

EM-CING-097-110602



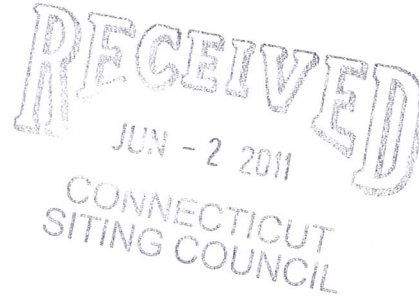
lar Wireless PCS, LLC
500 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 463-5511
Fax: (860) 513-7190

Douglas L. Culp
Real Estate Consultant

HAND DELIVERED

June 2, 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 8 Ferris Road Newtown, CT (owner TowerCo)

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.

LTE is a new high-performance air interface for cellular mobile communications. It is designed to increase the capacity and speed of mobile telephone networks.

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,

A handwritten signature in blue ink, appearing to read 'D. Culp', with a stylized flourish at the end.

Douglas L. Culp
Real Estate Consultant

Attachments

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

8 Ferris Road Newtown, CT
Site Number CT5511
Exempt Mods: 08/02, 05/11 and 12/06

Tower Owner/Manager: Tower Co

Equipment configuration: Monopole

Current and/or approved: Three PowerWave P7770 antennas @ 88 ft
Six PowerWave TMA's @ 88 ft
Six runs 7/8 inch coax to 88 ft
Equipment on Concrete Pad

Planned Modifications: Retain existing PowerWave P7770 Antenna's and TMA's @ 88 ft
Retain all Coax Cabling
Install three PowerWave P65-16 antennas or equivalent @ 88 ft
Install six remote radio heads Ericsson RRUS-11 @ 88 ft
Install one Raycap Fiber Power Connector/ Surge Suppressor –
DC6-48-60-18-8F @ 88 ft
Install one fiber and two DC power cables @ 88 ft

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 85.1% 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 89.8% of the standard.

Existing

Other Users							56.45
AT&T UMTS	88	1900 Band	1	500	0.0232	1.0000	2.32
AT&T UMTS	88	800 Band	1	500	0.0232	0.5867	3.96
AT&T GSM	88	800Band	7	296	0.0962	0.5867	16.40
AT&T GSM	88	1900 Band	3	427	0.0595	1.0000	5.95
Total							85.1%

* 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							56.45
AT&T UMTS	88	800 Band	1	500	0.0232	0.5867	3.96
AT&T UMTS	88	1900 Band	1	500	0.0232	1.0000	2.32
AT&T GSM	88	1900 Band	3	427	0.0595	1.0000	5.95
AT&T GSM	88	880 - 894	7	296	0.0962	0.5867	16.40
AT&T LTE	88	740 - 746	1	500	0.0232	0.4933	4.71
Total							89.8%

* 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 modifications. (Vertical Solutions, Inc. dated 5-23-11).

NEW CINGULAR WIRELESS PCS, LLC WIRELESS COMMUNICATIONS FACILITY CT5511

NEWTOWN - SR302 8 FERRIS ROAD NEWTOWN, CONNECTICUT



Your World. Delivered.
NEW CINGULAR WIRELESS PCS, LLC
1000 FERRIS ROAD
ROCKY HILL, CT 06067

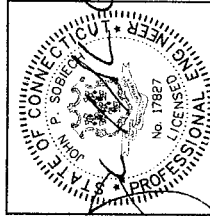
Circle 1 Copyright © 2011



238 Main Street, Middletown, CT 06457
Phone: (860) 257-4657 www.cha-engineers.com

CHA PROJECT NO:
22702 - 1037 - 43000

NO.	DATE	DESCRIPTION
0	03/29/11	ISSUED FOR REVIEW
1	05/18/11	ISSUED FOR CONSTRUCTION
2	05/18/11	ISSUED FOR CONSTRUCTION



THIS DOCUMENT IS THE PROPERTY OF CHA ENGINEERS, INC. UNLESS YOU ARE AN EMPLOYEE OF A LICENSED PROFESSIONAL ENGINEER TO ALTER THIS DOCUMENT.

