



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

www.ct.gov/csc

June 20, 2011

Douglas L. Culp, Real Estate Consultant
New Cingular Wireless PCS, LLC
500 Enterprise Drive
Rocky Hill, CT 06067-3900

RE: **EM-CING-153-110527** - New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 78 Westbury Park Road, Watertown, Connecticut

Dear Mr. Culp:

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 with the following conditions:

- The smokestack tower be repaired in accordance with recommendations made in the report prepared by Hudson Design Group dated April 13, 2011; and
- Prior to antenna installation, a signed letter from a Professional Engineer duly licensed in the State of Connecticut shall be submitted to the Council to certify that the recommended repairs have been completed and the smokestack tower is capable of supporting the proposed antennas.
- Any deviation from the proposed modification as specified in this notice and supporting materials with Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Not less than 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration;

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated May 26, 2011. 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. Thank you for your attention and cooperation.

Very truly yours,



Linda Roberts
Executive Director

LR/CDM/laf

- c: The Honorable Elaine H. Adams, Chairman Town Council, Town of Watertown
- Charles Frigon, Town Manager, Town of Watertown
- Ruth Mulcahy, Land Use Administrator, Town of Watertown
- Seimon Realty



EM-CING-153-110527

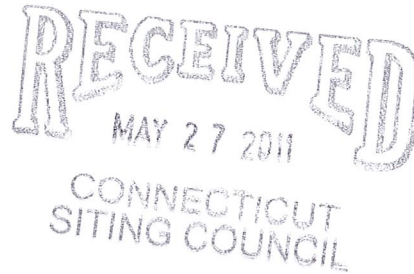
Wireless PCS, LLC
Drive

Rocky Hill, Connecticut 06067-3900
Phone: (860) 463-5511
Fax: (860) 513-7190

Douglas L. Culp
Real Estate Consultant

HAND DELIVERED

May 26, 2011



Ms. Linda Roberts
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Re: New Cingular Wireless PCS, LLC notice of intent to modify an existing tele-communications facility located at 78 Westbury Park Road Watertown, CT (owner Seimon Realty)

Dear Ms. Roberts:

In order to accommodate technological changes, implement Uniform Mobile Telecommunications System (“UMTS”) and/or Long Term Evolution (“LTE”) capabilities, and enhance system performance in the State of Connecticut, New Cingular Wireless PCS, LLC (“AT&T”) plans to modify the equipment configurations at many of its existing cell sites. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter and attachments is being sent to the chief elected official of the municipality in which the affected cell site is located.

UMTS technology offers services to mobile computer and phone users anywhere in the world. Based on the Global System for Mobile (“GSM”) communication standard, UMTS is the planned worldwide standard for mobile users. UMTS, fully implemented, gives computer and phone users high-speed access to the Internet as they travel. They have the same capabilities even when they roam, through both terrestrial wireless and satellite transmissions.

Attached is a summary of the planned modifications, including power density calculations reflecting the change in AT&T’s operations at the site. Also included is documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration.

The changes to the facility do not constitute modifications as defined in Connecticut General Statutes (“C.G.S.”) Section 16-50i(d) because the general physical characteristics of the facility

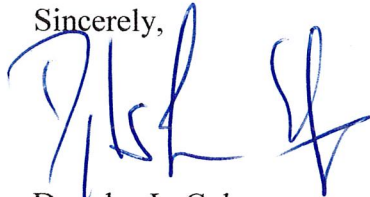
will not be significantly changed or altered. Rather, the planned changes to the facility fall squarely within those activities explicitly provided for in R.C.S.A. Section 16-50j-72(b)(2).

1. The height of the overall structure will be unaffected.
2. The proposed changes will not extend the site boundaries. There will be no effect on the site compound other than some enlarged equipment pads as may be noted in the attachments.
3. The proposed changes will not increase the noise level at the existing facility by six decibels or more.
4. Radio frequency power density may increase due to use of one or more GSM channel for UMTS transmissions. Moreover, LTE will utilize additional radio frequencies newly-licensed by the FCC for cellular mobile communications. However, the changes will not increase the calculated "worst case" power density for the combined operations at the site to a level at or above the applicable standard for uncontrolled environments as calculated for a mixed frequency site.

For the foregoing reasons, New Cingular Wireless respectfully submits that the proposed changes at the referenced site constitute exempt modifications under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at (860) 463-5511 with questions concerning this matter. Thank you for your consideration.

Sincerely,



Douglas L. Culp
Real Estate Consultant

Attachments

**NEW CINGULAR WIRELESS PCS, LLC
Equipment Modification**

78 Westbury Park Road Watertown, CT
Site Number CT1120
Exempt Mod

Tower Owner/Manager: Seimon Realty

Equipment configuration: Chimney/Smokestack

Current and/or approved: Three EMS Antennas @ 132 ft
6 ADC TMA's @ 132 ft
Nine runs 7/8 inch coax to 132 ft
Equipment shelter

Planned Modifications: Remove existing EMS antennas and TMA's @ 132 ft
Install six PowerWave P65-16 antennas @ 132 ft
Install six PowerWave Twin BP TMA's @ 132 ft
Remove existing coax cabling.
Install 12 1 5/8" Coax.

Power Density:

Worst-case calculations for existing wireless operations at the site, using standard parameters for other carriers, indicate a radio frequency electromagnetic radiation power density, measured at ground level beside the Tower, of approximately 21.9% of the standard adopted by the FCC. As depicted in the second table below, the total radio frequency electromagnetic radiation power density following proposed modifications would be approximately 22.9 % of the standard.

Existing

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm ²)	Standard Limits (mW/cm ²)	Percent of Limit
Other Users							8.56
AT&T UMTS	132	800 Band	1	500	0.0103	0.5867	1.76
AT&T GSM	132	1900 Band	6	427	0.0529	1.0000	5.29
AT&T GSM	132	800Band	6	296	0.0367	0.5867	6.25
Total							21.9%

* Data for other users are from Siting Council records.

Proposed

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm ²)	Standard Limits (mW/cm ²)	Percent of Limit
Other Users							8.56
AT&T UMTS	132	800 Band	1	500	0.0103	0.5867	1.76
AT&T UMTS	132	1900 Band	1	500	0.0103	1.0000	1.03
AT&T GSM	132	1900 Band	6	427	0.0529	1.0000	5.29
AT&T GSM	132	880 - 894	6	296	0.0367	0.5867	6.25
Total							22.9%

* Data for other users are from Siting Council records.

Structural information:

The attached structural analysis demonstrates that the monopole and foundation have adequate structural capacity to accommodate the proposed (International Chimney Corp. dated 5-16-11)

PROJECT INFORMATION

SCOPE OF WORK: UNMANNED TELECOMMUNICATIONS FACILITY MODIFICATIONS
 SITE ADDRESS: 76 WESTBURY PARK ROAD
 WATER TOWN, CT 06795
 LATITUDE: 41.603325 N 41.35° 11.97' N
 LONGITUDE: -73.111666 W -73° 6' 42" W
 JURISDICTION: NATIONAL, STATE & LOCAL CODES OR ORDINANCES
 CURRENT USE: TELECOMMUNICATIONS FACILITY
 PROPOSED USE: TELECOMMUNICATIONS FACILITY
 NOC#: 866--915-5600



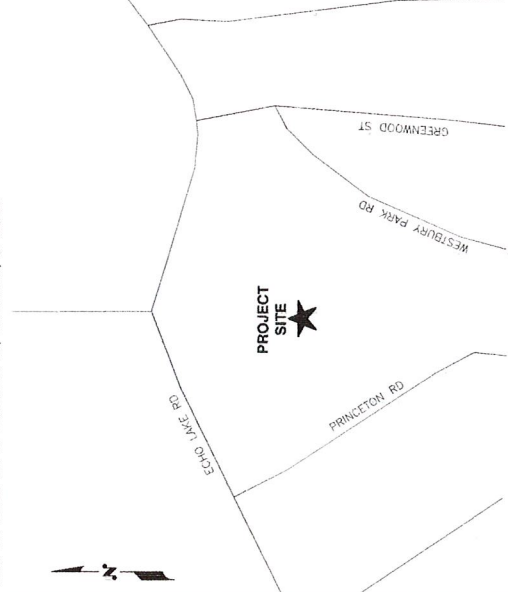
SITE NUMBER: CT1130
SITE NAME: WATERTOWN

