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@po.state.ct.us
www.ct.gov/csc

September 29, 2005

Karina Fournier
Zoning Department
T-Mobile
100 Filley Street
Bloomfield, CT 06002

RE: **EM-T-MOBILE-079-050907** - Omnipoint Communications, Inc. (T-Mobile) notice of intent to modify an existing telecommunications facility located at 175 South Main Street, Marlborough, Connecticut.

Dear Ms. Fournier:

At a public meeting held on September 28, 2005, the Connecticut Siting Council (Council) acknowledged 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 7, 2005, 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,

Pamela B. Katz

Pamela B. Katz, P.E.
Chairman

PBK/laf

c: The Honorable Nancy S. Bader, First Selectman, Town of Marlborough
Peter F. Hughes, Zoning Enforcement Officer, Town of Marlborough
Keith Coppins, Optasite, Inc.
Thomas J. Regan, Esq., Brown Rudnick Berlack Israels LLP
Christopher B. Fisher, Esq., Cuddy & Feder LLP
Kenneth C. Baldwin, Esq., Robinson & Cole LLP

T-Mobile®
Get more from life®

EM-T-MOBILE-079-050907

100 Filley Street, Bloomfield, CT 06002
860-796-3988 fax 860-692-7159

September 7, 2005

BY HAND

Pamela B. Katz, Chairman and
Members of the Siting Council
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: **Exempt Modification – Wireless Telecommunications Facility**
175 South Main Street, Marlborough, Connecticut
Optasite Facility

Dear Ms. Katz and Members of the Siting Council:

Omnipoint Communications, Inc. a.k.a. T-Mobile (formerly Voicestream Wireless Corp.) intends to co-locate antennas on the Optasite monopole located at 175 South Main Street in Marlborough. The Siting Council has approved the shared use of this facility by Sprint at the 160' level, AT&T at the 150' level, and Verizon at the 170' level. Please accept this letter as notification pursuant to R.C.S.A §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A §16-50j72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to First Selectman, Nancy Bader.

The tower is owned and operated by Optasite. It's coordinates are N 41° 36' 57" and W 72° 26' 11". The facility consists of a 170'monopole tower, capable of supporting six carriers within and approximate 60' X 75' site compound. T-Mobile proposes to install nine (9) panel-type antennas at the 130' level on the tower and 3 equipment cabinets within the fenced in compound.

The proposed modifications will not result in any substantial adverse environmental affect and therefore fall squarely within the activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modification will not increase the overall height of the existing tower. T-Mobile's antennas will be mounted with their centerline at the 130' level on the 170' tower. (See Exhibit 1, CD's)

2. The proposed installation of nine (9) antennas and 3 equipment cabinets will not require an extension of the site boundaries. (See Exhibit 1, CD's)

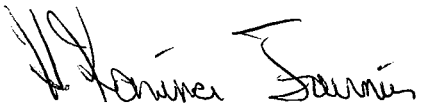
3. The existing Tower and compound were designed to accommodate multiple carriers. A structural analysis of the Tower with the proposed T-Mobile installation has been performed and is attached as (Exhibit 2 Structural Analysis). The structural analysis concludes that the tower can safely accommodate antennas and associated equipment of T-Mobile, Verizon, AT&T, Cingular and Sprint.

4. The proposed antenna modification will not increase the noise levels at the facility by six decibels or more.

5. The operation of the antennas will not increase radio frequency (RF) power density levels at the facility at or above the Federal Communications Commission (FCC) adopted safety standard. The worst-case RF density calculations for a point at the base of the tower for T-Mobile antennas would be 3.998% of the FCC standard. The cumulative worst-case RF power density calculation for all current carriers and T-Mobile would be 12.5906% of the applicable FCC standard. A copy of the report is attached. (See Exhibit 3, Power Density Calculations)

For the foregoing reasons, T-Mobile respectfully submits that the proposed antenna installation at the Sprint/Global telecommunications tower located at 175 South Main Street in Marlborough constitutes an exempt modification under R.C.S.A § 16-50j-72(b)(2).

Very Truly Yours



Karina Fournier
T-Mobile Zoning Department

Attachments

Cc: First Selectman, Nancy Bader

New England Market

Connecticut

Worst Case Power Density

T-Mobile

Site:	**CT11253C**
Site Address:	**175 South Main Street**
Town:	**Marlborough**
Tower Height:	**170 ft.**
Tower Style:	**New Monopole**
Base Station TX output	20 W
Number of channels	8
Antenna Model	EMS RR65-18-02DP
Cable Size	1 5/8 in.
Cable Length	135 ft.
Antenna Height	130.0 ft.
Ground Reflection	1.6
Frequency	1935.0 MHz
Jumper & Connector loss	4.50 dB
Antenna Gain	18.5 dBi
Cable Loss per foot	0.0116 dB
Total Cable Loss	1.5660 dB
Total Attenuation	6.0660 dB
Total EIRP per Channel	55.44 dBm
(In Watts)	350.29 W
Total EIRP per Sector	64.48 dBm
(In Watts)	2802.33 W
nsg	12.4340
Power Density (S) =	**0.039985 mW/cm^2**
T-Mobile Worst Case % MPE =	**3.9985%**

Equation Used :

$$S = \frac{(1000)(grf)^2 (Power) * 10^{(nsg/10)}}{4\pi (R)^2}$$

Office of Engineering and Technology (OET) Bulletin 65, Edition 97-01, August 1997

Co-Location Total

Carrier	% of Standard
Verizon	3.8700 %
Cingular	
Sprint PCS	3.9306 %
AT&T Wireless	4.7900 %
Nextel	
Total Excluding T-Mobile	**12.5906 %**
T-Mobile	3.9985
Total % MPE for Site	**16.5891%**

Exhibit 1

GLOBAL TELECOM

175 SOUTH MAIN STREET

MARLBOROUGH, CT 06447

SITE NUMBER: **CT-11-253-C**

CO-LOCATION

GENERAL NOTES

1) THE CONTRACTOR SHALL GIVE ALL NOTICES & COMPLY w/ ALL LAWS, ORDINANCES, RULES, REGULATIONS & LAWFUL ORDERS of ANY PUBLIC AUTHORITY, MUNICIPAL & UTILITY COMPANY SPECIFICATIONS, & LOCAL & STATE JURISDICTIONAL CODES BEARING on THE PERFORMANCE of THE WORK. THE WORK PERFORMED on THE PROJECT & THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE w/ ALL APPLICABLE CODES, REGULATIONS, & ORDINANCES.

2) THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION & CONTRACT DOCUMENTS THE COMPLETE SCOPE of WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS or ERRORS IN THE DRAWINGS and/or SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT & IMPROVEMENTS IN ACCORDANCE w/ THE INTENT of THESE DOCUMENTS.

3) THE CONTRACTOR or BIDDER SHALL BEAR THE RESPONSIBILITY of NOTIFYING (IN WRITING) THE LESSEE/LICENSEE REPRESENTATIVE of ANY CONFLICTS, ERRORS, or OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTORS PROPOSAL or PERFORMANCE of WORK. IN THE EVENT of DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY or EXTENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.

4) THE SCOPE of WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR & ALL OTHER MATERIALS & LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT as DESCRIBED HEREIN.

5) THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION of BIDS or PERFORMING WORK TO FAMILIARIZE HIMSELF w/ THE FIELD CONDITIONS & TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED in ACCORDANCE w/ THE CONTRACT DOCUMENTS.

6) THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED w/ CONSTRUCTION PRIOR TO STARTING WORK on ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS/CONTRACT DOCUMENTS.

7) THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT & MATERIALS ACCORDING TO THE MANUFACTURERS/VENDORS SPECIFICATIONS UNLESS NOTED OTHERWISE or WHERE LOCAL CODES or ORDINANCES TAKE PRECEDENCE.

8) THE CONTRACTOR SHALL PROVIDE A FULL SET of CONSTRUCTION DOCUMENTS AT THE SITE UPDATED w/ THE LATEST REVISIONS & ADDENDUMS or CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED w/ THE PROJECT.

9) THE CONTRACTOR SHALL SUPERVISE & DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES & PROCEDURES & FOR COORDINATING ALL PORTIONS of THE WORK UNDER THE CONTRACT.

10) THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS & ESTABLISHING & MAINTAINING ALL LINES & GRADES REQ'D TO CONSTRUCT ALL IMPROVEMENTS as SHOWN HEREIN

11) THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS & INSPECTIONS WHICH MAY BE REQD FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY or LOCAL GOVERNMENT AUTHORITY.

12) THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION of WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION on or ABOUT THE PROPERTY.

13) THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN & HAZARD FREE DURING CONSTRUCTION & DISPOSE of ALL DIRT, DEBRIS, RUBBISH & REMOVE EQUIPMENT NOT SPECIFIED as REMAINING on THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION & FREE FROM PAINT SPOTS, DUST, or SMUDGES of ANY NATURE.

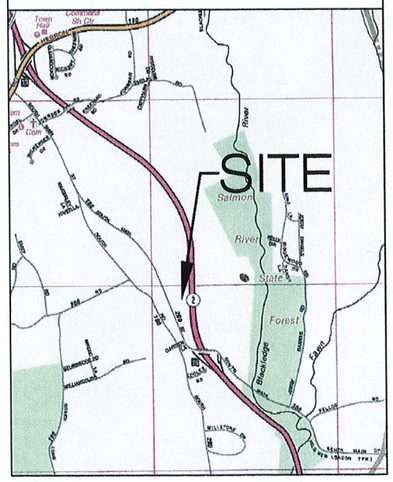
14) THE CONTRACTOR SHALL COMPLY W/ ALL OSHA REQUIREMENTS as THEY APPLY TO THIS PROJECT.

15) THE CONTRACTOR SHALL NOTIFY THE LESSEE/LICENSEE REPRESENTATIVE WHERE A CONFLICT OCCURS on ANY of THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL or CONSTRUCT ANY PORTION of THE WORK THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED BY THE LESSEE/LICENSEE REPRESENTATIVE.

16) THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. on THE JOB.

17) ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS & EXISTING PLANS of RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK. CALL THE FOLLOWING FOR ALL PRE-CONSTRUCTION NOTIFICATION 72hr PRIOR TO ANY EXCAVATION ACTIVITY.
DIG SAFE SYSTEM (MA, ME, NH, RI, VT): 1-888-344-7233
CALL BEFORE YOU DIG (CT): 1-800-922-4455

VICINITY MAP NTS



DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE LESSEE/LICENSEE REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

SHEET INDEX

SHT. NO.	DESCRIPTION	REV. NO.
T-1	TITLE SHEET & INDEX	1
A-1	SITE PLAN & COMPOUND PLAN, ELEVATION & DETAILS	1
S-1	EQUIPMENT LAYOUT, STRUCTURAL NOTES & DETAILS	1
E-1	ELEC. & GROUNDING NOTES, RISER DIAGRAM & DETAILS	1

PROJECT SUMMARY

SITE NUMBER:	CT-11-253-C
SITE NAME:	GLOBAL TELECOM
SITE ADDRESS:	175 SOUTH MAIN STREET MARLBOROUGH, CT 06447
ASSESSORS PARCEL NO.:	MAP: 009, BLK: 28A, LOT: 28 VOLUME: 146, PAGE: 84
CONSTRUCTION TYPE:	CO-LOCATION
PROPERTY OWNER:	FALLOW CROSSING, LLC 175 SOUTH MAIN STREET MARLBOROUGH, CT 06447
STRUCTURE OWNER:	GLOBAL TELECOMMUNICATIONS 14 HOLLYWOOD AVENUE NARRAGANSETT, RI 02882
APPLICANT:	OMNIPOINT COMMUNICATIONS, INC. 100 FILLEY STREET BLOOMFIELD, CT 06002

OMNIPOINT COMMUNICATIONS, INC.
A WHOLLY OWNED SUBSIDIARY OF T-MOBILE, USA
100 FILLEY STREET
BLOOMFIELD, CT 06002
OFFICE: (860)-692-7100
FAX: (860)-692-7159

ALL-POINTS TECHNOLOGY CORPORATION, P.C.
3 SADDLEBROOK DRIVE
KILLINGWORTH, CT. 06419
PHONE: (860)-663-1697
FAX: (860)-663-0935
www.allpointstech.com

STATE OF CONNECTICUT
SCOTT M. CHASE
No. 19725
LICENSED PROFESSIONAL ENGINEER

APPROVALS

LANDLORD _____

LEASING _____

R.F. _____

ZONING _____

CONSTRUCTION _____

A/E _____

PROJECT NO: CT-11-253-C

DRAWN BY: GWA

CHECKED BY: SMC

SUBMITTALS

1	03/08/04	CONSTRUCTION FINAL: SMC
0	02/06/04	CONSTRUCTION: GWA

CT-11-253-C
GLOBAL TELECOM
175 SOUTH MAIN STREET
MARLBOROUGH, CT 06447

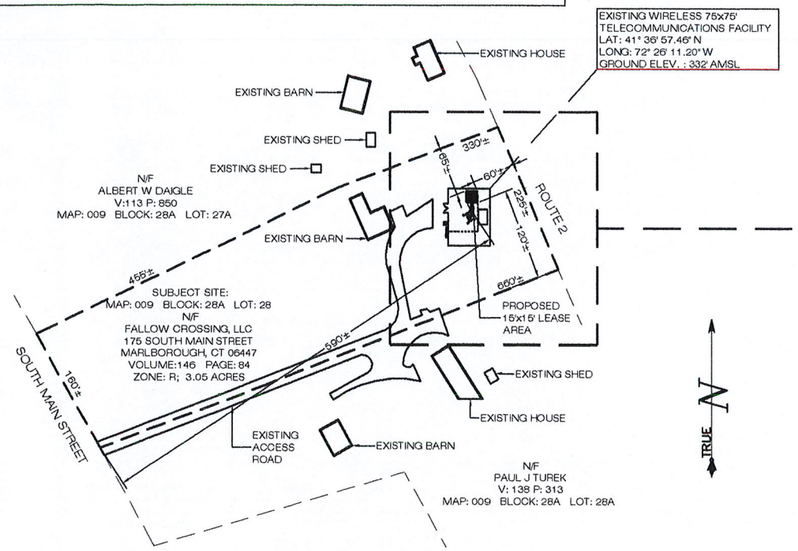
SHEET TITLE

TITLE SHEET & INDEX

SHEET NUMBER

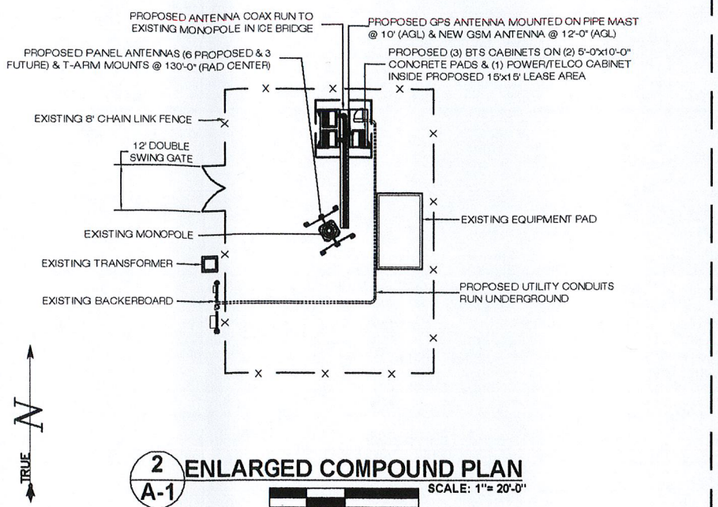
T-1

NOTE:
BASE MAPPING FROM: SITE PLANS LOCATED AT: GLOBAL TELECOM, LLC WIRELESS COMMUNICATION FACILITY 175 SOUTH MAIN STREET MARLBOROUGH, CT; PREPARED BY MCFARLAND-JOHNSON, INC. of NEW LONDON, CT DATED NOVEMBER 2002 & TOWN OF MARLBOROUGH ASSESSORS MAPS.



