HATCHPLATE POWER (Watts)	ERP (Watts)	Antenna RET Name	CABLE NUMBER	CABLE ID (CSSNG)
ANTENNA POSITION 1	PORT 1	4566.B.850.3G.1	4566.B.850.3G.1	CTV51922	CTV51922		UMTS 850	800 10121 @1950_840MHz_04DT	17.2	120	4	None	Andrew 1-5/8 (850)	165.042252	NO					770.9		9	
	PORT 3	4566.B.1900.3G.2	4566.B.1900.3G.2	CTU51928	CTU51928		UMTS 1900	800 10121 @1950_Xpol_2dt	17.5	120	2	None	Andrew 1-5/8 (850)	165.042252	RXAIT 1900					650.13		10	
	PORT 5	4566.B.1900.25G.1	4566.B.1900.25G.1	184P51922	184P51922		GSM 1900	800 10121 @1950_Xpol_7dt	16.45	120	7	None	Andrew 1-5/8 (850)	165.042252	RXAIT 1900				28.18	626.61		10	
ANTENNA POSITION 3	PORT 1	4566.B.700.4G.1	4566.B.700.4G.1	CTL05192_7B_1	CTL05192_7B_1		LTE 700	HPA-65R-BUU-H8_719MHz_04DT	16.39	170	4	TOP	FIBER	0	NO					1044.7202		13	
	PORT 3	4566.B.1900.4G.1	4566.B.1900.4G.1	CTL05192_9B_1_P	CTL05192_9B_1_P		LTE 1900	HPA-65R-BUU-H8_1948MHz_02DT	16.89	170	2	TOP	FIBER	0	NO					2233.5722		13	

Section 17C - FINAL SECTOR/CELL INFORMATION - SECTOR C

ANTENNA COMMON FIELDS	ANTENNA POSITION 1	ANTENNA POSITION 2	ANTENNA POSITION 3	ANTENNA POSITION 4	ANTENNA POSITION 5	ANTENNA POSITION 6	ANTENNA POSITION 7
ANTENNA MAKE - MODEL	800-10121		HPA-65R-BUU-H8				
ANTENNA VENDOR	Kathrein		CCI Antennas				
ANTENNA SIZE (H x W x D)	54.5X10.3X5.9		92.4X14.8X7.4				
ANTENNA WEIGHT	44.1		68				
AZIMUTH	240		290				
MAGNETIC DECLINATION							
RADIATION CENTER (feet)	78		78				
ANTENNA TIP HEIGHT	80						
MECHANICAL DOWNTILT	0		0				
FEEDER AMOUNT	2						
VERTICAL SEPARATION from ANTENNA ABOVE (TIP to TIP)							
VERTICAL SEPARATION from ANTENNA BELOW (TIP to TIP)							
HORIZONTAL SEPARATION from CLOSEST ANTENNA to LEFT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION from CLOSEST ANTENNA to RIGHT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION from ANOTHER ANTENNA (which antenna # / # of inches)							
Antenna RET Motor (QTY/MODEL)	2 Kathrein 860-10025						
SURGE ARRESTOR (QTY/MODEL)			1 DC Fiber Squid				
DIPLEXER (QTY/MODEL)	2 Powerwave / LGP 21901						
DUPLEXER (QTY/MODEL)							
Antenna RET CONTROL UNIT (QTY/MODEL)							
DC BLOCK (QTY/MODEL)							
TMA/LNA (QTY/MODEL)	2 Powerwave LGP 21401 (DB - 850 Bypass)						
CURRENT INJECTORS FOR TMA (QTY/MODEL)	2 Polyphaser 1000860						
PDU FOR TMAS (QTY/MODEL)							
FILTER (QTY/MODEL)							
SQUID (QTY/MODEL)							
FIBER TRUNK (QTY/MODEL)							
DC TRUNK (QTY/MODEL)							
RRH - 700 band (QTY/MODEL)			1 RRUS-11				
RRH - 850 band (QTY/MODEL)							
RRH - 1900 band (QTY/MODEL)			1 RRUS-12+RRUS-A2				
RRH - AWS band (QTY/MODEL)							
RRH - WCS band (QTY/MODEL)							
Additional RRH #1 - any band (QTY/MODEL)							
Additional RRH #2 - any band (QTY/MODEL)							
Additional Component 1 (QTY/MODEL)							
Additional Component 2 (QTY/MODEL)							
Additional Component 3 (QTY/MODEL)							
Local Market Note 1	LTE 1900 A3-A4 & E - BWE- 1xBBU RRH ADD //Replace LTE 1900 Radio w/ RRUS-12 on existing LTE Antenna // Add XMU.						
Local Market Note 2							
Local Market Note 3	Baseband Config - 1 DUS + XMUDUS-1 7A:7B:7C:X1P1:X1P2:ACXMU-1 PA:_:PB:_:PC:_:AC:AB:_:_:_:_:_:_:D1E:D1D						