DRAWING INDEX

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VICINITY MAP

DIRECTION TO SITE:
 FROM ENTERPRISE DR TOWARD CAPITAL BLVD, 0.3 MILES, TURN LEFT AT CAPITAL BLVD, 0.3 MILES, TURN LEFT AT WEST ST, 0.3 MILES, TURN LEFT TO MERGE ONTO I-81 S TOWARD NEW HAVEN, 9.1 MILES, TAKE EXIT 18 TO MERGE ONTO I-691 W TOWARD WATERBURY/DANBURY, 8.0 MILES, TAKE EXIT 1 TO MERGE ONTO I-84 W TOWARD WATERBURY/DANBURY, 8.7 MILES, TAKE EXIT 20 TO MERGE ONTO CT-8 N TOWARD TORRINGTON, 1.1 MILES, TAKE EXIT 35 ON THE LEFT FOR CT-73 TOWARD OAKVILLE/WATERTOWN, 0.5 MILES, TAKE EXIT 1 ON THE LEFT FOR CT-73 TOWARD OAKVILLE/WATERTOWN, 0.5 MILES, CONTINUE ONTO WATERTOWN AVENUE, 0.5 MILES, CONTINUE ONTO WESTBURY PARK ROAD, 0.2 MILES, TAKE THE 2ND RIGHT ONTO PRINCETON RD, DESTINATION WILL BE ON THE LEFT, 0.1 MILES, END AT PRINCETON RD, WATERTOWN, CT 06795



GENERAL NOTES

1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF AT&T. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.
2. THE FACILITY IS AN UNMANNED, PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY TO BE USED BY AT&T PERSONNEL AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE AT&T REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

CALL
 BEFORE YOU DIG
 CALL TOLL FREE 800-922-4455



UNDERGROUND SERVICE ALERT

1000 SCHOENBERG BLVD, SUITE 2101
 WILMINGTON, MA 01896
 TEL: 978.555.6553
 FAX: 978.555.8586

92 KEEWATON DRIVE
 SALEM, NH 03079

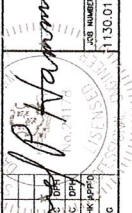
SITE NUMBER: CT1130
SITE NAME: WATERTOWN
 76 WESTBURY PARK ROAD
 WATERTOWN, CT 06795
 LITCHFIELD COUNTY

500 ENTERPRISE DRIVE, SUITE 3A
 ROCKY HILL, CT 06067

NO.	DATE	BY	REVISIONS
1	07/26/11	JC	CONSTRUCTION - REVISED
2	12/13/10	JC	ISSUED FOR CONSTRUCTION

DESIGNED BY: JC
 DRAWN BY: JC

AT&T
 TITLE SHEET
 (2ND CARRIER - FULL SWA?)
 DRAWING NUMBER
 T-1
 11.30.01



GROUNDING NOTES

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL STANDARDS. THE TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
2. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GESS) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
4. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BITS EQUIPMENT.
5. EACH BITS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BITS 2 AWG STRANDED COPPER FOR OUTDOOR BITS.
6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
7. APPROVED ANTI-OXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
11. METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
12. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING SHALL BE BONDING TO THE GROUND RING. ALL ELECTRICAL CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BARE TINNED COPPER GROUND WIRE, PER NEC 250.50


GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
CONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION)
SUBCONTRACTOR - SALEM - AT&T MOBILITY
OWNER - AT&T MOBILITY
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO VERIFY THE WORK TO BE DONE AND THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH THE CONSTRUCTION DRAWINGS, ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED FOR REFERENCE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. "FITTINGS LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND FITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES; GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND CONDUITS TO THE EXTENT POSSIBLE. THE SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.
14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.


15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERRECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE GALVANNEAL OR GALVALUME WITH COATINGS AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERRECTED USING A COMPATIBLE ZINC RICH PAINT.
16. CONSTRUCTION SHALL COMPLY WITH DIMS SPECIFICATIONS AND "GENERAL CONSTRUCTION SPECIFICS FOR CONSTRUCTION OF AT&T MOBILITY SITES."
17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING STRUCTURES SHALL BE MEASURED AND DRAWN TO SCALE. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY STRUCTURAL WORK OR SUBCONTRACTOR SHALL BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGEROUS LEVELS OF DANGEROUS EXPOSURE LEVELS.
20. APPLICABLE BUILDING CODES:
SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION. THE CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
BUILDING CODE, 2003 IBC WITH 2005 CT SUPPLEMENT & 2009 CT AMENDMENTS CODE; REFER TO ELECTRICAL DRAWINGS
LIGHTENING CODE; REFER TO ELECTRICAL DRAWINGS
SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST 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, NINTH EDITION; TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-F;
STRUCTURAL STANDARDS FOR STEEL
ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.
FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER MATTERS, WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

ABBREVIATIONS


ACL	ABOVE GRADE LEVEL	G.C.	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
AWG	AMERICAN WIRE GAUGE	MGB	MASTER GROUND BUS	TBD	TO BE DETERMINED
BCW	BARE COPPER WIRE	MIN	MINIMUM	TBR	TO BE REMOVED
BTS	BASE TRANSCIVER STATION	PROPOSED	NEW	TBR	TO BE REMOVED
EG	EQUIPMENT GROUND	N.T.S.	NOT TO SCALE	TBR	TO BE REMOVED AND REPLACED
EGR	EQUIPMENT GROUND RING	REF	REFERENCE	REQ	TYPICAL




500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067




SITE NUMBER: CT1130
SITE NAME: WATERTOWN
76 WESTBURY PARK ROAD
WATERTOWN, CT 06795
LITCHFIELD COUNTY



800-222-0887
TEL: 978-62-3239
FAX: 978-62-3266
1400/02/02/00/0001
4-ADDON: 04/01/05



52 KEELEYSON DRIVE
SALEM, NH 03079

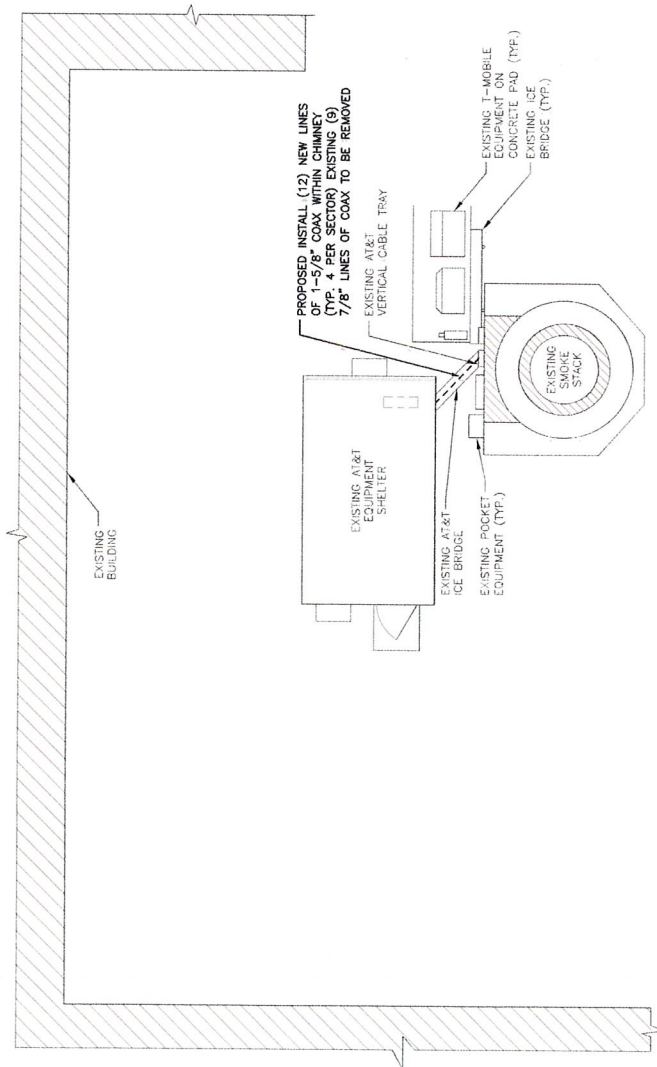


Professional Engineer
No. 113001
State of Connecticut

DESIGNED BY: DC
CHECKED BY: JG
SCALE: AS SHOWN

ISSUED FOR CONSTRUCTION: 01/23/07
REVISIONS: 1 (07/26/07) CONSTRUCTION REVISION

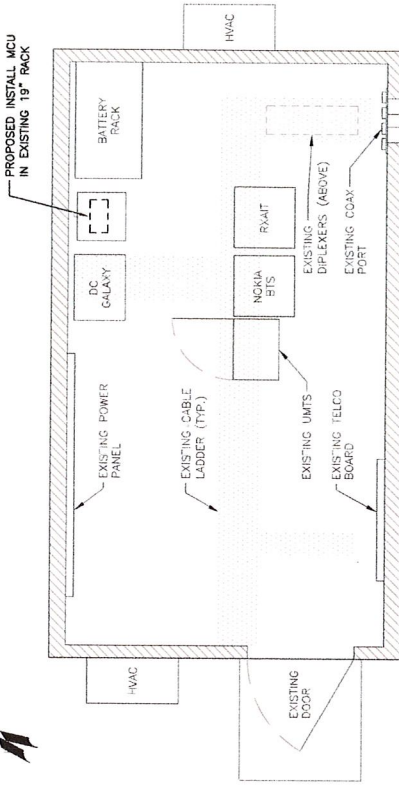
GENERAL NOTES (2ND CARRIER - FULL SWAP)
DRAWING NUMBER: GN-1