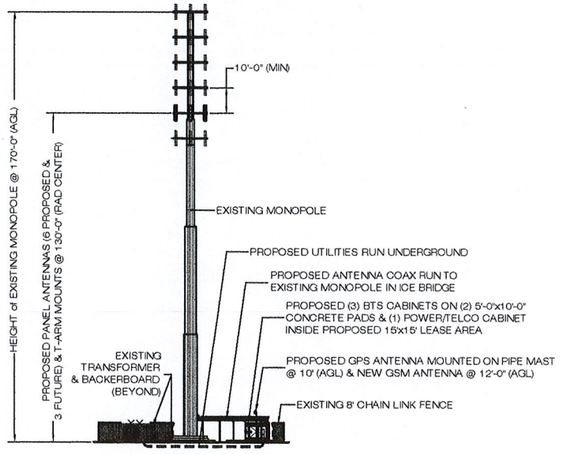
1 A-1 **PLOT PLAN** SCALE: 1"= 100'-0"

0 50' 100' 200'



2 A-1 **ENLARGED COMPOUND PLAN** SCALE: 1"= 20'-0"

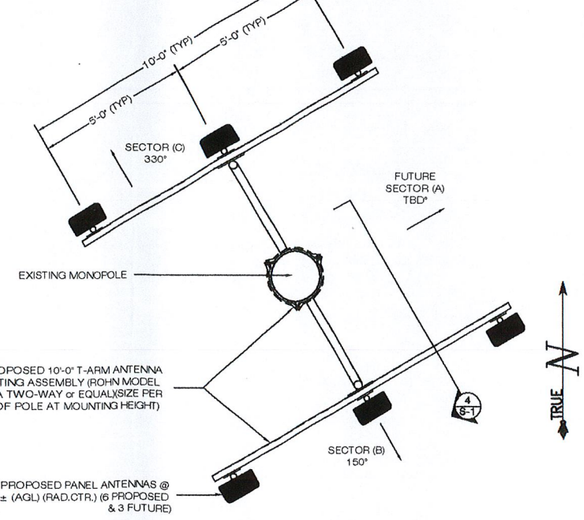
0 10' 20' 40'



3 A-1 **NORTHERN ELEVATION** SCALE: 1"= 30'-0"

0 15' 30' 60'

SPECIAL LESSEE/LICENSEE NOTE:
LESSEE/LICENSEE "FUTURE" PANEL ANTENNAS ARE DEPICTED FOR THE PURPOSES OF DETERMINING TOWER STRUCTURAL CAPACITY, OBTAINING ZONING APPROVALS & BUILDING PERMITS. SUBSEQUENT ENDORSEMENT or ACCEPTANCE of THIS DRAWING BY THE TOWER LESSEE/LICENSEE IS NOT TO BE CONSTRUED as PERMISSION or APPROVAL TO INSTALL "FUTURE" ANTENNAS THAT EXCEED "PROPOSED" or ACTUAL EQUIPMENT LISTED IN THE LESSEE/LICENSEE LEASE AGREEMENT.



4 A-1 **ANTENNA PLATFORM DETAIL** SCALE: NTS

1) ALL DIMENSIONS SHOWN THUS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & ELEVATIONS WHICH EFFECTS THE CONTRACTORS WORK. CONTRACTOR TO VERIFY ALL DIMENSIONS w/ LESSEE/LICENSEE PRIOR TO CONSTRUCTION.
2) NORTH ARROW SHOWN ON PLANS REFERS TO TRUE NORTH. CONTRACTOR SHALL VERIFY TRUE NORTH & INFORM CONSTRUCTION MANAGER of ANY DISCREPANCIES BEFORE STARTING CONSTRUCTION.
3) THE GENERAL CONTRACTOR and/or HIS SUB CONSULTANT SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS & INSPECTIONS WHICH MAY BE REQ'D FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTRY or LOCAL GOVERNMENT AUTHORITY.
4) ANTENNA INSTALLATION SHALL BE CONDUCTED BY FIELD CREWS EXPERIENCED IN THE ASSEMBLY & ERECTION of RADIO ANTENNAS, TRANSMISSION LINES & SUPPORT STRUCTURES.
5) COAXIAL CABLE CONNECTORS & TRANSMITTER EQUIPMENT SHALL BE PROVIDED BY THE LESSEE/LICENSEE & IS NOT INCLUDED IN THESE CONSTRUCTION DOCUMENTS. A SCHEDULE of LESSEE/LICENSEE SUPPLIED MATERIALS IS ATTACHED TO THE BID DOCUMENTS (SEE ATTACHMENT K). ALL OTHER HARDWARE TO BE PROVIDED BY THE CONTRACTOR. CONNECTION HARDWARE SHALL BE STAINLESS STEEL.
6) ANY EQUIPMENT THAT IS TO BE PAINTED SHALL BE PAINTED TO MATCH EXISTING. PAINT SHALL BE SHERWIN WILLIAMS, COROTHANE II. SURFACE PREPARATION & APPLICATION SHALL BE IN ACCORDANCE w/ MANF's SPECIFICATIONS & LESSEE/LICENSEE GUIDELINES.
7) COORDINATION, LAYOUT, & FURNISHING of CONDUIT, CABLE & ALL APPURTENANCES REQ'D FOR PROPER INSTALLATION of ELECTRICAL & TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY of THE CONTRACTOR.
8) EQUIPMENT WILL BE INDEPENDENTLY POWERED w/ SEPARATE METER.
9) PRIOR TO EXCAVATION NEAR TOWER, CONTRACTOR TO CONTACT & COORDINATE w/ PROPERTY LESSEE/LICENSEE.
10) ALL ACTIVE SEWER, WATER, GAS, ELECTRIC, & OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, & WHERE REQ'D FOR THE PROPER EXECUTION of THE WORK, SHALL BE RELOCATED as DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING or PIER DRILLING AROUND or NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW.
11) ALL INACTIVE SEWER, WATER, GAS, ELECTRIC & OTHER UTILITIES, WHICH INTERFERE w/ THE EXECUTION of THE WORK, SHALL BE REMOVED &/or CAPPED, PLUGGED or OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE w/ THE EXECUTION of THE WORK, SUBJECT TO THE APPROVAL of UTILITY COMPANY.
12) THE AREAS of THE PROPERTY DISTURBED BY THE WORK & NOT COVERED BY THE EQUIPMENT, DRIVEWAY or GRAVEL, SHALL BE GRADED TO A UNIFORM SLOPE, FERTILIZED, SEEDED & COVERED w/ MULCH.
13) THE CONTRACTOR SHALL ESTABLISH & MAINTAIN SOIL EROSION & SEDIMENTATION CONTROLS AT ALL TIMES DURING CONSTRUCTION.
14) ALL UTILITY WORK SHALL BE IN ACCORDANCE w/ LOCAL UTILITY COMPANY REQUIREMENTS & SPECIFICATIONS.
15) PER FCC MANDATE, ENHANCED EMERGENCY (E911) SERVICE REQ'D TO MEET NATIONWIDE STANDARDS FOR WIRELESS COMMUNICATIONS SYSTEMS. LESSEE/LICENSEE IMPLEMENTATION REQUIRES DEPLOYMENT of EQUIPMENT & ANTENNAS GENERALLY DEPICTED on THIS PLAN, ATTACHED TO or MOUNTED IN CLOSE PROXIMITY TO THE BTS RADIO CABINETS. LESSEE/LICENSEE RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO (E911) EQUIPMENT & LOCATION as TECHNOLOGY EVOLVES TO MEET REQ'D SPECIFICATION.

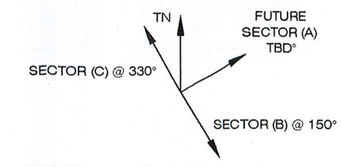
ABBREVIATIONS

SF	SQUARE FOOT	ADJ	ADJUSTABLE
APPROX	APPROXIMATE	SHT	SHEET
CONC	CONCRETE	SIM	SIMILAR C CONDUIT
CONT	CONTINUOUS	STL	STEEL
CJ	CONSTRUCTION JOINT	TOC	TOP OF CONCRETE
DIA	DIAMETER	TOM	TOP OF MASONRY
DWG	DRAWING	TYP	TYPICAL
EGB	EQUIPMENT GROUND BAR	VIF	VERIFY IN FIELD
EA	EACH	UON	UNLESS OTHERWISE NOTED
ELEC	ELECTRICAL	WWF	WELDED WIRE FABRIC
EL	ELEVATION	BTS	BASE TRANSMISSION STATION
EQ	EQUAL	w/	WITH
EQUIP	EQUIPMENT	LNA	LOW NOISE AMPLIFIER
EXT	EXTERIOR	PCS	PERSONAL COMM. SERVICES
FF	FINISHED FLOOR	A-1	ANTENNA MARK NO.
FG	FINISHED GRADE	&	AND
GA	GAUGE	@	AT
GALV	GALVANIZED	℄	PLATE BAR
GC	GENERAL CONTRACTOR	MIN	MINIMUM
LG	LONG	MTL	METAL
MAX	MAXIMUM	NIC	NOT IN CONTRACT
MECH	MECHANICAL	NTS	NOT TO SCALE
MFR	MANUFACTURER	OC	ON CENTER
MGB	MASTER GROUND	OPP	OPPOSITE
AGL	ABOVE GROUND LEVEL		
ARL	ABOVE ROOF LEVEL		
AFL	ABOVE FLOOR LEVEL		

SYMBOLS AND MATERIALS

- NEW ANTENNA
- EXISTING ANTENNA
- ASPHALT
- NEW ACCESS EASEMENT
- CONCRETE
- ELECTRIC BOX
- LIGHT POLE
- FND. MONUMENT
- SPOT ELEVATION
- SET POINT
- REVISION
- GRID REFERENCE
- DETAIL REFERENCE (DET.# / SHT.#)
- ELEVATION (D / SH)
- GROUT or PLASTER
- BRICK
- MASONRY
- CONCRETE
- EARTH
- GRAVEL
- PLYWOOD
- SAND
- WOOD CONT.
- WOOD BLOCKING
- STEEL
- CENTERLINE
- PROPERTY LINE
- STEPPED FOOTING
- MATCH LINE
- WORK POINT
- GROUND WIRE
- COAXIAL CABLE

ANTENNA ORIENTATION KEY



OMNIPOINT COMMUNICATIONS, INC.
A WHOLLY OWNED SUBSIDIARY OF T-MOBILE, USA
100 FILLEY STREET
BLOOMFIELD, CT 06002
OFFICE: (860)-692-7100
FAX: (860)-692-7159

ALL-POINTS TECHNOLOGY CORPORATION, P.C.
3 SADDLEBROOK DRIVE
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PHONE: (860)-663-1697
FAX: (860)-663-0935
www.allpointstech.com

STATE OF CONNECTICUT — SCOTT M. CHASE — No. 19726 — LICENSED PROFESSIONAL ENGINEER

APPROVALS

LANDLORD _____
LEASING _____
R.F. _____
ZONING _____
CONSTRUCTION _____
A/E _____

PROJECT NO: CT-11-253-C

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SUBMITTALS

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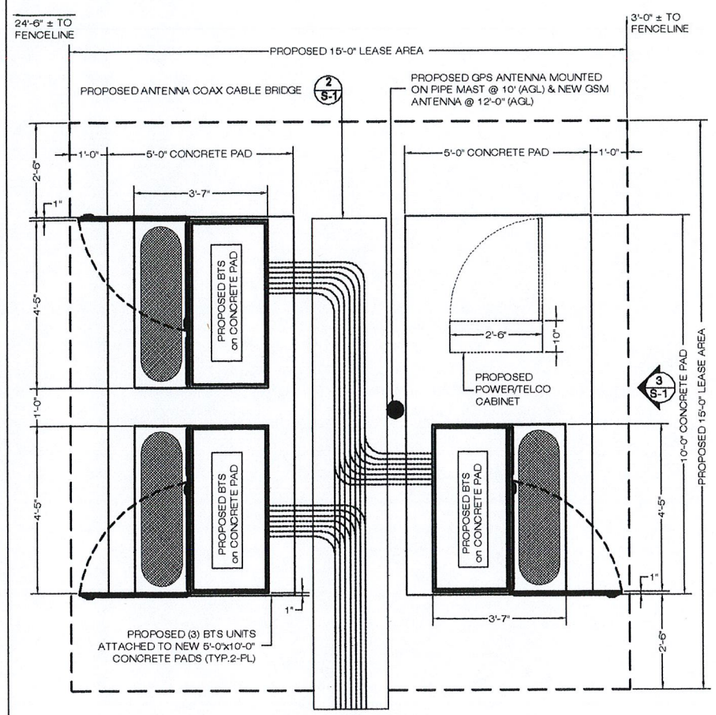
CT-11-253-C
GLOBAL TELECOM
175 SOUTH MAIN STREET
MARLBOROUGH, CT 06447

SHEET TITLE
SITE & COMPOUND PLAN, ELEVATION & DETAILS

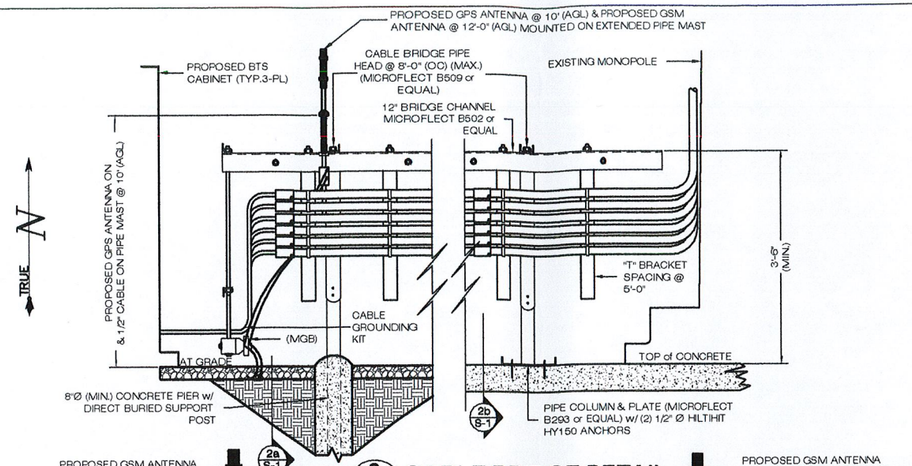
SHEET NUMBER
A-1



1 S-1 EQUIPMENT PAD LAYOUT

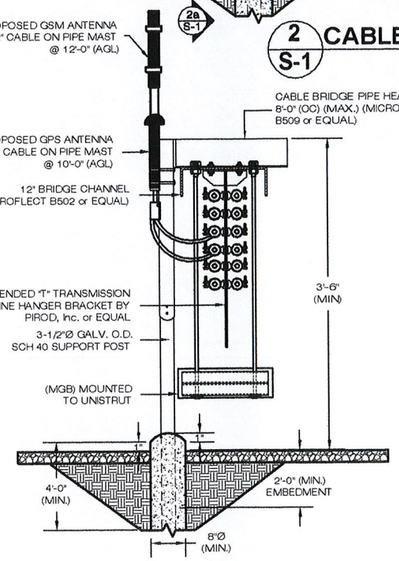
SCALE: 1/2"= 1'-0"