PORT SPECIFIC FIELDS	PORT NUMBER	USEID (CSSng)	USEID (Atoll)	ATOLL TXID	ATOLL CELL ID	TX/RX ?	TECHNOLOGY/FREQUENCY	ANTENNA ATOLL	ANTENNA GAIN	ELECTRICAL AZIMUTH	ELECTRICAL TILT	RRH LOCATION (Top/Bottom/Integrated/None)	FEEDERS TYPE	FEEDER LENGTH (feet)	RXAIT KIT MODULE?	TRIPLEXER or LLC (QTY)	TRIPLEXER or LLC (MODEL)	SCPA/MCPA MODULE?	HATCHPLATE POWER (Watts)	ERP (Watts)	Antenna RET Name	CABLE NUMBER	CABLE ID (CSSNG)
ANTENNA POSITION 1	PORT 1	4566.C.850.3G.1	4566.C.850.3G.1	CTV51923	CTV51923		UMTS 850	800 10121 @850MHz_04DT	16.2	240	4	None	Andrew 1-5/8 (850)	165.042252	NO					533.33		17	
	PORT 3	4566.C.1900.3G.2	4566.C.1900.3G.2	CTU51929	CTU51929		UMTS 1900	800 10121 @1950_Xpol_2dt	18	240	2	None	Andrew 1-5/8 (850)	165.042252	RXAIT 1900					729.46		18	
	PORT 5	4566.C.1900.25G.1	4566.C.1900.25G.1	184P51923	184P51923		GSM 1900	800 10121 @1950_Xpol_7dt	16.45	240	7	None	Andrew 1-5/8 (850)	165.042252	RXAIT 1900				28.18	626.61		18	
ANTENNA POSITION 3	PORT 1	4566.C.700.4G.1	4566.C.700.4G.1	CTL05192_7C_1	CTL05192_7C_1		LTE 700	HPA-65R-BUU-H8_725MHz_09DT	15.6	290	9	TOP	FIBER	0	NO					1044.7202		21	
	PORT 3	4566.C.1900.4G.1	4566.C.1900.4G.1	CTL05192_9C_1_P	CTL05192_9C_1_P		LTE 1900	HPA-65R-BUU-H8_1948MHz_06DT	17.39	290	6	TOP	FIBER	0	NO					2233.5722		21	

Diagram - Sector	A	Diagram File Name - CT5192_A_B_C_BWE1900_Rev1.vsd					
Atoll Site Name -	CTV5192	Location Name -	WINDSOR LOCKS NORTH	Market -	CONNECTICUT	Market Cluster -	NEW ENGLAND
Comments:							