SITE PLAN

SCALE: 3/16"=1'-0"

0 2'-8" 5'-4" 10'-8" 16"



EQUIPMENT PLAN

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

0 1'-0" 2'-0" 4'-0" 6'-0"

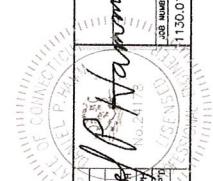


22 KEEMAYOIN DRIVE
SALEM, NH 03079

SITE NUMBER: CT1130
SITE NAME: WATERTOWN
76 WESTBURY PARK ROAD
WATERTOWN, CT 06795
LITCHFIELD COUNTY



500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06867

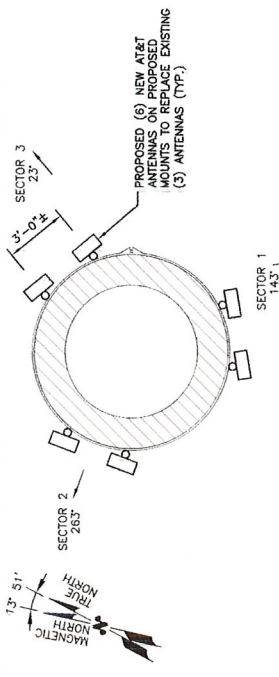


Daniel P. Stamm
DESIGNED BY: DC
DRAWN BY: JG
DATE: 01/21/10
SCALE: AS SHOWN

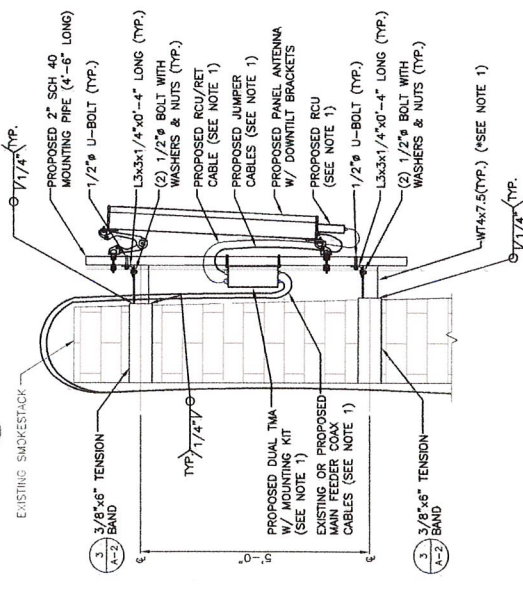
AT&T
SITE PLAN & EQUIPMENT PLAN
(2ND CARRIER - FULL SWAP)

JOB NUMBER	11300.01
DRAWING NUMBER	A-1
REV	1

SECTOR	SECTOR NAME	ANTENNA MAKE & MODEL	ANTENNA COUNT	AZIMUTH	RAD CENTER	MECHANICAL DOWNTILT	DUAL TMA COUNT	# OF COAX CABLES
1	ALPHA	POWERWAVE P65-15-XLH-RR	2 PROPOSED 0 EXISTING	143°*	132'-0"±	0°*	4 PROPOSED 0 EXISTING	4 PROPOSED 0 EXISTING
2	BETA	POWERWAVE P65-15-XLH-RR	2 PROPOSED 0 EXISTING	263°*	132'-0"±	0°*	4 PROPOSED 0 EXISTING	4 PROPOSED 0 EXISTING
3	GAMMA	POWERWAVE P65-15-XLH-RR	2 PROPOSED 0 EXISTING	23°*	132'-0"±	0°*	4 PROPOSED 0 EXISTING	4 PROPOSED 0 EXISTING



1 ANTENNA PLAN
A-2 SCALE: N.T.S.



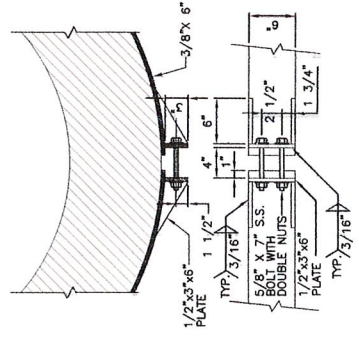
2 PROPOSED ANTENNA MOUNTING DETAIL
A-2 SCALE: N.T.S.

NOTES:
1. REFER TO RF CONFIG & SECTOR QUANTITY REQUIRED PER SECTOR

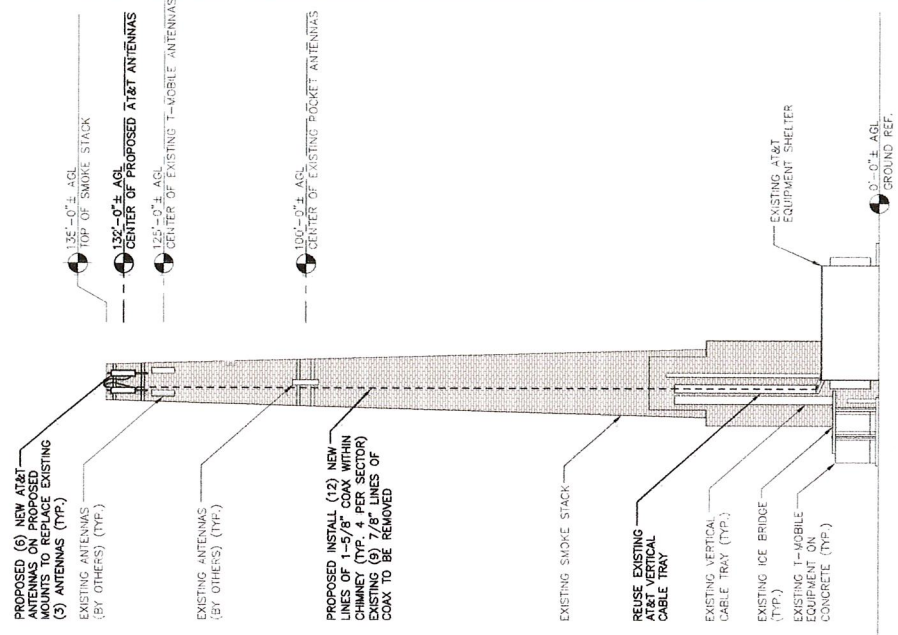
NOTE:
AN ANALYSIS FOR THE CAPACITY TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.

NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

- *NOTES:
- CONTRACTOR TO VERIFY CHIMNEY TAPER, AND FIELD MEASURE TO ASSURE PROPER INSTALLATION. LENGTH OF TOP TEE TO BE NO GREATER THAN 10'.
 - PAINT ALL MOUNTING HARDWARE, ANTENNAS, AND RRH TO MATCH BRICK CHIMNEY COLOR.
 - REFER TO RF CONFIG & SECTOR SCHEMATICS FOR MODEL, TYPE & QUANTITY REQUIRED PER SECTOR



3 TENSION BAND CONNECTION
A-2 SCALE: 1-1/2"=1'-0"
0 4 8 1-4 2 FEET



4 NORTH ELEVATION
A-2 SCALE: 3/32"=1'-0"
0 7.5'-4" 10'-8" 21'-4" 32 FEET

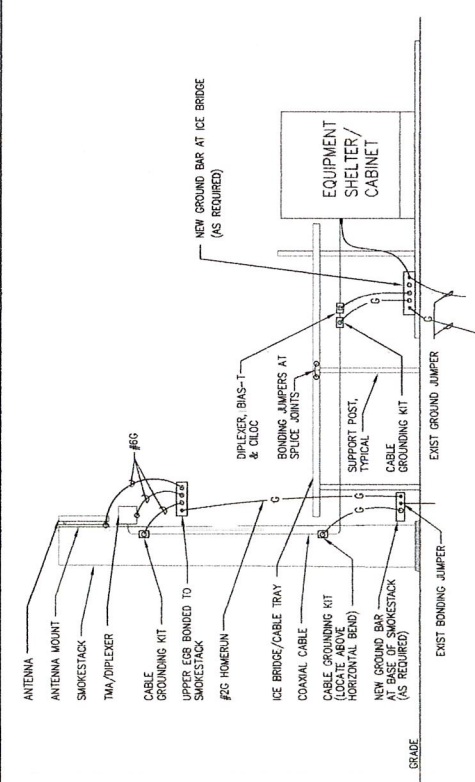
1000 CANTON STREET
BIRMINGHAM, AL 35203
TEL: 205-333-5533
FAX: 205-333-5534

at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

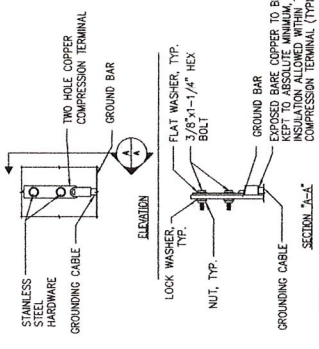
SITE NUMBER: CT1130
SITE NAME: WATERTOWN WATER TOWER, CT 06785
LITCHFIELD COUNTY

DESIGNED BY: DC
DRAWN BY: JC
DATE: 01/23/10
CHECKED FOR CONSTRUCTION: JC
DATE: 01/23/10
SCALE: AS SHOWN

ANTENNA LAYOUT AND ELEVATION (2ND SHEET - PULL SNAP)
A-2
1

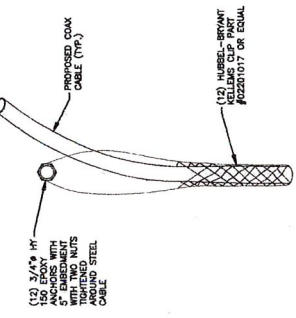


1 GROUNDING ONE LINE DIAGRAM
N.T.S.



NOTE:
1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
2. ODDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
3. CABLED DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGE.

2 TYPICAL GROUND BAR CONNECTION DETAIL
N.T.S.



3 KELLEMS GRIP
N.T.S.

NO.	REQ.	PART NO.	DESCRIPTION
1	1	HUB-0420-S	SOLID END BAR (20"x4"x1/4")
2	2	WALL MTC. BRKT.	WALL MOUNTING BRACKET
3	2	INSULATORS	INSULATORS
4	4	5/8"-11x1" H.H.C.S.	5/8"-11x1" H.H.C.S.
5	4	5/8" LOCKWASHER	5/8" LOCKWASHER

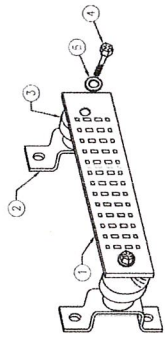
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" - SURGE PRODUCERS

- CABLE ENTRY PORTS (HATCH PLATES) (#2)
- GENERATOR FRAMEWORK (IF AVAILABLE) (#2)
- INTERNAL POWER CABLES (IF AVAILABLE) (#2)
- COLLECTOR POWER COMMON NEUTRAL/GROUND BOND (#2)
- +24V POWER SUPPLY RETURN BAR (#2)
- 48V POWER SUPPLY RETURN BAR (#2)
- RECTIFIER FRAMES.

SECTION "A" - SURGE ABSORBERS

- INTERIOR GROUND RING (#2)
- EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2)
- METALLIC COLD WATER PIPE (IF AVAILABLE) (#2)
- BUILDING STEEL (IF AVAILABLE) (#2)



4 GROUND BAR - DETAIL
N.T.S.

Hudson Design Group
1400 CROCODILE
SALEM, NH 03079
TEL: 603-883-5533
FAX: 603-883-5535

SAI communications
22 KEENAXON DRIVE
SALEM, NH 03079

SITE NUMBER: CT1130
SITE NAME: WATERTOWN
76 WESTBURY PARK ROAD
WATERTOWN, CT 06795
LITCHFIELD COUNTY

500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06867

AT&T
PROJECT: WATERTOWN GROUNDING, ONE-LINE DIAGRAM & DETAILS
(2ND CARRIER - FULL SWAP)
JOB NUMBER: 1130.01
DRAWING NUMBER: C-1
DATE: 11/30/01
DESIGNED BY: DC
CHECKED BY: JG
ISSUED FOR CONSTRUCTION: 10/12/01
DATE: 10/12/01
BY: CH/DC

Chimney Design Calculations by International Chimney Corporation
55 South Long Street, Williamsville, NY 14221

Customer: AT&T
Project: CT-40324-C
Site: 76 Westbury Park Road, Watertown, CT
Chimney Description: 140ft Buff Radial Brick Chimney

Scope: Analyze the radial brick chimney for dead load and wind load with the addition of the (6) proposed antennas at 135ft AGL.

Allowable Masonry Stresses: Compression = 280 psi Tension = 30 psi

Summary The chimney is not overstressed by the addition of the proposed antennas at 135 ft AGL.
The analysis assumes that all recommended structural repairs have been completed.



DD
5-16-11



International Chimney Corporation Design Calculations

Engineers & Contractors Since 1927
P.O. Box 260, Buffalo, NY 14231

Fax: 716.634.3983

Phone: 800.828.1446 or 716.634.3967

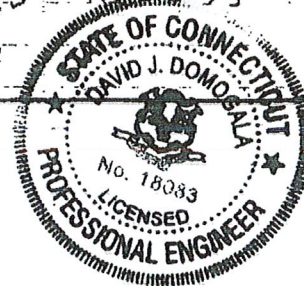
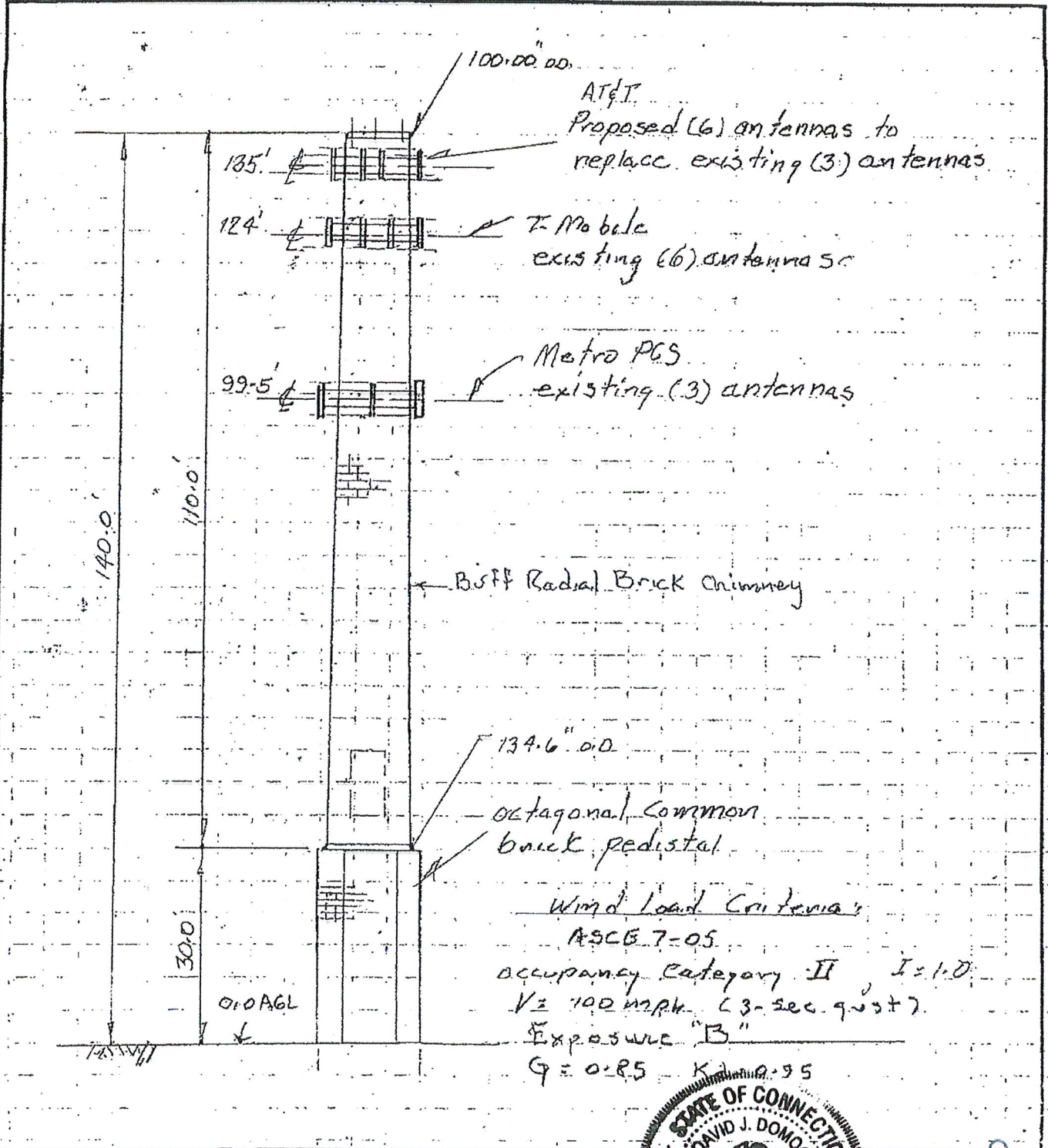
PROJECT: Watertown, CT AT&T Site # CT1130 JOB No.: CT40324-C

