

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

October 20, 2008

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

RE: **EM-POCKET-020-080930** – Youghiogheny Communications-Northeast, LLC d/b/a Pocket Communications notice of intent to modify an existing telecommunications facility located at 716 George Washington Turnpike, Burlington, 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 September 29, 2008, 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/jb

c: The Honorable Kathleen K. Zabel, First Selectman, Town of Burlington
Robert J. Coates, Planning and Zoning Chairman, Town of Burlington



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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

E-Mail: siting.council@ct.gov

Internet: ct.gov/csc

Daniel F. Caruso
Chairman

October 1, 2008

The Honorable Kathleen K. Zabel
First Selectman
Town of Burlington
200 Spielman Highway
Burlington, CT 06013

RE: **EM-POCKET-020-080930** – Youghiogheny Communications-Northeast, LLC d/b/a Pocket Communications notice of intent to modify an existing telecommunications facility located at 716 George Washington Turnpike, Burlington, Connecticut.

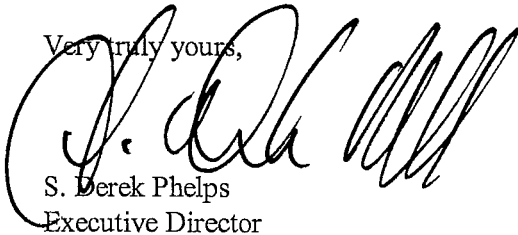
Dear Ms. Zabel:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

If you have any questions or comments regarding this proposal, please call me or inform the Council by October 15, 2008.

Thank you for your cooperation and consideration.

Very truly yours,



S. Derek Phelps
Executive Director

SDP/jb

Enclosure: Notice of Intent

c: Robert J. Coates, Planning and Zoning Chairman, Town of Burlington

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

EM-POCKET-020-080930

www.pullcom.com

September 29, 2008

Via Federal Express

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



**Re: Notice of Exempt Modification
Town of Burlington Telecommunications Facility
716 George Washington Turnpike, Burlington, Connecticut**

Dear Mr. Phelps:

Youghiogheny Communications-Northeast, LLC, doing business as Pocket Communications ("Pocket"), intends to install antennas and appurtenant equipment at the existing 180-foot monopole facility owned by Town of Burlington and located at 716 George Washington Turnpike, Burlington, 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 Honorable Kathleen K. Zabel, First Selectman, Town of Burlington.

The existing Facility consists of a 180-foot self-supporting monopole tower capable of supporting multiple carriers within a fenced compound. The coordinates for the Facility are **Lat: 41°-57'-59"** and **Long: 72°-57'-42"**. The tower is located next to the Burlington Fire Department building, roughly 130 feet southwest of George Washington Turnpike, approximately 1,600 feet southeast of it's intersection with Spielman Highway (Route 4) in the central portion of Burlington (see Site Map, attached as Exhibit A). The tower currently supports town public safety whip style antennas at multiple elevations, listed in the application materials. The tower also currently supports Verizon antennas at the one hundred sixty foot level (160') centerline AGL (above ground level), and AT&T antennas at the one hundred seventy foot (170') level AGL. Pocket proposes to install three APXV 18-206517S-C panel antennas to existing down pipe mounts off the top platform on the tower at the one hundred seventy five foot centerline (175') AGL, and a Nortel CDMA Micro BTS 3231 cabinet, mounted

Page 2

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 an ice bridge which will run from the lease area to the tower. Utilities will be run via a proposed underground conduit from an existing utility backboard, within the compound (See Design Drawings and Equipment Specifications, attached as Exhibits B and C respectively).

For the following reasons, the proposed modifications to the George Washington Turnpike 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 175 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 20.41% 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 Burlington Facility constitutes an exempt modification under R.C.S.A. Section 16-50j-72(b)(2)

Respectfully Submitted,



Carrie L. Larson

PULLMAN & COMLEY, LLC
ATTORNEYS AT LAW

Page 3

cc: Honorable Kathleen K. Zabel, First Selectman (Town of Burlington is also underlying property owner)

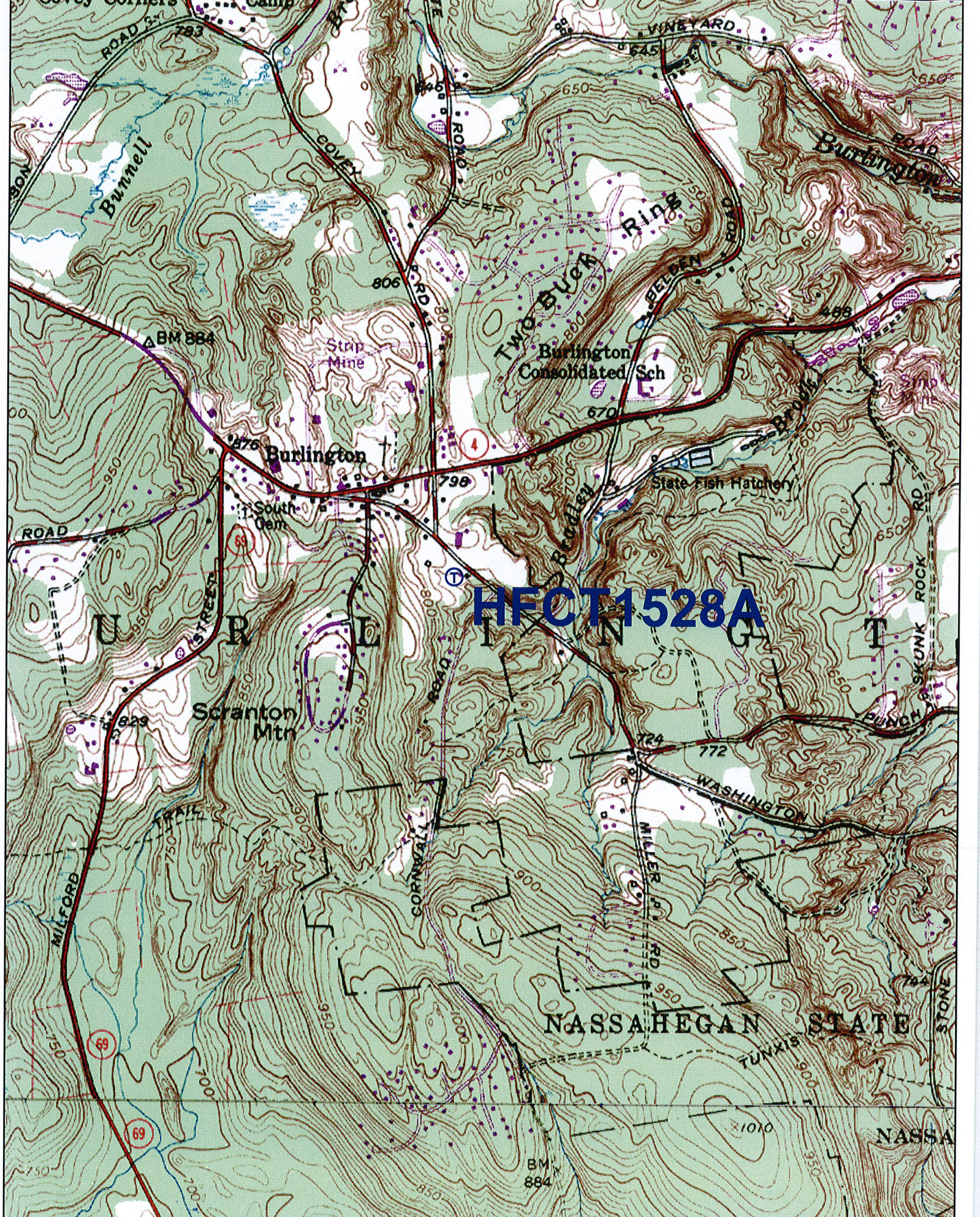
Exhibit A

Site Map

Pocket Site HFCT1528A

**716 George Washington
Turnpike**

Burlington, Connecticut



HFCT1528A

Exhibit B

Design Drawings

Pocket Site HFCT1528A

**716 George Washington
Turnpike**

Burlington, Connecticut

PROJECT INFORMATION

TOWER OWNER: TOWN OF BURLINGTON
200 SPELMAN HIGHWAY
BURLINGTON, CT 06013

OWNER SITE ID#: TBD

APPLICANT: YOURCHOSEHY COMMUNICATIONS-
NORTHEAST LLC
2819 NW LOOP 410
SAN ANTONIO, TX 78230

SITE ADDRESS: 716 GEORGE WASHINGTON TPKE.
BURLINGTON, CT 06013

COUNTY: HARTFORD

LATITUDE: 41.78629

LONGITUDE: -72.96167

STRUCTURE HEIGHT: 180' AGL

ZONING CLASSIFICATION: N/A

ZONING JURISDICTION: CONNECTICUT SITING COUNCIL

POWER COMPANY: CL&S 860-947-2121

TELEPHONE COMPANY: AT&T 1-888-727-8388

DESIGN FIRM: URS CORPORATION AES
500 ENTERPRISE DRIVE, SUITE 3B
ROCKY HILL, CT 06867
PHONE: 888-928-8882

DRAWING INDEX

01	TITLE SHEET	A
02	PARTIAL SITE PLAN AND NOTES	A
03	TOWER ELEVATION, ANTENNA PLAN AND DETAILS	A
04	GROUNDING DETAILS	A
05	GROUNDING PLAN AND DETAILS	A
06	ELECTRICAL DETAILS	A

STRUCTURAL REVIEW

A TOWER ANALYSIS HAS NOT BEEN PERFORMED FOR THE PREPARATION OF THESE PLANS. AS OF THE ISSUANCE OF THESE DRAWINGS, THE EXISTING TOWER HAS NOT BEEN EVALUATED FOR REPLACEMENT OR ADDITION OF ANTENNAS. THE TOWER ANALYSIS SHALL BE A PASSING STRUCTURAL TOWER ANALYSIS. A COPY OF THE TOWER ANALYSIS SHALL BE FORWARDED TO URS CORPORATION, ALL REINFORCEMENT (IF REQUIRED) SHALL BE PERFORMED PRIOR TO ANY WORK UNDER THIS CONTRACT BEING PERFORMED.

APPROVALS

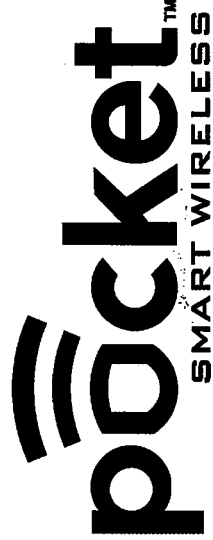
REAL ESTATE _____

RF _____

OPS/CONSTRUCTION _____

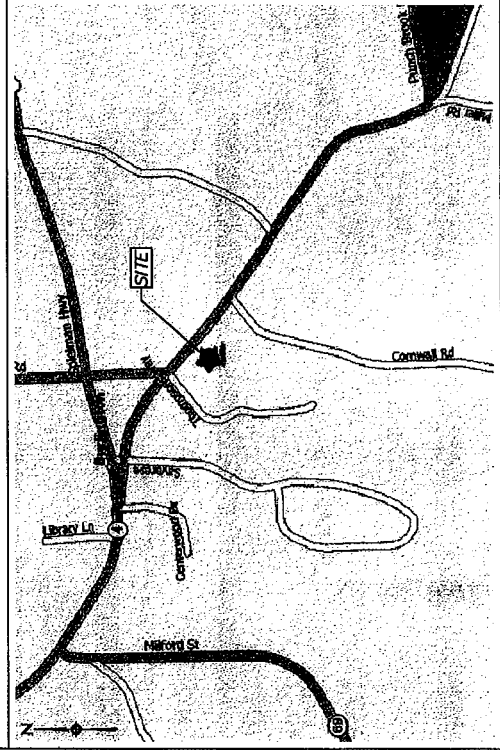
LEGAL/COMPLIANCE _____

NET DESIGN _____



**HFCT1528A
716 GEORGE WASH.
180' MONOPOLE**

LOCATION MAP



DRIVING DIRECTIONS

FROM HARTFORD: TAKE I-84 WEST TO EXIT 39 SOUTH ROUTE 4. SOUTH ROUTE 4 (FARMINGTON AVENUE) 10.7 MILES TO LEFT ON COVEY ROAD. 0.14 MILE TO LEFT ON GEORGE WASHINGTON TURNPIKE. FIRE DEPARTMENT AND MONOPOLE ON THE RIGHT.

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 (LAW) FOR THE LOCATION. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE APPLICABLE CODES AND STANDARDS IN EFFECT ON THE DATE OF BUILDING PERMIT. CONTRACTOR SHALL GOVERN THE DESIGN.

BUILDING CODE:
CONNECTICUT STATE BUILDING CODE
2003 INTERNATIONAL BUILDING CODE
2003 INTERNATIONAL PLUMBING CODE
2003 INTERNATIONAL MECHANICAL AND ELECTRICAL CODE
2003 INTERNATIONAL EXISTING BUILDING CODE
2005 CONNECTICUT SUPPLEMENT

ELECTRICAL CODE:
2005 NATIONAL ELECTRICAL CODE
CONNECTICUT STATE FIRE SAFETY CODE
2003 INTERNATIONAL FIRE CODE

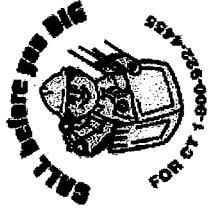
CONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST APPROVED EDITION OF THE FOLLOWING STANDARDS:

AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, ASD, THIRD EDITION
TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-F, STRUCTURAL STANDARD FOR STRUCTURAL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES
TIA 607, COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS
INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM
IEEE 692-41, RECOMMENDED PRACTICES FOR POWERING AND GROUNDING OF ELECTRONIC EQUIPMENT
IEEE 692-41, 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 CONTACTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING WIRELESS COMMUNICATIONS EQUIPMENT. THESE STANDARDS SHALL BE APPLIED TO THE EQUIPMENT WHERE THERE IS CONTACT BETWEEN THE GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT. THE SPECIFIC REQUIREMENT SHALL GOVERN.