SITE ID:
CT5511
SITE NAME:
NEWTOWN - SR302
SITE ADDRESS:
8 FERRIS ROAD
NEWTOWN, CT
06470
FAIRFIELD COUNTY

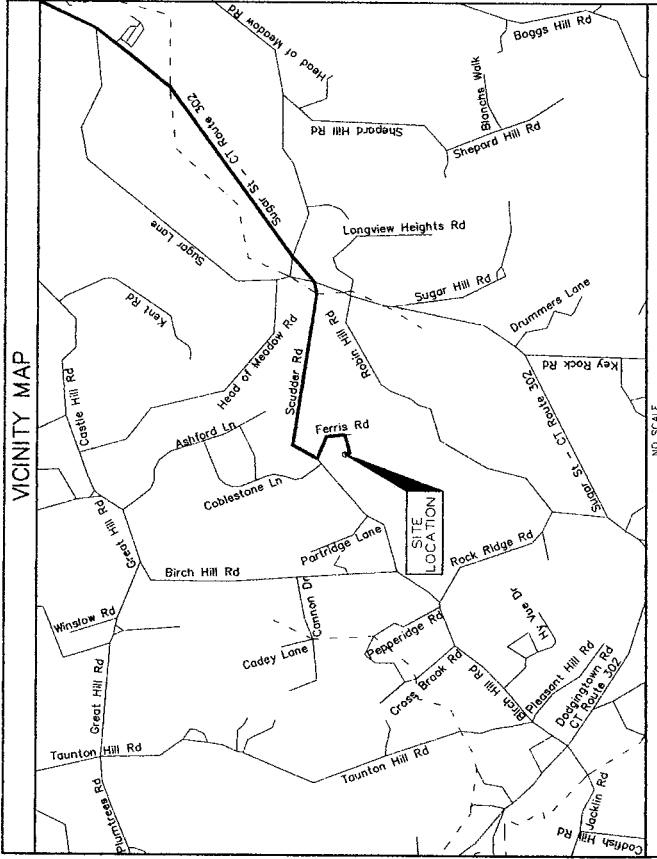
SHEET TITLE
TITLE SHEET

SHEET NUMBER
T01

SHEET NO.	SHEET TITLE	REVISION HISTORY	
		NO.	DATE
T01	TITLE SHEET	1	05 / 18 / 11
C01	SITE PLAN	1	05 / 18 / 11
C02	EQUIPMENT PLAN	1	05 / 18 / 11
C03	ELEVATION AND ANTENNA PLAN	1	05 / 18 / 11
C04	STRUCTURAL DETAILS	1	05 / 18 / 11
E01	FOUNDATIONS DETAILS & FLOORING DIAGRAM	1	05 / 18 / 11
G001	GENERAL NOTES	1	05 / 18 / 11
G002	GENERAL NOTES	1	05 / 18 / 11

DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK UNLESS IT IS POSSIBLE FOR THE WORK TO BE THE SAME.



PROJECT SUMMARY

SITE NUMBER: CT5511
 SITE NAME: NEWTOWN - SR302
 SITE ADDRESS: 8 FERRIS ROAD, NEWTOWN, CT 06470
 STRUCTURE OWNER: TOWECO ASSETS LLC
 APPLICANT: NEW CINGULAR WIRELESS PCS, LLC
 500 ENTERPRISE DRIVE, ROCKY HILL, CT 06067
 CONTACT: MICHAEL D. FOLEY (203) 414-1184
 COORDINATES: 41° 23' 23.25"N, 73° 20' 18.44"W
 HORIZONTAL DATUM: NAD 83
 ENGINEER: CHA, INC., 238 MAIN STREET, MIDDLETOWN, CT 06457
 CONTACT: PAUL JUSTANI, ROCKY HILL, CT 06067, (860) 257-4657

DRIVING DIRECTIONS

FROM HARTFORD:
 1. TAKE I-84 EAST.
 2. TAKE EXIT 10 FOR US-6W TOWARD NEWTOWN/SANDY HOOK ROAD.
 3. TURN RIGHT ONTO CT-34W/US-6W/CHURCH HILL ROAD.
 4. TURN LEFT ONTO MAIN STREET.
 5. TAKE RIGHT ONTO SUGAR HILL/SUGAR STREET.
 6. TAKE LEFT ONTO SCODDER ROAD.
 7. TURN LEFT ONTO FERRIS ROAD.
 8. TURN RIGHT ONTO ACCESS DRIVE AND FOLLOW TO TOWER.