SECTION No.: _____ PAGE No.: 1/1

PREPARED BY: MT DATE: 5-5-11

CHECKED BY: _____ DATE: _____

APPROVED BY: _____ DATE: _____



Handwritten signature and date:
5-10-11

Calculate Stress:

Fa = Axial load at bottom of each stack section. This includes all dead load above the bottom of the stack section, including the stack section itself plus all other stack sections above it.

$$Fa := \begin{cases} \text{for } r \in 1..N \\ F_{a_r} \leftarrow \frac{\text{DeadLoad}_r}{\text{Area}_r} \\ F_a \end{cases}$$

Fb = Bending stress due to wind at bottom of each stack section. This includes all wind load on the stack section itself plus the wind load on all stack sections above it.

$$Fb := \begin{cases} \text{for } r \in 1..N \\ F_{b_r} \leftarrow \frac{\text{TotalSectionMoment}_r}{\text{SectionMod}_r} \\ F_b \end{cases}$$

1	8.262
2	14.801
3	22.543
4	23.001
5	30.565
6	34.234
7	44.356
8	53.524
9	62.039
10	62.572
11	67.418

Fa = $\frac{\text{lb}}{\text{in}^2}$

1	2.593
2	8.235
3	16.575
4	18.631
5	27.415
6	32.125
7	46.878
8	60.021
9	71.421
10	68.629
11	74.206

Fb = $\frac{\text{lb}}{\text{in}^2}$

April 13, 2011

Our File # CT-40324-C

INTERNATIONAL CHIMNEY CORPORATION
ENGINEERS & CONTRACTORS SINCE 1927

HUDSON DESIGN GROUP
NORTH ANDOVER, MA

INSPECTION of
140'-0" x 7'-0"
BUFF RADIAL BRICK CHIMNEY
ON A RED COMMON BRICK PEDESTAL
WATERTOWN, CT
AT&T SITE NO.: CT1130
AT&T SITE NAME: WATERTOWN

April 13, 2011

Our File # CT-40324-C

INTERNATIONAL CHIMNEY CORPORATION
ENGINEERS & CONTRACTORS SINCE 1927

HUDSON DESIGN GROUP
NORTH ANDOVER, MA

INSPECTION of
140'-0" x 7'-0"
BUFF RADIAL BRICK CHIMNEY
ON A RED COMMON BRICK PEDESTAL
WATERTOWN, CT
AT&T SITE NO.: CT1130
AT&T SITE NAME: WATERTOWN

LIST OF CONTENTS

SECTION I	-	CHIMNEY DESCRIPTION
SECTION II	-	INSPECTION FINDINGS
SECTION III	-	RECOMMENDATIONS
SECTION IV	-	PHOTOGRAPHS (Photos in PDF Format)

INTERNATIONAL CHIMNEY CORPORATION
ENGINEERS & CONTRACTORS SINCE 1927

HUDSON DESIGN GROUP
NORTH ANDOVER, MA

INSPECTION of
140'-0" x 7'-0"
BUFF RADIAL BRICK CHIMNEY
ON A RED COMMON BRICK PEDESTAL
WATERTOWN, CT
AT&T SITE NO.: CT1130
AT&T SITE NAME: WATERTOWN

SECTION I - CHIMNEY DESCRIPTION

This freestanding structure is no longer being used to vent boilers. The top of this chimney is 140'-0" AGL. The ID and OD at the top are 7'-0"Ø and 8'-4"Ø, respectively. The bottom 29'-0" of this chimney is heptagonal in shape and made of red common brick and mortar. There is a concrete water table on top of the common brick wall at the junction of the pedestal and radial brick column. The top 110' of the chimney is round and made of buff-colored radial brick and mortar. There is a 1'-0"± exposure of the concrete foundation at grade elevation. The taper on the buff radial brick column is 1" in 4'.

The top of the radial brick column has a 6" H x 8" W steel reinforced concrete cap on top of the chimney wall. Above that is a galvanized steel rain hood, with a hatchway, that sits 6"± above the cap. Galvanized steel mesh covers the space between the top of the cap and the underside of the rain hood. Three (3) coax junction boxes are on top of the rain hood.

The old breeching opening, 6' W x 10' H between 30' AGL and 40' AGL on the N side of the chimney, was sealed some time ago with concrete blocks and mortar. Holes were then made in the sealed breeching opening to allow the coax cables for the antenna arrays to be run on the interior of the chimney.

A clean out door (COD) opening, 2'-1" W x 3'-4" H, is located on the S side of the common brick pedestal that begins just above the exposed concrete foundation. The hinged door is made of reinforced steel mesh and is attached to a cast iron frame.

The lightning protection system (LPS) consists of four (4) air terminals, one encircling cable that is 1'-6" below the top, and two (2) downleads; one on the NW side and one on the SE side of the chimney

Three (3) wireless communications carriers' antenna arrays are on the chimney. All coax cables for the wireless carriers enter the chimney close to the centerline of each array and exit the chimney at the breeching elevation on the N side where they were placed into vertical cable trays, with covers, that continue down the side of the chimney and pedestal to ice bridges or in hangers beneath the horizontal cable trays to their respective equipment shelters.

The uppermost carrier (AT&T/Cingular) has a centerline of 135' AGL. There are currently three (3) antennas (one per sector) and nine (9) 7/8"Ø coax cables associated with this array. The cables are in 2'-7" wide by 5" deep cable trays. The antennas are flush mounted to two (2) 3"H x 1/2" thick lug bands. The uppermost band is at 137' AGL and the lower band is at 132' AGL.

INTERNATIONAL CHIMNEY CORPORATION
ENGINEERS & CONTRACTORS SINCE 1927

The middle antenna array (T-Mobile) has a centerline of 124'-0" AGL, six (6) antennas (two (2) per sector) and eighteen (18) 1-5/8"Ø coax cables. The antennas are pipe-mounted to angle clips that are bolted to the chimney. The cable trays for this array are 2'-7" wide by 5" deep. Twelve (12) of the cables go to one BTS cabinet and the remaining six (6) to another.

The lowest array (MetroPCS/Pocket) has a centerline of 99'-6", three (3) antennas (one per sector) and six (6) 1-5/8" coax cables. The antennas are pipe-mounted to two (2) 6" H x 1/4" thick steel lug bands. The top band is at 101'-5" AGL and the lower band is at 97' AGL. The coax cables are in trays that are 12" wide x 4" deep.

A GPS antenna mounted to a bracket is located approximately 45' AGL on the E side of the chimney.

There are step irons on the interior of the chimney which are spaced evenly apart and go all the way to the top.

The wall thickness of the chimney is as follows:

Grade → 10' AGL	36"
20' AGL → 30" AGL	24"
40' AGL → 50' AGL	18"
60' AGL → 70' AGL	16"
80' AGL → 90' AGL	14"
100' AGL → 110' AGL	12"
120' AGL	10"
130' AGL → 140' AGL	8"

INTERNATIONAL CHIMNEY CORPORATION
ENGINEERS & CONTRACTORS SINCE 1927

HUDSON DESIGN GROUP
NORTH ANDOVER, MA

INSPECTION of
140'-0" x 7'-0"
BUFF RADIAL BRICK CHIMNEY
ON A RED COMMON BRICK PEDESTAL
WATERTOWN, CT
AT&T SITE NO.: CT1130
AT&T SITE NAME: WATERTOWN

SECTION II - INSPECTION FINDINGS

The overall condition of this chimney can best be described as fair.