0 1' 2' 4'



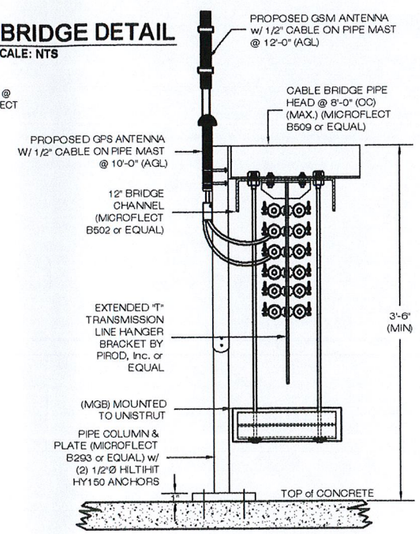
2 S-1 CABLE BRIDGE DETAIL

SCALE: NTS



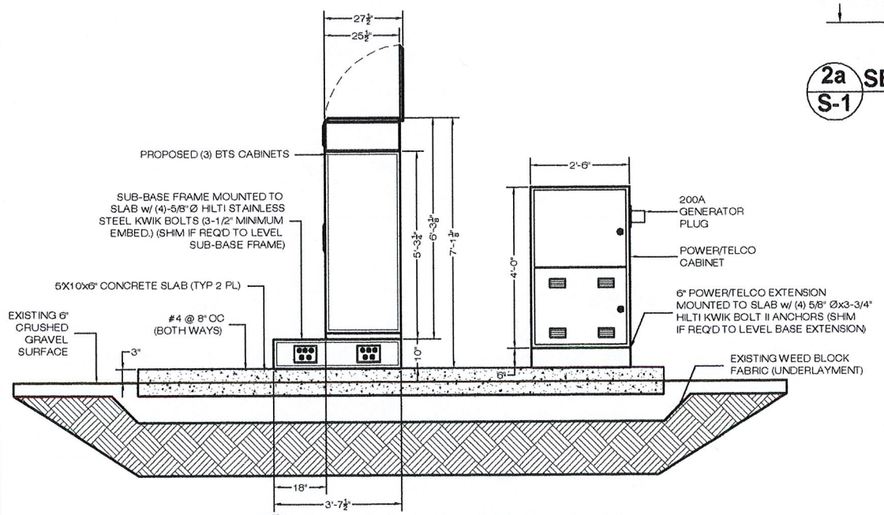
2a S-1 SECTION VIEW

SCALE: NTS



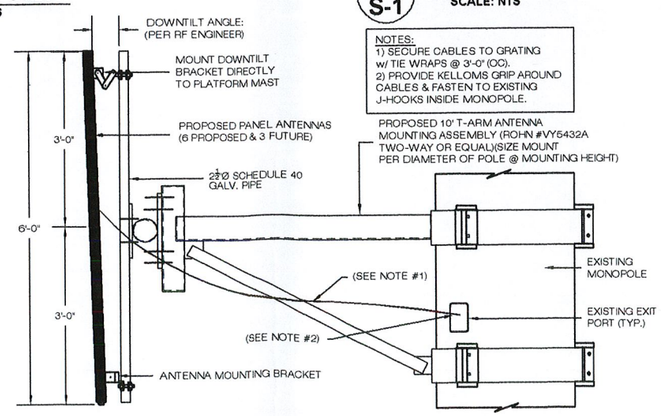
2b S-1 SECTION VIEW

SCALE: NTS



3 S-1 EQUIPMENT SLAB SECTION VIEW

SCALE: NTS



4 S-1 ANTENNA MOUNTING DETAIL

SCALE: NTS

STRUCTURAL NOTES

1) DESIGN REQUIREMENTS ARE PER STATE BUILDING CODE & APPLICABLE SUPPLEMENTS, ANSI/ASCE7, EIA/TIA-222-F STRUCTURAL STANDARDS FOR STEEL ANTENNA SUPPORTING STRUCTURES.

2) CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS IN THE FIELD PRIOR TO FABRICATION & ERECTION of ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION of THE CONSTRUCTION MANAGER.

3) DESIGN & CONSTRUCTION of STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE of STEEL CONSTRUCTION 'SPECIFICATION FOR THE DESIGN, FABRICATION & ERECTION of STRUCTURAL STEEL FOR BUILDINGS'.

4) STRUCTURAL & MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 STRUCT. STEEL UNLESS OTHERWISE INDICATED.

5) STEEL PIPE SHALL CONFORM TO ASTM A500 'COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING', GRADE A, or ASTM A53 PIPE STEEL BLACK & HOT-DIPPED ZINC-COATED WELDED & SEAMLESS TYPE E or S, GRADE B. PIPE SIZES INDICATED ARE NOMINAL. ACTUAL OUTSIDE DIAMETER IS LARGER.

6) STRUCTURAL CONNECTION BOLTS SHALL BE HIGH STRENGTH BOLTS (BEARING TYPE) & CONFORM TO ASTM A325 'HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS & PLAIN HARDENED WASHERS'. ALL BOLTS SHALL BE Ø5/8" UON.

7) ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE w/ ASTM A123 'ZINC (HOT-DIP GALVANIZED COATINGS on IRON & STEEL PRODUCTS', UNLESS OTHERWISE NOTED.

8) ALL BOLTS, ANCHORS & MISCELLANEOUS HARDWARE SHALL BE GALV. IN ACCORDANCE w/ ASTM A153 'ZINC-COATING (HOT-DIP) on IRON & STEEL HARDWARE', UNLESS OTHERWISE NOTED.

9) FIELD WELDS, DRILL HOLES, SAW CUTS & ALL DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED w/ AN ORGANIC ZINC REPAIR PAINT COMPLYING w/ REQUIREMENTS of ASTM A780. GALVANIZING REPAIR PAINT SHALL HAVE 65 PERCENT ZINC BY WEIGHT, ZIRP BY DUNCAN GALVANIZING, GALVA BRIGHT PREMIUM BY CROWN or EQUAL. THICKNESS of APPLIED GALVANIZING REPAIR PAINT SHALL BE NOT NOT LESS THAN 4 COATS (ALLOW DRY TIME BETWEEN COATS) w/A RESULTING COATING THICKNESS REQUIRED BY ASTM A123 or A153 as APPLICABLE.

10) CONTRACTOR SHALL COMPLY w/ AWS CODE FOR PROCEDURES, APPEARANCE & QUALITY of WELDS, & FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS & WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE w/ AWS 'STANDARD QUALIFICATION PROCEDURES'. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES & WELDING SHALL CONFORM TO AISC % D.I. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC 'MANUAL of STEEL CONSTRUCTION'. 9TH EDITION.11.

11) INCORRECTLY FABRICATED, DAMAGED or OTHERWISE MISFITTING or NONCONFORMING MATERIALS or CONDITIONS SHALL BE REPORTED TO THE CONSTRUCTION MANAGER PRIOR TO REMEDIAL or CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE CONSTRUCTION MANAGER APPROVAL.

12) UNISTRUTS SHALL BE FORMED STEEL CHANNEL STRUT FRAMING as MANUFACTURED BY UNISTRUT CORP, WAYNE, MI OR EQUAL. STRUT MEMBERS SHALL BE 1-5/8"x 1-5/8"x12GA, UNLESS OTHERWISE NOTED, & SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.

13) EPOXY ANCHOR ASSEMBLY SHALL CONSIST of 1/2" DIAMETER STAINLESS STEEL ANCHOR ROD w/ NUTS & WASHERS. AN INTERNALLY THREADED INSERT, A SCREEN TUBE & A EPOXY ADHESIVE. THE ANCHORING SYSTEM SHALL BE THE HILTI-HIT HY-20 and/or HY-150 SYSTEMS (as SPECIFIED AN DWG.) or ENGINEERS APPROVED EQUAL w/ 4-1/4" MIN. EMBEDMENT DEPTH.

14) EXPANSION BOLTS SHALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 4, CLASS I, HILTI KWIK BOLT II or APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE w/ THE MANUFACTURERS RECOMMENDATIONS. MINIMUM EMBEDMENT SHALL BE THREE & ONE HALF (3 1/2) INCHES.

15) GRAVEL SUB BASE & CONCRETE SHALL BE PLACED AGAINST UNDISTURBED SOIL.

16) CONCRETE FOR FENCE & ICE BRIDGE SUPPORT SHALL BE 3000 PSI AIR ENTRAINED (4%-6%) NORMAL WEIGHT CONCRETE.

17) ALL CAST IN PLACE CONCRETE SHALL BE MIXED & PLACED IN ACCORDANCE w/ THE REQUIREMENTS OF ACI 318 & ACI 301.

18) THE FOLLOWING MINIMUM CONCRETE COVER OVER REINFORCING STEEL SHALL BE as FOLLOWS UNLESS NOTED OTHERWISE:

CONCRETE CAST AGAINST EARTH.... 3 INCHES.
CONCRETE EXPOSED TO EARTH or WATER
#6 & LARGER .....2 INCHES
#5 & SMALLER .....1 1/2 INCHES

ALL EXPOSED EDGES SHALL BE PROVIDED w/ A 3/4"x3/4" CHAMFER UNLESS NOTED OTHERWISE.

19) LUMBER SHALL COMPLY w/ THE REQUIREMENTS of THE AMERICAN INSTITUTE of TIMBER CONSTRUCTION & THE NATIONAL FOREST PRODUCTS ASSOCIATIONS NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. ALL LUMBER SHALL BE PRESSURE TREATED & SHALL BE STRUCTURAL GRADE NO. 2 OR BETTER.

20) WHERE ROOF PENETRATIONS ARE REQ'D, THE CONTRACTOR SHALL CONTACT & COORDINATE RELATED WORK w/ THE BUILDING OWNER & THE EXISTING ROOF INSTALLER. WORK SHALL BE PERFORMED IN SUCH A MANNER as TO NOT VOID THE EXISTING ROOF WARRANTY.

21) PER FCC MANDATE, ENHANCED EMERGENCY (E911) SERVICE REQ'D TO MEET NATIONWIDE STANDARDS FOR WIRELESS COMMUNICATIONS SYSTEMS. LESSEE/LICENSEE IMPLEMENTATION REQUIRES DEPLOYMENT of EQUIPMENT & ANTENNAS GENERALLY DEPICTED on THIS PLAN, ATTACHED TO or MOUNTED IN CLOSE PROXIMITY TO THE BTS RADIO CABINETS. LESSEE/LICENSEE RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO (E911) EQUIPMENT & LOCATION as TECHNOLOGY EVOLVES TO MEET REQ'D SPECIFICATION.

OMNIPOINT COMMUNICATIONS, INC.
A WHOLLY OWNED SUBSIDIARY OF T-MOBILE, USA
100 FILLEY STREET
BLOOMFIELD, CT 06002
OFFICE: (860)-692-7100
FAX: (860)-692-7159

ALL-POINTS TECHNOLOGY CORPORATION, P.C.
3 SADDLEBROOK DRIVE
KILLINGWORTH, CT. 06419
PHONE: (860)-663-1697
FAX: (860)-663-0935
www.allpointstech.com

STATE OF CONNECTICUT
SCOTT M. CHASSE
No. 15725
LICENSED PROFESSIONAL ENGINEER

APPROVALS

LANDLORD _____
LEASING _____
R.F. _____
ZONING _____
CONSTRUCTION _____
A/E _____

PROJECT NO: CT-11-253-C

DRAWN BY: GWA

CHECKED BY: SMC

SUBMITTALS

1	03/08/04	CONSTRUCTION FINAL: SMC
0	02/06/04	CONSTRUCTION: GWA

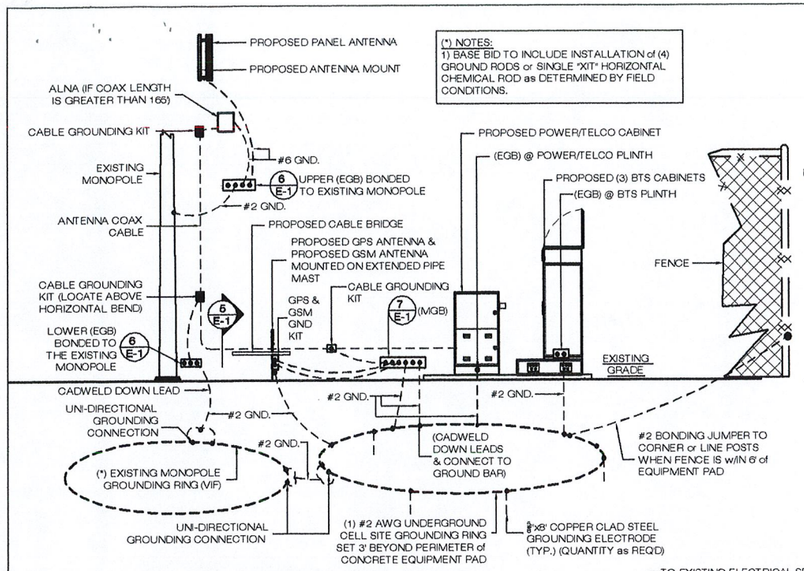
CT-11-253-C
GLOBAL TELECOM
175 SOUTH MAIN STREET
MARLBOROUGH, CT 06447

SHEET TITLE

EQUIPMENT LAYOUT, STRUCTURAL NOTES & DETAILS

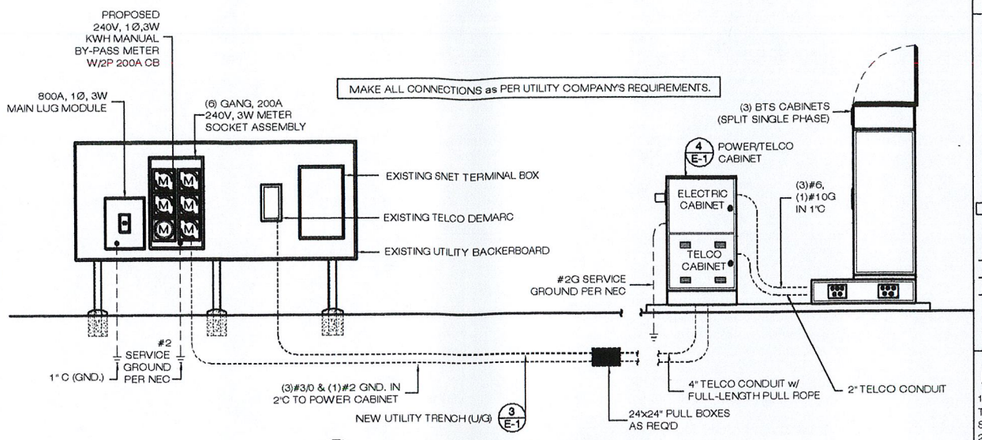
SHEET NUMBER

S-1

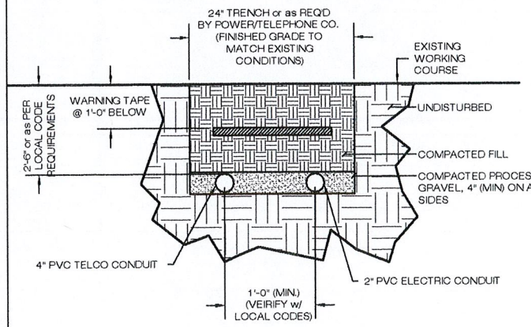


1 E-1 GROUNDING RISER DIAGRAM
SCALE: NTS

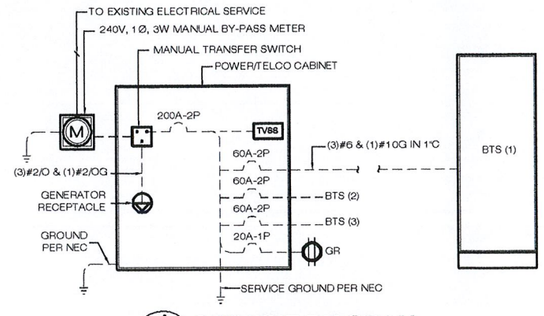
(*) NOTES:
1) BASE BID TO INCLUDE INSTALLATION of (4) GROUND RODS or SINGLE "KIT" HORIZONTAL CHEMICAL ROD as DETERMINED BY FIELD CONDITIONS.