SITE NOTES

1. THIS SITE IS UNMANNED AND IS RESTRICTED TO OUTDOOR EQUIPMENT. IT WILL BE USED FOR THE TRANSMISSION OF RADIO SIGNALS FOR THE PURPOSE OF PROVIDING PUBLIC CELLULAR SERVICE.
2. POCKET COMMUNICATIONS CERTIFIES THAT THIS TELEPHONE EQUIPMENT FACILITY WILL BE SERVICED ONLY BY POCKET COMMUNICATIONS EMPLOYEES AND THE WORK ASSOCIATED WITH THE FACILITY. ALL OTHER PERSONNEL WILL BE PROHIBITED FROM ENTERING THE FACILITY. THIS FACILITY IS EXEMPT FROM THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA) APPENDIX B, SECTION 4.11.(5)(9).
3. NO POTABLE WATER SUPPLY IS TO BE PROVIDED AT THIS LOCATION.
4. NO WASTE WATER WILL BE GENERATED AT THIS LOCATION.
5. NO SOLID WASTE WILL BE GENERATED AT THIS LOCATION.
6. AVERAGE OF ONE TRIP PER MONTH AT ONE HOUR PER VISIT.



NO.	DATE	REVISIONS
1	09/19/08	ISSUED FOR REVIEW
2		
3		
4		
5		
6		
7		
8		
9		
10		

PROJECT: HFCT1528A, 716 GEORGE WASHINGTON TPKE.

DATE: 09/19/08

DESIGNER: JCF

CHECKED: KAP

SCALE: AS SHOWN

PROJECT NO: PC1040/259923960

01



URS

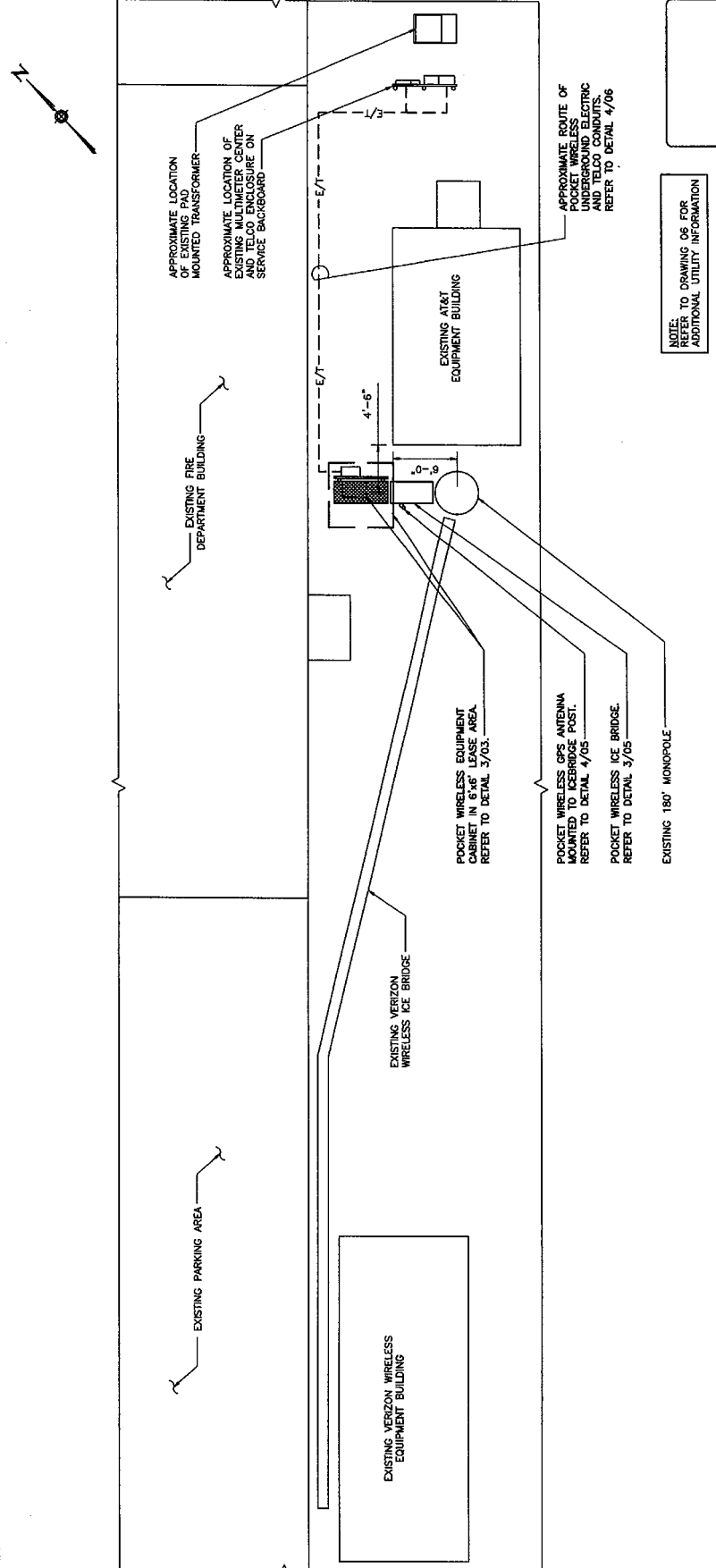
URS CORPORATION
100 WATER STREET
SUITE 1000
ROCKY HILL, CT 06867
PH: 860-514-4000
FAX: 860-514-4001

CONSTRUCTION NOTES

1. FIELD VERIFICATION: CONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK. POCKET COMMUNICATIONS ANTENNA MOUNT LOCATION AND ANTENNAS TO BE INSTALLED.
2. COORDINATE ALL WORK AND PROCEDURES WITH POCKET COMMUNICATIONS.
3. GRAVEL SURFACE IN AREAS OF COMPOUND THAT ARE DISTURBED DURING CONSTRUCTION SHALL BE REPLACED 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 IDENTIFY ANY DISCREPANCY, OMISSIONS, OR CONFLICTS AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR MANAGER AND THE ENGINEER.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, ORDINANCES, RULES, REGULATIONS, AND ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF THE AFFECTING AGENCY REGARDING THE PERFORMANCE OF THE WORK.
4. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL, AND UTILITY COMPANY ORDINANCES AND APPLICABLE REGULATIONS.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE THE WORK AS SHOWN ON THE DRAWINGS.
6. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
7. CONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER, AND T1 CABLES, AND SHOWING CABLES AS SHOWN ON THE SITE PLAN.
8. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
9. CONTRACTOR SHALL LEGALLY AND PROPERLY REMOVE OF ALL SCRAP MATERIALS SUCH AS CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
10. CONTRACTOR TO OBTAIN NECESSARY NOTICES TO PROCEED DOCUMENTS FROM THE TOWER OWNER BEFORE COMMENCING CONSTRUCTION.



SITE PLAN INFORMATION
 THIS SITE PLAN DRAWING WAS COMPILED FROM DATA PROVIDED BY GRAPEVINE SOLUTIONS AND AVAILABLE EXISTING DRAWINGS OF THE SUBJECT AREA.

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

NOTE:
 REFER TO DRAWING 06 FOR
 ADDITIONAL UTILITY INFORMATION

APPROXIMATE ROUTE OF
 POCKET WIRELESS
 UNDERGROUND ELECTRIC
 AND TELCO CONDUITS.
 REFER TO DETAIL 4/06

POCKET WIRELESS EQUIPMENT
 CABINET IN 6'x6' LEASE AREA.
 REFER TO DETAIL 3/03.

POCKET WIRELESS GPS ANTENNA
 MOUNTED TO ICEBRIDGE POST.
 REFER TO DETAIL 4/05

POCKET WIRELESS ICE BRIDGE.
 REFER TO DETAIL 3/05

EXISTING 150' MONOPOLE

EXISTING VERIZON
 WIRELESS ICE BRIDGE

EXISTING VERIZON WIRELESS
 EQUIPMENT BUILDING

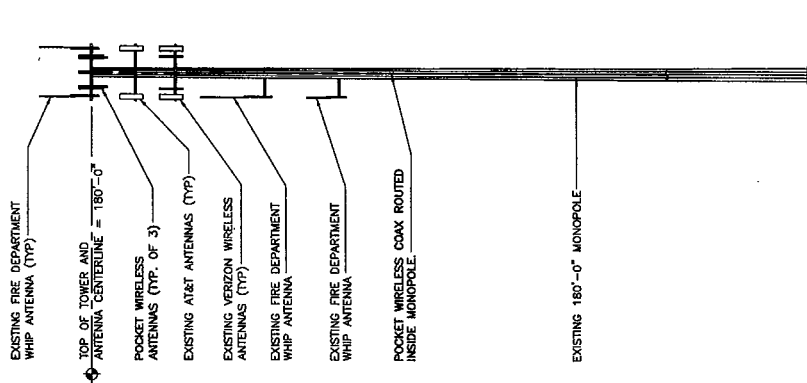
EXISTING PARKING AREA

EXISTING FIRE
 DEPARTMENT BUILDING

APPROXIMATE LOCATION
 OF EXISTING PAD
 MOUNTED TRANSFORMER

APPROXIMATE LOCATION OF
 EXISTING MULTIMETER CENTER
 WITH METAL FIRE ON
 SERVICE BACKBOARD

A TOWER ANALYSIS HAS NOT BEEN PERFORMED FOR THE PREPARATION OF THESE PLANS. AS OF THE ISSUANCE OF THESE PLANS, THE ENGINEER HAS REVIEWED THE PLANS FOR THE ISSUANCE OF THESE PLANS. THE ENGINEER'S REVIEW OF THE PLANS IS LIMITED TO THE ISSUANCE OF THESE PLANS. THE ENGINEER'S REVIEW OF THE PLANS IS LIMITED TO THE ISSUANCE OF THESE PLANS. THE ENGINEER'S REVIEW OF THE PLANS IS LIMITED TO THE ISSUANCE OF THESE PLANS.

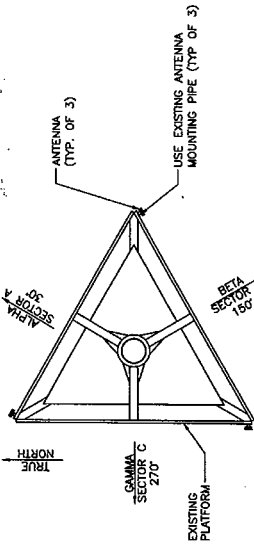


1 TOWER ELEVATION
SCALE: N.T.S.

ANTENNA KEY

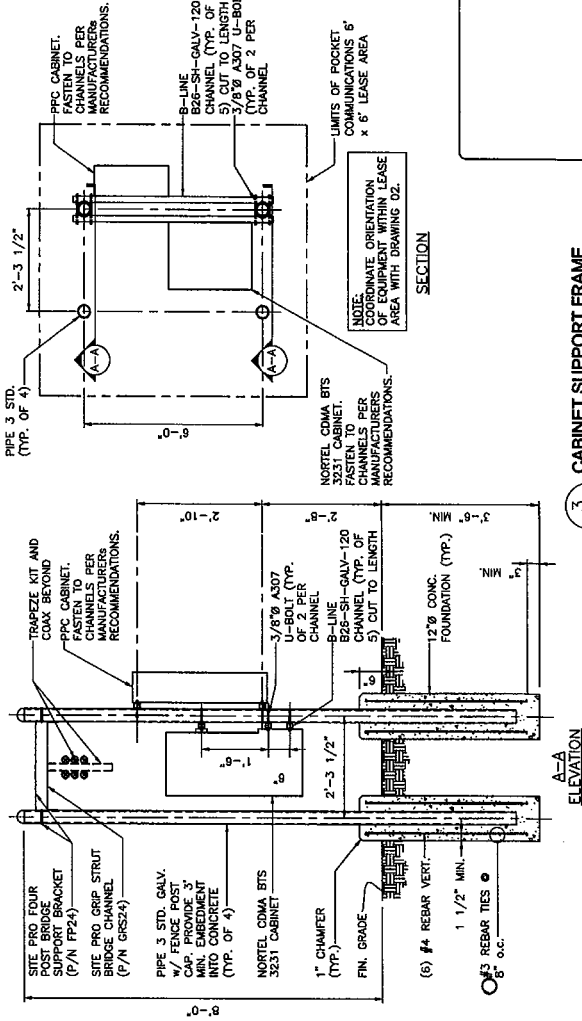
# ANTENNAS PER SECTOR	ANTENNA NUMBER	ANTENNA VENDOR	COAX COLOR CODE	COAX BAND	ANTENNA MODEL NUMBER	AZIMUTH	C/L HEIGHT	MECHANICAL DOWN TILT	ELECTRICAL DOWN TILT	COAX SIZE	CABLES PER ANTENNA	COAX MANUFACTURER
1	A-1	RFS	(1) RED	2065175-C	APXV18-2065175-C	30°	175'-0"	0°	0°	1 5/8"	2 @ 200'	RFS
1	B-1	RFS	(1) BLUE	2065175-C	APXV18-2065175-C	150°	175'-0"	0°	0°	1 5/8"	2 @ 200'	RFS
1	C-1	RFS	(1) GREEN	2065175-C	APXV18-2065175-C	270°	175'-0"	0°	0°	1 5/8"	2 @ 200'	RFS

*REFER TO RFS ANTENNA SHEET FOR FINAL TILT AND AZIMUTHS



2 ANTENNA SECTOR PLAN
SCALE: N.T.S.

- TOWER NOTES:**
- FOR DETAILED TOWER INFORMATION, REFER TO THE TOWER SHEET FOR OTHERS. THE TOWER SHOWN ON THIS SHEET IS SHOWN FOR GENERAL CONFIGURATION PURPOSES ONLY.
 - ANTENNA CONFIGURATION IS SUBJECT TO CHANGE. THE 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.
 - TRAFFIC RINGS DENOTES TRANSMIT PORTS TO BE CONNECTED TO THE +45 PORTS OF THE ANTENNAS.
 - PRIOR TO ORDERING ANY ANTENNAS OR COAX, CONTRACTOR SHALL CONTACT POCKET COMMUNICATIONS MANAGER AND OBTAIN APPROVAL FOR THIS COORDINATION. POCKET COMMUNICATIONS MANAGER IS SOLELY RESPONSIBLE FOR THIS COORDINATION.