PROJECT DESCRIPTION

THIS PROJECT ADDS THREE ANTENNAS, SIX RRH, SURGE ARRESTORS, AND A RADIO CABINET TO AN EXISTING TELECOMMUNICATIONS SITE

MAY 16, 2011





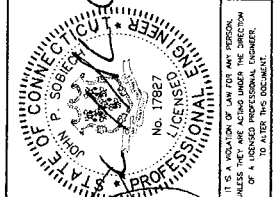
Your world. Delivered.

NEW CONJUGAR WIRELESS PCS, LLC
1000 WEST WINDY HILL ROAD
ROCKY HILL, CT 06867



CHA PROJECT NO:
22702 - 1037 - 43000

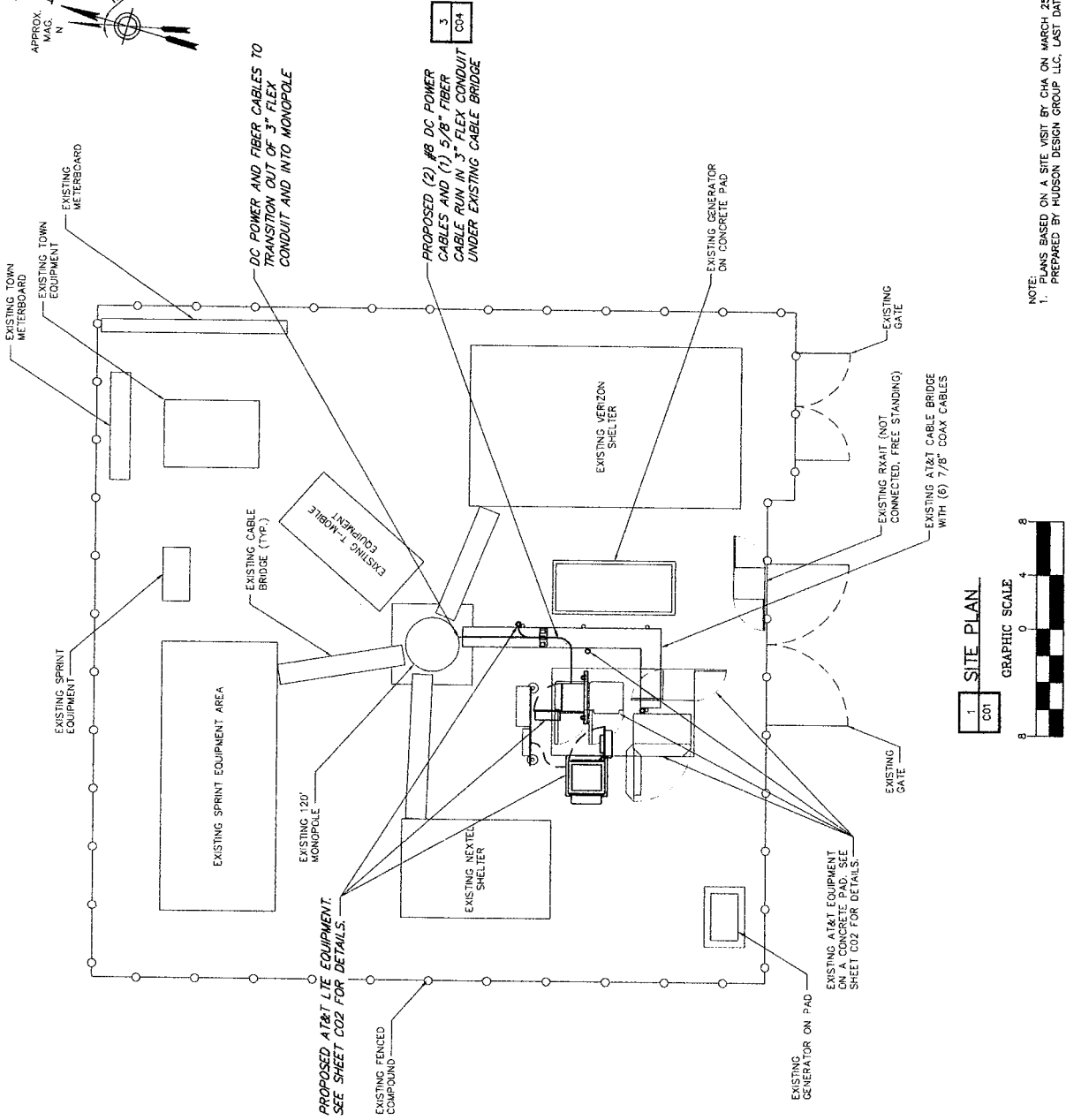
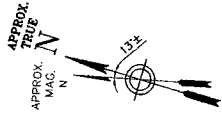
NO.	REVISION	DATE	BY	CHKD.	APP'D.
1	ISSUED FOR REVIEW	10/26/09	...	...	...
2	...	...	...	...	...
3	...	...	...	...	...