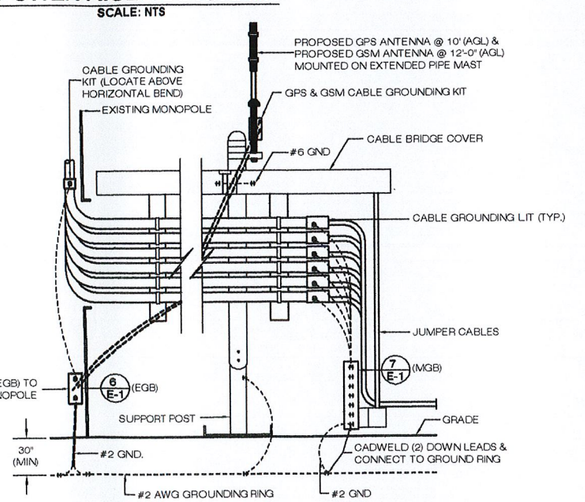
2 E-1 POWER RISER DIAGRAM
SCALE: NTS



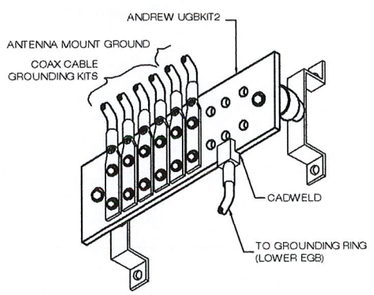
3 E-1 TRENCH DETAIL
SCALE: NTS



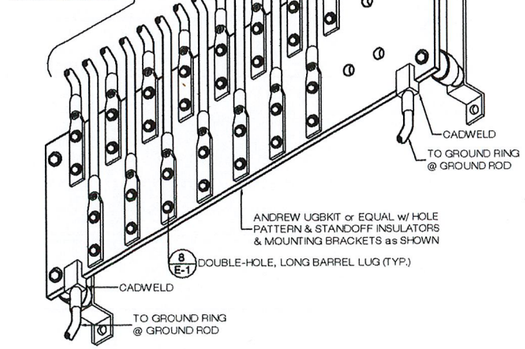
4 E-1 ONE LINE DIAGRAM
SCALE: NTS



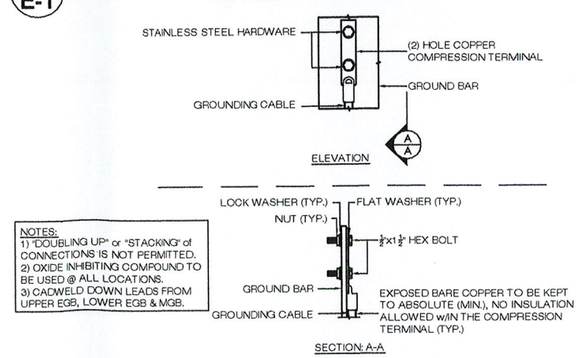
5 E-1 CABLE BRIDGE GROUNDING DETAIL
SCALE: NTS



6 E-1 EQUIPMENT GROUND BAR (EGB)
SCALE: NTS



7 E-1 MASTER GROUND BAR (MGB)
SCALE: NTS



NOTES:
1) "DOUBLING UP" or "STACKING" of CONNECTIONS IS NOT PERMITTED.
2) OXIDE INHIBITING COMPOUND TO BE USED @ ALL LOCATIONS.
3) CADWELD DOWN LEADS FROM UPPER EGB, LOWER EGB & MGB.

8 E-1 GROUND BAR CONNECTION DETAIL
SCALE: NTS

ELECTRICAL LEGEND

U.O.N.	UNLESS OTHERWISE NOTED		NEW PANEL BOARD, SURFACE MOUNTED
WP	WEATHERPROOF		EXISTING PANEL BOARD, SURFACE MOUNTED
GR	GROUND FAULT INTERRUPTER	T	DRY TYPE TRANSFORMER
A	AMPERE	M	METER
V	VOLT		CIRCUIT BREAKER
KWH	KILOWATT - HOUR		NON-FUSIBLE DISCONNECT SWITCH, MOUNTED 64" A.F.F.
C	CONDUIT		FUSIBLE DISCONNECT SWITCH, MOUNTED 64"A.F.F.
G	GROUND	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER w/ BUILT-IN FUSES, SURFACE MOUNTED
	GROUND		DUPLEX OUTLET, SURFACE MOUNTED, 20 AMPS, 125 VOLTS, SINGLE PHASE
MGB	MASTER GROUND BAR 1/4"x9"x24" COPPER	J	JUNCTION BOX, SURFACE MOUNTED 18" A.F.F.
EGB	EQUIPMENT GROUND BAR 1/4"x4"x12" OR 1/4"x4"x18" COPPER		EXPOSED WIRING
	GROUND COPPER WIRE, SIZE AS NOTED		HOME RUNS, MINIMUM 2#10 +1#10G IN 3/4" CONDUIT U.O.N.
	EXPOSED WIRING	A.F.F.	ABOVE FINISHED FLOOR
	COAXIAL CABLE		
	5/8"x8' COPPER CLAD STEEL GROUND ROD		
	EXOTHERMIC (CADWELD) OR MECHANICAL (COMPRESSION TYPE) CONNECTION		

ELECTRICAL AND GROUNDING NOTES

1) ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS of THE NATIONAL ELECTRICAL CODE (NEC) as WELL as APPLICABLE STATE & LOCAL CODES.
2) ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED & PROCURED PER SPECIFICATION REQUIREMENTS.
3) THE ELECTRICAL WORK INCLUDES ALL LABOR & MATERIAL DESCRIBED BY DRAWINGS & SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING & APPROVED ELECTRICAL SYSTEM.
4) GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, & IS RESPONSIBLE FOR OBTAINING SAID PERMITS & COORDINATION OF INSPECTIONS.
5) ELECTRICAL & TELCO WIRING OUTSIDE A BUILDING & EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS or SCHEDULE 80 PVC (as PERMITTED BY CODE) & WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL or NONMETALLIC CONDUITS.
6) BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.
7) ELECTRICAL WIRING SHALL BE COPPER w/ TYPE XHHW, THWN, or THHNINSULATION.
8) RUN ELECTRICAL CONDUIT or CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT & LESSEE/LICENSEE CELL SITE POWER PEDESTAL as INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION w/ UTILITY COMPANY.
9) RUN TELCO CONDUIT or CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT & LESSEE/LICENSEE CELL SITE TELCO CABINET & BTS CABINET as INDICATED ON THIS DRAWING PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE @ EACH END.
10) WHERE CONDUIT BETWEEN BTS & LESSEE/LICENSEE CELL SITE POWER PEDESTAL & BETWEEN BTS & LESSEE/LICENSEE CELL SITE TELCO SERVICE CABINET ARE U/G USE PVC, SCH.40 CONDUIT. ABOVE THE GROUND PORTION of THESE CONDUITS SHALL BE PVC CONDUIT.
11) ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
12) POWER PEDESTAL SUPPLIED BY LESSE/LICENSEE.
13) GROUNDING SHALL COMPLY w/ NEC ART. 250.
14) GROUND COAXIAL CABLE SHIELDS MINIMUM @ BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY LESSEE/LICENSEE.
15) USE #6 COPPER STRANDED WIRE w/ GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) & #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING as INDICATED ON THE DRAWING.
16) ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS or CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT w/ GALVANIZED STEEL.
17) ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST & STRAIGHTEST PATH POSSIBLE, EXCEPT as OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT @ RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT @ 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS w/IN 7 FEET of LESSEE/LICENSEE EQUIPMENT or CABINET TO MASTER GROUND BAR.
18) CONNECTIONS TO GROUND BARS SHALL BE MADE w/ TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
19) APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
20) BOND ANTENNA MOUNTING BRACKETS, COAXIAL CABLE GROUND KITS, & ALNA TO EGB PLACED NEAR THE ANTENNA LOCATION.
21) BOND ANTENNA EGBS & MGB TO GROUND RING.
22) TEST COMPLETED GROUND SYSTEM & RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION.

OMNIPOINT COMMUNICATIONS, INC.
A WHOLLY OWNED SUBSIDIARY OF T-MOBILE, USA
100 FILLEY STREET
BLOOMFIELD, CT 06002
OFFICE: (860)-692-7100
FAX: (860)-692-7159

ALL-POINTS TECHNOLOGY CORPORATION, P.C.
3 SADDLEBROOK DRIVE
KILLINGWORTH, CT. 06419
PHONE: (860)-663-1697
FAX: (860)-663-0935
www.allpointstech.com

STATE OF CONNECTICUT
SCOTT M. CHASE
No.19728
LICENSED PROFESSIONAL ENGINEER

APPROVALS

LANDLORD _____
LEASING _____
R.F. _____
ZONING _____
CONSTRUCTION _____
A/E _____

PROJECT NO: CT-11-253-C

DRAWN BY: GWA

CHECKED BY: SMC

SUBMITTALS

1	03/08/04	CONSTRUCTION FINAL: SMC
0	02/06/04	CONSTRUCTION: GWA

CT-11-253-C
GLOBAL TELECOM
175 SOUTH MAIN STREET
MARLBOROUGH, CT 06447

SHEET TITLE
ELECTRICAL & GROUNDING NOTES, RISERS & DETAILS

SHEET NUMBER
E-1

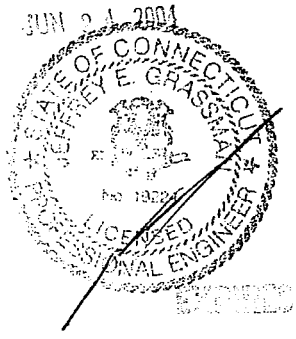
Exhibit 2

valmont

STRUCTURES

VALMONT COMMUNICATIONS
1545 PIDCO DRIVE
PLYMOUTH, INDIANA 46563
PHONE: 1-800-547-2151
ENGINEER: Jim Jarrett, PE (X4514)
Reviewed by:

COMMUNICATION POLE DESIGN CALCULATIONS



ANDREW SYSTEMS, INC.
VALMONT ORDER #17559-64
SITE NAME: Marlborough, CT
POLE HEIGHT: 170

valmont
MICROFLECT

6/23/04

ENGINEERING DATA

for

ANDREW SYSTEMS, INC.
Marlborough, CT
VALMONT ORDER 17559-64

1) STRUCTURE DESIGN CONFORMS TO EIA/TIA-222-F INCLUDING:
80 MPH BASIC WIND SPEED WITH NO ICE
80.0 MPH BASIC WIND SPEED WITH 0.5 INCH RADIAL ICE
50 MPH BASIC WIND SPEED WITH NO ICE FOR TWIST AND SWAY

2) FEEDLINES ARE ASSUMED TO BE PLACED INTERIOR TO THE POLE.

3) ALL MICROWAVE ASSUMED TO BE 6 GHz UNLESS OTHERWISE NOTED.

