



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

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

E-Mail: siting.council@ct.gov

Internet: ct.gov/csc

Daniel F. Caruso
Chairman

May 5, 2009

Carrie L. Larson, Esq.
Pullman & Comley, LLC
90 State House Square
Hartford, CT 06103-3702

RE: **EM-POCKET-047-090414** – Youghiogheny Communications-Northeast, LLC d/b/a Pocket Communications notice of intent to modify an existing telecommunications facility located at 15 Chamberlain Road, East Windsor, Connecticut.

Dear Attorney Larson:

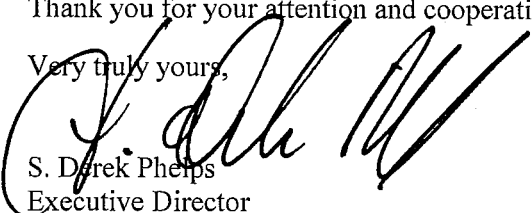
The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated April 13, 2009, including the placement of all necessary equipment and shelters within the tower compound. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Thank you for your attention and cooperation.

Very truly yours,


S. Derek Phelps
Executive Director

SDP/CDM/laf

c: The Honorable Denise Sabotka Menard, First Selectman, Town of East Windsor
Laurie Whitten, Town Planner, Town of East Windsor
Kenneth C. Baldwin, Esq., Robinson & Cole LLP

CARRIE L. LARSON
90 State House Square
Hartford, CT 06103-3702
p (860) 424-4312
f (860) 424-4370

EM-POCKET-047-090414

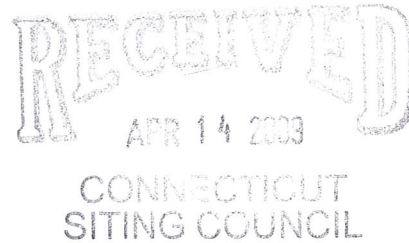
www.pullcom.com

April 13, 2009

ORIGINAL

Via Federal Express

S. Derek Phelps, Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051



**Re: Notice of Exempt Modification
Verizon Wireless Telecommunications Facility
15 Chamberlain Road, East Windsor, Connecticut**

Dear Mr. Phelps:

Youghiogheny Communications-Northeast, LLC, doing business as Pocket Communications (“Pocket”), intends to install antennas and appurtenant equipment at the existing 124-foot out of service water tank facility owned by Verizon Wireless and located at 15 Chamberlain Road, East Windsor, Connecticut (“Facility”). Pocket Communications provides prepaid, flat rate wireless voice and data services to more than a quarter of a million subscribers. Pocket is licensed by the Federal Communications Commission (FCC) to provide PCS wireless telecommunications service in the State of Connecticut, which includes the area to be served by the proposed installation. This installation constitutes an exempt modification pursuant to the Public Utility Environmental Standards Act, Connecticut General Statutes Section 16-50g et. seq. (PUESA), and Section 16-50j-72(b)(2) of the Regulations of the Connecticut State Agencies adopted pursuant to PUESA. In accordance with R.C.S.A. Section 16-50j-73, a copy of this notice has been sent to Denise Menard, First Selectman, Town of East Windsor.

The existing Facility consists of a 124-foot water tank capable of supporting multiple carriers within a fenced compound. The water tank is out of service and is controlled by Verizon Wireless, with exclusive rights to the tank and the ground space. This water tank has already been established as being within the jurisdiction of the Siting Council. The coordinates for the Facility are **Lat: 41°-53’-52” and Long: 72°-33’-09”**. The water tank is located in the “Scantic” area, in the central portion of East Windsor. The Facility is roughly 50 feet west of Chamberlain Road and roughly 600 feet north of Apothecaries Road. The Facility is roughly 3 miles east of Route 5 and roughly 4.7 miles west of Route 83 (see Site Map, attached as Exhibit A). The tower currently supports Verizon antennas at the one hundred sixteen foot level (116’) centerline AGL (above ground level); and Sprint antennas at the approximate one hundred six foot level (106’) AGL. Sprint’s elevation and Pocket’s proposed elevation are the same, as the antennas are mounted to the railing of the catwalk on the tower. Pocket proposes to install three

Page 2

APXV18-2065S-C antennas at the one hundred six foot level (106') AGL, and a Nortel CDMA Micro BTS 3231 cabinet, mounted on an "H-Frame," contained within a six foot by six foot (6'-0" x 6'-0") lease area. A small GPS antenna will be mounted to the antenna mount pipe on water tower (see detail 4/05, Exhibit B). An ice bridge will run from the lease area to the tower. Utilities will be run via a proposed underground conduit from existing utility sources within the compound (See Design Drawings and Equipment Specifications, attached as Exhibits B and C respectively). To accommodate Pocket's equipment on a temporary basis, a mobile, EPA approved generator and small microwave dish antenna (approximately 14" by 14") will be used at the site to provide electricity until permanent power can be established by the utility provider. Pocket anticipates that the temporary generator will be in use for a maximum of eight weeks from the time of approval. The specifications on this proposed temporary generator and microwave dish are included in the Equipment Specifications, attached as Exhibit C. Due to the temporary use and low emissions from the generator, no permit is required from the Department of Environmental Protection. Pocket would propose to refuel the generator every 48 hours.

For the following reasons, the proposed modifications to the Chamberlain Road Facility meet the exempt modification criteria set forth in R.C.S.A. Section 16-50j-72(b)(2):

1. The proposed modification will not increase the height of the tower as Pocket's antennas will be installed at a center line height of approximately 106 feet.
2. The installation of Pocket's equipment and shelter will not require an extension of the site boundaries.
3. The proposed modifications will not increase the noise levels at the existing Facility by six decibels or more.
4. The operation of the additional antennas will not increase the total radio frequency (RF) power density, measured at the site boundary, to a level at or above the standard adopted by the Connecticut Department of Environmental Protection as set forth in Section 22a-162 of the Connecticut General Statutes and MPE limits established by the Federal Communications Commission. The worst-case RF power density calculations for the proposed Pocket antennas would be 22.93% of the FCC standard (see general power density calculations table, attached as Exhibit D).

Also attached, Exhibit E, is a structural analysis confirming that the tower can support the existing and proposed antennas and associated equipment.

For the foregoing reasons, Pocket respectfully submits that the proposed antenna installation and equipment at the East Windsor Facility constitutes an exempt modification under R.C.S.A. Section 16-50j-72(b)(2)

Page 3

Respectfully Submitted,

A handwritten signature in cursive script, appearing to read 'C. Larson', with a long horizontal flourish extending to the right.

Carrie L. Larson

cc: Denise Menard, First Selectman, Town of East Windsor
Verizon Wireless, underlying property owner
Kenneth Baldwin, Esq.

Exhibit A

Site Map

Pocket Site HFCT1506A

Chamberlain Road

East Windsor, Connecticut

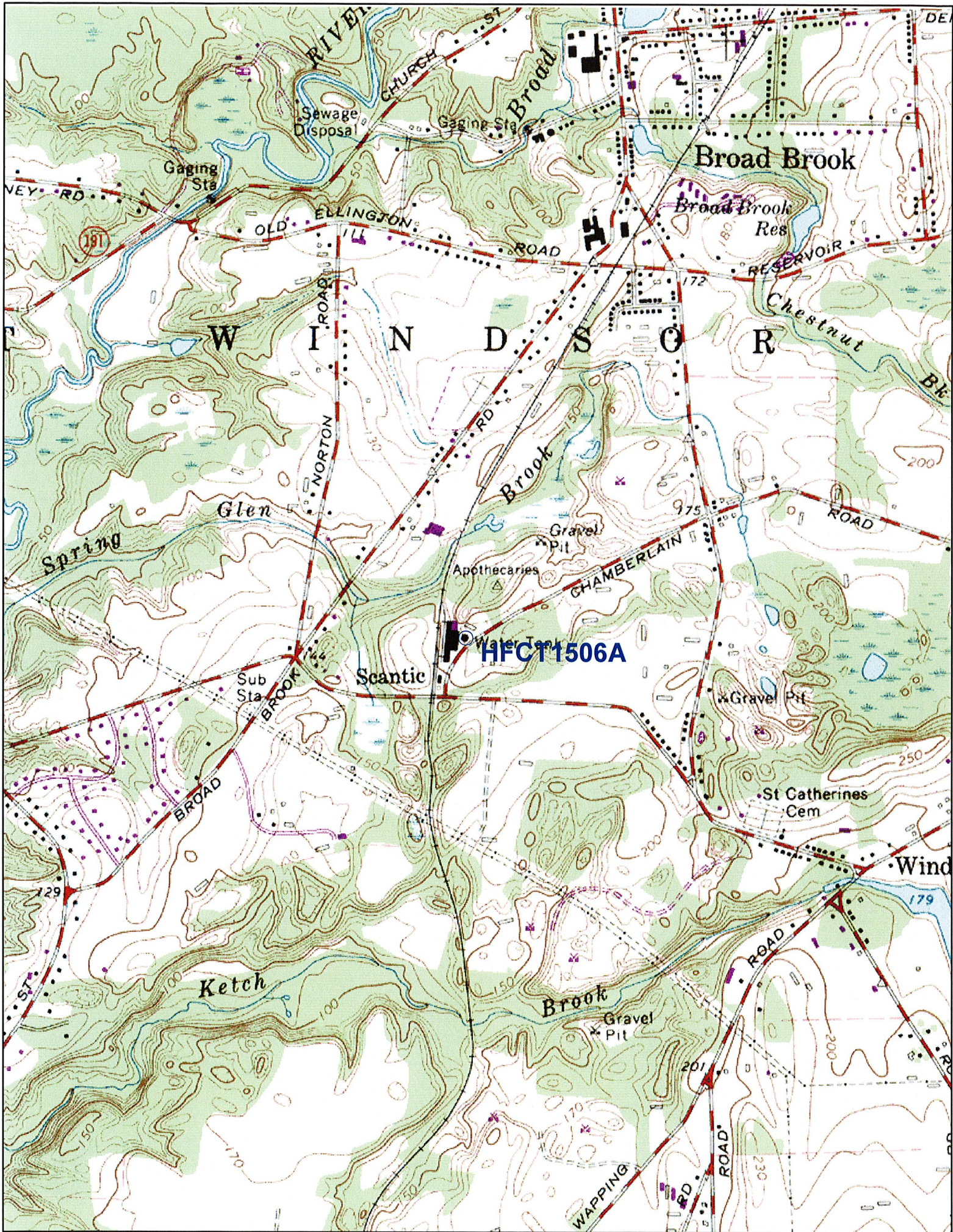


Exhibit B

Design Drawings

Pocket Site HFCT1506A

Chamberlain Road

East Windsor, Connecticut



HFCT1506A 15 CHAMBERLAIN ROAD WATER TANK

PROJECT INFORMATION

TOWER OWNER: VERIZON WIRELESS
99 EAST RIVER DRIVE
EAST HARTFORD, CT 06016

OWNER SITE ID#: N/A

APPLICANT: YOLCHIO-CHENY COMMUNICATIONS -
NORTHEAST LLC
2819 LINDEN LANE
ANTON, NY 12020

SITE ADDRESS: 15 CHAMBERLAIN ROAD
EAST WINDSOR, CT 06016

COUNTY: HARTFORD

LATITUDE: 41.89795

LONGITUDE: -72.55209

STRUCTURE HEIGHT: 124' AGL

ZONING CLASSIFICATION: N/A

ZONING JURISDICTION: CONNECTICUT SITING COUNCIL

POWER COMPANY: CL&P

TELEPHONE COMPANY: AT&T

DESIGN FIRM: URS CORPORATION AES
500 ENTERPRISE DRIVE, SUITE 3B
HARTFORD, CT 06183
PHONE: 860-529-8882

DRAWING INDEX

01	TITLE SHEET	0
02	SITE PLAN, DETAIL AND NOTES	0
03	TANK ELEVATION, ANTENNA PLAN AND DETAILS	0
03A	ANTENNA DETAILS	0
04	GROUNDING DETAILS	0
05	GROUNDING PLAN AND DETAILS	0
06	ELECTRICAL DETAILS	0

STRUCTURAL REVIEW

A STRUCTURAL ANALYSIS HAS NOT BEEN PERFORMED FOR THE PREPARATION OF THESE PLANS. AS OF THE ISSUANCE OF THESE DRAWINGS, THE EXISTING WATER TANK HAS NOT BEEN REPAIRED OR MODIFIED. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS PRIOR TO OCCUR ON THIS WATER TANK PRIOR TO THE ISSUANCE OF A PASSING STRUCTURAL ANALYSIS. A COPY OF THE ANALYSIS SHALL BE FORWARDED TO URS CORPORATION. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS AND SHALL BE PERFORMED PRIOR TO ANY WORK UNDER THIS CONTRACT BEING PERFORMED.