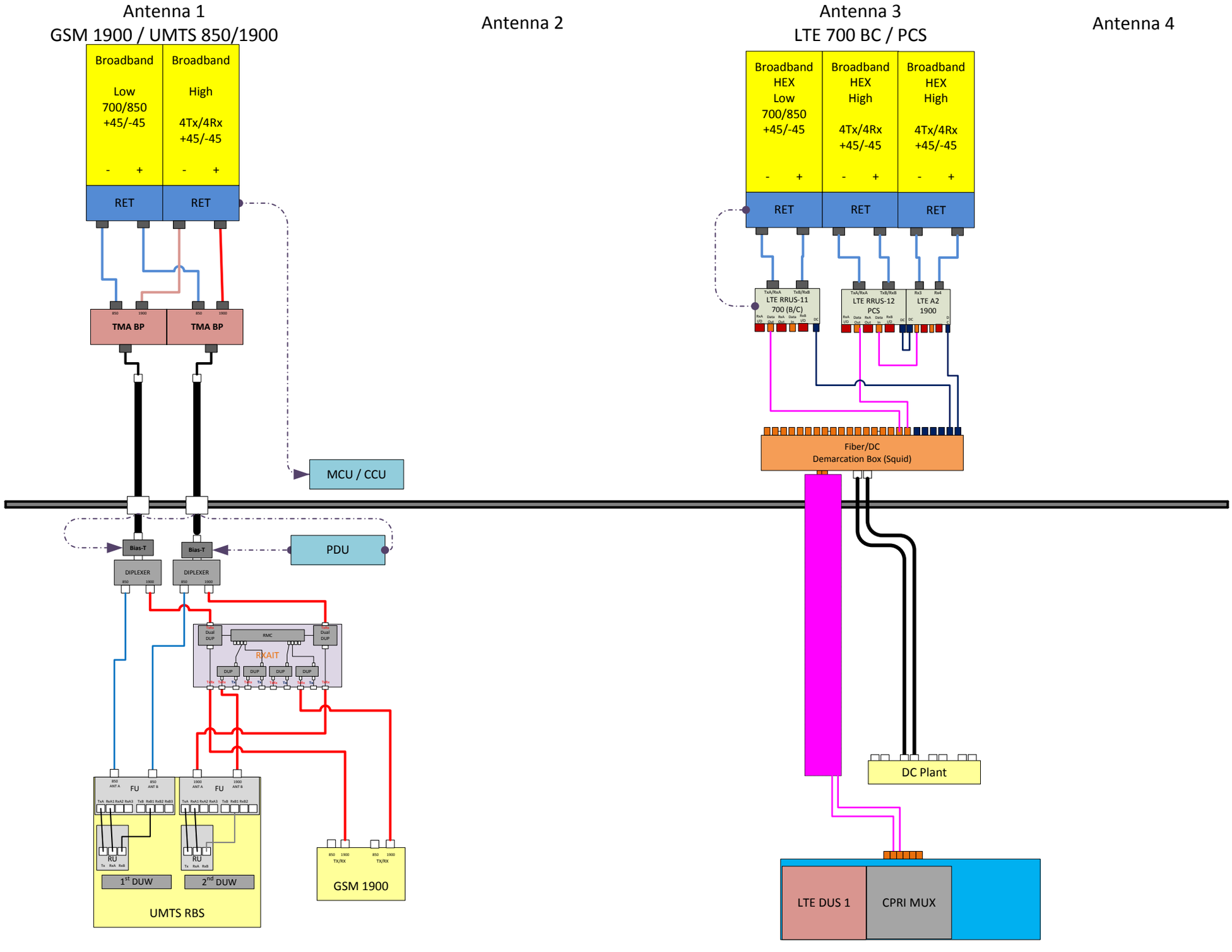


Diagram - Sector	B	Diagram File Name - CT5192_A_B_C_BWE1900_Rev1.vsd					
Atoll Site Name -	CTV5192	Location Name -	WINDSOR LOCKS NORTH	Market -	CONNECTICUT	Market Cluster -	NEW ENGLAND
Comments:							