4) LOADING AS FOLLOWS:

170' POLE
1 - Lightning Rod, 8' @ 170.0'
1 - Platform, PiRod w/o rails, 13' @ 165.0'
12 - 6' x 1' Panel @ 165.0'
1 - Platform, PiRod w/o rails, 13' @ 155.0'
12 - 6' x 1' Panel @ 155.0'
1 - Platform, PiRod w/o rails, 13' @ 145.0'
12 - 6' x 1' Panel @ 145.0'
1 - Platform, PiRod w/o rails, 13' @ 140.0'
12 - 5' x 1' Panel @ 140.0'
1 - Platform, PiRod w/o rails, 13' @ 135.0'
12 - 5' x 1' Panel @ 135.0'
1 - Platform, PiRod w/o rails, 13' @ 120.0'
12 - 5' x 1' Panel @ 120.0'
1 - HP MW Dish, 2' Dia. @ 160.0'
1 - HP MW Dish, 2' Dia. @ 160.0'

POLE HEIGHT(FT):	170	NUMBER OF A.B.'s:	20
BOLT CIRCLE(IN):	64.62	DIA. OF A.B.'s(IN):	2.25
BASE VERTICAL(K):	49.55	LENGTH OF A.B.'s(IN):	96.00
BASE SHEAR(K):	34.27	PROJECTION LENGTH(IN):	9.50
BASE MOMENT(IN-K):	50354	TEMPLATE OD(IN):	68.12

valmont MICROFLECT

BY_____ DATE _____
CHKD. BY _____ DATE _____

SHEET NO. _____

6/23/04

ENGINEERING DATA

for

ANDREW SYSTEMS, INC.
Marlborough, CT
VALMONT ORDER 17559-64

EIA/TIA-222-F

BASIC WIND:	80.0	MPH
WIND & ICE:	80.0	MPH AND 0.5 IN. ICE
TWIST & SWAY:	50.0	MPH

QTY	DESCRIPTION	HEIGHT	DATA W.O. ICE EPA	DATA W.O. ICE WT	DATA W/ ICE EPA	DATA W/ ICE WT
1	Lightning Rod, 8'	@ 170.0 '	1.12	37	1.77	45
1	Platform, PiRod w/o rails, 13'	@ 165.0 '	15.70	1300	20.10	1765
12	6' x 1' Panel	@ 165.0 '	50.40	360	54.60	732
1	Platform, PiRod w/o rails, 13'	@ 155.0 '	15.70	1300	20.10	1765
12	6' x 1' Panel	@ 155.0 '	50.40	360	54.60	732
1	Platform, PiRod w/o rails, 13'	@ 145.0 '	15.70	1300	20.10	1765
12	6' x 1' Panel	@ 145.0 '	50.40	360	54.60	732
1	Platform, PiRod w/o rails, 13'	@ 140.0 '	15.70	1300	20.10	1765
12	5' x 1' Panel	@ 140.0 '	42.00	360	45.60	672
1	Platform, PiRod w/o rails, 13'	@ 135.0 '	15.70	1300	20.10	1765
12	5' x 1' Panel	@ 135.0 '	42.00	360	45.60	672
1	Platform, PiRod w/o rails, 13'	@ 120.0 '	15.70	1300	20.10	1765
12	5' x 1' Panel	@ 120.0 '	42.00	360	45.60	672
1	HP MW Dish, 2' Dia.	@ 160.0 '	3.96	90	4.30	128
1	HP MW Dish, 2' Dia.	@ 160.0 '	3.96	90	4.30	128