APPROVALS

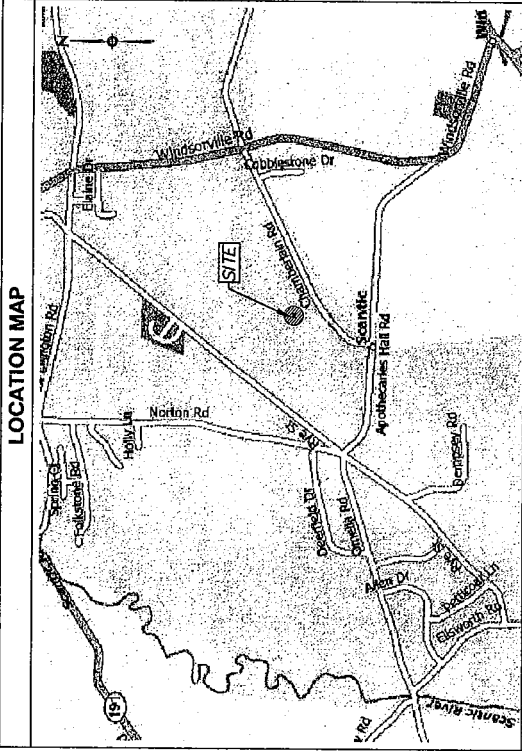
REAL ESTATE _____

RF _____

OPS/CONSTRUCTION _____

LEGAL/COMPLIANCE _____

NET DESIGN _____



DRIVING DIRECTIONS

FROM HARTFORD:
TAKE I-81 NORTH TO EXIT 4, THEN LEFT ON HIGHWAY 5 FOR 6.1 MILES TO RIGHT ON HIGHWAY 191 (PHELPS RD.). TAKE RIGHT ON CEMETERY ROAD TO LEFT ON CHAMBERLAIN ROAD.
APPOTHECARIES HALL ROAD TO LEFT ON CHAMBERLAIN ROAD.

APPLICABLE BUILDING CODES AND STANDARDS

CONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

- 2003 INTERNATIONAL BUILDING CODE
- 2003 INTERNATIONAL PLUMBING CODE
- 2003 INTERNATIONAL MECHANICAL CODE
- 2003 INTERNATIONAL ELECTRICAL CODE
- 2005 CONNECTICUT SUPPLEMENT
- ELECTRICAL CODE:
- 2005 NATIONAL ELECTRICAL CODE
- CONNECTICUT STATE FIRE SAFETY CODE
- 2003 INTERNATIONAL FIRE CODE

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

- AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, ASD, WITH EDITION
- NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 709 - STRUCTURAL STANDARD FOR STRUCTURAL STEEL TOWER AND ANTENNA SUPPORTING STRUCTURES
- TIA 607 COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS

INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM

IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC EQUIPMENT

IEEE C82.41, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND "HIGH SYSTEM EXPOSURE")

TELECORDIA GR-1275 GENERAL INSTALLATION REQUIREMENTS

TELECORDIA GR-1503 COAXIAL CABLE CONNECTIONS

ANSI T1.311, FOR TELECOM - DC POWER SYSTEMS - TELECOM, ENVIRONMENTAL PROTECTION FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

SITE NOTES

- THIS SITE IS UNMANNED AND IS RESTRICTED TO OUTDOOR EQUIPMENT. IT WILL BE USED FOR THE PROVISION OF RADIO SIGNALS FOR THE PURPOSE OF PROVIDING PUBLIC CELLULAR SERVICE.
- POCKET COMMUNICATIONS CERTIFIES THAT THIS TELEPHONE EQUIPMENT FACILITY WILL BE SERVICED ONLY BY POCKET COMMUNICATIONS EMPLOYEES AND THE WORK ASSOCIATED WITH ANY EQUIPMENT CANNOT BE PERFORMED BY HANDICAPPED PERSONS. THIS FACILITY WILL BE MAINTAINED ONLY BY SERVICE PERSONNEL FOR REPAIR PURPOSES ONLY. THIS FACILITY IS NOT TO BE USED BY THE AMERICANS WITH DISABILITIES ACT (ADA) APPENDIX B, SECTION 4.11.1(5)(B).
- NO POTABLE WATER SUPPLY IS TO BE PROVIDED AT THIS LOCATION.
- NO WASTE WATER WILL BE GENERATED AT THIS LOCATION.
- POCKET COMMUNICATIONS MAINTENANCE CREW (TYPICALLY ONE PERSON) WILL MAKE AN AVERAGE OF ONE TRIP PER MONTH AT ONE HOUR PER VISIT.

URS CORPORATION
1000 WEST 10TH AVENUE
DENVER, CO 80202
TEL: 303.733.1000
WWW.URS-CORP.COM

PROJECT: HFCT1506A, 15 CHAMBERLAIN ROAD
DATE: 02-27-09
REVISIONS: 01-28-09 ISSUED FOR CONSTRUCTION

01

CALL BEFORE YOU DIG
FOR CT 1-800-952-4455

STATE OF CONNECTICUT
REGISTERED PROFESSIONAL ENGINEER
NO. 10000
JCF

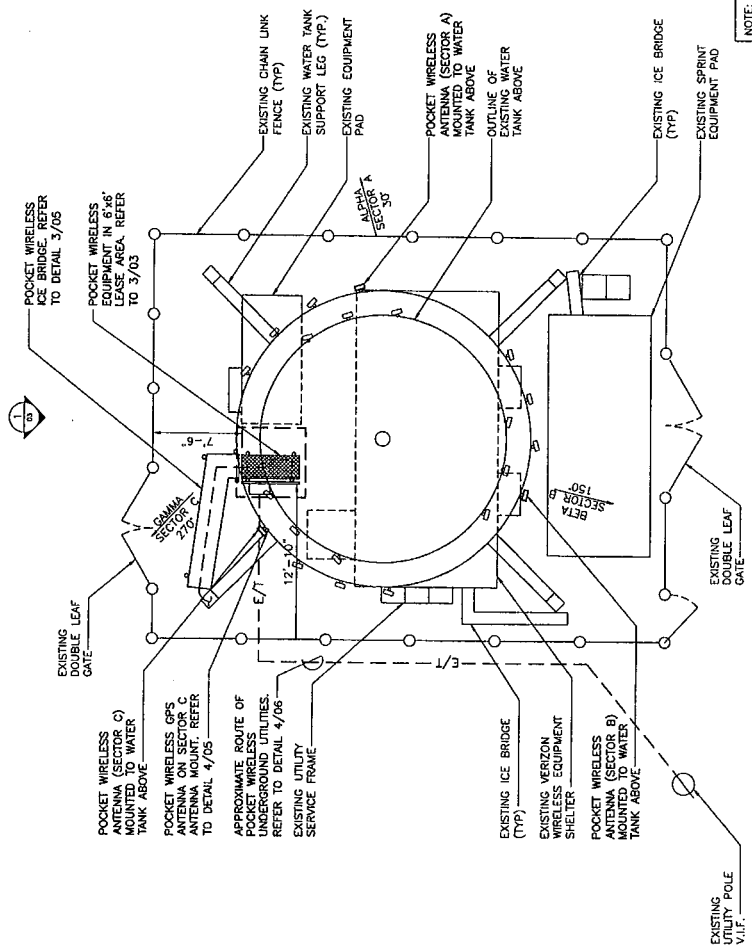
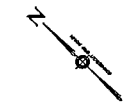
CONSTRUCTION NOTES

1. FIELD VERIFICATION: CONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK. POCKET COMMUNICATIONS ANTENNA SHALL BE INSTALLED.
2. COORDINATION OF WORK: CONTRACTOR SHALL COORDINATE OF WORK AND PROCEDURES WITH POCKET COMMUNICATIONS.
3. DISTURBED AREAS: CONTRACTOR SHALL RESTORE DISTURBED AREAS TO ORIGINAL CONDITION BY CONTRACTOR.

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
CONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION)
OWNER - POCKET COMMUNICATIONS
OEM - ORIGINAL EQUIPMENT MANUFACTURER
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND TO VERIFY THE ACCURACY OF THE INFORMATION PROVIDED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR, THE ENGINEER, THE CONSTRUCTION MANAGER AND THE OWNER.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF THE PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.
4. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, UNLESS OTHERWISE SPECIFIED.
5. UNLESS OTHERWISE SPECIFIED, ALL MATERIALS SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT APPURTENANCES, AND LABOR NECESSARY TO COMPLETE THE INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
7. CONTRACTOR SHALL REFERENCE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, AND GROUNDING CABLES AS SHOWN ON THE SITE PLAN.

8. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
9. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL DEBRIS AND WASTE MATERIALS SUCH AS CROWN CABLES AND OTHER ITEMS REMOVED FROM THE CELL SITE. ALL DEBRIS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
10. CONTRACTOR TO OBTAIN REQUIRED NOTICE TO PROCEED DOCUMENTS FROM THE TANK OWNER BEFORE COMMENCING CONSTRUCTION.



SITE PLAN INFORMATION

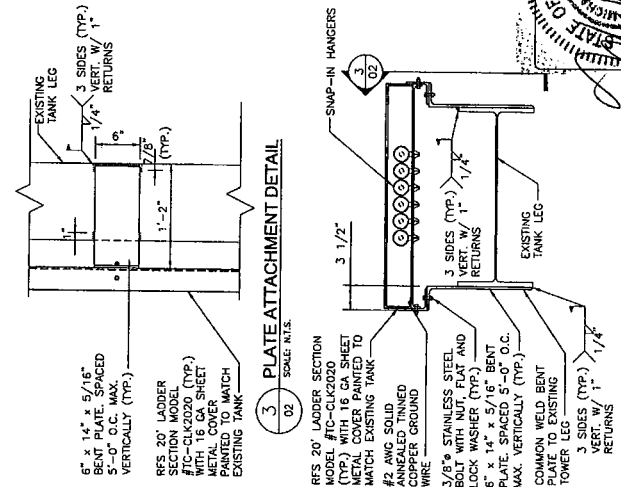
THIS SITE PLAN DRAWING WAS COMPILED FROM DATA PROVIDED BY THE CLIENT. THESE DATA ARE THE BEST AVAILABLE EXISTING DRAWINGS OF THE SUBJECT AREA.

1 SITE PLAN
02 SCALE: N.T.S.



2 VERTICAL CABLE SUPPORT DETAIL
02 SCALE: N.T.S.

3 PLATE ATTACHMENT DETAIL
02 SCALE: N.T.S.



NO.	DATE	REVISIONS
0	03-20-09	ISSUED FOR CONSTRUCTION

POCKET
SMART WIRELESS

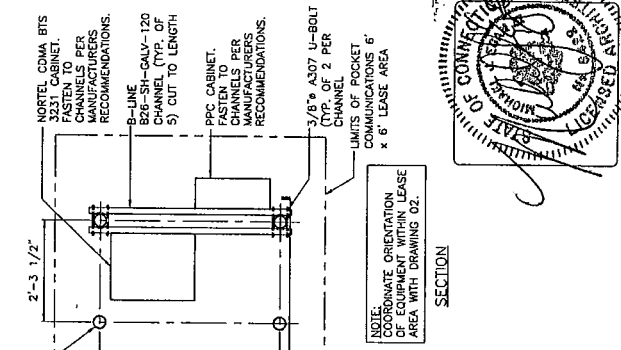
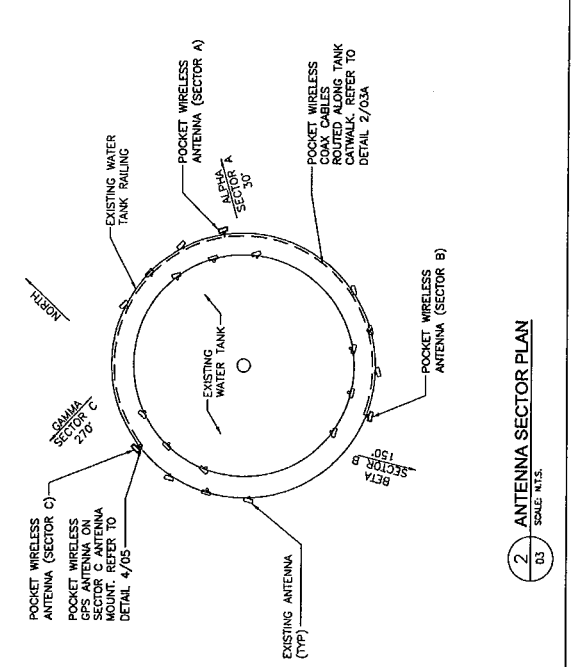
PROJECT: HFC11506A, 15 CHAMBERLAIN ROAD

SHEET: TANK ELEVATION, ANTENNA PLAN AND DETAILS

THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF SMART WIRELESS. IT IS TO BE USED ONLY IN CONNECTION WITH THE PROJECT AND NOT REPRODUCED WITHOUT THE WRITTEN PERMISSION OF SMART WIRELESS CORPORATION.