While no cracks were found on the radial brick section of the chimney, we found multiple cracks on both the exterior and interior of the common brick pedestal.

On the exterior S side there is a hairline crack that begins above the COD and ends just below the water table at the top of the pedestal. There is also a crack in the exposed foundation on the S side. The exterior E side of the common brick pedestal also has a hairline crack but is continuous from the foundation to the top of the water table on the pedestal. The N side also has a hairline crack that begins at the foundation and goes up behind the cable trays. A hairline crack can be found on the W side but while it too begins at the foundation, it is only 15'± long.

On the interior of the chimney we also found a few cracks that appear to go from the top of the concrete foundation to the junction where the common brick ends and the radial brick begins. One of the cracks, on the interior W side, is in close proximity to the right side of the corroded step irons. One of the step irons appears to have become dislodged from the radial brick section in the chimney. **PLEASE KEEP IN MIND THAT THE CONSTRUCTION STEP IRONS SHOULD NOT BE USED FOR CLIMBING! They were installed during the construction of the chimney and are now considered unsafe for climbing purposes due to the amount of corrosion and, in this case especially, the proximity to the vertical cracks in the masonry.**

There are multiple areas on the chimney where the brick faces have spalled and open and deteriorated mortar joints are located. We found approximately 15± buff radial brick that have spalled and 45% ± of all radial brick mortar joints are in poor condition.

On the common brick pedestal we noticed a large area on the upper 10'± of the W side that has numerous spalled brick. There also deteriorated mortar joints in the top 5' on this side. The water table above the common brick pedestal is in less than satisfactory condition.

Open and deteriorated joints are visible in some of the top twelve (12) common brick courses on the E side of the chimney. The masonry to the bottom left of the COD is in poor condition. There are multiple loose and missing brick in this area. The cast iron frame is extremely corroded and missing a piece on the bottom left side.

The LPS system is not functional due to a disconnected downlead and encircling cable. Some of the anchors are loose or missing.

INTERNATIONAL CHIMNEY CORPORATION
ENGINEERS & CONTRACTORS SINCE 1927

HUDSON DESIGN GROUP
NORTH ANDOVER, MA

INSPECTION of
140'-0" x 7'-0"
BUFF RADIAL BRICK CHIMNEY
ON A RED COMMON BRICK PEDESTAL
WATERTOWN, CT
AT&T SITE NO.: CT1130
AT&T SITE NAME: WATERTOWN

SECTION III - RECOMMENDATIONS

We recommend that the following repairs be made to this chimney:

- Clean the vertical cracks on the exterior of the common brick pedestal and the exposed foundation and install a bead of silicone based caulk on those cracks
- Remove the spalled radial and common brick and replace them with new brick
- Cut out, clean, wet, and point all exterior open and deteriorated mortar joints; 45%± of all radial brick joints and 5%± of all common brick joints.
- Repair the deteriorated area of masonry on the lower left side of the COD.
- Repair the door frame of the COD
- Remove the existing cracked water table on top of the common brick pedestal and replace it with new materials.
- Repair the LPS to make it functional and install new anchors as needed to secure the system.

April 13, 2011

Our File # CT-40324-C

INTERNATIONAL CHIMNEY CORPORATION
ENGINEERS & CONTRACTORS SINCE 1927

HUDSON DESIGN GROUP
NORTH ANDOVER, MA

INSPECTION of
140'-0" x 7'-0"
BUFF RADIAL BRICK CHIMNEY
ON A RED COMMON BRICK PEDESTAL
WATERTOWN, CT
AT&T SITE NO.: CT1130
AT&T SITE NAME: WATERTOWN

SECTION IV - PHOTOGRAPHS

The photographs included in this report have been saved in a separate PDF document with **Bookmarks** that contain the photo numbers and descriptions of the photos. The photographs and **Bookmarks** can be viewed using Adobe® 7 Standard or later. You can also use Adobe® Acrobat® Reader. If you use Adobe Reader, open the document and once the photos have appeared click "View", move the cursor over "Navigation Panels", and then click **Bookmarks** in the next box that opens. A window, or panel, will open on the left side of the screen with the corresponding photo numbers and a description of each photo below the photo number. Adobe® 7 Standard has a visible **Bookmarks** tab on the left side of the screen. In **Bookmarks**, a description of each photo is written below each photo number. If you can't see the entire photo description, move the cursor to the top of the **Bookmarks** tab, click the small down arrow next to **Options**, ▼, and click on **Wrap Long Bookmarks** in the next box that opens. This only applies if you are using Adobe® 7 Standard or later. Adobe® Reader performs this task automatically.

To see the photograph with the appropriate **Bookmark**, click the photo number inside the **Bookmarks** tab, or box, and not the arrows at the top or bottom of the PDF document.

P65-15-XLH-RR

Dual Broadband Antennas

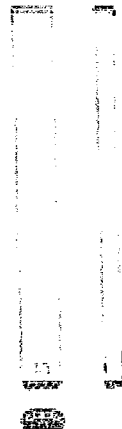
POLARIZATION: Dual Feed 45°
 FREQUENCY RANGE: 150-500 MHz
 NOMINAL BEAMWIDTH: 65°
 EIRP (MAX): 14.712 dB
 I.P.T. 0-10 dB
 L64-374 51'

ELECTRICAL SPECIFICATIONS

	E25-254		1710-1850	1710-2170	1800-2170
Frequency range (MHz)	500-500	525-554			
Frequency band (MHz)	1441.5	14.712.6	18.414.3	19.714.5	17.914.9
Gain (dB @3dB)	Gain Level +1.45			Gain Level +1.45	
Polarization	50			50	
Nominal Impedance (Ω)	< 1.5:1			< 1.5:1	
VSWR	73	65	65	61	60
Horizontal beam width -3 dB (°)	17			7.5	
Vertical beam width -3 dB (°)	0-13			0.9	
Electrical down (dB)	> 14			> 20	
Side lobe suppression, vertical 1st upper (dB)	> 30			> 30	
Isolation between inputs (dB)	> 40			> 40	
Inter band isolation (dB)	< 2			< 2	
Tracking, horizontal plane ±60° (dB)	< 1.25			< 0.5	
Vertical beam skew (°)	> 25			> 25	
Front to back ratio (dB) 150°±55° copolar	> 25			> 25	
Front to back ratio (dB) 150°±30° total power	> 15			> 15	
Cross polar discrimination (XPD) 0° (dB)	> 10			> 10	
Cross polar discrimination (XPD) ±55° (dB)	< -153			< -153	
IM3, 2xT0 (dBm/100W)	500			300	
Power handling, average per input (W)	1000			600	
Power handling, average total (W)					

MECHANICAL SPECIFICATIONS*

Connector	4 X 7/16 DIN Female, IP67
Connector position	Bottom
Dimensions, HxWxD, in (mm)	51" x 12" x 6" (1285 x 305 x 152)
Mounting	Pre-mounted Tie Brackets
Weight, with brackets, lbs (kg)	41 (19)
Weight, without brackets, lbs (kg)	30 (14)
Wind load horizontal/vertical, psf (N/m²)	220
Maximum operational wind speed, mph (m/s)	100 (45)
Survival wind speed, mph (m/s)	150 (67)
Lightning protection	DC Ground
Operating Temperature	-40°C to +60°C
Rostrum material	PA66, IP55
Rostrum size, HxWxD, in (mm)	66" x 16" x 10" (1626 x 400 x 255)
Rostrum color	Light Grey
Shipping weight, lbs (kg)	52 (24)
RET	(RET A)S0v1.1, MET and AISGv2.0
Brackets	7255.00, 7452.00



*All specifications subject to change without notice. Please contact your Powerwave representative for current performance data.

ANTENNA PATTERNS*

For detailed patterns visit <http://www.powerwave.com/pat>.