SITE ID:
CT15511
SITE NAME:
NEWTOWN - SR302
SITE ADDRESS:
8 FERRIS ROAD
NEWTOWN, CT
06470
FAIRFIELD COUNTY

SHEET TITLE
SITE PLAN

SHEET NUMBER
C01



3
C04



NOTE:
1. PLANS BASED ON A SITE VISIT BY CHA ON MARCH 25, 2011, AND DRAWINGS PREPARED BY HUDSON DESIGN GROUP LLC, LAST DATED 08/05/08.



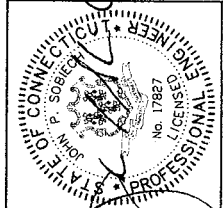
NEW CIRCULAR WIRELESS PCS, LLC
ROCKY HILL, CT 06867

CHA PROJECT NO:
22702 - 1037 - 43000



238 Main Street, Suite 210, Rocky Hill, CT 06867
Tel: (860) 261-4467

NO.	DATE	DESCRIPTION	BY	APP'D.
0	07/29/11	ISSUED FOR REVIEW	JAN	JAN
1	07/29/11	FOR CONSTRUCTION	JAN	JAN

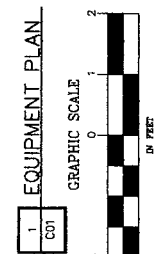
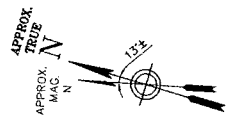
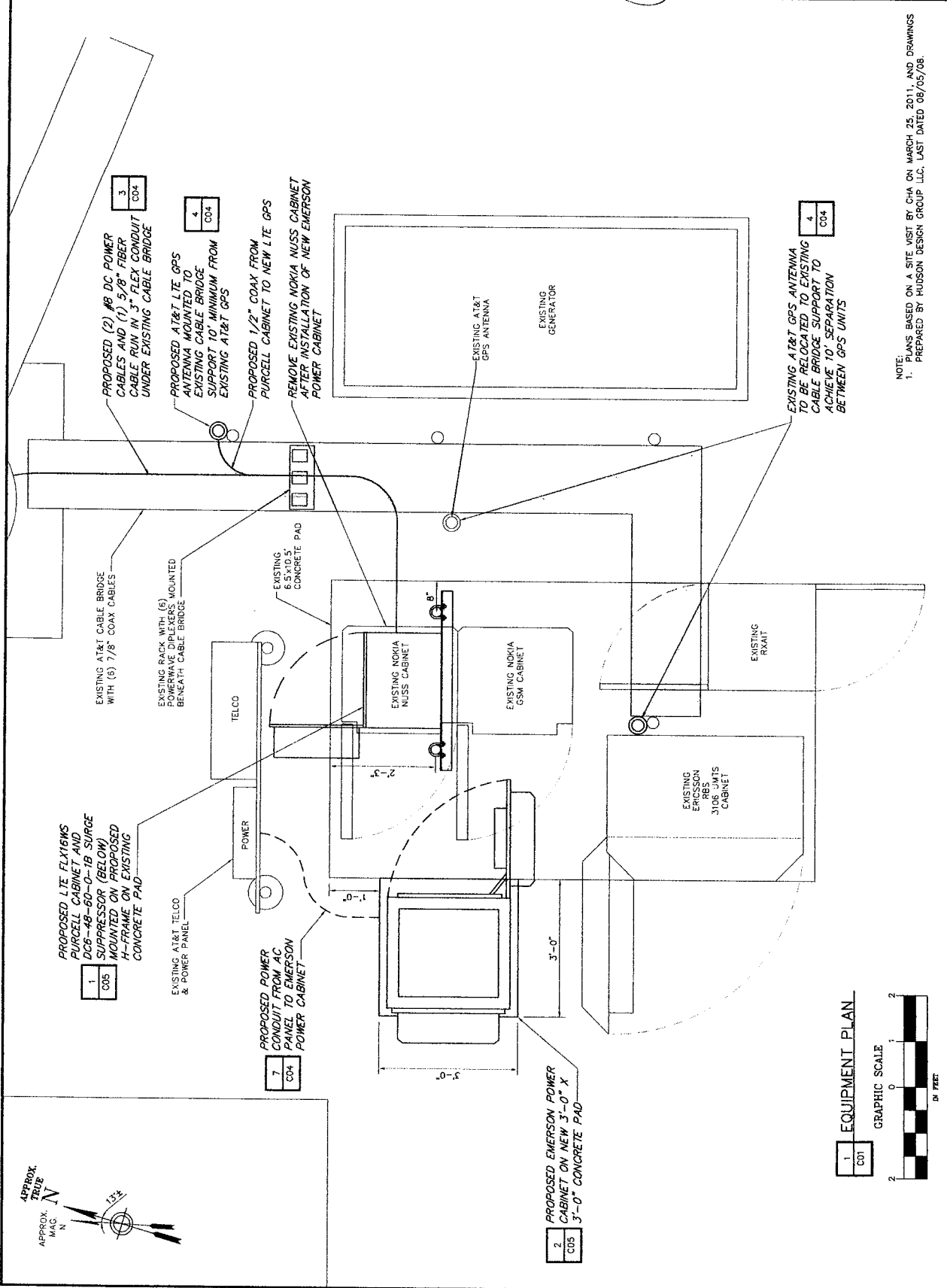


I, JOHN P. SOBIEAJ, LICENSED PROFESSIONAL ENGINEER, NO. 17827, STATE OF CONNECTICUT, HEREBY CERTIFY THAT I AM THE DESIGNER OF THIS PROJECT AND I HAVE REVIEWED THIS DOCUMENT TO ALTER THIS DOCUMENT.

SITE ID: CT15511
SITE NAME: NEWTOWN - BR302
SITE ADDRESS: 8 FERRIS ROAD, NEWTOWN, CT 06470, FAIRFIELD COUNTY

SHEET TITLE: EQUIPMENT PLAN

SHEET NUMBER: C02



NOTE:
1. PLANS BASED ON A SITE VISIT BY CHA ON MARCH 25, 2011, AND DRAWINGS PREPARED BY HUDSON DESIGN GROUP, LLC, LAST DATED 08/05/08.