URS
300 ENTERPRISE DRIVE
ANN ARBOR, MI 48106
TEL: 734.769.0000
WWW.URS.COM

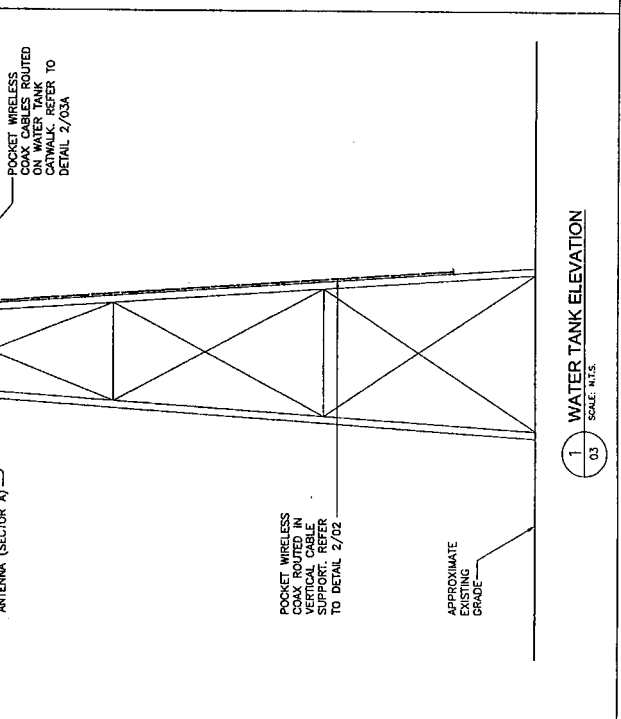
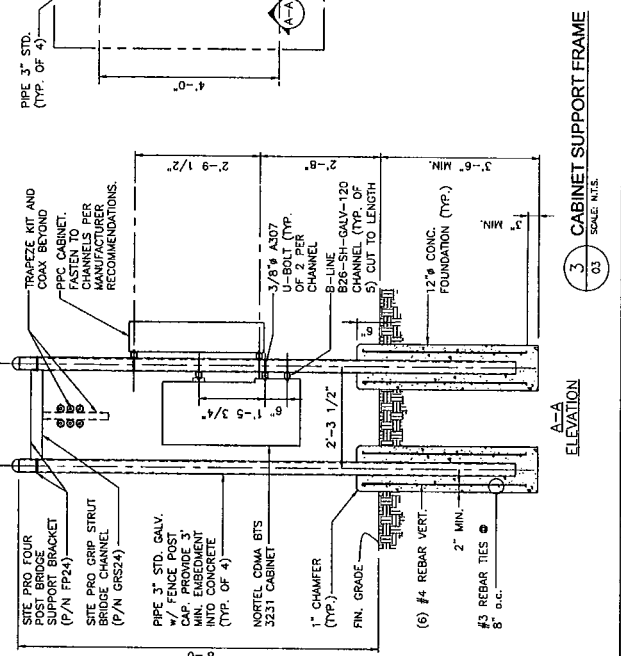
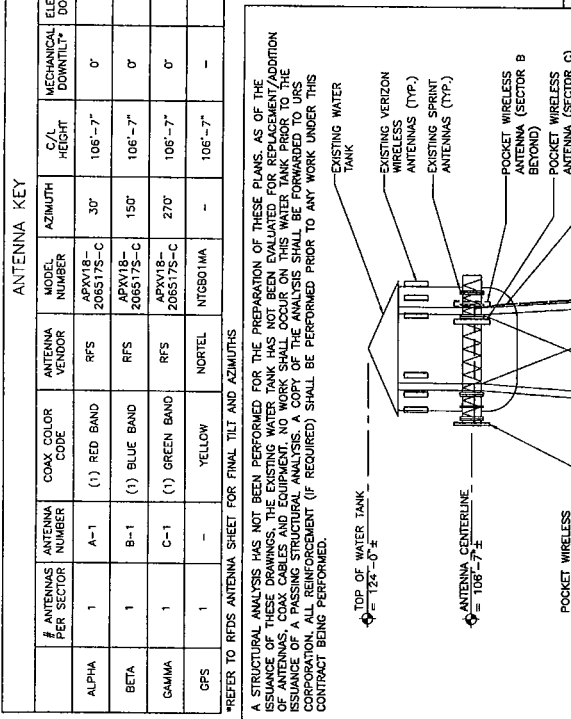
DATE: 03-21-09
DRAWN BY: JCF
CHECKED BY: JCF
PROJECT NUMBER: 1069-36923989
SHEET NUMBER: 03



ANTENNA KEY

# ANTENNAS PER SECTOR	ANTENNA NUMBER	COAX COLOR CODE	ANTENNA VENDOR	MODEL NUMBER	AZIMUTH	C/L HEIGHT	MECHANICAL DOWN TILT*	ELECTRICAL DOWN TILT*	COAX SIZE	COAX PER ANTENNA	COAX MANUFACTURER
1	A-1	(1) RED BAND	RFS	APXV18-206517S-C	30°	106'-7"	0°	0°	1 5/8"	2 @ 150'	RFS
1	B-1	(1) BLUE BAND	RFS	APXV18-206517S-C	150°	106'-7"	0°	0°	1 5/8"	2 @ 175'	RFS
1	C-1	(1) GREEN BAND	RFS	APXV18-206517S-C	270°	106'-7"	0°	0°	1 5/8"	2 @ 130'	RFS
1	-	YELLOW	NORTEL	NTGB01MA	-	106'-7"	-	-	1/2"	1 @ 130'	RFS

- TANK NOTES:**
- FOR DETAILED TANK INFORMATION, REFER TO THE TANK DRAWINGS. THE TANK SHOWN ON THIS SHEET IS SHOWN FOR GENERAL CONFIGURATION PURPOSES ONLY.
 - ANTENNA CONFIGURATION IS SUBJECT TO CHANGE. VERIFY ANTENNA HEIGHT, DOWN-TILT, AND AZIMUTH WITH PROJECT MANAGER PRIOR TO CONSTRUCTION.
- ANTENNA NOTES:**
- ALL COAX SHALL BE COLOR CODED AT THE ANTENNA AND AT THE EQUIPMENT CABINET.
 - INSURE COAX BANDS REMAIN TRANSPARENT TO THE ANTENNAS.
 - PRIOR TO ORDERING ANY ANTENNAS OR COAX, CONTRACTOR SHALL CONTACT POCKETS FOR ANTENNA MANAGER AND OBTAIN APPROVAL FOR ANTENNA CONFIGURATION. CONTRACTOR IS SOLELY RESPONSIBLE FOR THIS COORDINATION.
 - ANTENNA CONFIGURATION IS SUBJECT TO CHANGE. VERIFY ANTENNA HEIGHT, DOWN-TILT, AND AZIMUTH WITH PROJECT MANAGER PRIOR TO CONSTRUCTION.



REFER TO RFS ANTENNA SHEET FOR FINAL TILT AND AZIMUTHS

A STRUCTURAL ANALYSIS HAS NOT BEEN PERFORMED FOR THE PREPARATION OF THESE PLANS. AS OF THE ISSUANCE OF THESE DRAWINGS, THE EXISTING WATER TANK HAS NOT BEEN EVALUATED FOR REPLACEMENT/ADDITION OF ANTENNAS, COAX CABLES AND EQUIPMENT. NO WORK SHALL OCCUR ON THIS WATER TANK PRIOR TO THE ISSUANCE OF A PASSING STRUCTURAL ANALYSIS. A COPY OF THE ANALYSIS SHALL BE FORWARDED TO URS UPON REQUEST. ANY STRUCTURAL REPAIR OR REPLACEMENT (IF REQUIRED) SHALL BE PERFORMED PRIOR TO ANY WORK UNDER THIS CONTRACT BEING PERFORMED.

POCKET WIRELESS ANTENNA (SECTOR A)
POCKET WIRELESS ANTENNA (SECTOR B)
POCKET WIRELESS ANTENNA (SECTOR C)
POCKET WIRELESS ANTENNA (SECTOR D)
POCKET WIRELESS ANTENNA (SECTOR E)
POCKET WIRELESS ANTENNA (SECTOR F)
POCKET WIRELESS ANTENNA (SECTOR G)
POCKET WIRELESS ANTENNA (SECTOR H)
POCKET WIRELESS ANTENNA (SECTOR I)
POCKET WIRELESS ANTENNA (SECTOR J)
POCKET WIRELESS ANTENNA (SECTOR K)
POCKET WIRELESS ANTENNA (SECTOR L)
POCKET WIRELESS ANTENNA (SECTOR M)
POCKET WIRELESS ANTENNA (SECTOR N)
POCKET WIRELESS ANTENNA (SECTOR O)
POCKET WIRELESS ANTENNA (SECTOR P)
POCKET WIRELESS ANTENNA (SECTOR Q)
POCKET WIRELESS ANTENNA (SECTOR R)
POCKET WIRELESS ANTENNA (SECTOR S)
POCKET WIRELESS ANTENNA (SECTOR T)
POCKET WIRELESS ANTENNA (SECTOR U)
POCKET WIRELESS ANTENNA (SECTOR V)
POCKET WIRELESS ANTENNA (SECTOR W)
POCKET WIRELESS ANTENNA (SECTOR X)
POCKET WIRELESS ANTENNA (SECTOR Y)
POCKET WIRELESS ANTENNA (SECTOR Z)

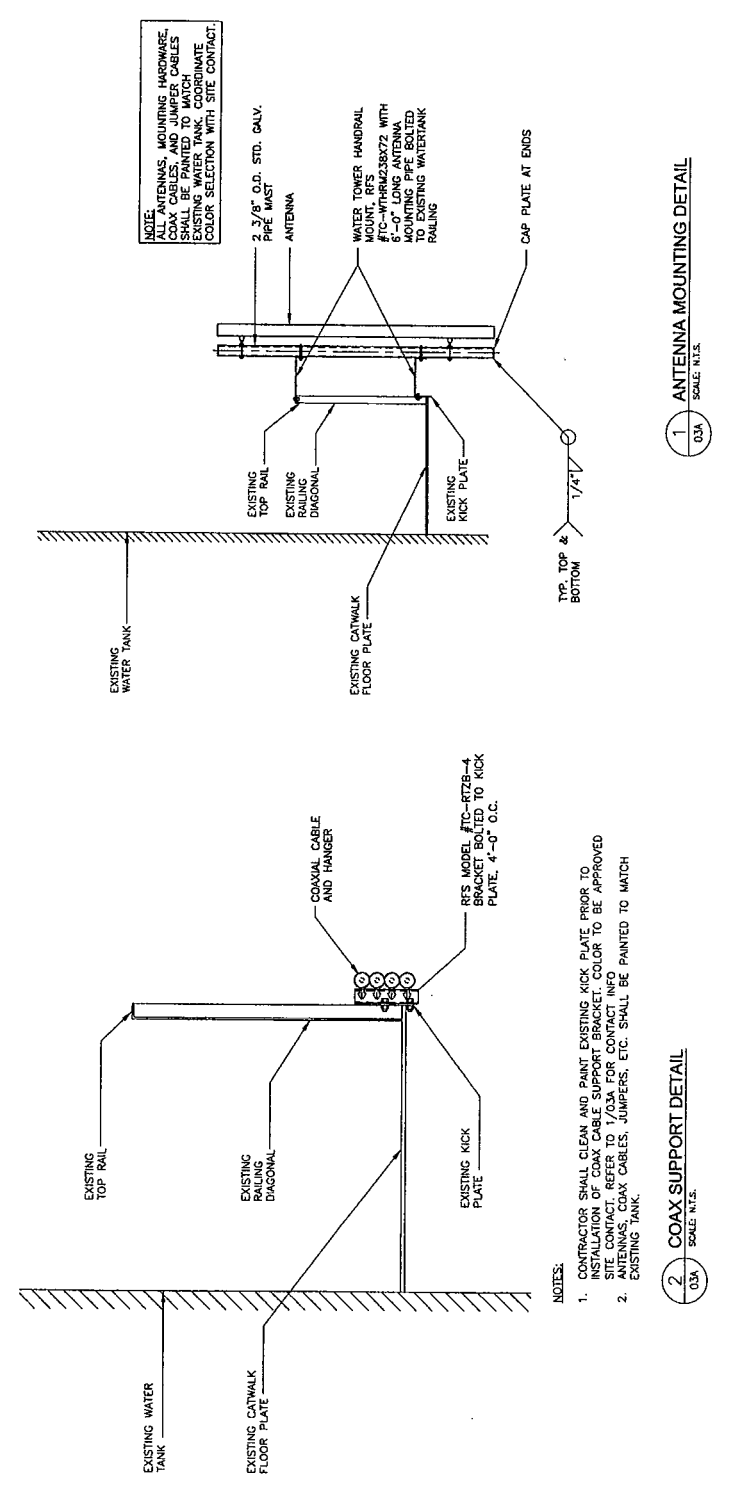
NO.	DATE	REVISIONS
0	02-10-09	ISSUED FOR CONSTRUCTION

PROJECT: HFCT1906A, 15 CHAMBERLAIN ROAD
 SHEET: ANTENNA AND COAX DETAILS
 DRAWN BY: JCF
 CHECKED BY: JCF
 DATE: 02-27-09
 PROJECT NUMBER: P-01069-36923989
 DRAWING NUMBER: 03A

URS

URS CORPORATION
 10000 ROCKY HILL CT, SUITE 100
 ROCKY HILL, CT 06156
 PHONE: 860-514-4000
 FAX: 860-514-4001
 WWW.URS.COM

STATE OF CONNECTICUT
 REGISTERED PROFESSIONAL ENGINEER
 LICENSE NO. 10000
 EXPIRES 12/31/09

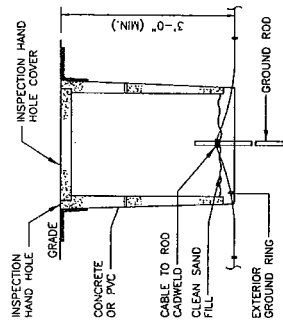


NOTE:
 ALL ANTENNAS, MOUNTING HARDWARE,
 COAX CABLES, AND JUMPER CABLES
 SHALL BE PAINTED TO MATCH
 EXISTING WATER TANK COORDINATE
 COLOR SELECTION WITH SITE CONTRACT.