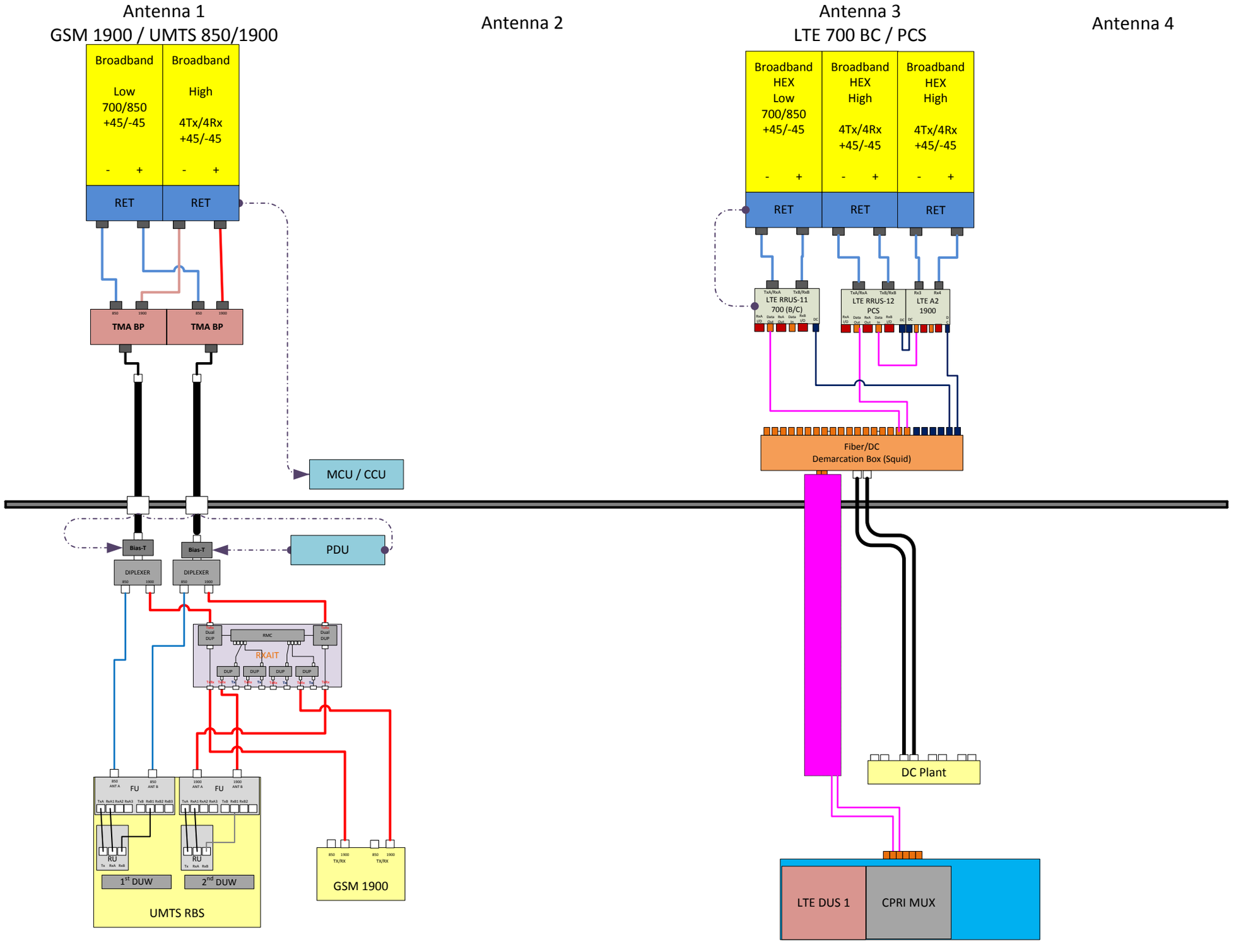
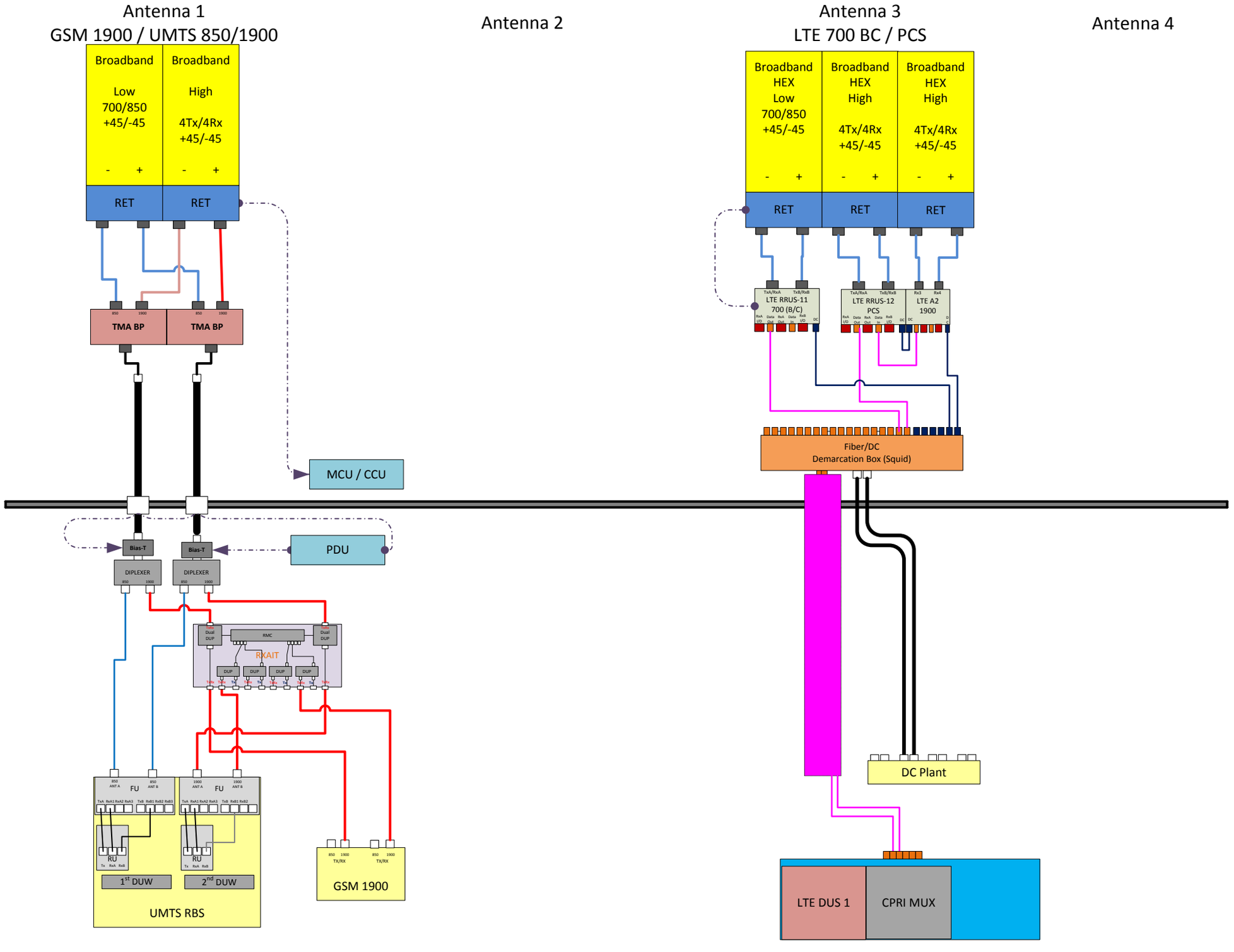