VALP ANDREW SYSTEMS, INC. 170' POLE, SITE: MARLBOROUGH, CT 17559-

I N P U T D A T A L I S T SEEFILE ACTLQUOT FOR SPOOL OUTPUT

```
/*********/*********/*********/*********/*********/*********/****/****
SHAP  HEXD    170.00                                                   5
STEE    65      0.00      0.00      1.00      0.00      4.00              0
CONS              1.00      1.50    0.5000                5.00      1.00  1    2
WIND       C                1.69      0.00      0.80
POLE  DIA      57.000    0.2000
SEC   HEIG      53.00     95.00    135.00      0.00      0.00         0
THIC  NESS   0.40625   0.34375   0.28125   0.21875   0.00000   0.00000
BCON              2.0
ROUT                                                      33.00  1   10
LOAD  ARM      170.00    174.00      0.00                              0    1
LOAD  ARM      165.00    166.50      0.00                              0    2
LOAD  ARM      165.00    168.00      0.00                              0    3
LOAD  ARM      155.00    156.50      0.00                              0    4
LOAD  ARM      155.00    158.00      0.00                              0    5
LOAD  ARM      145.00    146.50      0.00                              0    6
LOAD  ARM      145.00    148.00      0.00                              0    7
LOAD  ARM      140.00    141.50      0.00                              0    8
LOAD  ARM      140.00    142.50      0.00                              0    9
LOAD  ARM      135.00    136.50      0.00                              0   10
LOAD  ARM      135.00    137.50      0.00                              0   11
LOAD  ARM      120.00    121.50      0.00                              0   12
LOAD  ARM      120.00    122.50      0.00                              0   13
LOAD  ARM      160.00    160.00      0.00                              0   14
LOAD  ARM      160.00    160.00      0.00                              0   15
LCID  LOD1      80.00                1.00     0.000      0.50      0.00       1
FORC  DATA                          45.00      1.77  1-Lightning Rod, 8       1
FORC  DATA                        1765.00     20.10  1-Platform, PiRod        2
FORC  DATA                         732.00     54.60  12-6' x 1' Panel         3
FORC  DATA                        1765.00     20.10  1-Platform, PiRod        4
FORC  DATA                         732.00     54.60  12-6' x 1' Panel         5
FORC  DATA                        1765.00     20.10  1-Platform, PiRod        6
FORC  DATA                         732.00     54.60  12-6' x 1' Panel         7
FORC  DATA                        1765.00     20.10  1-Platform, PiRod        8
FORC  DATA                         672.00     45.60  12-5' x 1' Panel         9
FORC  DATA                        1765.00     20.10  1-Platform, PiRod       10
FORC  DATA                         672.00     45.60  12-5' x 1' Panel        11
FORC  DATA                        1765.00     20.10  1-Platform, PiRod       12
FORC  DATA                         672.00     45.60  12-5' x 1' Panel        13
FORC  DATA                         128.00      4.30  1-HP MW Dish, 2' D      14
FORC  DATA                         128.00      4.30  1-HP MW Dish, 2' D      15
LCID  LOD2      50.00                1.00     0.000      0.00      0.00       1
FORC  DATA                          37.00      1.12  1-Lightning Rod, 8       1
FORC  DATA                        1300.00     15.70  1-Platform, PiRod        2
FORC  DATA                         360.00     50.40  12-6' x 1' Panel         3
FORC  DATA                        1300.00     15.70  1-Platform, PiRod        4
FORC  DATA                         360.00     50.40  12-6' x 1' Panel         5
FORC  DATA                        1300.00     15.70  1-Platform, PiRod        6
FORC  DATA                         360.00     50.40  12-6' x 1' Panel         7
FORC  DATA                        1300.00     15.70  1-Platform, PiRod        8
FORC  DATA                         360.00     42.00  12-5' x 1' Panel         9
FORC  DATA                        1300.00     15.70  1-Platform, PiRod       10
FORC  DATA                         360.00     42.00  12-5' x 1' Panel        11
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FORC  DATA                          1300.00     15.70  1-Platform, PiRod          12
FORC  DATA                           360.00     42.00  12-5' x 1' Panel           13
FORC  DATA                            90.00      3.96  1-HP MW Dish, 2' D         14
FORC  DATA                            90.00      3.96  1-HP MW Dish, 2' D         15
QUOT  POLE
BASE  HXD6                0.00   59985.00  59976.00      2.250      18.00    1 3360
OPTI            0.00                        0.00     233.34       1.30         98
QUAN  TITY       1.0                                              22.00   21    0
HEF
END   ATA
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BY VALMONT INDUSTRIES FOR: ANDREW SYSTEMS, INC. 170' POLE, SITE: MARLBOROUGH, CT 17559DATE 06/23/04

*** SUMMARY *** VALP-04-162

---------- DESIGN SUMMARY ----------

ABOVE GROUND HEIGHT (FT)	170.00	GROUND LINE DIAMETER (IN)	57.000	POLE SHAFT WEIGHT (LB)	27449.
		TOP DIAMETER(IN)	24.687		
		POLE TAPER (IN/FT)	0.2000	SHAPE:	16-SIDED SYMMETRICAL POLYGON

CONNECTIONS BETWEEN SECTIONS	/FIRST/	/SECOND/	/THIRD/
HEIGHT ABOVE GROUND (FT)	53.00	95.00	135.00
TYPE	LAP SPLICE	LAP SPLICE	LAP SPLICE
OVERLAP LENGTH	81"	70"	58"

SECTION CHARACTERISTICS	/FIRST/	/SECOND/	/THIRD/	/FOURTH/
BASE DIAMETER (IN)	57.000	48.442	40.409	32.658
TOP DIAMETER (IN)	46.400	38.687	31.250	24.687
THICKNESS (IN)	0.40625	0.34375	0.28125	0.21875
LENGTH	53' 0"	48' 9"	45'10"	39'10"
WEIGHT (LB)	11959.	7846.	4958.	2686.

----------ANALYSIS SUMMARY----------

	GROUND LINE	GOVERNING LEVEL SEC. 1	GOVERNING LEVEL SEC. 2	GOVERNING LEVEL SEC. 3	GOVERNING LEVEL SEC. 4	POLE TOP
GOVERNING LOADING CASE	LOD1	LOD1	LOD1	LOD1	LOD1	LOD1
HEIGHT (FT)	0.00	0.00	53.00	95.00	135.00	170.00
RESULTANT MOMENT (IN-KIP)	50354.	50354.	29716.	15483.	4125.	4.
SHEAR FORCE (LB)	34274.	34274.	28602.	24269.	18008.	79.
VERTICAL FORCE (LB)	47120.	47120.	32171.	23637.	15641.	45.
COMBINED STRESS (KSI)	49.88	49.88	50.98	46.81	24.94	0.05
ALLOWABLE STRESS (KSI)	52.00	52.00	52.00	52.00	51.94	52.00
ALLOWABLE/COMBINED STRESS	1.04	1.04	1.02	1.11	2.08	99.99
TOTAL DEFLECTION (IN)	0.00	0.00	12.27	41.26	85.76	133.36

NOTE: DIAMETERS ARE OUTSIDE, MEASURED ACROSS THE FLATS

BY VALMONT INDUSTRIES FOR: ANDREW SYSTEMS, INC. 170' POLE, SITE: MARLBOROUGH, CT 17559DATE 06/23/04

*** GROUNDLINE REACTIONS ***

LOADING CASE IDENTIFIER	MOMENTS (IN-KIPS) ABOUT X-AXIS	ABOUT Y-AXIS	RESULTANT (X & Y)	TORSIONAL	AXIAL FORCE (LBS)	SHEAR (LBS) IN X-DIRECTION	IN Y-DIRECTION	RESULTANT (X & Y)	NOTES
LOD1	27975.	41868.	50354.	-126.	47120.	28498.	19042.	34274.	A B C
LOD2	9957.	14901.	17922.	-43.	37626.	10304.	6885.	12392.	

NOTE: POSITIVE AXIAL FORCE IS DOWNWARD. AXIAL FORCE INCLUDES THE WEIGHT OF THE ABOVE-GROUND PORTION OF THE POLE SHAFT TIMES THE APPROPRIATE OVERLOAD FACTOR, IN ADDITION TO THE CONCENTRATED VERTICAL LOADING.

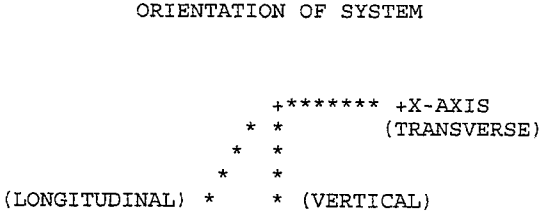
KEY TO THE SPECIAL NOTE ENTRIES
A INDICATES LOAD CASE WITH MAXIMUM OVERTURNING MOMENT
B INDICATES LOAD CASE WITH MAXIMUM AXIAL FORCE
C INDICATES LOAD CASE WITH MAXIMUM RESULTANT SHEAR

*** INPUT LOADS ***

LOADING CASE LOD1

BASIC VELOCITY IS 80.00 M.P.H. ICE THICKNESS 0.50 INCHES
FORCE COEFFICIENT INCREASED TO ACCOUNT FOR PROJECTIONS (EIA NOTE #3)
- MULTIPLIER IS 1.3, BUT RESULT NOT TO EXCEED 1.2-
WIND ORIENTATION IS 33.8 DEGREES CLOCKWISE FROM -X- AXIS
POLE WEIGHT OVERLOAD FACTOR IS 1.000 EXPOSURE C GUST FACTOR 1.69
ARM LOCATION IS MEASURED CLOCKWISE FROM -X- AXIS
POSITIVE -Y- AXIS IS 90 DEGREES CLOCKWISE FROM -X- AXIS

ORIENTATION OF SYSTEM



FOUNDATION ROTATION OF 0.50 DEGREES

ARM NO.	ARM MOUNTING HEIGHT (FT)	HEIGHT OF LOAD APPLICATION POINT (FT)	ARM LENGTH (FT)	LOCATION OF ARM IN XY PLANE (DEGREES)	FORCE-Y (LBS)	FORCE-X (LBS)	FORCE-Z (LBS)	EPA (SQ. FT.)
1	170.00	174.00	0.00	33.75	65.74	43.93	45.00	1.77
2	165.00	166.50	0.00	33.75	737.21	492.59	1765.00	20.10
3	165.00	168.00	0.00	33.75	2007.70	1341.50	732.00	54.60
14	160.00	160.00	0.00	33.75	155.93	104.19	128.00	4.30
15	160.00	160.00	0.00	33.75	155.93	104.19	128.00	4.30
4	155.00	156.50	0.00	33.75	724.28	483.94	1765.00	20.10
5	155.00	158.00	0.00	33.75	1972.80	1318.18	732.00	54.60
6	145.00	146.50	0.00	33.75	710.74	474.90	1765.00	20.10
7	145.00	148.00	0.00	33.75	1936.29	1293.79	732.00	54.60
8	140.00	141.50	0.00	33.75	703.72	470.21	1765.00	20.10
9	140.00	142.50	0.00	33.75	1599.72	1068.90	672.00	45.60
10	135.00	136.50	0.00	33.75	696.53	465.40	1765.00	20.10
11	135.00	137.50	0.00	33.75	1583.48	1058.05	672.00	45.60
12	120.00	121.50	0.00	33.75	673.74	450.18	1765.00	20.10
13	120.00	122.50	0.00	33.75	1532.07	1023.70	672.00	45.60

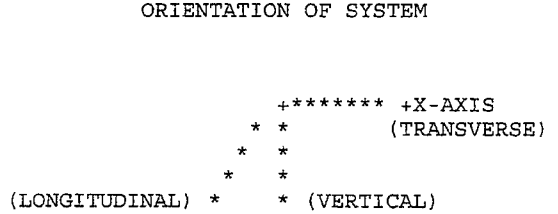
BY VALMONT INDUSTRIES FOR: ANDREW SYSTEMS, INC. 170' POLE, SITE: MARLBOROUGH, CT 17559DATE 06/23/04

*** INPUT LOADS ***

LOADING CASE LOD2

BASIC VELOCITY IS 50.00 M.P.H. ICE THICKNESS 0.00 INCHES
FORCE COEFFICIENT INCREASED TO ACCOUNT FOR PROJECTIONS (EIA NOTE #3)
- MULTIPLIER IS 1.3, BUT RESULT NOT TO EXCEED 1.2-
WIND ORIENTATION IS 33.8 DEGREES CLOCKWISE FROM -X- AXIS
POLE WEIGHT OVERLOAD FACTOR IS 1.000 EXPOSURE C GUST FACTOR 1.69
ARM LOCATION IS MEASURED CLOCKWISE FROM -X- AXIS
POSITIVE -Y- AXIS IS 90 DEGREES CLOCKWISE FROM -X- AXIS

ORIENTATION OF SYSTEM



FOUNDATION ROTATION OF 0.50 DEGREES

ARM NO.	ARM MOUNTING HEIGHT (FT)	HEIGHT OF LOAD APPLICATION POINT (FT)	ARM LENGTH (FT)	LOCATION OF ARM IN XY PLANE (DEGREES)	FORCE-Y (LBS)	FORCE-X (LBS)	FORCE-Z (LBS)	EPA (SQ. FT.)
1	170.00	174.00	0.00	33.75	16.25	10.86	37.00	1.12
2	165.00	166.50	0.00	33.75	224.93	150.30	1300.00	15.70
3	165.00	168.00	0.00	33.75	723.93	483.71	360.00	50.40
14	160.00	160.00	0.00	33.75	56.09	37.48	90.00	3.96
15	160.00	160.00	0.00	33.75	56.09	37.48	90.00	3.96
4	155.00	156.50	0.00	33.75	220.99	147.66	1300.00	15.70
5	155.00	158.00	0.00	33.75	711.35	475.31	360.00	50.40
6	145.00	146.50	0.00	33.75	216.86	144.90	1300.00	15.70
7	145.00	148.00	0.00	33.75	698.18	466.51	360.00	50.40
8	140.00	141.50	0.00	33.75	214.72	143.47	1300.00	15.70
9	140.00	142.50	0.00	33.75	575.56	384.57	360.00	42.00
10	135.00	136.50	0.00	33.75	212.52	142.00	1300.00	15.70
11	135.00	137.50	0.00	33.75	569.71	380.67	360.00	42.00
12	120.00	121.50	0.00	33.75	205.57	137.36	1300.00	15.70
13	120.00	122.50	0.00	33.75	551.22	368.31	360.00	42.00

BY VALMONT INDUSTRIES FOR: ANDREW SYSTEMS, INC. 170' POLE, SITE: MARLBOROUGH, CT 17559DATE

*** PROPERTIES ***

CONNECTION LOCATIONS	HEIGHT (FEET)	DIAMETER ACROSS FLATS (IN)	WALL THK. (IN)	D/T ACROSS FLATS	W/T ACROSS FLATS	MOMENTS OF INERTIA (IN4)	AREA (IN2)
GRND. LINE	0.00	57.000	0.4063	140.3	25.94	29739.	73.23
	5.00	56.000	0.4063	137.8	25.45	28190.	71.94
	10.00	55.000	0.4063	135.4	24.96	26696.	70.64
	15.00	54.000	0.4063	132.9	24.47	25256.	69.35
	20.00	53.000	0.4063	130.5	23.98	23868.	68.05
	25.00	52.000	0.4063	128.0	23.49	22532.	66.76
	30.00	51.000	0.4063	125.5	23.00	21247.	65.47
	35.00	50.000	0.4063	123.1	22.51	20012.	64.17
	40.00	49.000	0.4063	120.6	22.02	18826.	62.88
	45.00	48.000	0.4063	118.2	21.53	17687.	61.58
SEC BASE	46.23	47.754	0.4063	117.5	21.41	17415.	61.27
	50.00	47.000	0.4063	115.7	21.04	16596.	60.29
SEC TOP	53.00	47.087	0.3438	137.0	25.28	14179.	51.18
	55.00	46.687	0.3438	135.8	25.05	13818.	50.74
	60.00	45.687	0.3438	132.9	24.47	12942.	49.65
	65.00	44.687	0.3438	130.0	23.89	12105.	48.55
	70.00	43.687	0.3438	127.1	23.31	11304.	47.46
	75.00	42.687	0.3438	124.2	22.73	10540.	46.36
	80.00	41.687	0.3438	121.3	22.15	9811.	45.27
	85.00	40.687	0.3438	118.4	21.57	9116.	44.17
SEC BASE	89.20	39.846	0.3438	115.9	21.09	8558.	43.25
	90.00	39.687	0.3438	115.5	20.99	8455.	43.08