1 ANTENNA MOUNTING DETAIL
 0.3X SCALE: N.T.S.

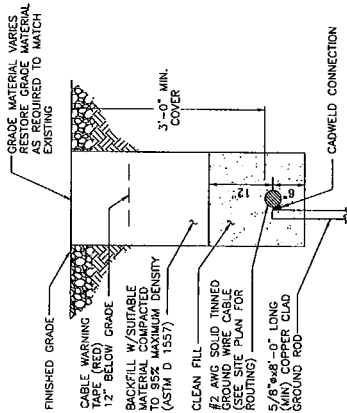
- NOTES:
- CONTRACTOR SHALL CLEAN AND PAINT EXISTING KICK PLATE PRIOR TO BRACKET INSTALLATION. COORDINATE COLOR TO BE APPROVED BY ARCHITECT. REFER TO 1.03A FOR CONTACT INFO.
 - ANTENNAS, COAX CABLES, JUMPERS, ETC. SHALL BE PAINTED TO MATCH EXISTING TANK.

2 COAX SUPPORT DETAIL
 0.3X SCALE: N.T.S.



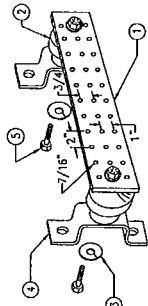
NOTE:
 1. INSPECTION HAND HOLE MAY BE CONCRETE OR PVC AND SHALL BE A MINIMUM OF 8" IN WIDTH/DIAMETER

7. GROUND ROD WITH INSPECTION HANDHOLE
 D4 SCALE: N.T.S.



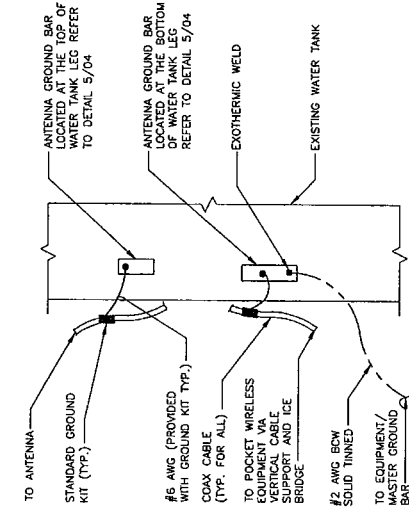
NOTE:
 1. WHERE EXISTING UTILITIES ARE LIKELY TO BE ENCOUNTERED, CONTRACTOR SHALL HAND DIG AND PROTECT EXISTING UTILITIES. CADWELD GROUND ROD TO GROUND RING AFTER GROUND ROD HAS BEEN DRIVEN INTO PLACE.

6. EGR DETAIL
 D4 SCALE: N.T.S.



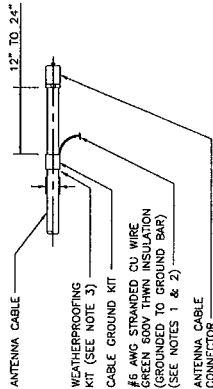
1 - COPPER GROUND BAR, 1/4" x 4" x 20" NEWTON INSTRUMENT CO. CAT. NO. B-8142 OR EQUAL. HOLE CENTERS TO MATCH NEMA DOUBLE LEG CONFIGURATION. (ACTUAL GROUND BAR SIZE WILL VARY BASED ON NUMBER OF GROUND CONNECTIONS).
2 - NUT LOCKS, WASHERS, INSTRUMENT CAT. NO. 3051-4 OR EQUAL.
3 - 5/8" COIL WASHER, INSTRUMENT CAT. NO. 3015-8 OR EQUAL.
4 - WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT. NO. A-6056 OR EQUAL.
5 - 5/8-11 X 1" HHCS BOLTS, NEWTON INSTRUMENT CO. CAT. NO. 3012-1 OR EQUAL.

5. MASTER/EQUIPMENT GROUND BAR DETAIL
 D4 SCALE: N.T.S.



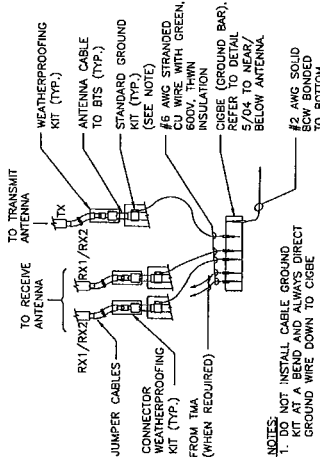
NOTE:
 1. NUMBER OF GROUND BARS MAY VARY DEPENDING ON TYPE OF TOWER.
 2. DO NOT INSTALL ANTENNA GROUND KIT ON CABLE BEND (TYP.).

2. WATER TANK - ANTENNA CABLE GROUNDING
 D4 SCALE: N.T.S.



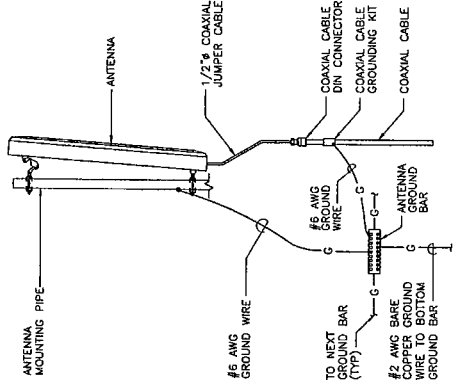
NOTE:
 1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
 2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
 3. WEATHER PROOFING SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.

3. CONNECTION OF CABLE GROUND KIT TO ANTENNA CABLE
 D4 SCALE: N.T.S.



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

4. CONNECTION OF GROUND WIRE TO GROUND BAR
 D4 SCALE: N.T.S.



1. TYPICAL ANTENNA GROUNDING DETAIL
 D4 SCALE: N.T.S.

URS

POCKET
 BARRY WINKELBAUM

HFC11508A, 15 CHAMBERLAIN ROAD

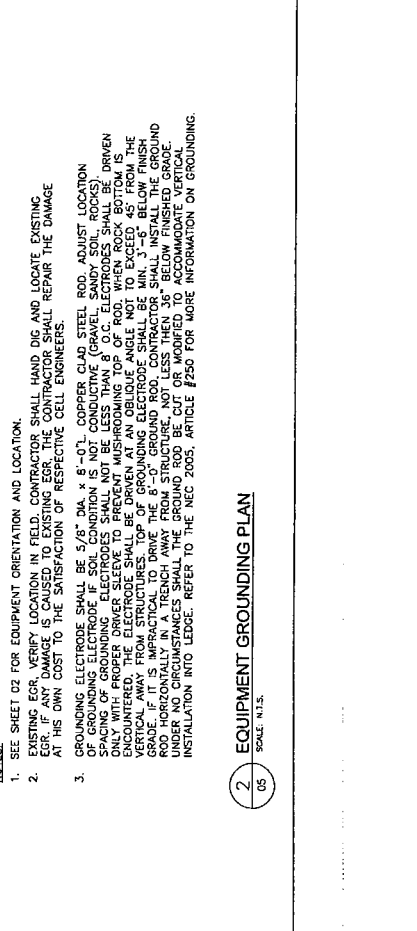
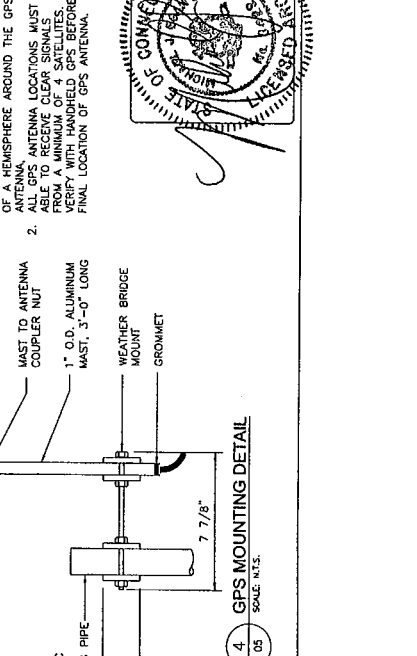
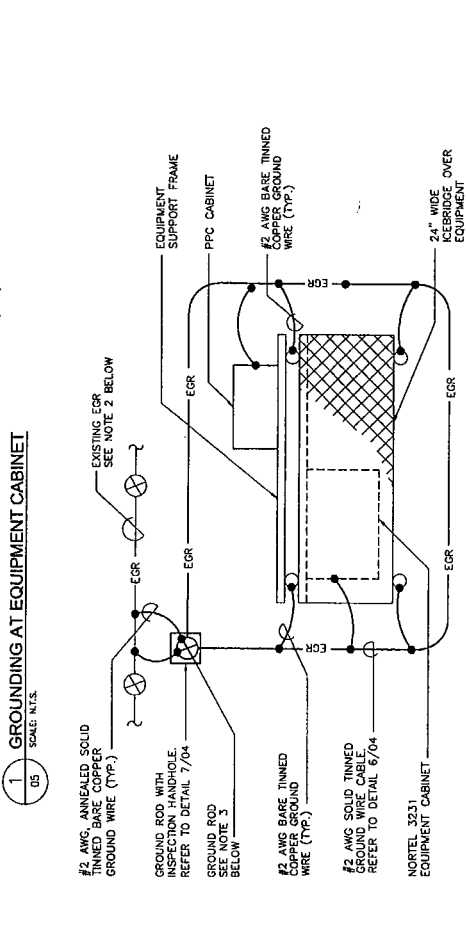
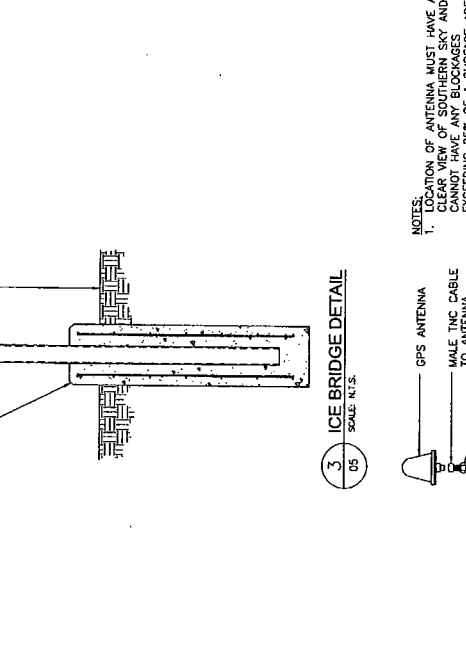
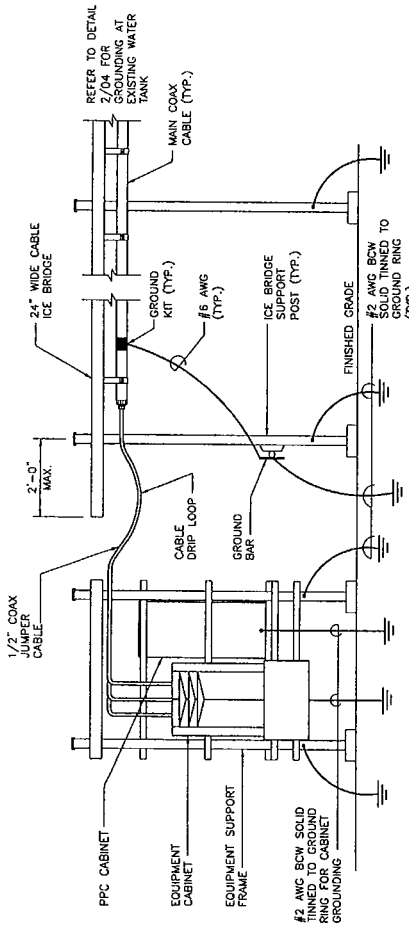
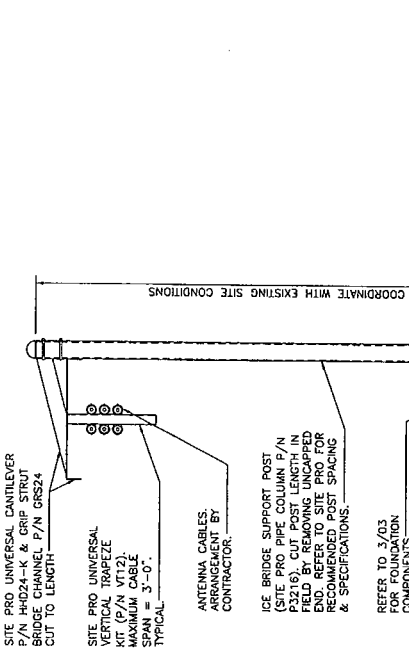
04

STATE OF CONNECTICUT
 DEPARTMENT OF CONSTRUCTION
 PROJECT NO. 03-27-09
 DRAWING NO. 150-000-000
 SHEET NO. 04
 PROJECT NUMBER

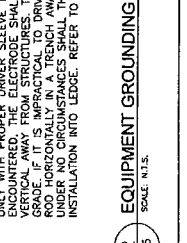
URS CORPORATION
 500 ENTERPRISE DRIVE
 LYONS, MA 01069

THE INFORMATION CONTAINED IN THIS DOCUMENT IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE. IT IS THE PROPERTY OF URS CORPORATION AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF URS CORPORATION.