3 CABINET SUPPORT FRAME
SCALE: N.T.S.

NO.	DATE	REVISIONS
A	09/19/08	ISSUED FOR REVIEW

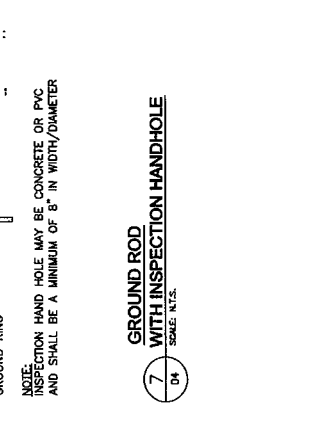
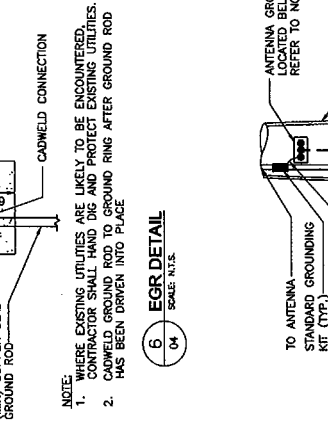
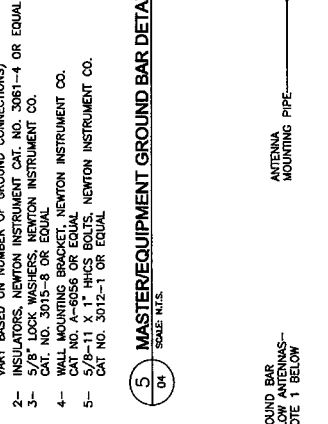
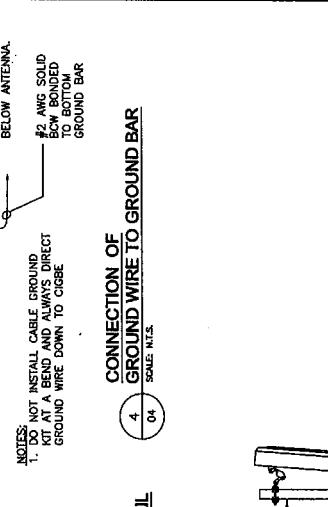
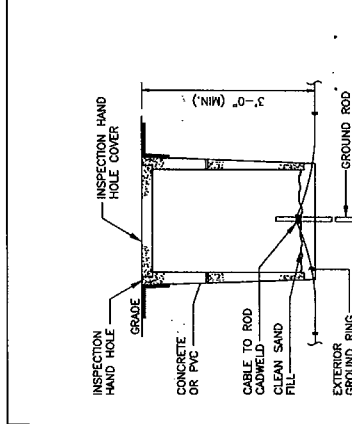
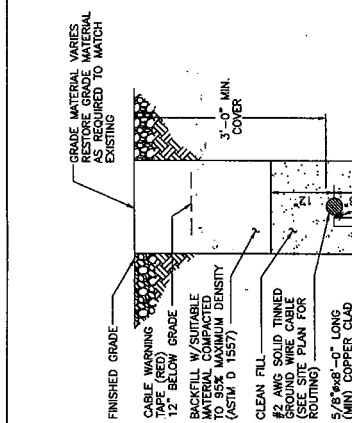
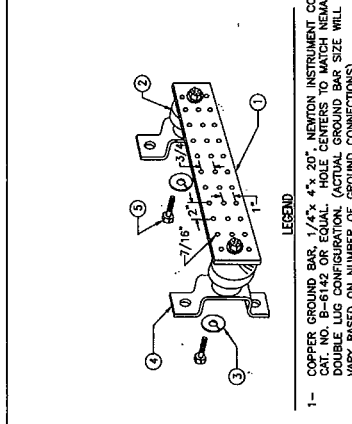
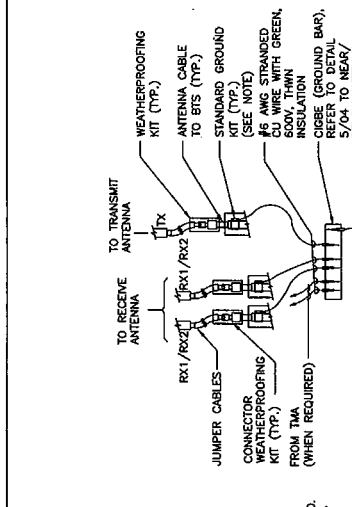
POCKET COMMUNICATIONS
HCT1828A, 716 GEORGE WASHINGTON TRKE
TOWER ELEVATION, ANTENNA PLAN AND DETAILS

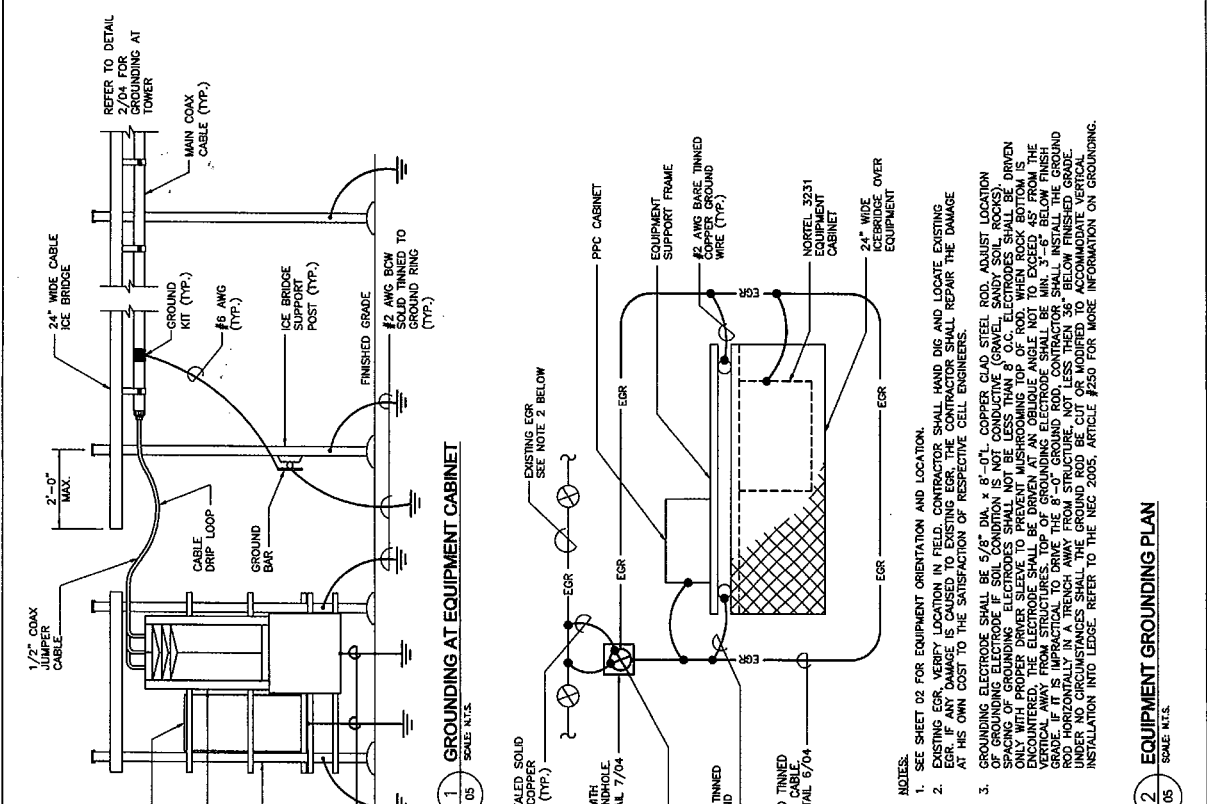
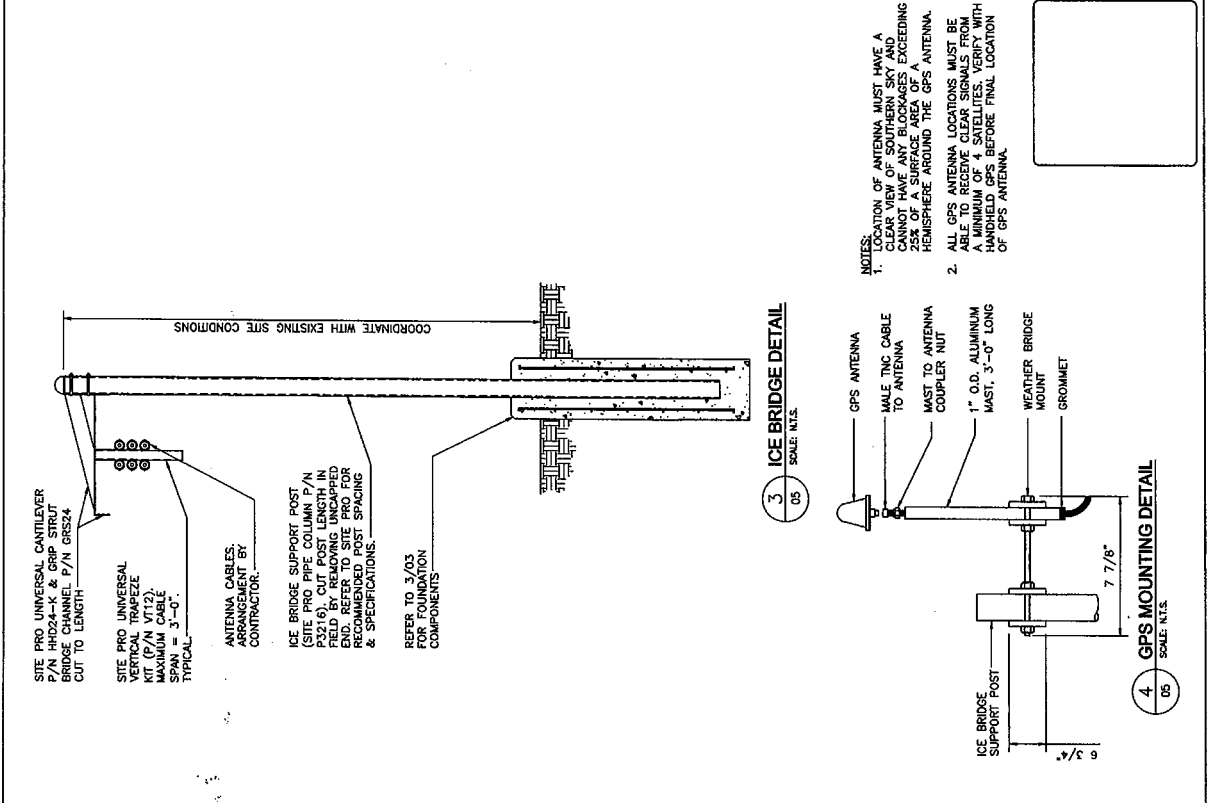
THE INFORMATION CONTAINED HEREIN IS THE PROPERTY OF URS CORPORATION. IT IS TO BE USED ONLY FOR THE PROJECT AND NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT PERMISSION OF URS CORPORATION.