TT19-08BP111-001

TMA Twin 1900 with 850 Bypass 12 dB AISG 1.1

ELECTRICAL SPECIFICATIONS

UL Frequency Range (MHz)	1850-1910 with 824-894 bypass
UL Rejection	>77 dB
UL Gain(dB)	12
UL Return Loss	>18
UL Noise Figure	<1.7 dB, Typical
UL Output 3rd Order Intercept Point(dBm)	>+23
UL Bypass Loss(dB)	2.5, Typical
UL Max Input Power (dBm)	+14 dBm
DL Frequency Range (MHz)	1930-1990 with 824-894 bypass
DL Return Loss	>18
DL Insertion Loss (dB)	850 MHz, <0.3; 1900 MHz, <0.5
Intermodulation	@ 2 x +43 dBm TX carriers, in receive band, <160 dBc, referred to antenna port
Input Voltage (V)	AISG Mode: 10-30; Current alarm mode: 8 -17
Alarm Functionality	AISG compatible or in case of no AISG command received, current alarm mode 170-190 mA
Power Consumption	<1.1W @12V
Power Handling, RMS	850: >57 dBm; 1900: >55 dBm
AISG Compatibility	AISG 1.1 fully upgradable to AISG 2.0 (AISG version only dependent on loaded SW version) TT19-08BP112-001 has AISG 2.0 loaded from factory

MECHANICAL SPECIFICATIONS

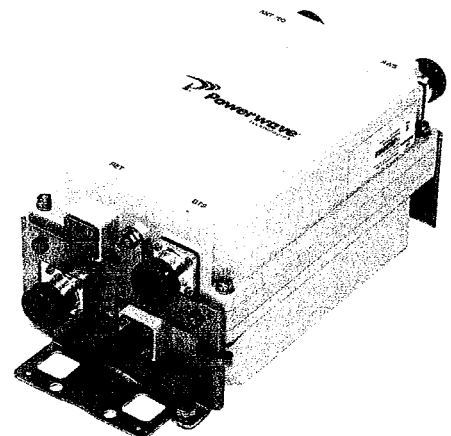
Dimension HxWxD mm(ft)	250x169x137 mm (9.9"x6.7"x5.4")
Weight(lbs)	<16
Colors	Off white (NCS 1502-R)
RF Connectors	DIN 7/16 female, long neck
Mounting Kit	Mounting kit for pole and wall is included

ENVIRONMENTAL SPECIFICATIONS

Temperature Range	-40° C to +65° C (-40° F to +149° F)
Operational	ETS 300 019-1-4
Transportation	ETS 300 019-1-2
Storage	ETS 300 019-1-1
Lightning Protection	3 kA 10/350 µs; 20 kA (Shield)
Housing	Aluminum
MTBF	>1 million hours per TMA
Ingress Protection	IP65 and IP68

APPROVAL AND TESTS

Safety	EN60950
EMC	3GPP: TS 25,113



*All specifications subject to change without notice. Contact your Powerwave representative for complete performance data.



New Cingular Wireless PCS, LLC
500 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 463-5511
Fax: (860) 513-7190

Douglas L. Culp
Real Estate Consultant

May 26, 2011

Mr. Charles Frigon
Town Manager
Town Hall Annex
424 Main Street
Watertown, CT 06795

Re: Telecommunications Facility – 78 Westbury Park Road Watertown, CT

Dear Charles Frigon:

In order to accommodate technological changes, implement Uniform Mobile Telecommunications System (“UMTS”) and Long Term Evolution (“LTE”) capabilities, and enhance system performance in the State of Connecticut, New Cingular Wireless PCS, LLC (“AT&T”) will be changing its equipment configuration at certain cell sites.

As required by Regulations of Connecticut State Agencies (“R.C.S.A.”) Section 16-50j-73, the Connecticut Siting Council has been notified of the changes and will review AT&T’s proposal. Please accept this letter as notification under Section 16-50j-73 of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2).

The accompanying letter to the Siting Council fully describes Cingular’s proposal for the referenced cell site. However, if you have any questions or require any further information on our plans or the Siting Council’s procedures; please call me at (860) 463-5511 or Ms. Linda Roberts, Executive Director, Connecticut Siting Council at (860) 827-2935.

Sincerely,

Douglas L. Culp
Real Estate Consultant

Enclosure

Martin, David C.

From: Steve Levine <Steve.Levine@SAI-Comm.com>
Sent: Thursday, February 16, 2012 2:34 PM
To: Martin, David C.
Cc: Tim Burks; Karen Couture
Subject: Satisfaction of CSC Approval Conditions in EM-Cing-153-110527 (AT&T CT1130)
Attachments: CT1130 2C - PE Letter in Satisfaction of CSC Approval Conditions.PDF

Dave,

Please accept the attached PE letter as satisfaction of the Council's approval conditions in EM-Cing-153-110527:

RE: EM-CING-153-110527 - New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 78 Westbury Park Road, Watertown, Connecticut

Dear Mr. Culp:

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 with the following conditions:

- The smokestack tower be repaired in accordance with recommendations made in the report prepared by Hudson Design Group dated April 13, 2011; and
- Prior to antenna installation, a signed letter from a Professional Engineer duly licensed in the State of Connecticut shall be submitted to the Council to certify that the recommended repairs have been completed and the smokestack tower is capable of supporting the proposed antennas.

Should you have any questions or comments, please do not hesitate to call or email.

Thank you.

**AT&T Mobility / New Cingular Wireless PCS, LLC / SAI
Communications**

Steve Levine 500 Enterprise Drive, 3rd Fl., Rocky Hill, CT 06067
Real Estate Consultant Office 860-513-7636 Mobile 203-556-1655 Fax 860-513-7190

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David Domogala – PE

210 Amos White Road
Southbury, CT 06488

February 6, 2012

Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

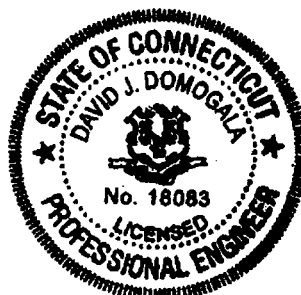
Subject: Confirmation of Repairs to Chimney
140' x 7' Buff Radial Brick Chimney on a Red Common Brick Pedestal
76 Westbury Park Road
Watertown, CT 06795
International Chimney File # CT-40324-C

I, David Domogala, a Connecticut licensed P.E., confirm that repairs have been made to the chimney located at 76 Westbury Park Road in Watertown, CT (AT&T Site Number: CT1130) in accordance with the recommendations made in the report, dated April 13, 2011, submitted by Hudson Design Group, LLC.

This chimney is now capable of supporting the proposed antennas.

Any questions or concerns, please feel free to contact me.

Attached:
Analysis (5 pages)
Recommendations (1 page)



David J. Domogala
2-6-12

Chimney Design Calculations by International Chimney Corporation
55 South Long Street, Williamsville, NY 14221

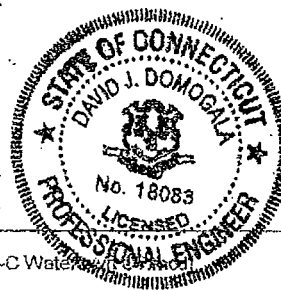
Customer: AT&T
Project: CT-40324-G
Site: 76 Westbury Park Road, Watertown, CT

Chimney Description: 140ft Buff Radial Brick Chimney

Scope: Analyze the radial brick chimney for dead load and wind load with the addition of the (5) proposed antennas at 135ft AGL.

Allowable Masonry Stresses: Compression = 280 psi Tension = 30 psi

Summary The chimney is not overstressed by the addition of the proposed antennas at 135 ft AGL.
The analysis assumes that all recommended structural repairs have been completed.