NO.	DATE	REVISIONS
0	03-09-09	ISSUED FOR CONSTRUCTION



NOTES:
 1. LOCATION OF ANTENNA MUST HAVE A CLEAR VIEW OF SOUTHERN SKY AND SHOULD HAVE ANY OBSTACLES WITHIN THE AREA OF A HEMISPHERE AROUND THE GPS ANTENNA.
 2. ALL GPS ANTENNA LOCATIONS MUST BE CLEAR TO RECEIVE CLEAR SIGNALS FROM ALL HANDHELD GPS BEFORE VERIFYING WITH HANDHELD GPS BEFORE FINAL LOCATION OF GPS ANTENNA.



NOTES:
 1. SEE SHEET 02 FOR EQUIPMENT ORIENTATION AND LOCATION.
 2. EXISTING EGR, VERIFY LOCATION IN FIELD. CONTRACTOR SHALL HAND DIG AND LOCATE EXISTING EGR. IF ANY DAMAGE IS CAUSED TO EXISTING EGR, THE CONTRACTOR SHALL REPAIR THE DAMAGE AT HIS OWN COST TO THE SATISFACTION OF RESPECTIVE CELL ENGINEERS.
 3. GROUNDING ELECTRODE SHALL BE 5/8" DIA. x 8'-0" L. COPPER CLAD STEEL ROD. ADJUST LOCATION OF GROUNDING ELECTRODE TO BE AT LEAST 18" FROM THE EDGE OF THE CONCRETE (OR ROCK) FOUNDATION. THE ELECTRODE SHALL NOT BE LESS THAN 18" FROM THE EDGE OF THE FOUNDATION. ONLY WITH PROPER DRIVER SLEEVE TO PREVENT MUSHROOMING TOP OF ROD. WHEN ROCK BOTTOM IS ENCOUNTERED, THE ELECTRODE SHALL BE DRIVEN AT AN OBLOQUE ANGLE NOT TO EXCEED 45° FROM THE VERTICAL. THE ELECTRODE SHALL BE DRIVEN TO A MINIMUM OF 8" BELOW FINISHED GRADE. IF IT IS IMPRACTICAL TO DRIVE THE GROUND ROD TO THE REQUIRED MINIMUM, THE GROUND ROD SHALL BE DRIVEN TO A MINIMUM OF 3" BELOW FINISHED GRADE. THE GROUND ROD SHALL BE DRIVEN TO A MINIMUM OF 3" BELOW FINISHED GRADE. UNDER NO CIRCUMSTANCES SHALL THE GROUND ROD BE CUT OR MODIFIED TO ACCOMMODATE VERTICAL INSTALLATION INTO LEDGE. REFER TO THE NEC 2005, ARTICLE #250 FOR MORE INFORMATION ON GROUNDING.

NOTES:
 1. SEE SHEET 02 FOR EQUIPMENT ORIENTATION AND LOCATION.
 2. EXISTING EGR, VERIFY LOCATION IN FIELD. CONTRACTOR SHALL HAND DIG AND LOCATE EXISTING EGR. IF ANY DAMAGE IS CAUSED TO EXISTING EGR, THE CONTRACTOR SHALL REPAIR THE DAMAGE AT HIS OWN COST TO THE SATISFACTION OF RESPECTIVE CELL ENGINEERS.
 3. GROUNDING ELECTRODE SHALL BE 5/8" DIA. x 8'-0" L. COPPER CLAD STEEL ROD. ADJUST LOCATION OF GROUNDING ELECTRODE TO BE AT LEAST 18" FROM THE EDGE OF THE CONCRETE (OR ROCK) FOUNDATION. THE ELECTRODE SHALL NOT BE LESS THAN 18" FROM THE EDGE OF THE FOUNDATION. ONLY WITH PROPER DRIVER SLEEVE TO PREVENT MUSHROOMING TOP OF ROD. WHEN ROCK BOTTOM IS ENCOUNTERED, THE ELECTRODE SHALL BE DRIVEN AT AN OBLOQUE ANGLE NOT TO EXCEED 45° FROM THE VERTICAL. THE ELECTRODE SHALL BE DRIVEN TO A MINIMUM OF 8" BELOW FINISHED GRADE. IF IT IS IMPRACTICAL TO DRIVE THE GROUND ROD TO THE REQUIRED MINIMUM, THE GROUND ROD SHALL BE DRIVEN TO A MINIMUM OF 3" BELOW FINISHED GRADE. UNDER NO CIRCUMSTANCES SHALL THE GROUND ROD BE CUT OR MODIFIED TO ACCOMMODATE VERTICAL INSTALLATION INTO LEDGE. REFER TO THE NEC 2005, ARTICLE #250 FOR MORE INFORMATION ON GROUNDING.

NOTES:
 1. SEE SHEET 02 FOR EQUIPMENT ORIENTATION AND LOCATION.
 2. EXISTING EGR, VERIFY LOCATION IN FIELD. CONTRACTOR SHALL HAND DIG AND LOCATE EXISTING EGR. IF ANY DAMAGE IS CAUSED TO EXISTING EGR, THE CONTRACTOR SHALL REPAIR THE DAMAGE AT HIS OWN COST TO THE SATISFACTION OF RESPECTIVE CELL ENGINEERS.
 3. GROUNDING ELECTRODE SHALL BE 5/8" DIA. x 8'-0" L. COPPER CLAD STEEL ROD. ADJUST LOCATION OF GROUNDING ELECTRODE TO BE AT LEAST 18" FROM THE EDGE OF THE CONCRETE (OR ROCK) FOUNDATION. THE ELECTRODE SHALL NOT BE LESS THAN 18" FROM THE EDGE OF THE FOUNDATION. ONLY WITH PROPER DRIVER SLEEVE TO PREVENT MUSHROOMING TOP OF ROD. WHEN ROCK BOTTOM IS ENCOUNTERED, THE ELECTRODE SHALL BE DRIVEN AT AN OBLOQUE ANGLE NOT TO EXCEED 45° FROM THE VERTICAL. THE ELECTRODE SHALL BE DRIVEN TO A MINIMUM OF 8" BELOW FINISHED GRADE. IF IT IS IMPRACTICAL TO DRIVE THE GROUND ROD TO THE REQUIRED MINIMUM, THE GROUND ROD SHALL BE DRIVEN TO A MINIMUM OF 3" BELOW FINISHED GRADE. UNDER NO CIRCUMSTANCES SHALL THE GROUND ROD BE CUT OR MODIFIED TO ACCOMMODATE VERTICAL INSTALLATION INTO LEDGE. REFER TO THE NEC 2005, ARTICLE #250 FOR MORE INFORMATION ON GROUNDING.

Exhibit C

Equipment Specifications

Pocket Site HFCT1506A

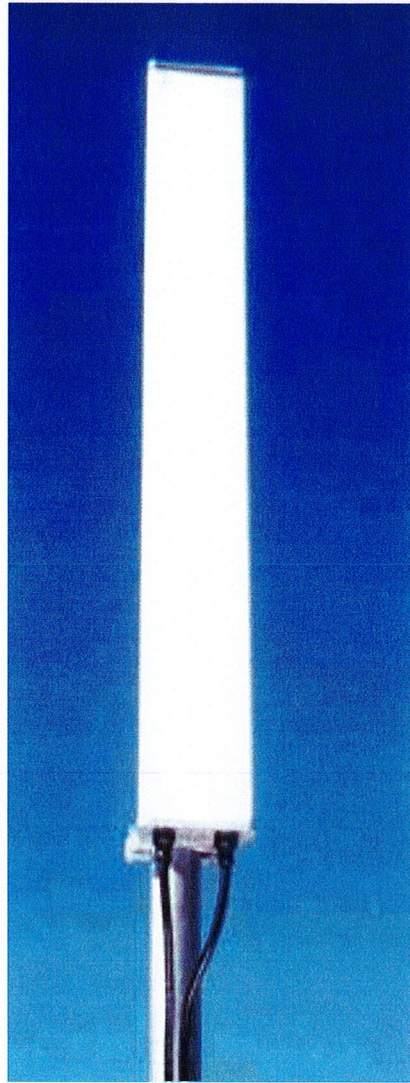
Chamberlain Road

East Windsor, Connecticut



Product Description

This variable tilt antenna provides exceptional suppression of all upper sidelobes at all downtilt angles. It also features null fill and a wide downtilt range with optional remote tilt.



Features/Benefits

- Variable electrical downtilt - provides enhanced precision in controlling intercell interference. The tilt is infield adjustable 0-10 deg.
- High Suppression of all Upper Sidelobes (Typically <-20dB).
- Optional remote tilt - can be retrofitted.
- Broadband design.
- Dual polarization.
- Low profile for low visual impact.

Technical Features

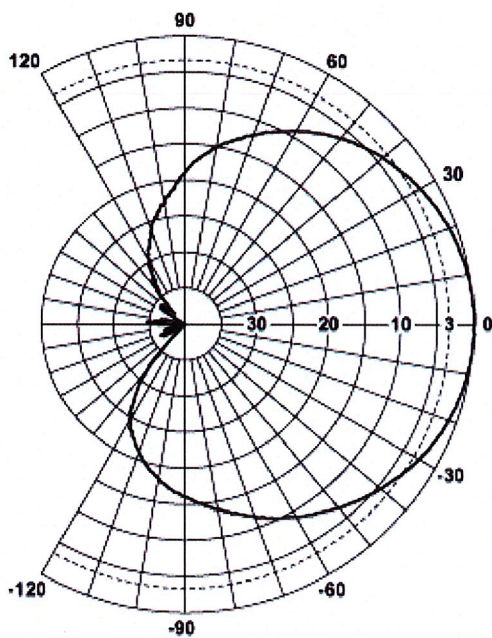
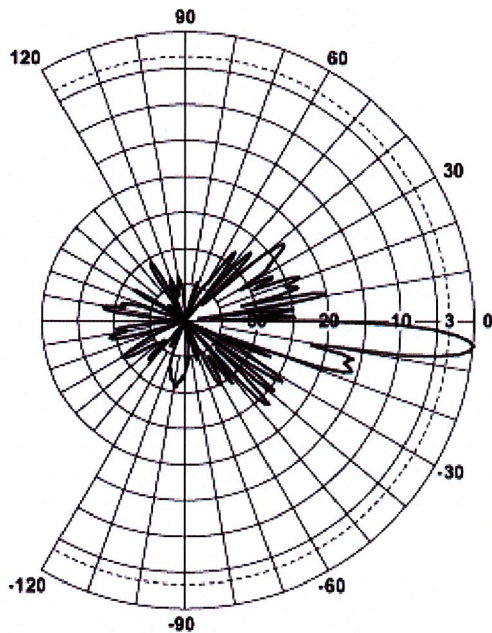
Frequency Band	3G/UMTS (Single, Broad, Dual and Triple-Band)
Horizontal Pattern	Directional
Antenna Type	Panel Dual Polarized
Electrical Down Tilt Option	Variable