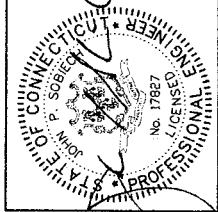


NEW CINGULAR WIRELESS PCS, LLC
100 ENTERPRISE DRIVE
ROCKY HILL, CT 06867



CHIA PROJECT NO:
22702 - 1037 - 43000

NO.	DATE	SUBMITAL
1	03/28/11	ISSUED FOR REVIEW
2	04/21/11	CHG. PAL. REVISED FOR DISTRIBUTION
3	05/10/11	REVISED FOR DISTRIBUTION
4	05/10/11	CHG. PAL. REVISED FOR DISTRIBUTION
5	05/10/11	CHG. PAL. REVISED FOR DISTRIBUTION

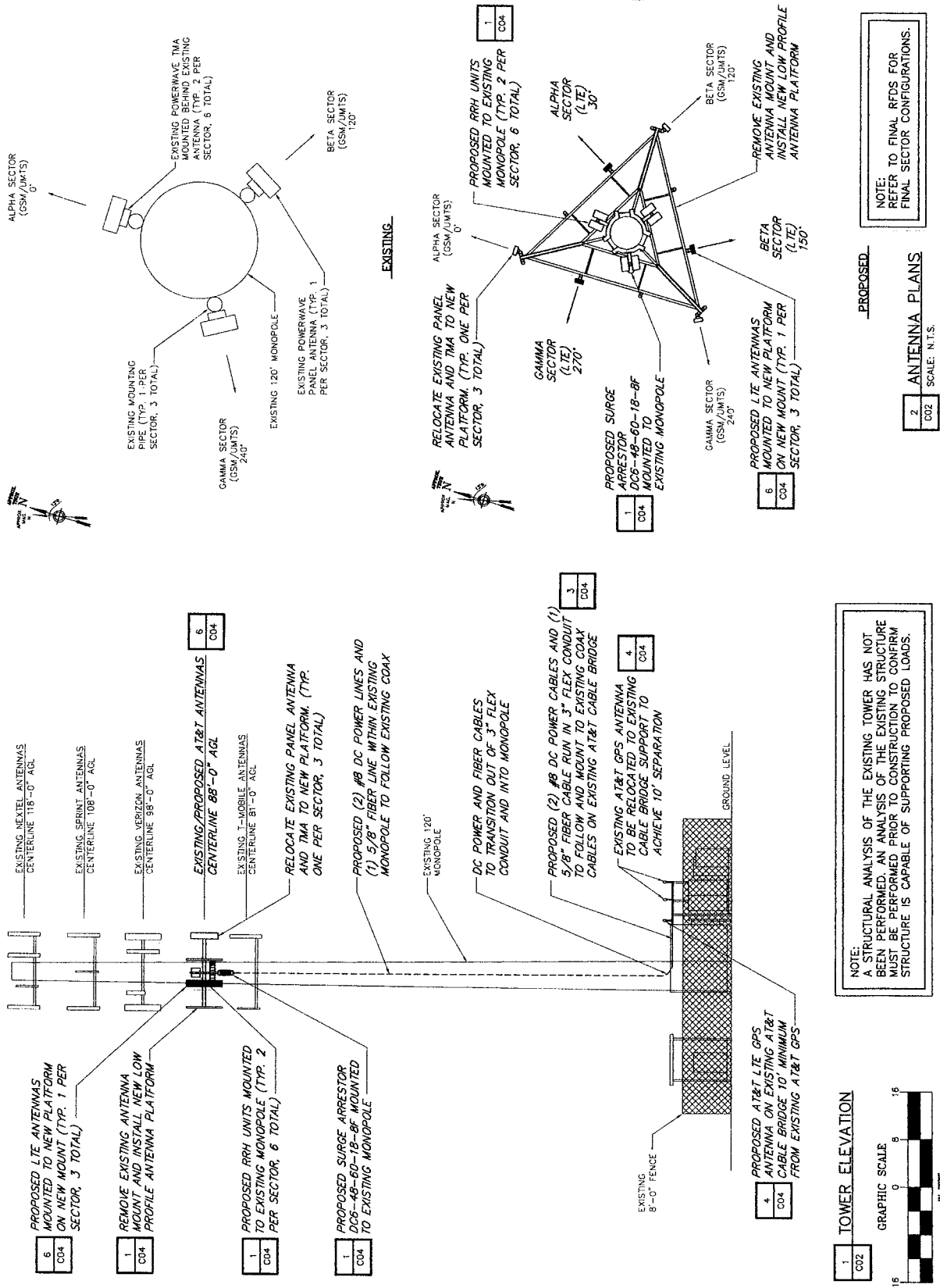


IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS HE OR SHE IS A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SITE ID:
CT5511
SITE NAME:
NEWTOWN - SR302
SITE ADDRESS:
8 FERRIS ROAD
NEWTOWN, CT
06470
FAIRFIELD COUNTY

SHEET TITLE
ELEVATION AND
ANTENNA PLAN

SHEET NUMBER
C03





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NEW CONULAS WIRELESS PCS, LLC
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067

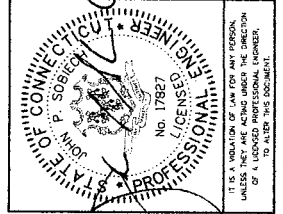
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2100 Main Street, Suite 212, Rocky Hill, CT 06067-2200