SEC TOP	95.00	39.250	0.2813	139.6	25.79	6721.	34.91
	100.00	38.250	0.2813	136.0	25.08	6217.	34.01
	105.00	37.250	0.2813	132.4	24.38	5739.	33.12
	110.00	36.250	0.2813	128.9	23.67	5286.	32.22
	115.00	35.250	0.2813	125.3	22.96	4857.	31.33
ARM	120.00	34.250	0.2813	121.8	22.25	4452.	30.43
ARM	120.00	34.250	0.2813	121.8	22.25	4452.	30.43
	125.00	33.250	0.2813	118.2	21.55	4070.	29.53
	130.00	32.250	0.2813	114.7	20.84	3711.	28.64
SEC BASE	130.15	32.220	0.2813	114.6	20.82	3701.	28.61
SEC TOP	135.00	31.687	0.2188	144.9	26.85	2753.	21.93
ARM	135.00	31.687	0.2188	144.9	26.85	2753.	21.93
ARM	135.00	31.687	0.2188	144.9	26.85	2753.	21.93
ARM	140.00	30.687	0.2188	140.3	25.94	2499.	21.23
ARM	140.00	30.687	0.2188	140.3	25.94	2499.	21.23
ARM	145.00	29.687	0.2188	135.7	25.03	2261.	20.53
ARM	145.00	29.687	0.2188	135.7	25.03	2261.	20.53
	150.00	28.687	0.2188	131.1	24.12	2038.	19.84
ARM	155.00	27.687	0.2188	126.6	23.21	1831.	19.14
ARM	155.00	27.687	0.2188	126.6	23.21	1831.	19.14
ARM	160.00	26.687	0.2188	122.0	22.30	1638.	18.44
ARM	160.00	26.687	0.2188	122.0	22.30	1638.	18.44
ARM	165.00	25.687	0.2188	117.4	21.39	1459.	17.75
ARM	165.00	25.687	0.2188	117.4	21.39	1459.	17.75
ARM	170.00	24.687	0.2188	112.9	20.48	1294.	17.05

TOP	170.00	24.687	0.2188	112.9	20.48	1294.	17.05

BY VALMONT INDUSTRIES FOR: ANDREW SYSTEMS, INC. 170' POLE, SITE: MARLBOROUGH, CT 17559DATE 06/23/04

LOADING CASE LOD1 *** REACTIONS *** SHEAR FORCE AT BASE (LB) = 34274.
TOTAL VERTICAL FORCE AT BASE (LB) = 47120.

	*** MOMENTS ABOUT -X- AXIS (IN-KIPS) ***				*** MOMENTS ABOUT -Y- AXIS (IN-KIPS) ***			
HEIGHT(FT)	LOAD	WIND	DEFL	TOTAL	LOAD	WIND	DEFL	TOTAL
0.00	18142.	8197.	1636.	27975.	27151.	12268.	2448.	41868.
5.00	17530.	7676.	1620.	26826.	26236.	11488.	2424.	40148.
10.00	16919.	7174.	1598.	25691.	25321.	10737.	2392.	38450.
15.00	16307.	6691.	1573.	24571.	24405.	10014.	2354.	36773.
20.00	15696.	6226.	1543.	23465.	23490.	9318.	2309.	35117.
25.00	15084.	5779.	1509.	22372.	22575.	8649.	2258.	33482.
30.00	14472.	5350.	1471.	21293.	21659.	8006.	2202.	31867.
35.00	13861.	4937.	1430.	20228.	20744.	7389.	2140.	30273.
40.00	13249.	4542.	1385.	19176.	19829.	6797.	2073.	28699.
45.00	12637.	4164.	1338.	18139.	18913.	6231.	2002.	27146.
46.23	12487.	4073.	1325.	17886.	18689.	6096.	1984.	26769.
50.00	12026.	3803.	1287.	17115.	17998.	5691.	1926.	25615.
53.00	11659.	3594.	1256.	16509.	17449.	5379.	1880.	24708.
55.00	11414.	3459.	1235.	16108.	17083.	5177.	1849.	24108.
60.00	10803.	3133.	1181.	15117.	16167.	4689.	1767.	22624.
65.00	10191.	2825.	1124.	14140.	15252.	4228.	1682.	21162.
70.00	9579.	2535.	1065.	13179.	14336.	3793.	1594.	19723.
75.00	8968.	2261.	1003.	12233.	13421.	3385.	1502.	18307.
80.00	8356.	2006.	940.	11302.	12506.	3002.	1407.	16914.
85.00	7744.	1767.	875.	10386.	11590.	2644.	1310.	15544.
89.20	7230.	1579.	819.	9628.	10821.	2363.	1226.	14410.
90.00	7133.	1545.	809.	9486.	10675.	2312.	1210.	14197.
95.00	6521.	1339.	742.	8602.	9760.	2004.	1110.	12874.
100.00	5910.	1150.	674.	7734.	8844.	1721.	1009.	11575.
105.00	5298.	977.	606.	6881.	7929.	1462.	906.	10297.
110.00	4686.	820.	536.	6042.	7014.	1227.	802.	9042.
115.00	4075.	678.	465.	5218.	6098.	1015.	696.	7809.
120.00	3463.	552.	393.	4408.	5183.	826.	589.	6597.
120.00	3463.	552.	393.	4408.	5183.	826.	589.	6597.
125.00	2878.	440.	326.	3644.	4307.	658.	488.	5453.
130.00	2355.	342.	264.	2960.	3524.	512.	394.	4430.
130.15	2339.	339.	262.	2940.	3501.	508.	392.	4400.
135.00	1832.	258.	202.	2292.	2741.	386.	303.	3430.
135.00	1832.	258.	202.	2292.	2741.	386.	303.	3430.
135.00	1832.	258.	202.	2292.	2741.	386.	303.	3430.
140.00	1338.	188.	147.	1673.	2003.	281.	220.	2503.
140.00	1338.	188.	147.	1673.	2003.	281.	220.	2503.
145.00	938.	130.	102.	1169.	1403.	194.	152.	1749.
145.00	938.	130.	102.	1169.	1403.	194.	152.	1749.
150.00	628.	83.	68.	779.	941.	124.	102.	1166.
155.00	395.	46.	40.	482.	591.	69.	60.	721.
155.00	395.	46.	40.	482.	591.	69.	60.	721.
160.00	195.	20.	20.	235.	291.	31.	29.	351.
160.00	195.	20.	20.	235.	291.	31.	29.	351.
165.00	80.	5.	6.	91.	120.	8.	9.	137.
165.00	80.	5.	6.	91.	120.	8.	9.	137.
170.00	2.	0.	0.	2.	4.	0.	0.	4.
170.00	2.	0.	0.	2.	4.	0.	0.	4.

BY VALMONT INDUSTRIES FOR: ANDREW SYSTEMS, INC. 170' POLE, SITE: MARLBOROUGH, CT 17559DATE 06/23/04

LOADING CASE LOD1 *** DEFLECTIONS AND STRESSES**

	********** DEFLECTIONS **********										
	WITHOUT SECONDARY	WITH SECONDARY MOMENTS				********** APPLIED STRESSES (KSI)**********					ALLOWABLE
HEIGHT(FT)	MOMENTS	X-DIR.	Y-DIR.	TOTAL	ROTATION (DEGREES)	BENDING	AXIAL	TORSION	SHEAR	COMBINED	ALLOWABLE STRESS	ALLOWABLE DIVIDED BY COMBINED
0.00	0.0	0.0	0.0	0.0	0.00	49.24	0.64	-0.07	0.95	49.88	52.00	1.042
5.00	0.1	0.1	0.1	0.1	0.20	48.94	0.64	-0.07	0.95	49.57	52.00	1.049
10.00	0.4	0.4	0.2	0.4	0.41	48.61	0.63	-0.08	0.95	49.23	52.00	1.056
15.00	0.9	0.8	0.5	1.0	0.61	48.24	0.62	-0.08	0.95	48.86	52.00	1.064
20.00	1.6	1.4	1.0	1.7	0.82	47.85	0.61	-0.08	0.95	48.46	52.00	1.073
25.00	2.5	2.2	1.5	2.7	1.03	47.41	0.60	-0.09	0.95	48.02	52.00	1.083
30.00	3.6	3.2	2.2	3.9	1.24	46.93	0.60	-0.09	0.96	47.53	52.00	1.094
35.00	5.0	4.4	2.9	5.3	1.46	46.41	0.59	-0.09	0.96	47.00	52.00	1.106
40.00	6.5	5.8	3.8	6.9	1.68	45.83	0.58	-0.10	0.96	46.41	52.00	1.120
45.00	8.2	7.3	4.9	8.8	1.89	45.20	0.57	-0.10	0.97	45.78	52.00	1.136
46.23	8.7	7.7	5.2	9.3	1.95	45.04	0.57	-0.10	0.97	45.61	52.00	1.140
50.00	10.2	9.1	6.1	10.9	2.11	44.51	0.57	-0.11	0.97	45.08	52.00	1.154
53.00	11.5	10.2	6.8	12.3	2.25	50.35	0.63	-0.13	1.13	50.98	52.00	1.020
55.00	12.4	11.0	7.4	13.2	2.35	49.98	0.63	-0.13	1.13	50.61	52.00	1.028
60.00	14.8	13.2	8.8	15.8	2.60	49.00	0.62	-0.13	1.13	49.62	52.00	1.048
65.00	17.4	15.5	10.4	18.7	2.85	47.94	0.61	-0.14	1.14	48.55	52.00	1.071
70.00	20.3	18.1	12.1	21.8	3.10	46.77	0.61	-0.15	1.14	47.38	52.00	1.098
75.00	23.5	20.9	14.0	25.2	3.35	45.50	0.60	-0.15	1.15	46.10	52.00	1.128
80.00	26.9	24.0	16.0	28.8	3.60	44.10	0.60	-0.16	1.15	44.70	52.00	1.163
85.00	30.5	27.2	18.2	32.7	3.84	42.57	0.59	-0.17	1.16	43.16	52.00	1.205
89.20	33.7	30.1	20.1	36.2	4.04	41.17	0.59	-0.18	1.16	41.76	52.00	1.245
90.00	34.3	30.6	20.5	36.9	4.08	40.89	0.58	-0.18	1.16	41.48	52.00	1.254
95.00	38.4	34.3	22.9	41.3	4.34	46.13	0.68	-0.22	1.40	46.81	52.00	1.111
100.00	42.7	38.2	25.5	46.0	4.61	43.69	0.67	-0.23	1.41	44.37	52.00	1.172
105.00	47.3	42.3	28.3	50.9	4.87	41.01	0.67	-0.24	1.42	41.69	52.00	1.247
110.00	52.1	46.7	31.2	56.1	5.12	38.05	0.67	-0.26	1.43	38.72	52.00	1.343
115.00	57.2	51.2	34.2	61.6	5.35	34.78	0.67	-0.27	1.44	35.45	52.00	1.467
120.00	62.5	56.0	37.4	67.3	5.57	31.14	0.67	-0.29	1.46	31.81	52.00	1.635
120.00	62.5	56.0	37.4	67.3	5.57	31.14	0.67	-0.29	1.46	31.81	52.00	1.635
125.00	68.0	60.9	40.7	73.3	5.78	27.33	0.58	-0.26	1.29	27.92	52.00	1.863
130.00	73.6	66.0	44.1	79.4	5.96	23.62	0.58	-0.27	1.30	24.21	52.00	2.148
130.15	73.8	66.2	44.2	79.6	5.96	23.51	0.58	-0.27	1.30	24.09	52.00	2.159
135.00	79.5	71.3	47.6	85.8	6.13	24.22	0.71	-0.36	1.66	24.94	51.94	2.083
135.00	79.5	71.3	47.6	85.8	6.13	24.22	0.71	-0.36	1.66	24.94	51.94	2.083
135.00	79.5	71.3	47.6	85.8	6.13	24.22	0.71	-0.36	1.66	24.94	51.94	2.083
140.00	85.4	76.7	51.3	92.3	6.29	18.86	0.60	-0.31	1.41	19.47	52.00	2.671
140.00	85.4	76.7	51.3	92.3	6.29	18.86	0.60	-0.31	1.41	19.47	52.00	2.671
145.00	91.6	82.2	55.0	98.9	6.42	14.10	0.48	-0.26	1.16	14.58	52.00	3.566
145.00	91.6	82.2	55.0	98.9	6.42	14.10	0.48	-0.26	1.16	14.58	52.00	3.566
150.00	97.8	87.9	58.7	105.7	6.51	10.07	0.35	-0.18	0.84	10.42	52.00	4.991
155.00	104.1	93.6	62.5	112.5	6.58	6.69	0.34	-0.20	0.84	7.04	52.00	7.390
155.00	104.1	93.6	62.5	112.5	6.58	6.69	0.34	-0.20	0.84	7.04	52.00	7.390
160.00	110.5	99.3	66.4	119.5	6.62	3.51	0.19	-0.11	0.48	3.71	52.00	14.020
160.00	110.5	99.3	66.4	119.5	6.62	3.51	0.19	-0.11	0.48	3.71	52.00	14.020
165.00	116.9	105.1	70.2	126.4	6.65	1.48	0.16	-0.11	0.42	1.65	52.00	31.517
165.00	116.9	105.1	70.2	126.4	6.65	1.48	0.16	-0.11	0.42	1.65	52.00	31.517

170.00	123.3	110.9	74.1	133.4	6.65	0.04	0.00	0.00	0.01	0.05	52.00	99.990
170.00	123.3	110.9	74.1	133.4	6.65	0.04	0.00	0.00	0.01	0.05	52.00	99.990

BY VALMONT INDUSTRIES FOR: ANDREW SYSTEMS, INC. 170' POLE, SITE: MARLBOROUGH, CT 17559DATE 06/23/04

LOADING CASE LOD2 *** REACTIONS *** SHEAR FORCE AT BASE (LB) = 12392.
TOTAL VERTICAL FORCE AT BASE (LB) = 37626.

	*** MOMENTS ABOUT -X- AXIS (IN-KIPS) ***				*** MOMENTS ABOUT -Y- AXIS (IN-KIPS) ***			
HEIGHT(FT)	LOAD	WIND	DEFL	TOTAL	LOAD	WIND	DEFL	TOTAL
0.00	6292.	3116.	549.	9957.	9416.	4663.	822.	14901.
5.00	6081.	2917.	537.	9536.	9101.	4366.	804.	14271.
10.00	5871.	2726.	525.	9121.	8786.	4079.	785.	13651.
15.00	5660.	2542.	511.	8713.	8471.	3804.	765.	13039.
20.00	5449.	2365.	496.	8310.	8155.	3539.	743.	12437.
25.00	5239.	2194.	481.	7914.	7840.	3284.	720.	11844.
30.00	5028.	2031.	465.	7523.	7525.	3039.	695.	11259.
35.00	4817.	1874.	447.	7139.	7210.	2804.	670.	10684.
40.00	4607.	1723.	430.	6760.	6895.	2579.	643.	10117.
45.00	4396.	1579.	411.	6387.	6579.	2364.	616.	9558.
46.23	4344.	1545.	407.	6296.	6502.	2312.	609.	9423.
50.00	4186.	1442.	392.	6020.	6264.	2158.	587.	9010.
53.00	4059.	1363.	381.	5803.	6075.	2040.	571.	8685.
55.00	3975.	1311.	374.	5660.	5949.	1963.	559.	8471.
60.00	3764.	1187.	355.	5307.	5634.	1777.	531.	7942.
65.00	3554.	1070.	335.	4959.	5318.	1602.	502.	7422.
70.00	3343.	960.	315.	4618.	5003.	1437.	472.	6912.
75.00	3132.	856.	295.	4284.	4688.	1282.	442.	6411.
80.00	2922.	759.	275.	3956.	4373.	1136.	411.	5920.
85.00	2711.	669.	254.	3634.	4057.	1001.	380.	5438.
89.20	2534.	597.	237.	3368.	3792.	894.	354.	5040.
90.00	2500.	584.	233.	3318.	3742.	874.	349.	4966.
95.00	2290.	506.	213.	3009.	3427.	758.	318.	4503.
100.00	2079.	435.	192.	2706.	3112.	651.	288.	4050.
105.00	1869.	369.	172.	2410.	2796.	552.	257.	3606.
110.00	1658.	310.	151.	2119.	2481.	463.	226.	3171.
115.00	1447.	256.	131.	1834.	2166.	383.	195.	2745.
120.00	1237.	208.	110.	1555.	1851.	312.	165.	2327.
120.00	1237.	208.	110.	1555.	1851.	312.	165.	2327.
125.00	1027.	166.	91.	1284.	1537.	248.	136.	1921.
130.00	847.	129.	73.	1049.	1267.	193.	109.	1569.
130.15	841.	128.	72.	1042.	1259.	191.	108.	1559.
135.00	666.	97.	56.	819.	997.	145.	83.	1226.
135.00	666.	97.	56.	819.	997.	145.	83.	1226.
135.00	666.	97.	56.	819.	997.	145.	83.	1226.
140.00	489.	71.	40.	600.	732.	106.	60.	898.
140.00	489.	71.	40.	600.	732.	106.	60.	898.
145.00	343.	49.	28.	420.	514.	73.	42.	629.
145.00	343.	49.	28.	420.	514.	73.	42.	629.
150.00	230.	31.	19.	279.	344.	46.	28.	418.
155.00	149.	17.	11.	178.	223.	26.	17.	266.
155.00	149.	17.	11.	178.	223.	26.	17.	266.
160.00	73.	8.	5.	86.	110.	11.	8.	129.
160.00	73.	8.	5.	86.	110.	11.	8.	129.
165.00	33.	2.	2.	37.	50.	3.	3.	55.
165.00	33.	2.	2.	37.	50.	3.	3.	55.
170.00	1.	0.	0.	1.	1.	0.	0.	1.
170.00	1.	0.	0.	1.	1.	0.	0.	1.

BY VALMONT INDUSTRIES FOR: ANDREW SYSTEMS, INC. 170' POLE, SITE: MARLBOROUGH, CT 17559DATE 06/23/04

LOADING CASE LOD2 *** DEFLECTIONS AND STRESSES**

HEIGHT(FT)	WITHOUT SECONDARY MOMENTS	WITH SECONDARY MOMENTS X-DIR.	Y-DIR.	TOTAL	ROTATION (DEGREES)	APPLIED STRESSES (KSI) BENDING	AXIAL	TORSION	SHEAR	COMBINED	ALLOWABLE STRESS	ALLOWABLE DIVIDED BY COMBINED
0.00	0.0	0.0	0.0	0.0	0.00	17.52	0.51	-0.02	0.34	18.04	52.00	2.883
5.00	0.0	0.0	0.0	0.0	0.07	17.40	0.51	-0.03	0.34	17.90	52.00	2.905
10.00	0.1	0.1	0.1	0.2	0.14	17.26	0.50	-0.03	0.34	17.75	52.00	2.929
15.00	0.3	0.3	0.2	0.3	0.22	17.11	0.49	-0.03	0.34	17.60	52.00	2.955
20.00	0.6	0.5	0.3	0.6	0.29	16.95	0.48	-0.03	0.34	17.43	52.00	2.984
25.00	0.9	0.8	0.5	1.0	0.37	16.77	0.47	-0.03	0.34	17.25	52.00	3.015
30.00	1.3	1.1	0.8	1.4	0.44	16.58	0.47	-0.03	0.34	17.05	52.00	3.050
35.00	1.8	1.6	1.0	1.9	0.52	16.38	0.46	-0.03	0.34	16.84	52.00	3.088
40.00	2.3	2.0	1.4	2.5	0.59	16.16	0.45	-0.03	0.34	16.61	52.00	3.131
45.00	2.9	2.6	1.7	3.1	0.67	15.92	0.44	-0.04	0.35	16.36	52.00	3.179
46.23	3.1	2.7	1.8	3.3	0.69	15.85	0.44	-0.04	0.35	16.30	52.00	3.191