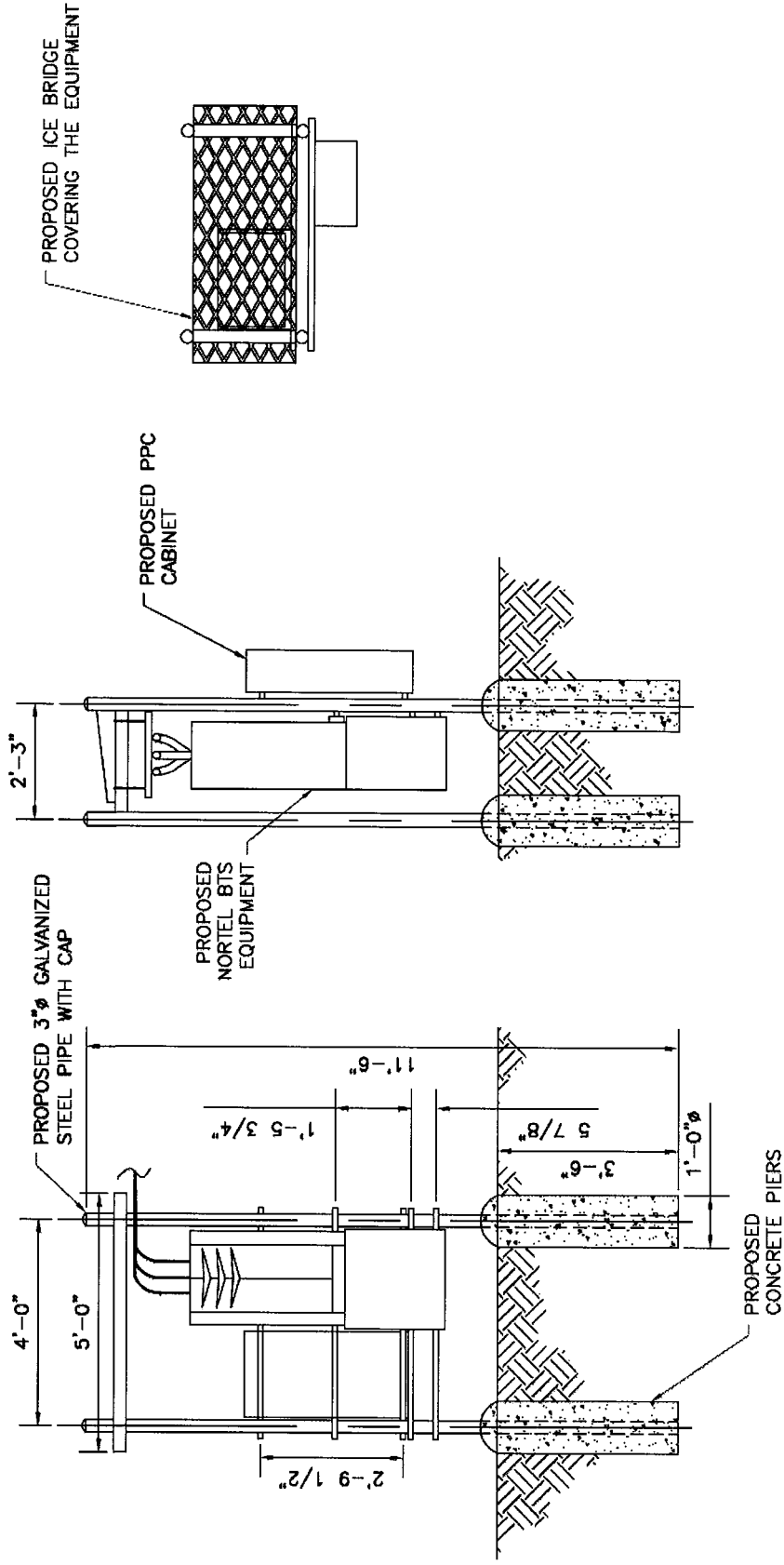


Gain, dBi (dBd)	18.8 (16.7) , 19.0 (16.9)
Frequency Range, MHz	1710-1900, 1900-2170
Connector Type	(2) 7-16 DIN Female
Connector Location	Bottom
Mount Type	Downtilt
Electrical Downtilt, deg	0-10
Horizontal Beamwidth, deg	67 , 63
Mounting Hardware	APM40-2
Rated Wind Speed, km/h (mph)	160 (100)
VSWR	< 1.5:1
Vertical Beamwidth, deg	5.0 , 4.6
Upper Sidelobe Suppression, dB	>17 , >18 all (Typically >20)
Polarization	Dual pol +/-45°
Front-To-Back Ratio, dB	>30
Maximum Power Input, W	300
Isolation between Ports, dB	>30
Lightning Protection	Direct Ground
3rd Order IMP @ 2 x 43 dBm, dBc	>150
7th Order IMP @ 2x46 dBm, dBc	>170
Impedance, Ohms	50
Overall Length, m (ft)	1.85 (6.06)
Mounting Hardware Weight, kg (lb)	3.4 (7.5)
Dimensions - HxWxD, mm (in)	1850 x 175 x 80 (72.0 x 6.8 x 3.15)
Weight w/o Mtg Hardware, kg (lb)	12 (26.4)
Weight w/ Mtg Hardware, kg (lb)	14.8 (32.5)
Radiating Element Material	Brass
Radome Color	Light Grey RAL7035
Radome Material	Fiberglass
Mounting Hardware Material	Diecasted Aluminum
Reflector Material	Aluminum
Max Wind Loading Area, m ² (ft ²)	0.31 (3.3)
Survival Wind Speed, km/h (mph)	200 (125)
Maximum Thrust @ Rated Wind, N (lbf)	558 (125)
Front Thrust @ Rated Wind, N (lbf)	558 (125)
Shipping Weight, kg (lb)	18.3 (39.8)
Packing Dimensions, HxWxD, mm (in)	2021 x 260 x 200 (79.5 x 10.2 x 7.8)
Packing Dimensions - HxWxD, m (ft)	2.0 x 0.26 x 0.2 (6.6 x 0.85 x 0.65)

Notes

For additional mounting information please click "External Document Link" below.





Pocket/Youghiogheny Communications – Northeast, LLC
 Rack Detail



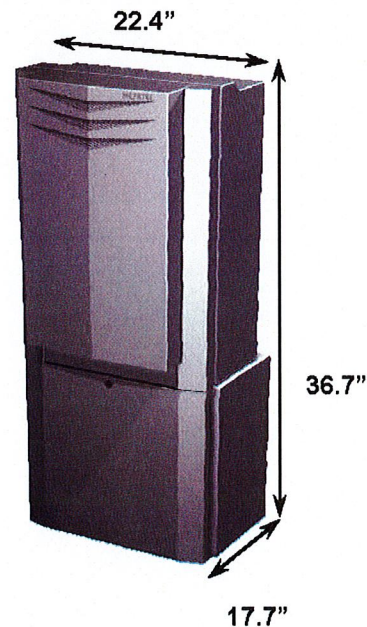
CDMA BTS 3231 AWS 1.7/2.1 GHz (Outdoor/Indoor)

to transport to hard to reach locations such as the top of a high rise building.

CDMA BTS 3231

Industry's Highest Capacity AWS Micro BTS

The CDMA BTS 3231 is the latest extension to Nortel Networks BTS (Base Transceiver Station) portfolio providing the ideal solution for urban, sub-urban and rural deployments. The CDMA BTS 3231 is a 3-carrier, 3-sector outdoor/indoor BTS operating at the AWS band of 1.7/2.1 GHz supporting IS-95, 1XRTT and 1xEV-DO simultaneously. BTS 3231 provides flexible deployments solutions including floor, rack, and wall mount options. The power consumption of BTS3231 is industry leading consuming only 630W for 3C3S. The BTS 3231 is also very light at 240lbs making it easy





EMPOWERING REAL PEOPLE

- Home
- Products
- Support
- Gov / Military
- Employment

Contact Us

Products

- o Combination Units
- o Generators
 - Lite
 - Mobile
 - Portable
- o Light Towers
- o Pumps
- o Water Trailers

Support

- o Warranty
- o Sales Literature
- o Manuals
- o Troubleshooting
- o Training
- o Ordering
- o Forms
- o OEM Links

Gov / Military

- o GSA
- o Products
- o Pictures

News

- o 20th Anniversary
- o Trade Shows
- o Newsletter
- o Awards
- o Press Releases
- o Promotions
- o Special Events

Employment

- o Current Openings
- o Internships

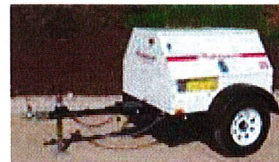
Contact Us

GLOSSARY

MLG15 Lite Generator Interim Tier IV EPA Approved Engine

Magnum recognizes environmental responsibility and continues to meet emission regulations with the addition of their Interim Tier IV Generator line. The MLG15 generator is powered by a Mitsubishi diesel engine. Proven power you can trust, while maximizing fuel efficiency and high performance.

Affordable, Reliable, Mobile



More Information

Manuals

- o [Operating & Parts](#)

**ALWAYS
check for**

Search Site

Power

The MLG15 diesel generator provides just the right combination of output, flexibility, ruggedness, efficiency and affordability for on-the-go, smaller-to-midsized, single phase power needs.

Features

Tough

- Full tubular steel frame, with lockable enclosure
- Durable, fade resistant, white baked on powder coat finish
- Stainless steel hinges, exterior hardware and pad lockable door latches

Reliable

- Key switch to preheat (glow plug), start & stop
- Automatic low oil level / high temp shutdown alerts
- 70A Start limit main breaker
- 2 year - 2,000 hour warranty
- Marathon voltage regulation within +/- 1%

Ease for Your Users

- Self-priming 4 cylinder Mitsubishi engine
- External convenience outlets with individual breaker switches
- External emergency stop switch

Specifications

Output

3 Phase - Standby kW (kVA)	N/A
Amps 480V (208V)	N/A
3 Phase - Prime kW (kVA)	N/A
Amps 480V (208V)	N/A
1 Phase - Standby kW (kVA)	14.0 (14.0)
Amps 240V	58
1 Phase - Prime kW (kVA)	13.0 (13.0)
Amps 240V	54
AC Voltage 1-phase	120, 240
AC Voltage 3-phase	N/A
Frequency Hz	60
Power Factor	1.0 (1 Phase)
Generator - Brand / Type / Insulation	Marathon / Brushless / F
Sound (dB(A) 23 ft @ prime)	68

Size and Weight

Skid Mounted - L x W x H in (m)	N/A
Dry Weight lbs (kg)	N/A
Operating Weight lbs (kg)	N/A
Trailer Mounted - L x W x H in (m)	105 x 67 x 56 (2.67 x 1.70 x 1.42)
Dry Weight lbs (kg)	1425 (646)

updated parts information before placing a parts order.

Tech. Specs.

- [MLG15](#)

Literature / Sales

- [Generator Lit.](#)
- [Service Kit Lit.](#)
- [Sales Support](#)



- [Warranty Overview](#)
- [Warranty Claim Policy](#)

Operating Weight lbs (kg)	1823 (827)
Engine	
Type	Interim Tier IV
Brand	Mitsubishi
Aspiration	Natural
Power - Prime @ 1800 rpm hp (kWm)	22.3 (16.6)
Displacement cubic in (L)	107 (1.8)
Cylinders	4
Speed rpm	1800
Fuel Consumption - Prime gph (Lph)	1.30 (4.92)
Capacities	
Fuel Tank gal (L)	56 (212)
Approximate Run Time hrs	43
Coolant qt (L)	11.6 (11.0)
Electrical Distribution	
Battery - 12V	1 - 12V 440 CCA Wet Cell
Main Circuit Breaker Size A	70
Voltage Selection	N/A
Voltage Regulation	+/-1%
120V - 20A GFI Duplex Outlets - qty	2
240V - 30A Twist Lock Outlets - qty	2
240V - 50A Twist Lock Outlets - qty	2
Trailer	
Number of Axles	1
Capacity - Axle Rating lbs (kg)	2200 (998)
Tire Size in	15
Brakes	N/A
Hitch	2" Ball
Maximum Tire Pressure psi	50
Options	
Powertrain (Engine/Gen)	<ul style="list-style-type: none"> • 60/40 Coolant • Heated Fuel Filter • Engine Heater - Lower Radiator Hose • Oil Drain Valve Kit
Controls	<ul style="list-style-type: none"> • Battery, 720 CCA Gel Cell • Battery, 720 CCA Wet Cell • Battery, 685 CCA Gel Cell • No Battery • Battery Disconnect, Lockable • Battery Charger, 2 Amp • Alternative Outlet Panel Options (Consult factory for details)

Cabinet/Fuel Tank

- Interior Cabinet Light
- Level Indicator
- 56 Gallon Fuel Tank
- Fuel Tank Cap - Vent w/ Lanyard
- Spare Tire & Carrier
- Lift Structure
- Liquid Containment/Quiet Pack

Trailer

- Tube & Sleeve Jack
- Combo Hitch - 2.5" Ring/2" Ball
- 2.5" Ring
- 3" Ring
- 3" Ring (1.625 TH)
- Plug Adapter, 4 Flat to 6 Round
- Plug Adapter, 4 Flat to 7 Pin
- Plug Adapter, 4 Flat to 7 Round Spade
- Outrigger Package

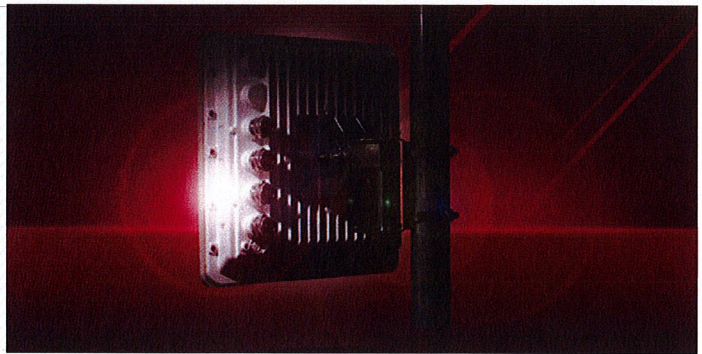
Product Images (click small image to pop-up larger version)



Copyright © 2003 - 2009 Magnum Products LLC



EX-5r Series



All-Outdoor, Carrier-Class, Tri-Band 5 GHz TDD Radio System for Low, Medium and High Capacity Ethernet and TDM Applications

The EX-5r series of all-outdoor digital microwave radios is the first family of carrier-class, tri-band TDD radios available in the 5.2 – 5.8 GHz license-exempt bands. Radios in the EX-5r line support capacities ranging from 27 Mbps to an industry-leading 440 Mbps of aggregate user throughput, from zero to four T1/E1s and both 100BaseT and GbE interfaces. Featuring native TDM and native Ethernet transport and full software configurability and upgradeability, the EX-5r series was designed to meet demanding backhaul requirements of enterprise organizations and service providers seeking the performance benefits of an all-outdoor configuration.

Carrier-class TDD. The EX-5r series radios combine native TDM and native Ethernet transport with low, fixed latency to deliver guaranteed throughput and service quality. Capacity can be allocated variably between TDM and Ethernet via software, while the selectable throughput symmetry control feature enables radio capacity to efficiently match asymmetric traffic requirements.

Industry-leading Spectrum Management. The EX-5r radios include selectable channel bandwidth and 1 MHz tuning resolution,

yielding up to 54 non-overlapping frequency channels and up to 415 center frequencies of operation. These capabilities, combined with selectable modulation and superior system gain, provide unparalleled interference avoidance and transmission resiliency. A built-in spectrum analyzer is even included to accelerate deployment and simplify troubleshooting.