PROJECT NO: HCT1828A
DATE: 09/19/08
JOB NO: 0823960
DRAWING NO: 03

03





NOTES:

- SEE SHEET 02 FOR EQUIPMENT ORIENTATION AND LOCATION.
- EXISTING EGR, VERIFY LOCATION IN FIELD. CONTRACTOR SHALL HAND DIG AND LOCATE EXISTING EGR. CONTRACTOR SHALL REPAIR THE DAMAGE AT HIS OWN COST TO THE SATISFACTION OF RESPECTIVE CELL ENGINEERS.
- GROUNDING ELECTRODE SHALL BE 5/8\"/>

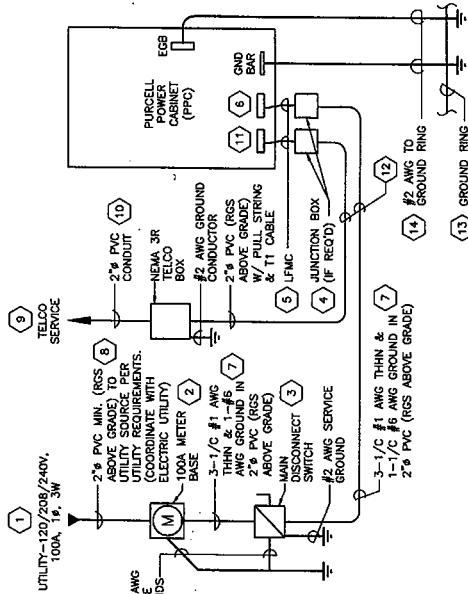
REFER TO 3/03 FOR ANTENNA COMPONENTS

REFERENCE NOTES:

- ELECTRICAL ESTIMATION FROM ELECTRICAL CONTRACTORS TO TELECO SERVICE.
- CONTRACTOR TO SUPPLY AND INSTALL A 100A, 120/208/240V, 3W, 3PH METER BASE. METER BASE TO BE NEMA 3R RATED AND ACCEPTABLE TO LOCAL UTILITY. INDICATING THE METER IS TO BE INSTALLED IN THE METER SERVICE.
- CONTRACTOR TO SUPPLY AND INSTALL NEMA 3R, 100A FUSIBLE DISCONNECT SWITCH WITH LOCKABLE HANDLE. PROVIDE WITH TWO (2) 100A FUSES, AC MECHANICAL INTERLOCK, AND LOCAL UTILITY REQUIREMENTS. PROVIDE WITH COMMUNICATIONS SERVICE DISCONNECT.
- WEATHER TIGHT NEMA 3R JUNCTION BOX (IF REQUIRED). SIZE TO NEC CODE FOR APPLICATION.
- LIQUID TIGHT FLEXIBLE METALLIC CONDUIT W/ WEATHER TIGHT FITTINGS (POWER OR TELCO) SEE NOTE #2 BELOW.
- UTILITY POWER ENTRY INTO CABINET. COORDINATE TERMINATION WITH CABINET MANUFACTURER.
- CONTRACTOR SHALL SUPPLY AND INSTALL 2" GRC. AFG AND PVC 36" BFG C/W 3"-#1 & 1"-#6 AWG THIN FOR UTILITY SERVICE.
- C/W 3"-#1 & 1"-#6 AWG THIN FOR TELCO SERVICE.
- TELECO DEMARKATION POINT. ELECTRICAL CONTRACTOR TO COORDINATE WITH LOCAL TELECO FOR SERVICE TO TELCO BOX OR CABINET.
- CONTRACTOR TO SUPPLY AND INSTALL (1) 2" GRC AFG AND PVC 36" BFG C/W FULL CORDS FOR TELCO SERVICE TO CABINET TERMINATION POINT.
- TELCO SERVICE ENTRY INTO CABINET. COORDINATE TERMINATION WITH CABINET MANUFACTURER.
- CONTRACTOR TO ALLOW FOR UNDERGROUND UTILITY LOCATION. CONDUIT TO BE INSTALLED IN A MANNER WHICH WILL NOT BE A HAZARD TO ORIGINAL CONDITION. INSTALL 5" WIDE METALLIC LINED RED PLASTIC MARK TAPE 8" ABOVE ALL BURRED CONDUIT.
- PORTION OF EXTERIOR GROUND RING
- 2" SOLID BARS, TINNED COPPER EQUIPMENT GROUND CONDUCTOR TO BE INSTALLED IN THE GROUND RING. LOCATE GROUNDING ELECTRODE ADJACENT TO CABINET. BOND GROUNDING ELECTRODE SYSTEM TO CABINET GROUND RING.

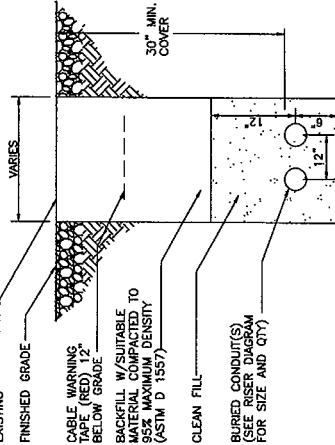
NOTES:

- CONTRACTOR SHALL PROVIDE 100 AMP, SINGLE PHASE, 120/208/240 VAC, 60 HZ ELECTRIC SERVICE FOR SITE.
- CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY BEFORE THE START OF WORK TO OBTAIN ALL NECESSARY PERMITS AND REQUIREMENTS. PROVIDED AND INSTALLED PER UTILITY REQUIREMENTS.
- FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT REFER TO DRAWINGS PROVIDED BY AC OR TELCO PANEL MANUFACTURER.
- ALL WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND LOCAL CODES AND REQUIREMENTS.
- CONTRACTOR SHALL INSTALL SUFFICIENT LENGTHS OF LFMC (NOT EXCEEDING 6'-0") INCLUDING ALL CONDUIT FITTINGS (NUTS, REDUCING BUSHINGS, ELBOWS, ETC.) TO BE USED ON ALL CONDUIT CONNECTIONS FROM IMC CONDUIT TO THE PURCELL POWER CABINET (PPC).
- CONTRACTOR SHALL PROVIDE ELECTRICAL SERVICE EQUIPMENT WITH FAULT CURRENT RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT FROM THE POWER UTILITY.
- CONTRACTOR SHALL VERIFY THAT THE MAIN BONDING JUMPER AND GROUNDING ELECTRODE SYSTEM IS INSTALLED PROPERLY IN THE MAIN DISCONNECT SWITCH.



POWER, TELCO, GROUND SINGLE LINE DIAGRAM FOR OUTDOOR CABINET
SCALE: N.T.S.

GRADE MATERIAL VARIES RESTORE GRADE MATERIAL AS REQUIRED TO MATCH EXISTING.



- ELECTRICAL/TELEPHONE TRENCH DETAIL NOTES:**
- THE CLEAN FILL SHALL PASS THROUGH A 3/8" MESH SCREEN AND SHALL NOT CONTAIN SHARP STONES. OTHER BACKFILL SHALL NOT CONTAIN ASHES, CHINDERS, SHELLS, FROZEN MATERIAL, LOOSE DEBRIS OR STONES LARGER THAN 2" IN MAXIMUM DIMENSION. THE TRENCH SHALL BE BACKFILLED IMMEDIATELY FOLLOWING PLACEMENT OF THE CONDUITS.
 - WHERE EXISTING UTILITIES ARE LIKELY TO BE ENCOUNTERED, CONTRACTOR SHALL HAND DIG AND PROTECT EXISTING UTILITIES.

TYPICAL ELECTRICAL TELEPHONE TRENCH DETAIL
SCALE: N.T.S.

PANEL SSC			
LOAD DESCRIPTION	LOAD (KVA)	PHASE	LOAD DESCRIPTION
BITS CABINET	2.5	30/2	2.2
	4	30/2	2.2
LIGHTING	1.9	10/1	0.2
SPACE	9	---	---
SPACE	12	---	---
SPACE	14	---	---
SPACE	17	---	---
SPACE	19	---	---
SPACE	22	---	---
SPACE	24	---	---
LOAD SUB-TOTAL	6.9	LOAD TOTAL	11.5 KVA
LOAD SUB-TOTAL			4.6

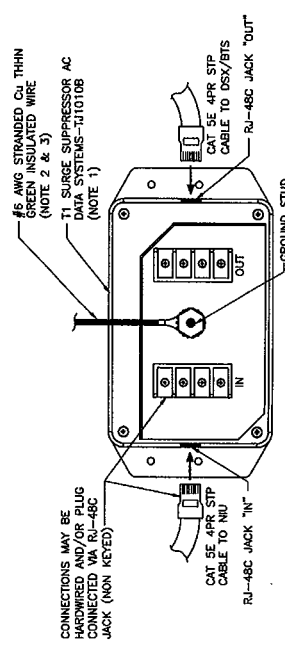
100A MCB, 120/208/240V, 1P, 3 WIRE, 65,000 AIC	
TOTAL CONNECTED LOAD	11.5 KW
25% OF LARGEST CONT. LOAD	1.75 KW
TOTAL LOADS	13.25 KW

NOTE: ALL NON-OPTIONAL BREAKERS PROVIDED BY SSC MFR

PANEL SCHEDULE
SCALE: N.T.S.

GENERAL ELECTRIC NOTES:

- ALL ELECTRICAL AND GROUNDING WORK SHALL BE PERFORMED IN ACCORDANCE WITH PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.
- CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL VERIFY ROUTING AND LENGTHS PRIOR TO WORK.
- WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCO/DIA.
- THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES, AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.



- CONNECTIONS MAY BE HARDWIRED AND/OR PLUG JACK (NON KEYS).**
- NOTES:**
- MOUNT TVSS UNIT ON EQUIPMENT FRAME HOUSING THE DSX UNIT. USE APPROPRIATE STAINLESS STEEL BOLTS WITH FLAT WASHERS AND A LOCK WASHER ON THE NUT SIDE. THE TVSS MAY BE LOCATED ON THE TELCO BACKBOARD. REFER TO MANUFACTURER'S INSTRUCTIONS.
 - ATTACH RING TERMINAL FROM SUPPLIED GROUND CONDUCTOR TO TVSS GROUND STUD SECURELY FASTEN WITH SUPPLIED WASHER AND NUT. REFER TO MANUFACTURER'S INSTRUCTIONS. FOR PROPER PERFORMANCE, THE GROUND CONDUCTOR LENGTH SHOULD BE LIMITED WITH NO SHARP BENDS ON COILS.
 - WHEN TVSS IS MOUNTED ON EQUIPMENT FRAME, BOND THE GROUND CONDUCTOR TO THE EQUIPMENT FRAME AND TO THE GROUNDING ELECTRODE SYSTEM. BOND THE GROUND CONDUCTOR TO THE TELCO (BOARD) GROUND BAR OR NEAREST GROUND BAR.

TVSS DETAIL
SCALE: N.T.S.

Exhibit C

Equipment Specifications

Pocket Site HFCT1528A

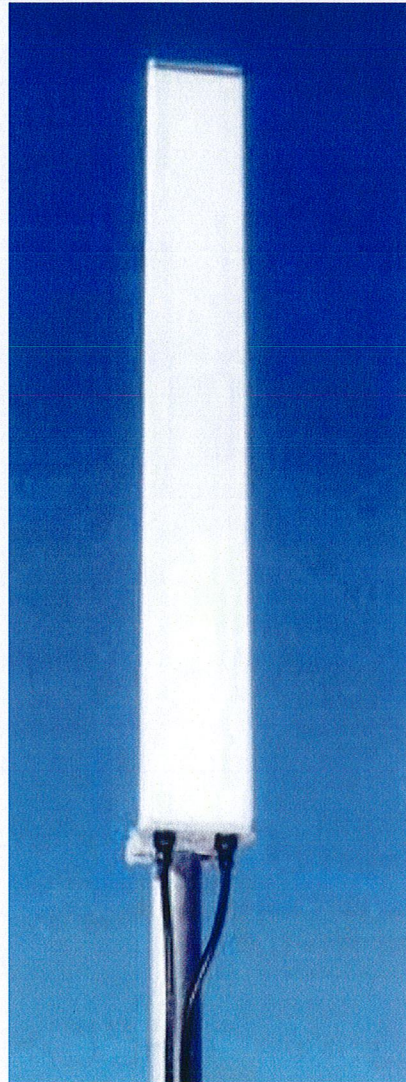
**716 George Washington
Turnpike**

Burlington, 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

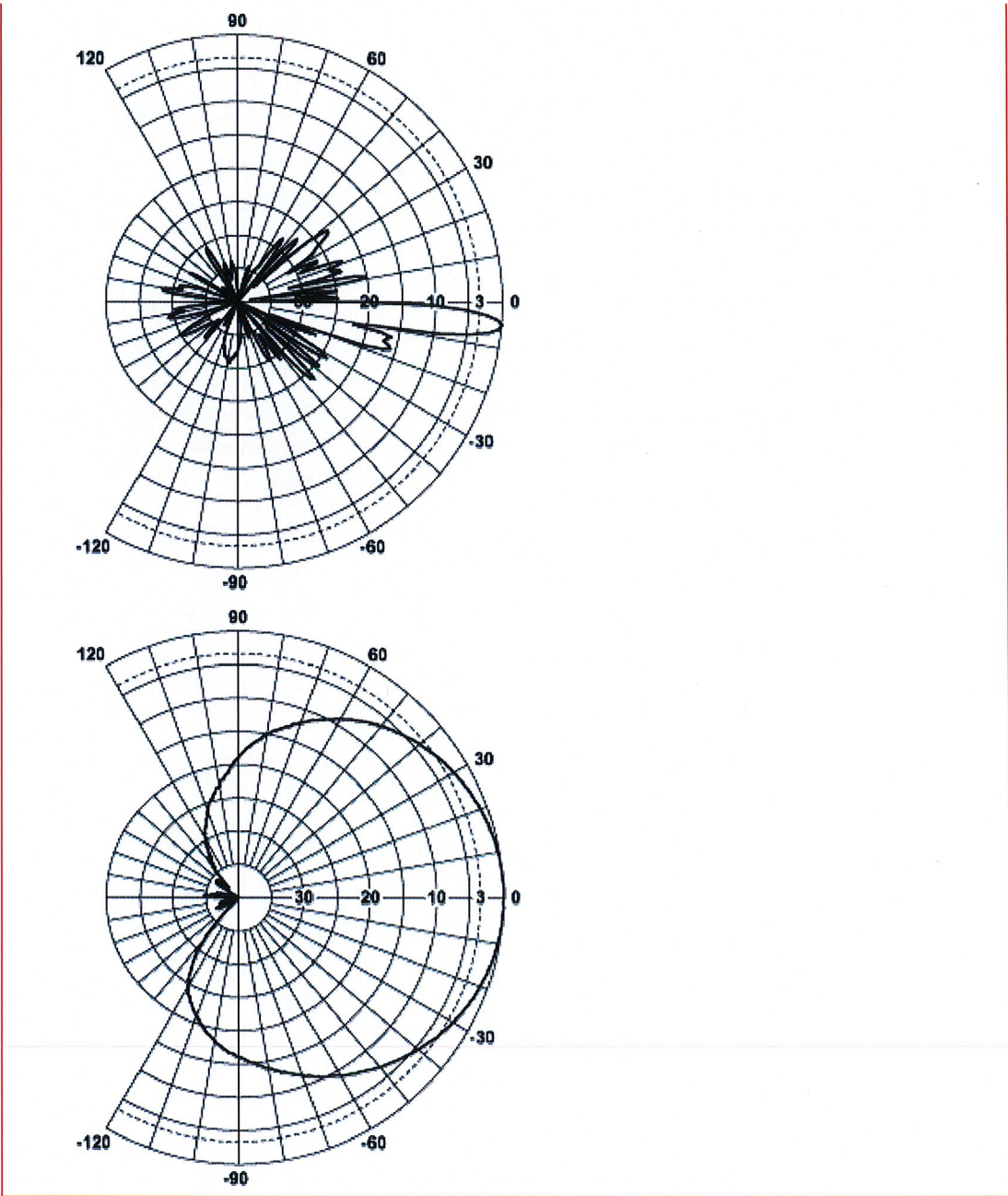
Frequency Band	3G/UMTS (Single, Broad, Dual and Triple-Band)
Horizontal Pattern	Directional
Antenna Type	Panel Dual Polarized
Electrical Down Tilt Option	Variable