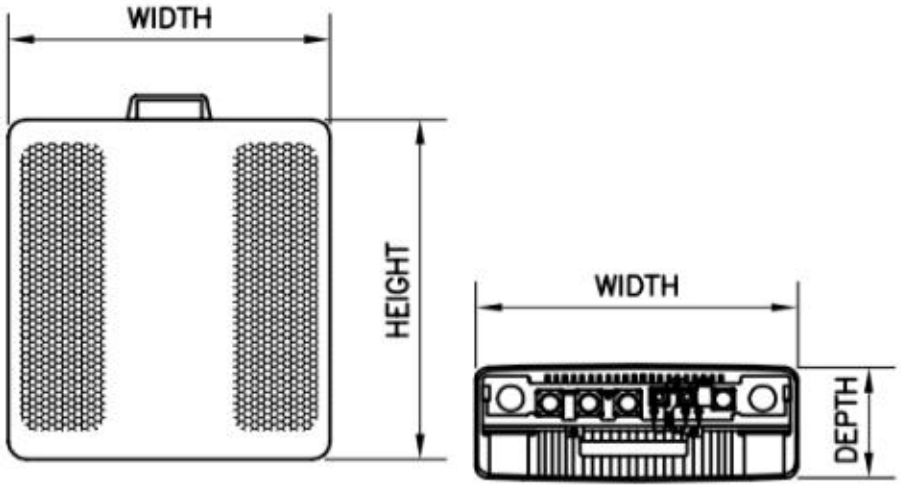