ExaltSync Synchronization. The ExaltSync technology embedded in the EX-5r series radios allows multiple radio systems to be collocated in close proximity without self-interference, minimizing antenna separation and ensuring reuse of scarce spectrum across all collocated systems.

Security, Management and Data Networking. The EX-5r radios deliver the highest data and management security available with optional 128- and 256-bit AES encryption and secure SNMP v3 management, together with enhanced fault management and diagnostic features. The 802.1Q VLAN option provides built-in network administration and security flexibility.

EX-5r series radios are available in both integrated antenna and external antenna (connectorized) versions.



Primary Specifications		EX-5r Lite / EX-5r-c Lite	EX-5r v3 / EX-5r-c v2	EX-5r GigE / EX-5r-c GigE
Maximum Capacity ¹	TDM		4xT1/E1	
	Ethernet (Aggregate)	100 Mbps	200 Mbps	440 Mbps
Frequency (GHz)	Tri-band: 5.250-5.350, 5.470-5.725, 5.725-5.850			
Range ²	> 30 miles at 99.999% throughput availability			

¹ Please refer to the Exalt Throughput and Range Specification document for detailed capacity information.

² Distance based upon FCC regulations, average climate and terrain, 6' dish antennas, 3 dB transmission system losses at each end. Longer or shorter distances will apply for alternative antennas, country regulations, transmission system losses, path topologies and radio configurations. See Exalt's link budget and path planning tool to model your scenario.

Specifications

EX-5r Series

System

Frequency Bands(GHz)	5.250-5.350, 5.470-5.725, 5.725-5.850			
Tuning Resolution	1 MHz			
Output Power (full power)	+24 dBm QPSK; +21 dBm 16QAM			
5725-5850 MHz band	+13 dBm			
5250-5350 MHz band ²	+13 dBm			
5470-5725 MHz band ²	+13 dBm			
Output Power (min power)	Full power minus 20 dB			
Power Control Step Size	0.5 dB			
Receiver Threshold (BER=10 ⁻⁶)	8 MHz	16 MHz	32 MHz	64 MHz
QPSK	-86	-83	-80	-77
16QAM	-78	-75	-72	-69
Non-overlapping Channels				
5.250-5.350 GHz	10	5	2	1
5.470-5.725 GHz	29	14	7	3
5.725-5.850 GHz	15	7	3	1
Maximum RSL	-25 dBm error-free			
	0 dBm no damage			
Throughput Symmetry Control	5 modes			
	20/80, 80/20, 35/65, 65/35, 50/50			
Error Floor	10 ⁻¹²			
Latency (T1/E1)	1ms, typical			
Maximum Packet Size	All 1916 bytes except GigE 9728 bytes			

System (continued)

Link Security	96-bit proprietary encryption 128-bit and 256-bit AES encryption ³
Spectrum Analyzer	Embedded
VLAN	802.1Q
QoS	802.1p (GigE)
Management	HTTP GUI CLI/Telnet SNMP v1, 2c, v3
Compliance	FCC 15.247, FCC 15.407 EN 301-893, EN 302-502 EN 60-950, EN 301-489 IC RSS-210

System Components

Complete Link	Two terminals, each with AC adapter & accessory kit
Single Terminal	One terminal with AC adapter & accessory kit
Accessory Kit	DC power connector, rack and grounding hardware (spare)
AC Adapter	AC adapter (spare)
Mounting Kits	Available for each product (spare)
ExaltSync GPS Sync Kit	GPS receiver and mounting bracket (optional)

Specifications

EX-5r Lite

EX-5r-c Lite

EX-5r v3

EX-5r-c v2

EX-5r GigE

EX-5r-c GigE

Physical

Physical Configuration	Outdoor Unit (ODU)					
Dimensions (H x W x D)	14 x 14 x 3.8 in 35.6 x 35.6 x 9.7 cm	14 x 14 x 2.5 in 35.6 x 35.6 x 6.4 cm	14 x 14 x 3.8 in 35.6 x 35.6 x 9.7 cm	14 x 14 x 2.5 in 35.6 x 35.6 x 6.4 cm	14 x 14 x 3.8 in 35.6 x 35.6 x 9.7 cm	14 x 14 x 2.5 in 35.6 x 35.6 x 6.4 cm
Antenna	Integrated	2x Type-N (F) Connector	Integrated	2x Type-N (F) Connector	Integrated	2x Type-N (F) Connector
Integrated Antenna						
Gain/3 dB Beamwidth	23 dBi / 9 degrees	-	23 dBi / 9 degrees	-	23 dBi / 9 degrees	-
Operating Temperature	-40 to +65 °C; -40 to +149 °F					
Full Spec Temperature	-40 to +60 °C; -40 to +140 °F					
Weight	14 lbs/6.4 kg	12 lbs/5.5 kg	14 lbs/6.4 kg	12 lbs/5.5 kg	14 lbs/6.4 kg	12 lbs/5.5 kg
Environmental	NEMA 4/IP56					
Altitude	15,000 ft; 4.6 km					
Humidity	100% condensing					

Interfaces

RF	-	2x N-type (F), 50 ohm	-	2x N-type (F), 50 ohm	-	2x N-type (F), 50 ohm
TDM T1/E1 Interfaces	RJ48C/RJ45 (F) (x4)					
T1 Impedance	100 ohms, balanced					
T1 Line Code	AMI, B8ZS, selectable per channel					
T1 Data Rate	1.544 Mbps					
T1 Compliance	ANSI T1.102-1987; ITU-T; G.823; GR-499-CORE					
E1 Impedance	120 ohms, balanced					
E1 Line Code	HDB3					
E1 Data Rate	2.048 Mbps					
E1 Compliance	CEPT-1; G.703; ITU-T-G.703					
Loopback Modes	Remote Internal; Remote External; Local Line					
Ethernet	RJ45 (F)					
Interface Speed	10/100BaseT (POE)					
Duplex	Half, Full, Auto-MDIX					
Compliance	802.3					
ExaltSync Synchronization	RJ45 (F)					
	Input: 1pps (GPS)					
DC Power	48VDC, <50W					
AC Power Adapter	100-240VAC, 1.5A					
Input						
Output	48VDC, 1.5A, 72W (via power injector)					
	48VDC, 2.08A, 100W (via power injector)					

¹ Not all frequency bands are authorized or available for use in all countries.

² +24 dBm output power available in EX-5r v3 and EX-5r Lite. Consult Exalt for availability in other models.

³ Software license key upgrade.

© 2008 Exalt Communications, Inc. All rights reserved. The Exalt logo is a trademark of Exalt Communications, Inc. Specifications subject to change without notice.



World Headquarters
Exalt Communications Inc.
580 Division Street
Campbell, CA 95008 USA

Phone: +1 (408) 871-1804
Toll free: (888) 91EXALT
sales@exaltcom.com

www.exaltcom.com



EX-5i Series



All-Indoor, Carrier-Class, Tri-Band 5 GHz TDD Radio Systems for Low, Medium and High Capacity Ethernet and TDM Applications

The EX-5i series of all-indoor digital microwave radios is the first family of carrier-class, tri-band TDD radios available in the 5.2 – 5.8 GHz license-exempt bands. The EX-5i line delivers up to 216 Mbps of aggregate user throughput and up to sixteen T1/E1s plus one DS3. Featuring native TDM and native Ethernet transport and full software configurability and upgradeability, the EX-5i series was designed to meet demanding backhaul requirements of enterprise organizations and service providers seeking the accessibility benefits of an all-indoor configuration.

Carrier-class TDD. The EX-5i series radios combine native TDM and native Ethernet transport with low, fixed latency to deliver guaranteed throughput and service quality. Capacity can be allocated variably between TDM and Ethernet via software, while the selectable throughput symmetry control feature enables radio capacity to efficiently match asymmetric traffic requirements. Optional 1+1 monitored hot standby (MHS) protection provides full hardware redundancy.

Industry-leading Spectrum Management. The EX-5i radios include selectable channel bandwidth and 1 MHz tuning resolution, yielding up to 54 non-overlapping frequency channels and up to 415 center frequencies of operation. These capabilities, combined with selectable modulation and superior system gain, provide unparalleled interference avoidance and transmission resiliency. A built-in spectrum analyzer is even included to accelerate deployment and simplify troubleshooting.

ExaltSync™ Synchronization. The ExaltSync technology embedded in the EX-5i series radios allows multiple radio systems to be collocated in close proximity without self-interference, minimizing antenna separation and ensuring reuse of scarce spectrum across all collocated systems.

Security, Management and Data Networking. The EX-5i radios deliver the highest data and management security available with optional 128- and 256-bit AES encryption and secure SNMP v3 management, together with enhanced fault management and diagnostic features. The 802.1Q VLAN option provides built-in network administration and security flexibility.



Primary Specifications		EX-5i Lite	EX-5i	EX-5i-16	EX-5i-DS3
Maximum Capacity ¹	TDM	4xT1/E1		16xT1/E1	16xT1/E1; 1xDS3
	Ethernet (Aggregate)	100 Mbps		200 Mbps	
Frequency (GHz)		Tri-band: 5.250-5.350, 5.470-5.725, 5.725-5.850			
Range ²		> 30 miles at 99.999% throughput availability			

¹ Please refer to the Exalt Throughput and Range Specification document for detailed capacity information.

² Distance based upon FCC regulations, average climate and terrain, 6' dish antennas, 3 dB transmission system losses at each end. Longer or shorter distances will apply for alternative antennas, country regulations, transmission system losses, path topologies and radio configurations. See Exalt's path planning tool to model your scenario.

Specifications	EX-5i Series	Specifications	EX-5i Lite	EX-5i	EX-5i-16	EX-5i-DS3
System		Physical				
Frequency Bands ¹ (GHz)	5.250-5.350 5.470-5.725 5.725-5.850	Dimensions (H x W x D)	1RU 1.75 x 17 x 14 in 4.5 x 43.2 x 35.6 cm		1.5RU 2.63 x 17 x 14 in 6.7 x 43.2 x 35.6 cm	
Tuning Resolution	1 MHz	Physical Configuration	Single-piece Indoor Unit (IDU)			
Output Power (full power)		Operating Temperature	-40 to +65 °C -40 to +149 °F			
5725-5850 MHz band	+24 dBm QPSK; +21 dBm 16QAM	Full Spec Temperature	-25 to +60 °C -13 to +140 °F			
5250-5350 MHz band ²	+13 dBm	Weight	9.5 lbs / 4.3 kg		12 lbs / 5.5 kg	
5470-5725 MHz band ²	+13 dBm	Environmental	GR-1089-CORE intra-building			
Output Power (min power)	Full power minus 20 dB	Altitude	15,000 ft, 4.6 km			
Power Control Step Size	0.5 dB	Humidity	95% non-condensing			
Receiver Threshold (BER=10 ⁻⁶)	8 MHz 16 MHz 32 MHz 64 MHz ³	Interfaces				
QPSK	-86 -83 -80 -77	RF	N-type(F), impedance 50 ohm			
16QAM	-78 -75 -72 -69	TDM T1/E1 Interfaces	RJ48C/RJ45 (F) (x4)		RJ48C/RJ45 (F) (x16)	
Non-overlapping Channels		T1 Impedance	100 ohms, balanced			
5.250-5.350 GHz	10 5 2 1	T1 Line Code	AMI, B8ZS, selectable per channel			
5.470-5.725 GHz	29 14 7 3	T1 Data Rate	1.544 Mbps			
5.725-5.850 GHz	15 7 3 1	T1 Compliance	ANSI T1.102-1987; ITU-T; G.823; GR-499-CORE			
Maximum RSL (QPSK)	-25 dBm error-free 0 dBm no damage	E1 Impedance	120 ohms, balanced			
Throughput Symmetry Control	5 modes 20/80, 80/20, 35/65, 65/35, 50/50	E1 Line Code	HDB3			
Error Floor	10 ⁻¹²	E1 Data Rate	2.048 Mbps			
Latency (T1/E1)	1ms, typical	E1 Compliance	CEPT-1; G.703; ITU-T-G.703			
Link Security	96-bit proprietary encryption 128-bit and 256-bit AES encryption ³	DS3 Impedance	- BNC (F) (2x) 75 ohms, unbalanced			
VLAN	802.1Q	DS3 Line Code	- B3ZS			
Management	HTTP GUI CLI/Telnet SNMP v1, 2c, v3	DS3 Data Rate	- 44.736 Mbps			
Compliance	FCC 15.247, FCC 15.407 EN 301-893, EN 302-502 EN 60-950, EN 301-489, IC RSS-210	DS3 Compliance	-ANSI T1.102-1993; GR-499-CORE			
System Components		Loopback Modes	Remote Internal; Remote External; Local Line			
Complete Link ⁴	Two terminals, each with AC adapter and accessory kit	Ethernet	RJ45 (F) (x2), auto-MDIX			
Single terminal	One terminal with AC adapter and accessory kit	Interface Speed	10/100BaseT			
Accessory Kit	DC power connector, rack and grounding hardware (spare)	Duplex	Half, Full, Auto			
AC Adapter	AC adapter (spare)	Compliance	802.3			
Exalt Capacity Expansion Kit	For 6 GHz Part 101 links (optional accessory kit)	Console (Serial)	9-pin Sub-D (F)			
		Interface Speed	9600 bps			
		Compliance	EIA-574 (RS-232)			
		Alarm	9-pin Sub-D (F)			
		Inputs (2)	TTL/Closure			
		Outputs (2)	Relay (Form C)			
		ExaltSync	RJ45 (F)			
		Synchronization	Internal Sync 1pps (GPS)			
		DC Power	6-pin barrier strip ±20-60VDC		6-pin barrier strip ±20-60VDC	
		Input Voltage				
		Consumption	<38.5W (48V: <0.8A, 24V: <1.6A)		< 45W (48V: <0.9A, 24V: 1.8A)	
		AC Power Adapter	EIC to NEMA 5-15			
		Input	100-240VAC, 1.5A			
		Output	48VDC, 1.5A, 72W			

¹ Not all frequency bands are authorized or available for use in all countries.