David J. Domogala
5-16-11



International Chimney Corporation Design Calculations

Engineers & Contractors Since 1927
P.O. Box 260, Buffalo, NY 14231

Fax: 716.634.3983

Phone: 800.828.1446 or 716.634.3967

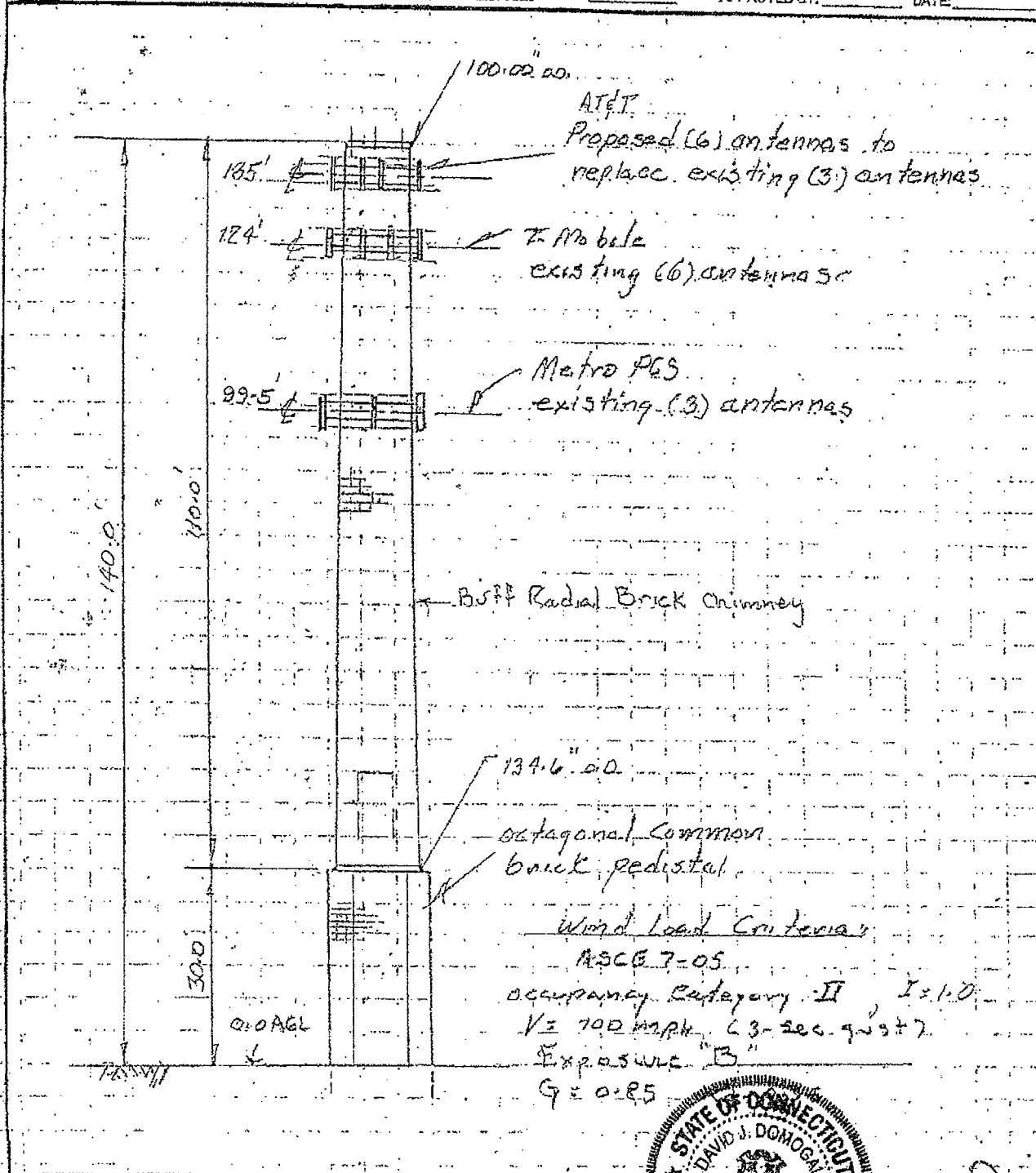
PROJECT: Whitestown CT AT&T Site # CT1130 JOB No.: CT40324-G

SECTION No.: _____ PAGE No.: 1/1

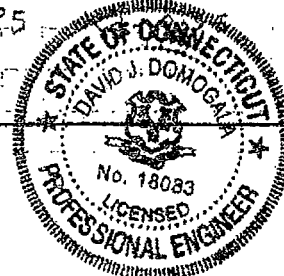
PREPARED BY: MT DATE: 5-5-11

CHECKED BY: _____ DATE: _____

APPROVED BY: _____ DATE: _____



ICC File No.: [ICC FORM - Design calculations.rpd]



David J. Domogala
5-16-11

Calculate Stress:

Fa = Axial load at bottom of each stack section. This includes all dead load above the bottom of the stack section, including the stack section, itself plus all other stack sections above it.

$$F_a = \left. \begin{array}{l} \text{for } r=1..N \\ F_{a_r} \leftarrow \frac{\text{DeadLoad}_r}{\text{Area}_r} \\ F_a \end{array} \right\}$$

Fb = Bending stress due to wind at bottom of each stack section. This includes all wind load on the stack section itself plus the wind load on all stack sections above it.

$$F_b = \left. \begin{array}{l} \text{for } r=1..N \\ F_{b_r} \leftarrow \frac{\text{TotalSectionMoment}_r}{\text{SectionMod}_r} \\ F_b \end{array} \right\}$$

Fa =

1	8.262
2	14.801
3	22.543
4	23.001
5	30.565
6	34.234
7	44.356
8	53.524
9	62.039
10	62.572
11	67.418

$\frac{\text{lb}}{\text{in}^2}$

Fb =

1	2.593
2	8.235
3	16.575
4	18.631
5	27.415
6	32.125
7	46.878
8	60.021
9	71.421
10	68.629
11	74.206

$\frac{\text{lb}}{\text{in}^2}$

April 13, 2011

Our File # CT-40324-C

INTERNATIONAL CHIMNEY CORPORATION
ENGINEERS & CONTRACTORS SINCE 1927

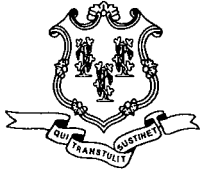
HUDSON DESIGN GROUP
NORTH ANDOVER, MA

INSPECTION of
140'-0" x 7'-0"
BUFF RADIAL BRICK CHIMNEY
ON A RED COMMON BRICK PEDESTAL
WATERTOWN, CT
AT&T SITE NO.: CT1130
AT&T SITE NAME: WATERTOWN

SECTION III - RECOMMENDATIONS

We recommend that the following repairs be made to this chimney:

- Clean the vertical cracks on the exterior of the common brick pedestal and the exposed foundation and install a bead of silicone based caulk on those cracks
- Remove the spalled radial and common brick and replace them with new brick
- Cut out, clean, wet, and point all exterior open and deteriorated mortar joints; 45%± of all radial brick joints and 5%± of all common brick joints.
- Repair the deteriorated area of masonry on the lower left side of the COD.
- Repair the door frame of the COD
- Remove the existing cracked water table on top of the common brick pedestal and replace it with new materials.
- Repair the LPS to make it functional and install new anchors as needed to secure the system.



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

www.ct.gov/csc

July 19, 2011

Ms. Ruth Mulcahy
Land Use Administrator
Town of Watertown
51 Depot Street, Suite 502
Watertown, CT 06795

RE: **EM-CING-153-110527** - New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 78 Westbury Park Road, Watertown, Connecticut. Clarification of Council Jurisdiction.

Dear Ms. Mulcahy:

The Council approved the above referenced Notice of Exempt Modification to swap out telecommunications antennas at the existing, inactive smokestack located at 78 Westbury Park Road in Watertown on June 20, 2011. Pursuant to the provisions cited below, such modifications are under the exclusive jurisdiction of the Council as indicated in the decision letter for this modification dated June 20, 2011. A copy of the decision letter is enclosed for your convenience.

Conn. Gen. Stat. §16-50x(a) states in pertinent part:

“Notwithstanding any other provision of the general statutes to the contrary, ... the council shall have exclusive jurisdiction over the location and type of facilities and over the location and type of modifications of facilities subject to the provisions of subsection (d) of this section. In ruling on applications for certificates or petitions for a declaratory ruling for facilities and on requests for shared use of facilities, the Council shall give such consideration to other state laws and municipal regulations as it shall deem appropriate. Whenever the council certifies a facility pursuant to this chapter, such certification shall satisfy and be in lieu of all certifications, approvals and other requirements of state and municipal agencies in regard to any questions of public need, convenience and necessity for such facility.” (Emphasis added).

Conn. Gen. Stat. §16-50i(a)(6) defines a “facility” as, *“such telecommunication towers, including associated telecommunications equipment, owned or operated by the state, a public service company or a certified telecommunications provider or used in a cellular system, as defined in the Code of Federal Regulations Title 47, Part 22, as amended which may have a substantial adverse environmental effect.”* (Emphasis added).

Additionally, the modification of the facility complies with the requirements of Section 16-50j-72 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.

Watertown Exempt Modification

July 19, 2011

Page 2

Taken together, the authorities cited above and the decision letter for this exempt modification filing, serve to make clear that AT&T's installation of antennas at the existing, inactive smokestack located at 78 Westbury Park Road in Watertown is under the exclusive jurisdiction of the Council.

If you have any other questions please do not hesitate to contact me. Thank you.

Sincerely,

A handwritten signature in black ink that reads "Linda Roberts". The signature is written in a cursive, flowing style.

Linda Roberts
Executive Director

c: Doug Culp, New Cingular Wireless