Diagram - Sector	C	Diagram File Name - CT5192_A_B_C_BWE1900_Rev1.vsd					
Atoll Site Name -	CTV5192	Location Name -	WINDSOR LOCKS NORTH	Market -	CONNECTICUT	Market Cluster -	NEW ENGLAND
Comments:							



WORKFLOW SUMMARY						
Date	FROM State / Status	FROM ATTUID	TO State / Status	TO ATTUID	Operation	Comments
09/02/2016	Preliminary / In Progress	mm093q	Preliminary / Submitted for Approval	RC475S	Promote	LTE Preliminary RFDS
09/12/2016	Preliminary / Submitted for Approval	RC475S	Preliminary / Approved	BG144B	Promote	
10/24/2016	Preliminary / Approved	BG144B	Final / RF Approval	OM636A	Promote	Needs Final



FRONT VIEW

BOTTOM VIEW

RRU (REMOTE RADIO UNIT)			
EQUIPMENT	DIMENSIONS	WEIGHT	CLEARANCES
MAKE: ERICSSON MODEL: RRUS 12	20.4"L x 18.5"W x 7.5"D	50 LBS.	ABOVE: 16" MIN. BELOW: 12" MIN. FRONT: 36" MIN.

NOTES:
1. CONTRACTOR TO COORDINATE FINAL EQUIPMENT MODEL SELECTION WITH AT&T CONSTRUCTION MANAGER PRIOR TO ORDERING.

9
C-2

ERICSSON RRUS 12 DETAIL

SCALE: 1" = 1'-0"

Radio Frequency Emissions Analysis Report

AT&T Existing Facility

Site ID: CT5192

Windsor Locks North
104 Prospect Hill Road
East Windsor, CT 6088

January 18, 2017

Centerline Communications Project Number: 950006-022

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**14.31 %**

January 18, 2017

AT&T Mobility – New England
Attn: John Benedetto, RF Manager
550 Cochituate Road
Suite 550 – 13&14
Framingham, MA 06040

Emissions Analysis for Site: **CT5192 – Windsor Locks North**

Centerline Communications, LLC ("Centerline") was directed to analyze the proposed AT&T facility located at **104 Prospect Hill Road, East Windsor, CT**, for the purpose of determining whether the emissions from the Proposed AT&T Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm2). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Population exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limits for the 700 and 850 MHz Bands are approximately 467 $\mu W/cm^2$ and 567 $\mu W/cm^2$ respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 2300 MHz (WCS) bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were performed for the proposed AT&T Wireless antenna facility located at **104 Prospect Hill Road, East Windsor, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since AT&T is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. All power values expressed and analyzed are maximum power levels expected to be used on all radios.

All emissions values for additional carriers were taken from the Connecticut Siting Council (CSC) active MPE database. Values in this database are provided by the individual carriers themselves

For each sector the following channel counts, frequency bands and power levels were utilized as shown in *Table 1*:

Technology	Frequency Band	Channel Count	Transmit Power per Channel (W)
UMTS	850 MHz	2	30
UMTS	1900 MHz (PCS)	2	30
GSM	1900 MHz (PCS)	2	30
LTE	700 MHz	2	60
LTE	1900 MHz (PCS)	2	60

Table 1: Channel Data Table

The following antennas listed in *Table 2* were used in the modeling for transmission in the 700 MHz, 850 MHz and 1900 MHz (PCS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
A	1	Kathrein 800-10121	88
A	2	CCI HPA-65R-BUU-H8	88
B	1	Kathrein 800-10121	88
B	2	CCI HPA-65R-BUU-H8	88
C	1	Kathrein 800-10121	88
C	2	CCI HPA-65R-BUU-H8	88

Table 2: Antenna Data

All calculations were done with respect to uncontrolled / general population threshold limits.