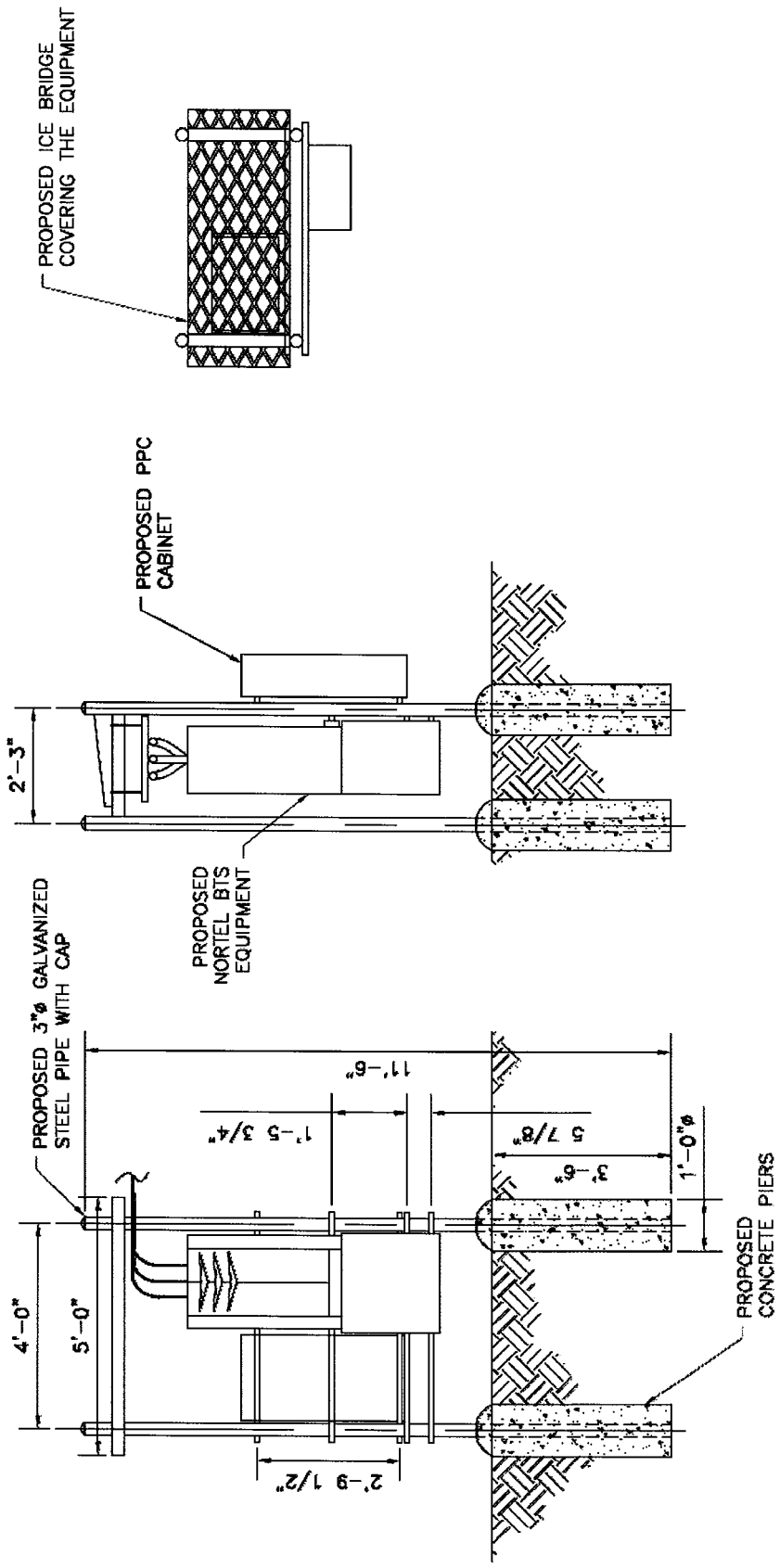


Gain, dBi (dBd)	18.8 (16.7) , 19.0 (16.9)
Frequency Range, MHz	1710-1900, 1900-2170
Connector Type	(2) 7-16 DIN Female
Connector Location	Bottom
Mount Type	Downtilt
Electrical Downtilt, deg	0-10
Horizontal Beamwidth, deg	67 , 63
Mounting Hardware	APM40-2
Rated Wind Speed, km/h (mph)	160 (100)
VSWR	< 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)

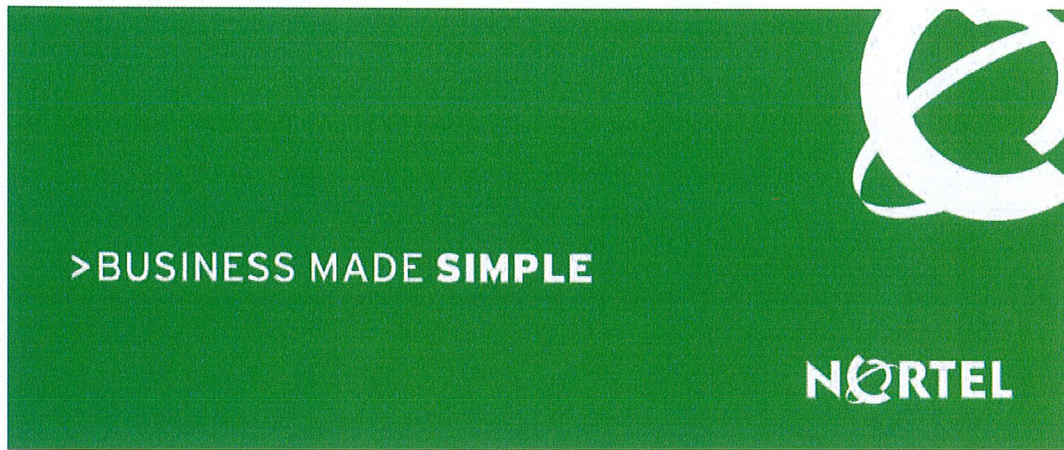
Notes

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)

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

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

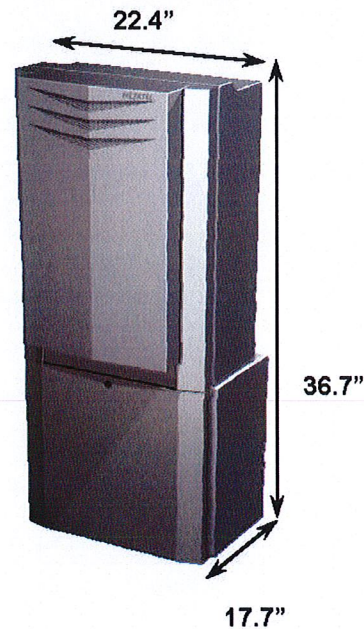


Exhibit D

Power Density Calculations

Pocket Site HFCT1528A

**716 George Washington
Turnpike**

Burlington, Connecticut



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

support@csquaredsystems.com

Calculated Radio Frequency Emissions



CT-1528

716 George Washington Tpke, Burlington, CT

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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 tower at 716 George Washington Tpke, Burlington, CT.

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:

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

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

Off Beam Loss is determined by the selected antenna patterns

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
Verizon	9	200	160	869	1,800	0.0253	0.5793	4.36%
Verizon	3	200	160	1,900	600	0.0084	1.0000	0.84%
AT&T	6	296	170	880	1,776	0.0221	0.5867	3.77%
AT&T	3	427	170	1,930	1,281	0.0159	1.0000	1.59%
Public Safety	1	60	188	159	60	0.0006	0.2000	0.31%
Public Safety	1	75	188	155	75	0.0008	0.2000	0.38%
Public Safety	1	75	188	156	75	0.0008	0.2000	0.38%
Public Safety	1	40	144	155	40	0.0007	0.2000	0.35%
Public Safety	Receive Only		134	Receive Only				
Public Safety	1	100	113	34	100	0.0028	0.2000	1.41%
Public Safety	6	50	106	155	300	0.0096	0.2000	4.80%
Pocket	3	631	175	2130-2133.75	1,893	0.0222	1.0000	2.22%
							Total	20.41%

Table 1: Proposed Carrier Information

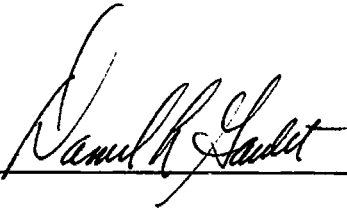
5. Conclusion

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 tower is 20.41% of the FCC limit.

Please note that as indicated 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

September 15, 2008

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

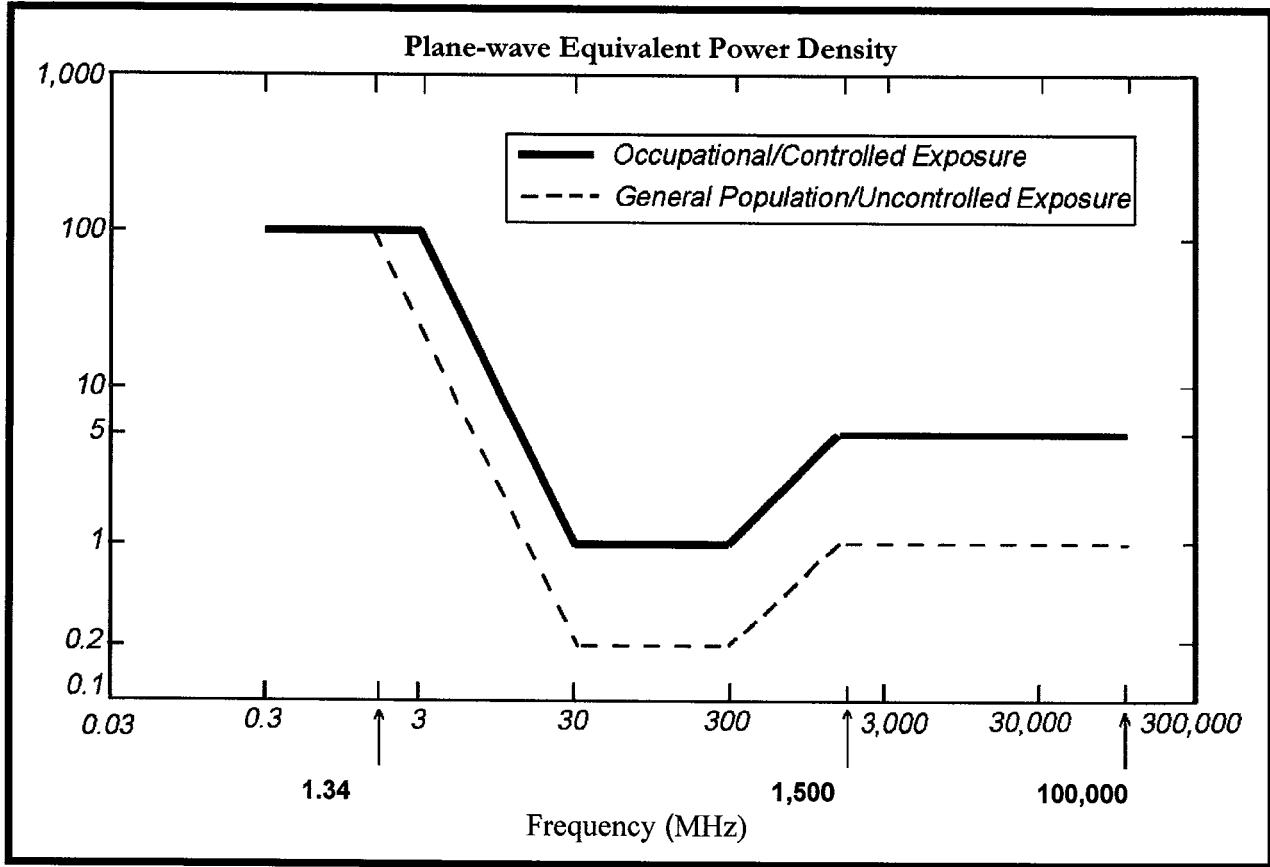
(B) Limits for General Population/Uncontrolled Exposure

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 HFCT1528A

**716 George Washington
Turnpike**

Burlington, Connecticut

Structural Analysis Report



Pocket Comm. #HFCT1528A Site

Owner: Town of Burlington, CT
Burlington, Connecticut

September 24, 2008

MEI PROJECT ID: CT01342M-08V0

MALOUF ENGINEERING INTL., INC.



STRUCTURAL CONSULTANTS

17950 PRESTON ROAD, SUITE 720 • DALLAS, TEXAS 75252-5635 • TEL. 972-783-2578 FAX 972-783-2583
www.maloufengineering.com





September 24, 2008

Mr. Kim Pocock
Force 3 Communications
 Lexington, SC

STRUCTURAL ANALYSIS

Structure/Make/Model:	178.75 ft Monopole	EEI / 18 Sided Pole	
Client/Site Name/#:	Force 3 Comm. / Pocket Comm.	HFCT1528A	
Owner/Site Name/#:	Town of Burlington, CT		
MEI Project ID:	CT01342M-08V0		
Location:	716 George Washington Tpke Burlington, CT 06013	Hartford County FCC #N/A	
	LAT	41-45-59 N	LON 72-57-42 W

EXECUTIVE SUMMARY:

Malouf Engineering Int'l (MEI), as requested, has performed a structural analysis of the above mentioned structure to assess the impact of the changed condition as noted in Table 1.