50.00	3.6	3.2	2.1	3.9	0.75	15.66	0.44	-0.04	0.35	16.09	52.00	3.231
53.00	4.1	3.6	2.4	4.3	0.80	17.70	0.48	-0.04	0.40	18.18	52.00	2.861
55.00	4.4	3.9	2.6	4.7	0.83	17.56	0.48	-0.04	0.40	18.04	52.00	2.883
60.00	5.3	4.7	3.1	5.6	0.92	17.20	0.47	-0.05	0.40	17.67	52.00	2.943
65.00	6.2	5.5	3.7	6.6	1.01	16.81	0.46	-0.05	0.40	17.27	52.00	3.010
70.00	7.2	6.4	4.3	7.7	1.09	16.39	0.46	-0.05	0.41	16.85	52.00	3.087
75.00	8.4	7.4	5.0	8.9	1.18	15.93	0.45	-0.05	0.41	16.38	52.00	3.174
80.00	9.6	8.5	5.7	10.2	1.27	15.44	0.44	-0.06	0.41	15.88	52.00	3.275
85.00	10.9	9.6	6.4	11.6	1.35	14.89	0.44	-0.06	0.41	15.33	52.00	3.392
89.20	12.0	10.6	7.1	12.8	1.42	14.40	0.43	-0.06	0.41	14.83	52.00	3.506
90.00	12.2	10.8	7.2	13.0	1.44	14.30	0.43	-0.06	0.41	14.73	52.00	3.529
95.00	13.7	12.1	8.1	14.6	1.53	16.13	0.49	-0.08	0.50	16.63	52.00	3.128
100.00	15.2	13.5	9.0	16.2	1.62	15.29	0.49	-0.08	0.50	15.78	52.00	3.296
105.00	16.8	14.9	10.0	18.0	1.71	14.36	0.48	-0.08	0.50	14.85	52.00	3.503
110.00	18.6	16.5	11.0	19.8	1.80	13.34	0.48	-0.09	0.50	13.82	52.00	3.762
115.00	20.4	18.1	12.1	21.7	1.88	12.22	0.47	-0.09	0.51	12.70	52.00	4.095
120.00	22.2	19.7	13.2	23.7	1.96	10.98	0.47	-0.10	0.51	11.46	52.00	4.539
120.00	22.2	19.7	13.2	23.7	1.96	10.98	0.47	-0.10	0.51	11.46	52.00	4.539
125.00	24.2	21.5	14.4	25.8	2.03	9.63	0.41	-0.09	0.45	10.04	52.00	5.178
130.00	26.2	23.3	15.6	28.0	2.10	8.37	0.41	-0.09	0.45	8.78	52.00	5.924
130.15	26.3	23.3	15.6	28.1	2.10	8.33	0.41	-0.09	0.45	8.74	52.00	5.951
135.00	28.3	25.1	16.8	30.2	2.16	8.66	0.49	-0.12	0.58	9.16	51.94	5.672
135.00	28.3	25.1	16.8	30.2	2.16	8.66	0.49	-0.12	0.58	9.16	51.94	5.672
135.00	28.3	25.1	16.8	30.2	2.16	8.66	0.49	-0.12	0.58	9.16	51.94	5.672
140.00	30.4	27.0	18.1	32.5	2.21	6.77	0.41	-0.11	0.49	7.18	52.00	7.239
140.00	30.4	27.0	18.1	32.5	2.21	6.77	0.41	-0.11	0.49	7.18	52.00	7.239
145.00	32.6	29.0	19.4	34.9	2.26	5.07	0.33	-0.09	0.40	5.40	52.00	9.630
145.00	32.6	29.0	19.4	34.9	2.26	5.07	0.33	-0.09	0.40	5.40	52.00	9.630
150.00	34.8	31.0	20.7	37.2	2.29	3.61	0.24	-0.06	0.29	3.85	52.00	13.492
155.00	37.1	33.0	22.0	39.7	2.32	2.47	0.23	-0.07	0.29	2.70	52.00	19.248
155.00	37.1	33.0	22.0	39.7	2.32	2.47	0.23	-0.07	0.29	2.70	52.00	19.248
160.00	39.4	35.0	23.4	42.1	2.34	1.29	0.13	-0.04	0.17	1.43	52.00	36.378
160.00	39.4	35.0	23.4	42.1	2.34	1.29	0.13	-0.04	0.17	1.43	52.00	36.378
165.00	41.7	37.0	24.7	44.5	2.34	0.60	0.11	-0.04	0.15	0.71	52.00	72.967
165.00	41.7	37.0	24.7	44.5	2.34	0.60	0.11	-0.04	0.15	0.71	52.00	72.967

170.00	44.0	39.1	26.1	47.0	2.35	0.01	0.00	0.00	0.00	0.02	52.00	99.990
170.00	44.0	39.1	26.1	47.0	2.35	0.01	0.00	0.00	0.00	0.02	52.00	99.990

0 MINIMUM DEFLECTION RATIO // DEFLECTION LIMIT / DEFLECTION // IS 7498328.5

BY VALMONT INDUSTRIES FOR: ANDREW SYSTEMS, INC. 170' POLE, SITE: MARLBOROUGH, CT 17559-DATE 06/23/04
*** ANCHORAGE *** ANCH-04-096

*** ANCHOR BOLT CHARACTERISTICS GOVERNED BY LOADING CASE LOD1 ***

NUMBER OF BOLTS	DIAMETER (IN.)	LENGTH (IN.)	WEIGHT (LB.)	SHIPPED AS	PROJECTION LENGTH (IN.)	GALVANIZED LENGTH (IN.)	THREAD SIZE
20	2.250	96.	2923.	BOLTS, TEMPLATES	9.50	18.00	4.5-UNC-2A

STEEL SPECIF.	MAXIMUM BOLT FORCE (LB.)	MAXIMUM STRESS (PSI)	ALLOWABLE STRESS (PSI)	STRESS AREA (SQ. IN.)	SAFETY FACTOR	CONFIGURATION OF BOTTOM END OF ANCHOR BOLT
A615	158215.	48689.	59985.	3.250	1.23	THREADED WITH HEAVY HEX HEAD NUT

*** BOLT COORDINATES AND FORCES ***

BOLT NO.	X-COORD	Y-COORD	MAX TENSION-LB	MAX FORCE-LB	*	BOLT NO.	X-COORD	Y-COORD	MAX TENSION-LB	MAX FORCE-LB
1	32.308	0.00	-2356.	2356.	*	2	30.727	9.984	45806.	50518.
3	26.138	18.990	89253.	93965.	*	4	18.990	26.138	123737.	128449.
5	9.984	30.727	145874.	150586.	*	6	0.00	32.308	153502.	158214.

MAX. BOLT CIRCLE = 64.62 IN. TEMPLATE DIAMETER = 70.62 IN.

*** BASE PLATE CHARACTERISTICS GOVERNED BY LOADING CASE LOD1 ***

DRAWING NUMBER	OVERALL LENGTH (IN.)	OVERALL WIDTH (IN.)	THICKNESS (IN.)	ACTUAL WEIGHT (LB.)	RAW MATERIAL WEIGHT (LB.)	SIDE LENGTH (IN.)
HXD6-98	70.62	70.62	2.5000	2426.	3532.	14.05

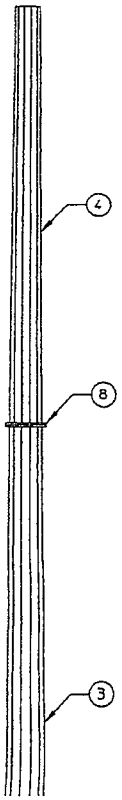
TOP WIDTH (IN.)	POLE DIAM. (MAJOR DIAM.) (IN.)	CRITICAL FAILURE MODE	TOTAL LENGTH OF FAIL MODE LINE (IN.)	EFFECTIVE LENGTH (IN.)	TOTAL MOMENT ALONG FAIL LINE (IN.-LB.)
14.05	57.00	2	76.88	66.04	3034225.

STEEL SPECIF. VALMONT	STEEL SPECIF. OTHER	BENDING STRESS (PSI)	ALLOWABLE STRESS (PSI)	MAX. VERTICAL SHEAR STRESS (PSI)
S34	A633	44108.	59976.	10100.

** LOADS AT POLE BASE ********** LOADING CASES**********

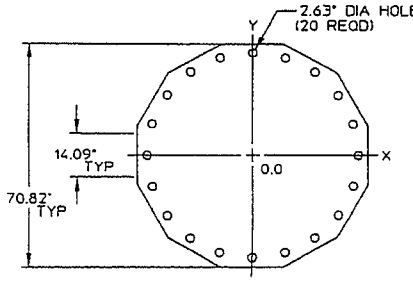
LOADING CASE IDENTIFICATION	LOD1	LOD2
MOMENT ABT. X-AXIS (IN-KIP)	27975.	9957.
MOMENT ABT. Y-AXIS (IN-KIP)	41868.	14901.
SHEAR FORCE (LB.)	34274.	12392.
VERTICAL FORCE (LB.)	47120.	37626.

]MAX CRITERION-	LOAD CASE
]MOMENT ABT. X	LOD1
]MOMENT ABT. Y	LOD1
]RES. MOMENT	LOD1
]SHEAR FORCE	LOD1
]BOLT FORCE	LOD1
]BOLT TENSION	LOD1



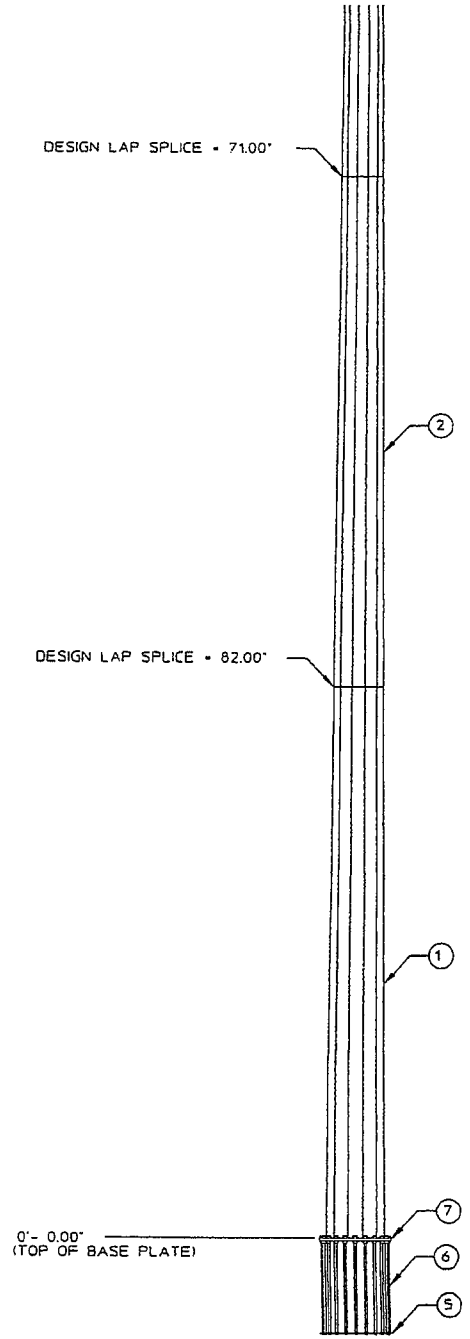
ITEM ID	NO. REQD	FEATURES	WEIGHT (LBS)
1	1	SECTION A	12,921
2	1	SECTION B	8,621
3	1	SECTION C	5,006
4	1	SECTION D	2,304
5	1	BOTTOM CAGE PLATE	127
6	20	2.25"-4.5 UNC-2A ANCHOR BOLT, LENGTH = 8.00"	2,560
7	1	BASE PLATE	2,440
8	2	FLANGE PLATE	701
	1	TOP CAGE PLATE (REMOVE BEFORE SETTING POLE)	168
	12	BOLT 150" DIA	
	1	SAFETY CLIMBING CABLE (LENGTH = 160.00")	113
	2	GROUNDING LUG	2
		GALVANIZING	577
	211	STEP AND CLIP (VALMONT STANDARD)	1
	6	HAND HOLE	15
	2	HAND HOLE (5" x 8")	17
	3	HAND HOLE (6" x 18") (TUBE)	12
	15	HAND HOLE (6" x 18") (TUBE)	12
	1	POLE CAP	43

HOLE COORDS (INCHES)	
X-COORD	Y-COORD
32.41	0.00
30.82	10.02
26.22	19.05
19.05	26.22
10.02	30.82
0.00	32.41



NOTES
1. BASE PLATE THICKNESS = 2.500"
2. BASE PLATE ALLOWABLE STRESS (KSI) = 60
3. VENT AND DRAIN HOLES PROVIDED
4. MAXIMUM BOLT CIRCLE DIAMETER = 64.82"
5. MAXIMUM TEMPLATE DIAMETER = 70.82"

BASE PLATE / ANCHORAGE CHARACTERISTICS



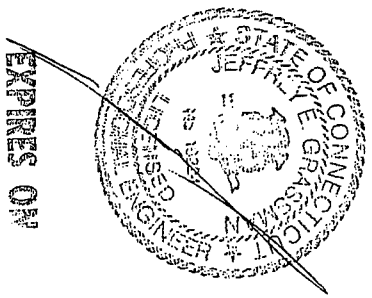
NOTES:

1. REACTIONS FOR FOUNDATION DESIGN.
   MOMENT = 50,194 IN-KIPS
   SHEAR = 34,337 #
   VERTICAL = 50,979 #
2. GALVANIZED PER ASTM A-123.
3. DESIGN CRITERIA: EIA/TIA 222-F
4. THIS STRUCTURE HAS BEEN DESIGNED FOR THE FOLLOWING LOADING:
   A. CASE 1: WIND = 80 MPH, ICE = 0.50 INCH
   B. CASE 2: WIND = 50 MPH
   C. EQUIPMENT

DESCRIPTION	MTG HT. (FT)	CENTROID HT. (FT)	CENTROID ECC (FT)	WITHOUT ICE EPA (FT**2)	WITHOUT ICE WT (LBS)	WITH ICE EPA (FT**2)	WITH ICE WT (LBS)
1-Lightning Rod, 8'	170.00	174.00	0.00	1.12	37	1.77	45
1-Platform, PiRod w/	165.00	166.50	0.00	15.70	1300	20.10	1765
12-6' x 1' Panel	165.00	168.00	0.00	50.40	360	54.60	732
1-Platform, PiRod w/	155.00	156.50	0.00	15.70	1300	20.10	1765
12-6' x 1' Panel	155.00	158.00	0.00	50.40	360	54.60	732
1-Platform, PiRod w/	145.00	146.50	0.00	15.70	1300	20.10	1765
12-6' x 1' Panel	145.00	148.00	0.00	50.40	360	54.60	732
1-Platform, PiRod w/	140.00	141.50	0.00	15.70	1300	20.10	1765
12-5' x 1' Panel	140.00	142.50	0.00	42.00	360	45.60	672
1-Platform, PiRod w/	135.00	136.50	0.00	15.70	1300	20.10	1765
12-5' x 1' Panel	135.00	137.50	0.00	42.00	360	45.60	672
1-Platform, PiRod w/	120.00	121.50	0.00	15.70	1300	20.10	1765
12-5' x 1' Panel	120.00	122.50	0.00	42.00	360	45.60	672
1-HP MW Dish, 2' Dia	160.00	160.00	0.00	3.96	90	4.30	128
1-HP MW Dish, 2' Dia	160.00	160.00	0.00	3.96	90	4.30	128

5. FEEDLINES ARE PLACED INTERIOR TO POLE SHAFT (UNLESS NOTED OTHERWISE).

SECTION INFORMATION					
ITEM ID	LENGTH	BASE OD	TOP OD	THK	MATL
1	53'- 0.00"	57.20"	46.60"	0.438"	S-22
2	48'-10.00"	48.72"	38.95"	0.375"	S-22
3	45'-11.00"	40.69"	31.51"	0.281"	S-22
4	35'- 0.00"	31.51"	24.51"	0.219"	S-22



JAN 31 2005

EXPIRES ON

OCT 11 2004

ORDER	PROJECT	FILE ID	SCALE	DATE	ENGR
	QU10286	170_DC	NONE	10/04/04	DDC

DESCRIPTION
ANDREW SYSTEMS, INC. 170' POLE, SITE MARLBOROUGH, CT

VALMONT.

ITEM ID	NO REQD	FEATURES	WEIGHT (LBS)
1	1	SECTION A	12,921
2	1	SECTION B	8,621
3	1	SECTION C	5,006
4	1	SECTION D	2,304
5	1	BOTTOM CAGE PLATE	127
6	20	2.25"-4.5 UNC-2A ANCHOR BOLT, LENGTH = 8.00"	2,560
7	1	BASE PLATE	2,440
8	2	FLANGE PLATE	701
	1	TOP CAGE PLATE (REMOVE BEFORE SETTING POLE)	168
	12	BOLT 1.50" DIA	
	1	SAFETY CLIMBING CABLE (LENGTH = 160.00')	113
	2	GROUNDING LUG	2
		GALVANIZING	577
	211	STEP AND CLIP (VALMONT STANDARD)	1
	6	HAND HOLE	15
	2	HAND HOLE (5" x 8")	17
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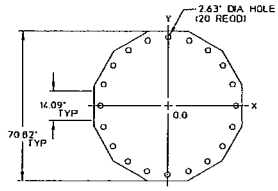

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BASE PLATE / ANCHORAGE CHARACTERISTICS

NOTES.

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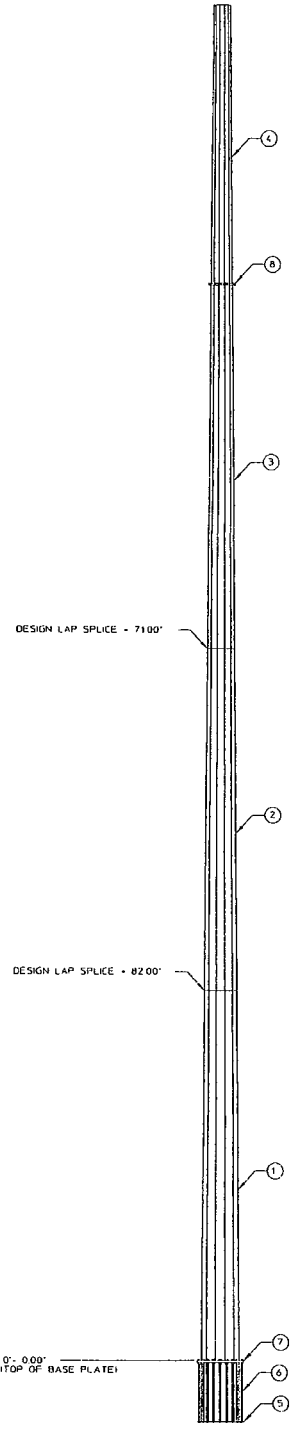

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ORDER	PROJECT	F&E NO.	SCALE	DATE	ENGR
	QU10286	170_OC	NONE	10/04/04	DDC

DESCRIPTION:
ANDREW SYSTEMS, INC. 170' POLE, SITE MARLBOROUGH, CT

VALMONT

Exhibit 3

T-Mobile

T-Mobile USA Inc.
100 Filley St, Bloomfield, CT 06002-1853
Phone: (860) 692-7100
Fax: (860) 692-7159

Technical Memo

To: Christine Farrell
From: Sumit Nahar - Radio Frequency Engineer
cc: Jason Overbey
Subject: Power Density Report for CT11253C
Date: March 16, 2004

1. Introduction:

This report is the result of an Electromagnetic Field Intensities (EMF - Power Densities) study for the T-Mobile PCS antenna installation on a New Monopole at 175 South Main Street, Marlborough, CT. This study incorporates the most conservative consideration for determining the practical combined worst case power density levels that would be theoretically encountered from locations surrounding the transmitting location.

2. Discussion:

The following assumptions were used in the calculations:

1) The emissions from T-Mobile transmitters are in the 1935-1945 MHz frequency band.
2) The antenna array consists of two sectors, with 3 antennas per sector.
3) The model number of the antennas are EMS RR65-18-02DP
4) The antenna center line height is 130 ft.
5) The maximum transmit power from any sector is 2802.33 Watts Effective Radiated Power (EiRP) assuming 8 channels per sector.
6) All the antennas are simultaneously transmitting and receiving, 24 hours a day.
7) Power levels emitting from the antennas are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
8) The average ground level of the studied area does not change significantly with respect to the transmitting location

Equations given in "FCC OET Bulletin 65, Edition 97-01" were then used with the above information to perform the calculations.

3. Conclusion:

Based on the above worst case assumptions, the power density calculation from the T-Mobile PCS antenna installation on a New Monopole at 175 South Main Street, Marlborough, CT, is 0.03998 mW/cm^2. This value represents 3.998% of the Maximum Permissible Emission (MPE) standard of 1 milliwatt per square centimeter (mW/cm^2) set forth in the FCC/ANSI/IEEE C95.1-1991. Furthermore, the proposed antenna location for T-Mobile will not interfere with existing public safety communications, AM or FM radio broadcasts, TV, Police Communications, HAM Radio communications or any other signals in the area.
The combined Power Density from other carriers is 12.5906%. The combined Power Density for the site is 16.589% of the M.P.E. standard.

Miscellaneous

T · ·Mobile·
Get more from life

100 Filley Street, Bloomfield, CT 06002
860-794-6427 fax 860-692-7159

September 2, 2005

First Selectman Nancy S. Bader
Town of Marlborough
26 North Main Street
Marlborough, CT 06447

RE: **Wireless Telecommunications Facility**
175 South Main Street, Marlborough, Connecticut

Dear First Selectman Bader:

Omnipoint Communications, Inc. a.k.a. T-Mobile (formerly Voicestream Wireless Corp.) intends to co-locate antennas on the future monopole located at 175 South Main Street, Marlborough. Attached, please find a copy of our application to the CT Siting Council.

If you have any questions or concerns, please feel free to call me at 860-794-6427, or the CT Siting Council.

Very Truly Yours

Christine Farrell
T-Mobile Real Estate and Zoning

Attachment-Application

Cc: CSC