RESULTS

Per the calculations completed for the proposed AT&T configurations *Table 3* shows resulting emissions power levels and percentages of the FCC's allowable general population limit.

Antenna ID	Antenna Make / Model	Frequency Bands	Antenna Gain (dBd)	Channel Count	Total TX Power (W)	ERP (W)	MPE %
Antenna A1	Kathrein 800-10121	850 MHz / 1900 MHz (PCS)	11.45 / 14.35	6	180	4,105.06	2.54
Antenna A2	CCI HPA-65R-BUU-H8	700 MHz / 1900 MHz (PCS)	13.15 / 14.95	4	240	6,229.75	4.84
						Sector A Composite MPE%	**7.38**
Antenna B1	Kathrein 800-10121	850 MHz / 1900 MHz (PCS)	11.45 / 14.35	6	180	4,105.06	2.54
Antenna B2	CCI HPA-65R-BUU-H8	700 MHz / 1900 MHz (PCS)	13.15 / 14.95	4	240	6,229.75	4.84
						Sector B Composite MPE%	**7.38**
Antenna C1	Kathrein 800-10121	850 MHz / 1900 MHz (PCS)	11.45 / 14.35	6	180	4,105.06	2.54
Antenna C2	CCI HPA-65R-BUU-H8	700 MHz / 1900 MHz (PCS)	13.15 / 14.95	4	240	6,229.75	4.84
						Sector C Composite MPE%	**7.38**

Table 3: AT&T Emissions Levels

The Following table (*table 4*) shows all additional carriers on site and their MPE% as recorded in the CSC active MPE database for this facility along with the newly calculated maximum AT&T MPE contributions per this report. FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. For this site, all three sectors have the same configuration yielding the same results on all three sectors. *Table 5* below shows a summary for each AT&T Sector as well as the composite MPE value for the site.

Site Composite MPE%	
Carrier	**MPE%**
AT&T – Max Sector Value	**7.38 %**
Yankee Gas (on Adjacent Tower)**	3.40 %
CL&P (on Adjacent Tower)**	3.53 %
Site Total MPE %:	**14.31 %**

*Table 4: All Carrier MPE Contributions (** signifies carriers on lattice tower on property adjacent to water tank)*

AT&T Sector A Total:	7.38 %
AT&T Sector B Total:	7.38 %
AT&T Sector C Total:	7.38 %
Site Total:	14.31 %

Table 5: Site MPE Summary

Per FCC OET 65, carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. *Table 6* below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated AT&T sector(s). For this site, all three sectors have the same configuration yielding the same results on all three sectors.

AT&T _ Frequency Band / Technology	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Frequency (MHz)	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
AT&T 850 MHz UMTS	2	418.91	88	4.48	850 MHz	567	0.79%
AT&T 1900 MHz (PCS) UMTS	2	816.81	88	8.73	1900 MHz (PCS)	1000	0.87%
AT&T 1900 MHz (PCS) GSM	2	816.81	88	8.73	1900 MHz (PCS)	1000	0.87%
AT&T 700 MHz LTE	2	1,239.23	88	13.25	700 MHz	467	2.84%
AT&T 1900 MHz (PCS) LTE	2	1,875.65	88	20.06	1900 MHz (PCS)	1000	2.01%
						Total:	7.38%

Table 6: AT&T Maximum Sector MPE Power Values

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the AT&T facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

AT&T Sector	Power Density Value (%)
Sector A:	7.38 %
Sector B:	7.38 %
Sector C:	7.38 %
AT&T Maximum Total (per sector):	7.38 %
Site Total:	14.31 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **14.31 %** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

Scott Heffernan
RF Engineering Director
Centerline Communications, LLC
95 Ryan Drive, Suite 1
Raynham, MA 02767