Based on the stress analysis performed, the existing structure **is in conformance** with the ANSI/TIA **222-F** Standard for the loading considered under the criteria listed and referenced in the report sections - tower rated at 86.9% (pole shaft).

The installation of the proposed changed condition of the Pocket Communications (3) APXV 18-206517S-C Panel Antennas onto the existing (3) down pipe mounts off the top platform at Elev. 175ft± c.l. fed with (6) 1-5/8" Dia. Tx-Lines (internal to shaft) is structurally acceptable.

MEI appreciates the opportunity of providing our continuing professional services to you. If you have any questions or need further assistance on this or other projects please contact us.

Respectfully submitted,

MALOUF ENGINEERING INT'L, INC.

Analysis performed by:

Helder Lopez, MSCE
 Project Engineer

Reviewed & Approved by:

[Handwritten Signature]
 E. Mark Malouf, PE
 Connecticut #17715
 972-783-2578 ext. 106
 mmalouf@maloufengineering.com



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1. INTRODUCTION & SCOPE

A structural analysis was performed by Malouf Engineering Int'l (MEI), as requested and authorized by Mr. Kim Pocock, of Force 3 Communications, on behalf of Pocket Communications, to determine the acceptance of the proposed changed conditions in conformance with the ANSI/TIA-222-F Standard, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures".

The scope of this independent analysis is to determine the overall stability and the adequacy of structural members, foundations, and member connections, as available and stated. This analysis considers the structure to have been properly installed and maintained with no structural defects. Installation procedures and related loading are not with the scope of this analysis and should be performed and evaluated by a competent person of the erection contractor.

The different report sections detail the applicable information used in this evaluation, relating to the tower data, the appurtenances configuration and the wind and ice loading considered.

2. SOURCE OF DATA

The following information has been used in this evaluation as source data that accurately represent the existing structure and the related appurtenances:

	Source	Information	Reference
STRUCTURE			
Tower	Kim Pocock / Force 3 Comm.	Original Tower Manufacturer Drawings	EEI Project #13628 Drawing #GS55931 Dated 09/08/05
Foundation	Kim Pocock / Force 3 Comm.	Original Design Drawings	EEI Project #13628 Dwg #D13628-180.1 Dated 09/15/05
Material Grade	Available from supplied documents noted above – refer to Appendix.		
CURRENT APPURTENANCES			
	Kim Pocock / Force 3 Comm.	Recent Photos	Photos Taken 07/14/08
CHANGED CONDITION			
	Kim Pocock / Force 3 Comm.	E-mail Instructions & phone conversation.	E-mail Dated 09/18/08 & 09/24/08.

Background Information:

Based on available information, the following is known regarding this structure:

DESIGNER / FABRICATOR	EEI / MP
DESIGN CRITERIA	TIA/EIA 222-F 80/69 Mph + 0 / 1/2" Ice
PRIOR STRUCTURAL MODIFICATIONS	None Known

3. ANALYSIS CRITERIA

The structural analysis performed used the following criteria:

CODE / STANDARD	ANSI/TIA-222-F-96 Standard	
LOADING CASES	<i>Full Wind:</i>	80 Mph (fastest-mile) - with No Radial Ice
	<i>Iced Case:</i>	69 Mph (fastest-mile) + 1/2" Radial Ice
	<i>Service:</i>	50 Mph

Appurtenances Configuration

The following appurtenances configuration has been considered:

Table 1: Proposed Changed Condition Appurtenances

Elev (ft)	Tenant	Ant Qty	Appurtenance Model / Description	Mount Description	Lines Qty	Line size & Location
175 c.l.	Pocket	3	APXV 18-206517S-C Panel Antennas	[3-Existing down Pipe Mounts off top platform]	6	1-5/8"- (I)

Table 2: Current and Reserved/Future Appurtenances

Elev (ft)	Tenant	Ant Qty	Appurtenance Model / Description	Mount Description	Lines Qty	Line size & Location
178.5 base		3	15' Omni Whip Antennas	12' LP Platform w/o Rails	3	1-5/8"- (I)
170		6	5.5'Hx12"Wx3.5"D (Approx) Panel Antennas	12' LP Platform w/o Rails	3	1-5/8"- (I)
		12	TMA's			
160		6	5'Hx4"Wx8"D (Approx) Panel Antennas	(1) 12' LP Platform w/o Rails	3	1-5/8"- (I)
		6	5'Hx12"Wx8"D (Approx) Panel Antennas		3	1-5/8"- (I)
126		1	20' 4-Elem. Dipole Antenna	(1) Straight Arm Mount	1	7/8"- (I)
		1	10' Omni Whip Antenna	(1) Straight Arm Mount	1	7/8"- (I)
108		1	10' 2-Elem. Dipole Antenna	(1) Straight Arm Mount	1	7/8"- (I)

Notes:

- Existing carrier(s) elevation and antennae sizes have been estimated based on photos supplied, along with their transmission line quantity and size.
- (I) = internal; (E) = External; (FZ) = Within Face Zone & (OFZ) = Outside Face Zone - as per TIA-222.
- The above antennas, mounts, and lines represent MEI's understanding of the appurtenances configuration. If different than above, the analysis is invalid. Please refer to Appendix 2 for EPA wind areas used in the calculations. Please contact MEI if any discrepancies are found.

4. ANALYSIS PROCEDURE

The subject structure is analyzed for feasibility of the installation of the proposed changed condition previously noted. The data records furnished were reviewed and a computer stress analysis was performed in accordance with the TIA-222 Standard provisions and with the agreed scope of work terms and the results of this analysis are reported.

Analysis Program

The computer program used to model the structure is a rigorous Finite Element Analysis program, RISATower (ver. 5.2.1.0), a commercially available program developed by C-Concepts, WI and now maintained by RISA Technologies. The latticed structures members are modeled using beam/truss and cable members and the pole members using tubular beam elements. The structural parameters and geometry of the members are included in the model. The dead and temperature loads and the wind loads are internally calculated by the program for the different wind directions and then applied as external loads on the structure.

Assumptions

This engineering study is based on the theoretical capacity of the members and is not a condition assessment of the structure. This analysis is based on information supplied, and therefore, its results are based on and as accurate as that supplied data. MEI has made no independent determination, nor is it required to, of its accuracy. The following assumptions were made for this structural stress analysis:

- This existing tower is assumed, for the purpose of this analysis, to have been properly maintained and to be in good condition with no structural defects and with no deterioration to its member capacities ('as-new' condition).
- The tower member sizes and configuration are considered accurate as supplied. The material grade is as per data supplied and/or as assumed and as stated.
- The appurtenances configuration is as supplied and/or as stated in the report. It is assumed to be complete and accurate. All antennas, mounts, coax and waveguides are assumed to be properly installed and supported as per manufacturer requirements.
- Some assumptions are made regarding antennas and mounts sizes and their projected areas based on best interpretation of data supplied and of best knowledge of antenna type & industry practice.
- Mounts/Platforms are considered adequate to support the loading. No actual analysis of the platform/mount itself is performed, with the analysis being limited to analyzing the structure.
- The soil parameters are as per data supplied or as assumed and stated in the calculations. Refer to the Appendix. If no data is available, the foundation system is assumed to support the structure with its new reactions.
- All welds and connections are assumed to develop at least the member capacity, unless determined otherwise and explicitly stated in this report. All guy cable assemblies, as applicable, are assumed to develop the rated breaking strength of the wire.
- All prior structural modifications, if any, are assumed to be as per data supplied/available, and to have been properly installed and to be fully effective.

If any of the above assumptions are not valid or have been made in error, this analysis results may be invalidated, MEI should be contacted to review any contradictory information to determine its effect.

5. ANALYSIS RESULTS

The results of the structural stress analysis based on data available and with the previous listed criteria, indicated the following:

Table 3: Stress Analysis Results

Member Type	Maximum Stress Ratio	Controlling Elev. (ft) / Component	Pass/Fail	Comment
POLE SHAFT	86.9%	93.3' - 46.2'	Pass	
BASE PLATE	-	-	Pass	New reactions are Less than original design reactions
ANCHOR RODS	61.5%	Bolt Tension	Pass	
FOUNDATION	83.2%	Moment Comparison	Pass	New Moment is 16.8% Less than original design Moment

Notes:

1. The Maximum Stress Ratio is the percentage that the maximum load in the member is relative to the allowable load as determined by Code requirements.
2. Refer to the Appendix 2 for more details on the member loads.
3. A maximum stress ratio between 100% and 105% may be considered as *Acceptable* according to industry standard practice.

6. FINDINGS & RECOMMENDATIONS

- Based on the rigorous stress analysis results, the subject structure **is rated at 86.9%** of its support capacity (controlling component: Shaft) with the proposed changed condition considered. Please refer to Table 3 and to Appendix 2 for more details of the analysis results.
- Based on the stress analysis performed, the existing structure **is in conformance** with the ANSI/TIA **222-F** Standard for the loading considered under the criteria listed and referenced in the report sections.
- ***The installation of the proposed changed condition of the Pocket Communications (3) APXV 18-206517S-C Panel Antennas onto the existing (3) down pipe mounts off the top platform at Elev. 175ft± c.l. fed with (6) 1-5/8" Dia. Tx-Lines (internal to shaft) is structurally acceptable.***
- This structure has additional support capacity for the appurtenances and loading criteria considered. Therefore, No changes to the configuration considered should be made without performing a new proper evaluation.

Rigging and temporary supports required for the erection/modification shall be determined, documented, furnished and installed by the erector/contractor accounting for the loads imposed on the structure due to the proposed construction method.

7. REPORT DISCLAIMER

The engineering services rendered by Malouf Engineering International, Inc. ('MEI') in connection with this Structural Analysis are limited to a computer analysis of the tower structure, size and capacity of its members. MEI does not analyze the fabrication, including welding and connection capacities, except as included in this Report.

The analysis performed and the conclusions contained herein are based on the assumption that the tower has been properly installed and maintained, including, but not limited to the following:

1. Proper alignment and plumbness.
2. Correct guy tensions, as applicable.
3. Correct bolt tightness or slip jacking of sleeved connections.
4. No significant deterioration or damage to any structural component.

Furthermore, the information and conclusions contained in this Report were determined by application of the current "state-of-the-art" engineering and analysis procedures and formulae. MALOUF ENGINEERING INTERNATIONAL, INC. Assumes no obligation to revise any of the information or conclusions contained in this Report in the event that such engineering and analysis procedures and formulae are hereafter modified or revised. In addition, under no circumstances will MALOUF ENGINEERING INTERNATIONAL, INC. Have any obligation or responsibility whatsoever for or on account of consequential or incidental damages sustained by any person, firm or organization as a result of any information or conclusions contained in the Report, and the maximum liability of MALOUF ENGINEERING INTERNATIONAL, INC., if any, pursuant to this Report shall be limited to the total funds actually received by MALOUF ENGINEERING INTERNATIONAL, INC. For preparation of this Report.

Customer has requested MALOUF ENGINEERING INTERNATIONAL, INC. To prepare and submit to Customer an engineering analysis with respect to the Subject Tower and has further requested MALOUF ENGINEERING INTERNATIONAL, INC. to make appropriate recommendations regarding suggested structural modifications and changes to the Subject Tower. In making such request of MALOUF ENGINEERING INTERNATIONAL, INC., Customer has informed MALOUF ENGINEERING INTERNATIONAL, INC. that Customer will make a determination as to whether or not to implement any of the changes or modifications which may be suggested by MALOUF ENGINEERING INTERNATIONAL, INC. and that Customer will have any such changes or modifications made by riggers, erectors and other subcontractors of Customer's choice. MALOUF ENGINEERING INTERNATIONAL, INC. shall have the right to rely upon the accuracy of the information supplied by the customer and shall not be held responsible for the Customer's misrepresentation or omission of relevant fact whether intentional or otherwise.

Customer hereby agrees and acknowledges that MALOUF ENGINEERING INTERNATIONAL, INC. shall have no liability whatsoever to Customer or to others for any work or services performed by any persons other than MALOUF ENGINEERING INTERNATIONAL, INC. in connection with the implementation of services including but not limited to any services rendered for Customer or for others by riggers, erectors or other subcontractors. Customer acknowledges and agrees that any riggers, erectors or subcontractors retained or employed by Customer shall be solely responsible to Customer and to others for the quality of work performed by them and that MALOUF ENGINEERING INTERNATIONAL, INC. shall have no liability or responsibility whatsoever as a result of any negligence or breach of contract by any such rigger, erector or subcontractor and that Customer and rigger, erector, or subcontractor will provide MALOUF ENGINEERING INTERNATIONAL, INC. with a Certificate of Insurance naming MALOUF ENGINEERING INTERNATIONAL, INC. as additional insured.