² +24 dBm output power. Consult Exalt for availability.

³ Software license key upgrade.

⁴ Two complete links (4 terminals) required for MHS protection along with Exalt MHS kit and protection cabling. Consult your Exalt Sales representatives for MHS availability. (MHS is not available on EX-5i or EX-5i Lite).



Exhibit D

Power Density Calculations

Pocket Site HFCT1506A

Chamberlain Road

East Windsor, Connecticut



C Squared Systems, LLC
920 Candia Road
Manchester, NH 03109
Phone: (603) 657 9702
E-mail:
support@csquaredsystems.com

Calculated Radio Frequency Emissions



HFCT1506A

15 Chamberlain Road, East Windsor, CT 06016

Table of Contents

1. Introduction	1
2. FCC Guidelines for Evaluating RF Radiation Exposure Limits	2
3. RF Exposure Prediction Methods	2
4. Calculation Results	3
5. Conclusion	3
6. Statement of Certification	4
Attachment A: References	5
Attachment B: FCC Limits For Maximum Permissible Exposure (MPE)	6

List of Tables

Table 1: Proposed Carrier Information	3
---	---

1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed Pocket antennas to be installed on the existing water tank at 15 Chamberlain Road, East Windsor, CT 06016.

These calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are much more conservative (higher) than the actual signal levels will be from the finished installation.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter (mW/cm^2). The number of mW/cm^2 emitted is called the power density. The general population exposure limit for the cellular band is $0.567\text{-}0.593 \text{ mW}/\text{cm}^2$, and the general population exposure limit for the PCS/AWS band is $1.0 \text{ mW}/\text{cm}^2$. 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.

The FCC general population / uncontrolled limits set the maximum exposure to which most people may be subjected. General population / uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Higher exposure limits are permitted under the occupational / controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure (through training), and they must be able to exercise control over their exposure. General population / uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals.”

The FCC describes exposure to radio frequency (RF) energy in terms of percentage of maximum permissible exposure (MPE) with 100% being the maximum allowed. Rather than the FCC presenting the user specification in terms of complex power density figures over a specified surface area, this MPE measure is particularly useful, and even more so when considering that power density limits actually vary by frequency because of the different absorptive properties of the human body at different frequencies.

MPE limits are specified as time-averaged exposure limits. This means that exposure can be averaged over 30 minutes for general population / uncontrolled exposure (or 6 minutes for occupational / controlled exposure). However, for the case of exposure of the general public, time averaging is usually not applied because of uncertainties over exact exposure conditions and difficulty in controlling time of exposure. Therefore, the typical conservative approach is to assume that any RF exposure to the general public will be continuous.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population / uncontrolled exposure and for occupational / controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include limits for Maximum Permissible Exposure (MPE) for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP), the exposure limits developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

Attachment B contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit. As shown in these excerpts, each frequency band has different exposure limits, requiring power density to be reported as a percent of Maximum Permissible Exposure (MPE) when dealing with carriers transmitting in different frequency bands.

3. RF Exposure Prediction Methods

The emission field calculation results displayed in the following figures were generated using the following formula as outlined in FCC bulletin OET 65:

$$\text{Power Density} = \left(\frac{0.64 \times EIRP}{\pi \times R^2} \right)$$

Where:

EIRP = Effective Isotropic Radiated Power

R = Radial Distance = $\sqrt{(H^2 + V^2)}$

H = Horizontal Distance from antenna

V = Vertical Distance from bottom of antenna

0.64 is the ground reflection factor

4. Calculation Results

Table 1 below outlines the power density information for the site. All information for carriers other than Pocket was obtained from current CSC database.

Carrier	Number of Trans.	Effective Radiated Power (ERP) Per Transmitter (Watts)	Antenna Height (Feet)	Operating Frequency (MHz)	Total ERP (Watts)	Power Density (mw/cm ²)	Limit	%MPE
Sprint	N/A	N/A	104	1962.5	N/A	0.1655	1.0000	16.55%
Verizon	9	200	116	869	1800	0.0014	0.5793	0.24%
Verizon	3	200	116	1900	600	0.0014	1.0000	0.14%
Pocket	3	631	106.58	2130-2133.75	1893	0.0599	1.0000	5.99%
							Total	22.93%

Table 1: Proposed Carrier Information

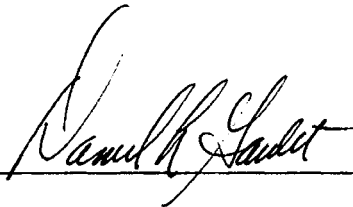
5. Conclusion

The above analysis verifies that emissions from the proposed site will be well below the maximum power density levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Even when using conservative methods, the cumulative power density from the proposed transmit antennas at the existing facility is well below the limits for the general public. The highest expected percent of Maximum Permissible Exposure at the base of the water tank is 22.93% of the FCC limit.

As noted in the introduction, obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are more conservative (higher) than the actual signal levels will be from the finished installation.

6. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in ANSI/IEEE Std. C95.3, ANSI/IEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.



Daniel I. Goulet
C Squared Systems, LLC

April 1, 2009

Date

Attachment A: References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

ANSI C95.1-1982, American National Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz. IEEE-SA Standards Board

IEEE Std C95.3-1991 (Reaff 1997), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave. IEEE-SA Standards Board

Attachment B: FCC Limits For Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	f/300	6
1500-100,000	-	-	5	6

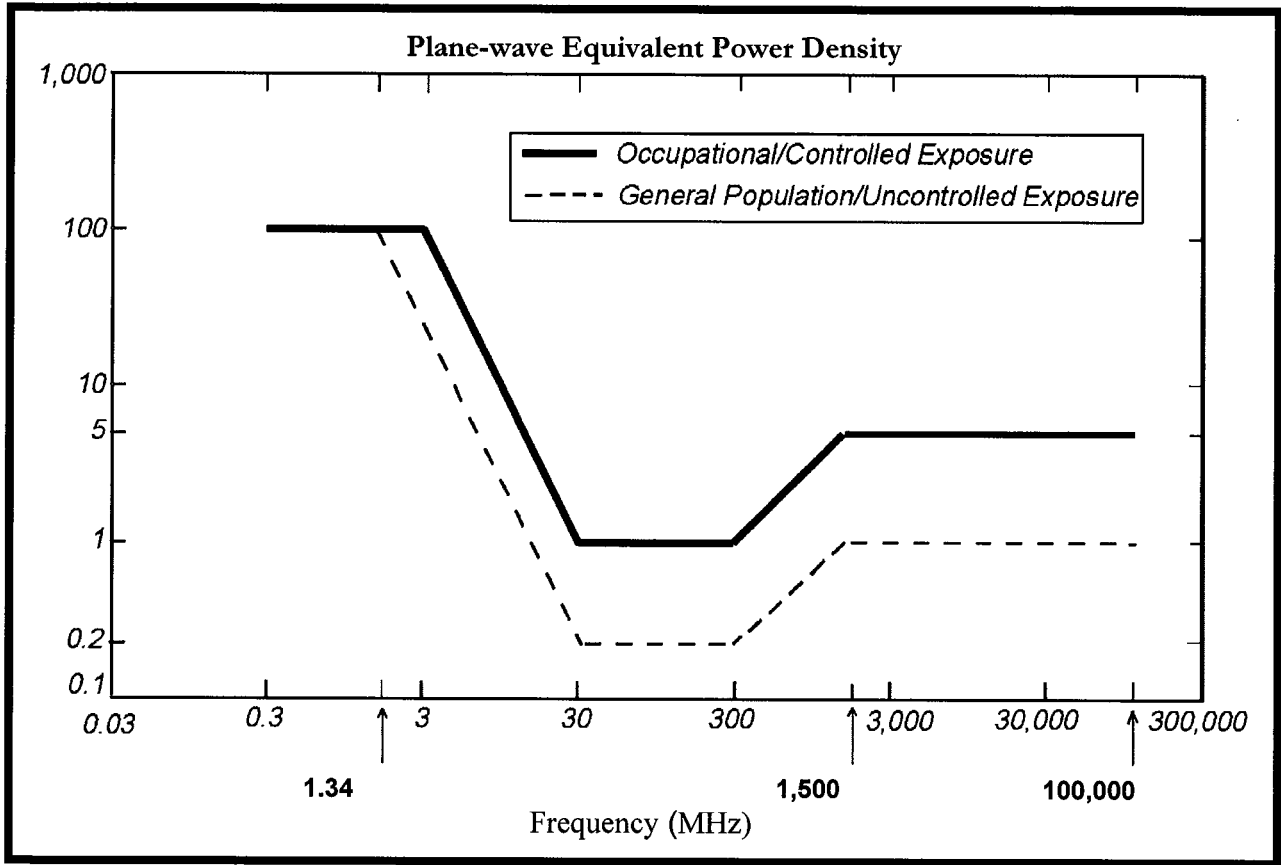
(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz * Plane-wave equivalent power density

NOTE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.



• FCC Limits for Maximum Permissible Exposure (MPE)

Exhibit E

Structural Analysis

Pocket Site HFCT1506A

Chamberlain Road

East Windsor, Connecticut



April 06, 2009

Mr. Aleksey Tyurin
Verizon Wireless
99 East River Drive
East Hartford, CT 06108

*Re: Structural Certification Letter
Pocket Wireless HFCT1506A
Verizon Wireless Site Ref ~ Broadbrook
15 Chamberlain Road ~ East Windsor, CT*

Natcomm Project No. 09033.00

Dear Mr. Tyurin,

Natcomm Inc., has reviewed the proposed Pocket Wireless antenna installation at the above referenced site. The purpose of the review was to determine the adequacy of an existing 124-ft AGL water tank structure to support the proposed installation of three (3) panel antennas and six (6) coaxial cables. The review considered the effects of wind load, dead load and ice load in accordance with TIA/EIA-222-F and the 2005 Connecticut State Building Code. This assessment is based on the findings of a previous structural letter prepared by Natcomm, job no., 05031.CO2, dated March 8, 2005 and design documents prepared by URS Corporation, job no., PC1069-36923989, dated February 27, 2009.

The existing/reserved antenna configuration is as follows:

- **VERIZON: (Existing)**
Antennas: Nine (9) Swedcom ALP9212-N and six (6) Decibel 948F85T2E-M panel antennas pipe mounted to the existing water tank wall surface with a RAD center elevation of 116-ft AGL.
Coax Cables: Fifteen (15) 1-5/8" Ø coax cables vertically supported off the leg of the existing water tank structure.
- **SPRINT: (Existing/Reserved)**
Antennas: Nine (9) panel antennas mounted to the existing water tank handrail with a RAD center elevation of 106-ft+/- AGL.
Coax Cables: Nine (9) 1-5/8" Ø coax cables vertically supported off the leg of the existing water tank structure.
- **MISC: (Existing)**
GPS: One (1) GPS antenna mounted to the structure with a RAD center elevation of 35-ft+/- AGL and (1) GPS antenna mounted to the water tank leg with a RAD center elevation of 77-ft+/- AGL.
Coax Cables: Two (2) 1/2" Ø coax cables (estimated) vertically supported off the leg of the existing water tank structure.

p: 203.488.0580
f: 203.488.8587
w: nat-eng.com
63-2 N. Branford Rd.
Branford, CT 06405

Re: Structural Certification Letter
Pocket Wireless HFCT1506A
Verizon Wireless Site Ref ~ Broadbrook
15 Chamberlain Road ~ East Windsor, CT

Page 2 of 2

The proposed antenna/appurtenance loading is as follows:

▪ **POCKET WIRELESS**


Antennas: Three (3) RFS APXV18-206517S-C panel antennas pipe mounted to the existing water tank handrail with a RAD center elevation of 106-ft AGL.

Coax Cable: Six (6) 1-5/8" \varnothing coaxial cables vertically supported off the leg/face of the existing water tank structure per details 2 and 3 on URS drawing 02, dated 03/20/09, noted as Rev 0 'Issued for Construction'.

A comparative analysis of existing and proposed loading finds that the impact of the proposed installation is insignificant when considering the service loads induced on the tank structure (a conservative increase of less than 2.5% in overall tank surface area). In conclusion the existing elevated tank structure is adequate to support the proposed Pocket Wireless antennas and coaxial cables.

If there are any questions regarding this matter, please feel free to call.

Respectfully Submitted by:


Carlo F. Centore, PE
Principal ~ Structural Engineer