APPENDIX 1 - TOWER DRAWING

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
15' Omni Whip Antenna (E.)	178.5	(6) 5'Hx12"Wx8"D (Approx.) Panel Ants. (VzW / E.)	160
15' Omni Whip Antenna (E.)	178.5		
15' Omni Whip Antenna (E.)	178.5	12 ft L.P. Platform w/o Rails (VzW / E.)	157
12 ft L.P. Platform w/o Rails (E.)	178.5		
(3) APXV 18-206517S-C Panel Ants. (Pocket Comm.)	175	20' 4-Elem. Dipole Antenna (E.)	126
		Straight Arm Mount (E.)	126
(6) 5.5'Hx12"Wx3.5"D (Approx.) Panel Ants. (ATI / E.)	170	10' Omni Whip Antenna (E.)	126
		Straight Arm Mount (E.)	126
(12) TMA's (ATI / E.)	170	10' 2-Elem. Dipole Antenna (E.)	108
12 ft L.P. Platform w/o Rails (ATI / E.)	167	Straight Arm Mount (E.)	108
(6) 5'Hx4"Wx8"D (Approx.) Panel Ants. (VzW / E.)	160		

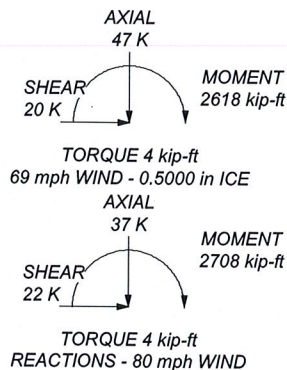
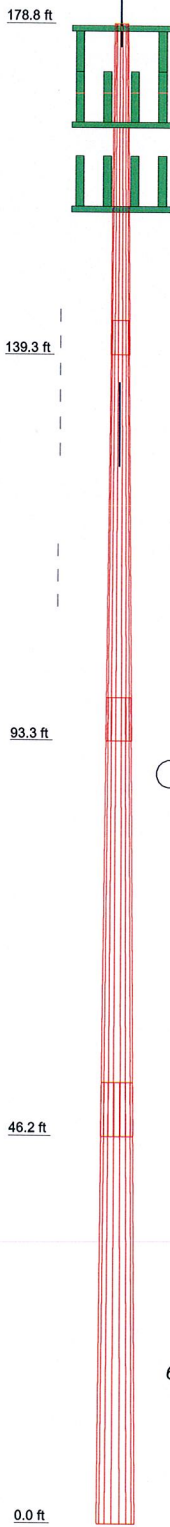
MATERIAL STRENGTH


GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for a 80 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 69 mph basic wind with 0.50 in ice.
4. Deflections are based upon a 50 mph wind.
5. OWNER: BURLINGTON FIRE DEPT.
6. TOWER RATING: 86.9 %

Section	Length (ft)	Number of Sides	Thickness (in)	Lap Splice (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (K)
1	39.42	18	0.1875	4.06	19.5000	28.0313	A572-65	1.9
2	50.10	18	0.2500	5.19	26.7770	37.5313	A572-65	4.3
3	52.29	18	0.3750	6.39	35.9166	47.1250	A572-65	8.7
4	52.59	18	0.3750	45.0052	56.2500		A572-65	10.7

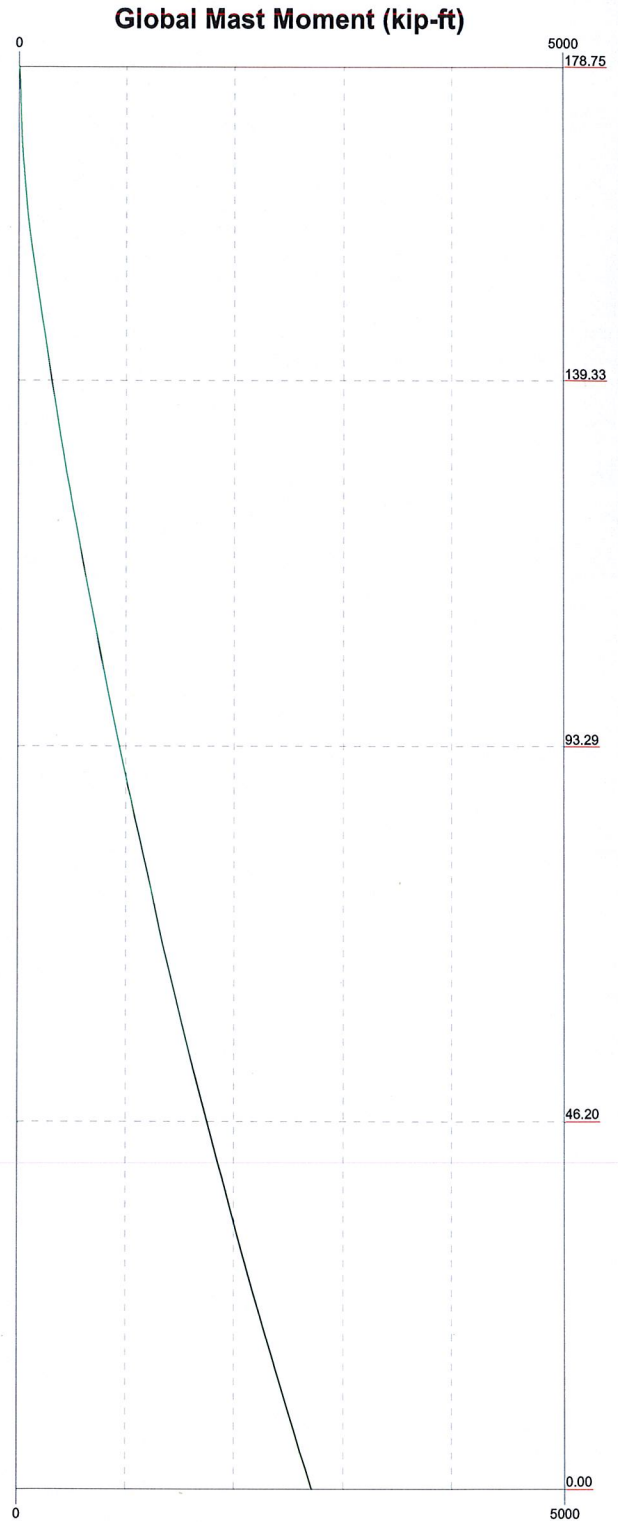
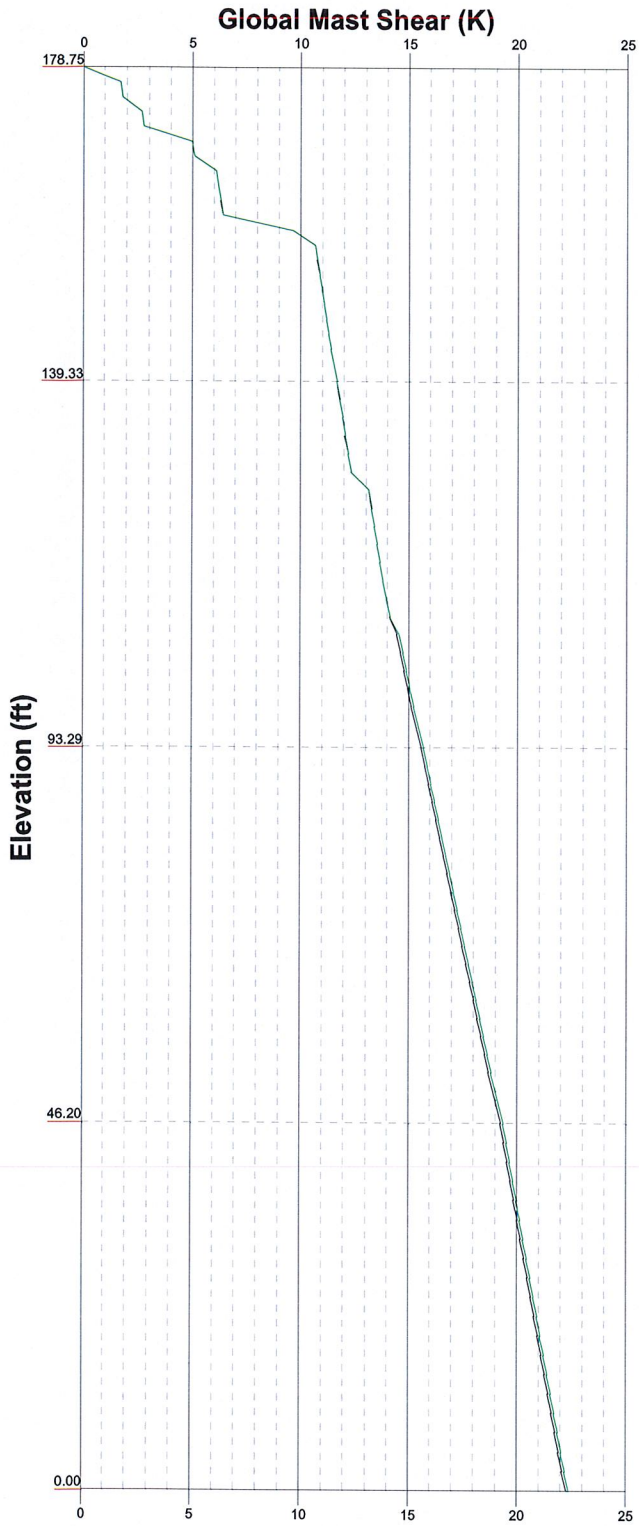



 <p>Malouf Engineering Int'l, Inc 17950 Preston Rd., Suite 720 Dallas, Texas - 75252 Phone: (972) 783-2578 FAX: (972) 783-2583</p>	Job: 179 ft - Mnp. - Pocket Comm. Site # HFCT1528A		
	Project: CT01342M-08V0		
	Client: Force 3 Comm. / Pocket Comm.	Drawn by: HML	App'd:
	Code: TIA/EIA-222-F	Date: 09/24/08	Scale: NTS
Path: C:\MEI\Projects\08files\CT01342M-08V0\CT01342M-08V0.dwg		Dwg No. E-1	

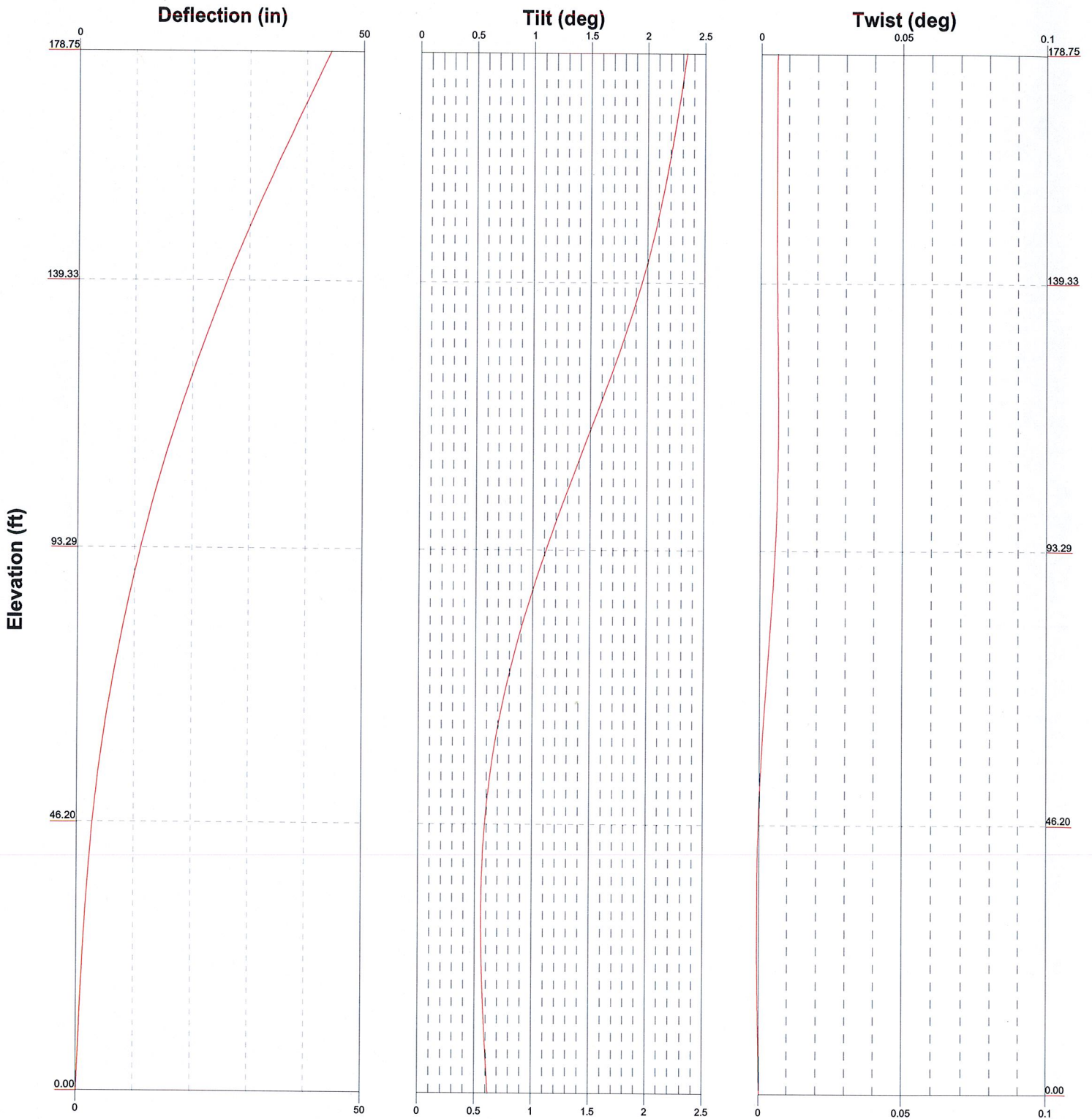
APPENDIX 2 - ANALYSIS PRINTOUT & GRAPHICS


Vx Vz

Mx Mz



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	Client: Force 3 Comm. / Pocket Comm.	Drawn by: HML	App'd:	
	Code: TIA/EIA-222-F	Date: 09/24/08	Scale: NTS	
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	Client: Force 3 Comm. / Pocket Comm.		Drawn by: HML	App'd:
	Code: TIA/EIA-222-F		Date: 09/24/08	Scale: NTS
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Tower Input Data

There is a pole section.

This tower is designed using the TIA/EIA-222-F standard.

The following design criteria apply:

Tower is located in Hartford County, Connecticut.

Basic wind speed of 80 mph.

Nominal ice thickness of 0.5000 in.

Ice density of 56 pcf.

A wind speed of 69 mph is used in combination with ice.

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 50 mph.

OWNER: BURLINGTON FIRE DEPT..

A non-linear (P-delta) analysis was used.

Pressures are calculated at each section.

Stress ratio used in pole design is 1.333.

Local bending stresses due to climbing loads, feedline supports, and appurtenance mounts are not considered.

Options

<ul style="list-style-type: none"> Consider Moments - Legs Consider Moments - Horizontals Consider Moments - Diagonals Use Moment Magnification v Use Code Stress Ratios v Use Code Safety Factors - Guys Escalate Ice Always Use Max Kz Use Special Wind Profile v Include Bolts In Member Capacity v Leg Bolts Are At Top Of Section v Secondary Horizontal Braces Leg Use Diamond Inner Bracing (4 Sided) Add IBC .6D+W Combination 	<ul style="list-style-type: none"> Distribute Leg Loads As Uniform Assume Legs Pinned v Assume Rigid Index Plate v Use Clear Spans For Wind Area v Use Clear Spans For KL/r v Retension Guys To Initial Tension Bypass Mast Stability Checks v Use Azimuth Dish Coefficients v Project Wind Area of Appurt. v Autocalc Torque Arm Areas SR Members Have Cut Ends Sort Capacity Reports By Component v Triangulate Diamond Inner Bracing 	<ul style="list-style-type: none"> Treat Feedline Bundles As Cylinder Use ASCE 10 X-Brace Ly Rules v Calculate Redundant Bracing Forces Ignore Redundant Members in FEA SR Leg Bolts Resist Compression v All Leg Panels Have Same Allowable Offset Girt At Foundation Consider Feedline Torque Include Angle Block Shear Check <li style="padding-left: 20px;">Poles Include Shear-Torsion Interaction Always Use Sub-Critical Flow Use Top Mounted Sockets
--	--	---

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	178.75-139.33	39.42	4.06	18	19.5000	28.0313	0.1875	0.7500	A572-65 (65 ksi)
L2	139.33-93.29	50.10	5.19	18	26.7770	37.5313	0.2500	1.0000	A572-65 (65 ksi)
L3	93.29-46.20	52.29	6.39	18	35.9166	47.1250	0.3750	1.5000	A572-65 (65 ksi)
L4	46.20-0.00	52.59		18	45.0052	56.2500	0.3750	1.5000	A572-65 (65 ksi)

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Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number	C _A A _A		Weight plf
						No Ice	1/2" Ice	
Step Bolts	A	No	CaAa (Out Of Face)	178.75 - 0.00	1	No Ice	0.03	0.26
Safety Line 5/16	A	No	CaAa (Out Of Face)	178.75 - 0.00	1	No Ice	0.03	0.26
1 5/8 (E.)	A	No	Inside Pole	178.75 - 0.00	3	No Ice	0.00	1.04
1 5/8 (Pocket Comm.)	A	No	Inside Pole	178.75 - 0.00	6	No Ice	0.00	1.04
1 5/8 (AT&T / E.)	A	No	Inside Pole	170.00 - 0.00	12	No Ice	0.00	1.04
1 5/8 (VzW / E.)	A	No	Inside Pole	160.00 - 0.00	12	No Ice	0.00	1.04
7/8 (E.)	A	No	Inside Pole	126.00 - 0.00	1	No Ice	0.00	0.54
7/8 (E.)	A	No	Inside Pole	126.00 - 0.00	1	No Ice	0.00	0.54
7/8 (E.)	A	No	Inside Pole	108.00 - 0.00	1	No Ice	0.00	0.54
7/8 (E.)	A	No	Inside Pole	108.00 - 0.00	1	No Ice	0.00	0.54

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment °	Placement ft	C _A A _A		Weight K	
			Horz Lateral ft	Vert ft			Front ft ²	Side ft ²		
15' Omni Whip Antenna (E.)	A	From Face	0.00	0.00	0.0000	178.50	No Ice	4.21	4.21	0.04
			0.00	0.00			1/2" Ice	6.50	6.50	0.07
			7.50	7.50						
15' Omni Whip Antenna (E.)	B	From Face	0.00	0.00	0.0000	178.50	No Ice	4.21	4.21	0.04
			0.00	0.00			1/2" Ice	6.50	6.50	0.07
			7.50	7.50						
15' Omni Whip Antenna (E.)	C	From Face	0.00	0.00	0.0000	178.50	No Ice	4.21	4.21	0.04
			0.00	0.00			1/2" Ice	6.50	6.50	0.07
			7.50	7.50						
12 ft L.P. Platform w/o Rails (E.)	A	None	0.00	0.00	0.0000	178.50	No Ice	17.00	17.00	1.20
							1/2" Ice	21.25	21.25	2.05
(3) APXV 18-206517S-C Panel Ants. (Pocket Comm.)	A	None	0.00	0.00	0.0000	175.00	No Ice	15.02	15.02	0.16
							1/2" Ice	21.04	21.04	0.42
(6) 5.5'Hx12"Wx3.5"D (Approx.) Panel Ants. (AT&T / E.)	C	None	0.00	0.00	0.0000	170.00	No Ice	36.35	36.35	0.36
							1/2" Ice	48.01	48.01	1.02
(12) TMA's (AT&T / E.)	C	None	0.00	0.00	0.0000	170.00	No Ice	7.90	7.90	0.20
							1/2" Ice	11.94	11.94	0.39
12 ft L.P. Platform w/o Rails (AT&T / E.)	C	None	0.00	0.00	0.0000	167.00	No Ice	17.00	17.00	1.20
							1/2" Ice	21.25	21.25	2.05
(6) 5'Hx4"Wx8"D (Approx.) Panel Ants. (VzW / E.)	B	None	0.00	0.00	0.0000	160.00	No Ice	28.52	28.52	0.27
							1/2" Ice	39.65	39.65	0.80
(6) 5'Hx12"Wx8"D (Approx.) Panel Ants. (VzW / E.)	B	None	0.00	0.00	0.0000	160.00	No Ice	39.85	39.85	0.39
							1/2" Ice	51.19	51.19	1.13

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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight
			Horz	Vert					
			ft	ft	°	ft	ft ²	ft ²	K
12 ft L.P. Platform w/o Rails (VzW / E.)	B	None			0.0000	157.00	No Ice 17.00 1/2" Ice 21.25	17.00 21.25	1.20 2.05
20' 4-Elem. Dipole Antenna (E.)	A	From Face	6.00		0.0000	126.00	No Ice 5.67 1/2" Ice 8.50	5.67 8.50	0.03 0.06
			0.00						
			10.00						
Straight Arm Mount (E.)	A	From Face	3.00		0.0000	126.00	No Ice 1.50 1/2" Ice 2.00	3.75 5.25	0.06 0.12
			0.00						
			0.00						
10' Omni Whip Antenna (E.)	B	From Face	6.00		0.0000	126.00	No Ice 3.74 1/2" Ice 5.60	3.74 5.60	0.03 0.06
			0.00						
			5.00						
Straight Arm Mount (E.)	B	From Face	3.00		0.0000	126.00	No Ice 1.50 1/2" Ice 2.00	3.75 5.25	0.06 0.12
			0.00						
			0.00						
10' 2-Elem. Dipole Antenna (E.)	A	From Face	6.00		0.0000	108.00	No Ice 2.88 1/2" Ice 4.30	2.88 4.30	0.02 0.04
			0.00						
			5.00						
Straight Arm Mount (E.)	A	From Face	3.00		0.0000	108.00	No Ice 1.50 1/2" Ice 2.00	3.75 5.25	0.06 0.12
			0.00						
			0.00						

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	10	46.75	-0.00	-0.00
	Max. H _x	8	37.05	22.23	0.00
	Max. H _z	2	37.05	0.00	22.32
	Max. M _x	2	2708.38	0.00	22.32
	Max. M _z	4	2696.96	-22.23	0.00
	Max. Torsion	12	4.49	-14.33	14.40
	Min. Vert	8	37.05	22.23	0.00
	Min. H _x	4	37.05	-22.23	0.00
	Min. H _z	6	37.05	0.00	-22.32
	Min. M _x	6	-2707.30	0.00	-22.32
	Min. M _z	8	-2698.81	22.23	0.00
	Min. Torsion	16	-4.48	14.33	-14.40

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Critical Deflections and Radius of Curvature - Service Wind

<i>Elevation</i>	<i>Appurtenance</i>	<i>Gov. Load Comb.</i>	<i>Deflection</i>	<i>Tilt</i>	<i>Twist</i>	<i>Radius of Curvature</i>
<i>ft</i>			<i>in</i>	<i>°</i>	<i>°</i>	<i>ft</i>
178.50	15' Omni Whip Antenna	19	44.077	2.3293	0.0086	22889
175.00	(3) APXV 18-206517S-C Panel Ants.	19	42.369	2.3046	0.0086	22889
170.00	(6) 5.5'Hx12"Wx3.5"D (Approx.) Panel Ants.	19	39.939	2.2683	0.0086	13079
167.00	12 ft L.P. Platform w/o Rails	19	38.491	2.2456	0.0085	9739
160.00	(6) 5'Hx4"Wx8"D (Approx.) Panel Ants.	19	35.160	2.1877	0.0085	6103
157.00	12 ft L.P. Platform w/o Rails	19	33.760	2.1602	0.0084	5261
126.00	20' 4-Elem. Dipole Antenna	19	20.914	1.7249	0.0067	3394
108.00	10' 2-Elem. Dipole Antenna	19	15.007	1.3836	0.0050	3575

Maximum Tower Deflections - Design Wind

<i>Section No.</i>	<i>Elevation</i>	<i>Horz. Deflection</i>	<i>Gov. Load Comb.</i>	<i>Tilt</i>	<i>Twist</i>
	<i>ft</i>	<i>in</i>		<i>°</i>	<i>°</i>
L1	178.75 - 139.331	112.745	2	6.0269	0.0238
L2	143.393 - 93.2943	70.728	2	5.1491	0.0220
L3	98.487 - 46.1953	31.494	2	3.0792	0.0115
L4	52.5859 - 0	8.933	2	1.5692	0.0043

Base Plate Design Data

<i>Plate Thickness</i>	<i>Number of Anchor Bolts</i>	<i>Anchor Bolt Size</i>	<i>Actual Allowable Ratio Bolt Tension</i>	<i>Actual Allowable Ratio Bolt Compression</i>	<i>Actual Allowable Ratio Plate Stress</i>	<i>Actual Allowable Ratio Stiffener Stress</i>	<i>Controlling Condition</i>	<i>Ratio</i>
<i>in</i>		<i>in</i>	<i>K</i>	<i>K</i>	<i>ksi</i>	<i>ksi</i>		
2.0000	18	2.2500	107.37	111.48			Plate	0.82
			131.21	217.81				
			0.82	0.51				

RISATower Malouf Engineering Int'l. Inc 17950 Preston Rd., Suite 720 Dallas, Texas - 75252 Phone: (972) 783-2578 FAX: (972) 783-2583	Job 179 ft - Mnp. - Pocket Comm. Site # HFCT1528A	Page 5 of 5
	Project CT01342M-08V0	Date 16:52:39 09/24/08
	Client Force 3 Comm. / Pocket Comm.	Designed by HML

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	SF*P _{allow} K	% Capacity	Pass Fail	
L1	178.75 - 139.331	Pole	TP28.0313x19.5x0.1875	1	-12.27	63.62	75.8	Pass	
L2	139.331 - 93.2943	Pole	TP37.5313x26.777x0.25	2	-19.52	204.67	86.9	Pass	
L3	93.2943 - 46.1953	Pole	TP47.125x35.9166x0.375	3	-30.75	606.49	66.6	Pass	
L4	46.1953 - 0	Pole	TP56.25x45.0052x0.375	4	-37.04	1132.07	71.4	Pass	
							Summary		
							Pole (L2)	86.9	Pass
							Anchor	61.50	Pass
							Bolts		
							RATING =	86.9	Pass

FOUNDATION PRINTOUT

Version: FDN2-D72/AL

 * FOUNDATION ANALYSIS PROGRAM *
 * Pier Analysis *
 * (c) 1999, Malouf Engineering Intl., Inc. *

COMPARISON WITH ORIGINAL DESIGN LOADS
 ORIGINAL SHEAR = 26.4 KIPS > 22.3 KIPS (OK) R= .845
 ORIGINAL MOMENT = 3255.5 K-FT > 2708.4 K-FT (OK) R= .832

*** COMMENTS ***

ORIGINAL DESIGN REACTIONS AS PER EEI PROJ. No. 13628
 DRAWING No. D13628-180.1 REV. 1 DATED 09-15/05.
 ORIGINAL REACTION COMPARISON ONLY

 MEI JOB NUMBER = CT01342M-08V0
 DESCRIPTION = 179.75 FT MONOPOLE FOUNDATION CHECK
 SITE NAME = POCKET COMM. No. HFCT1528A, BURLINGTON C
 CLIENT NAME = FORCE 3 COMM / POCKET COMM.
 CHECK CODE = TIA/EIA-222-REV. F
 TIME/DATE/FILE = 17:05:10 / 09-24-2008 / CT1342-0.dat

LOADS		ORIGINAL DESIGN
COMPRESSION FORCE	= 37.050 KIPS	34.200 KIPS
UPLIFT FORCE	= .000 KIPS	.000 KIPS
SHEAR FORCE	= 22.320 KIPS	26.400 KIPS
MOMENT	= 2708.380 KIP-FT	3255.500 KIP-FT