Phone: (860) 261-4587 www.cha.com

CHA PROJECT NO:
22702 - 1037 - 43000

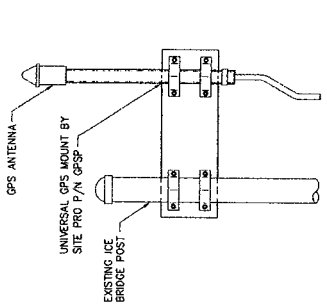
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2	04/14/11	CHG. P/N, P/N APPROV.
3	04/14/11	CHG. P/N, P/N APPROV.
4	04/14/11	CHG. P/N, P/N APPROV.



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UNLESS THEY ARE ACTING UNDER THE DIRECTION
OF A LICENSED PROFESSIONAL ENGINEER,
TO ALTER THIS DOCUMENT.

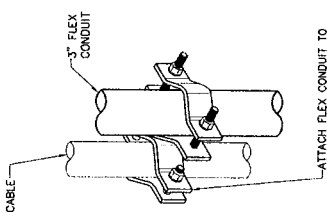
SITE ID:
C15511
SITE NAME:
NEWTOWN - SR302
SITE ADDRESS:
8 FERRIS ROAD
NEWTOWN, CT
06470
FAIRFIELD COUNTY

SHEET TITLE
STRUCTURAL DETAILS
SHEET NUMBER
C04



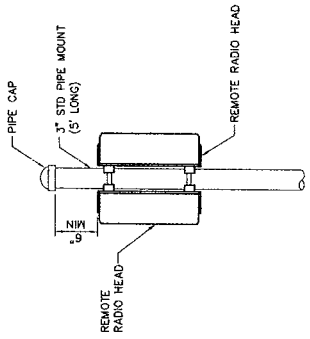
NOTE:
1. THE WEIGHT OF THE ANTENNA MOUNT IS 6.5 LBS.

4 GPS MOUNTING DETAIL
C04 SCALE: NTS



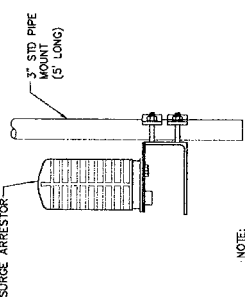
ATTACH FLEX CONDUIT TO EXISTING CABLE WITH SINCLAIR CLAMP 005

3 FLEX CONDUIT DETAIL
C04 SCALE: NTS



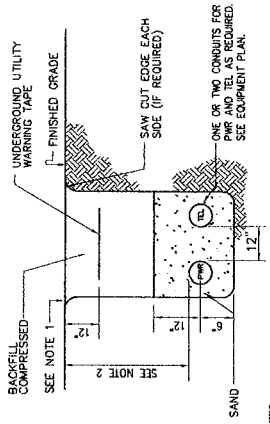
NOTE:
REMOTE RADIO HEAD MOUNTING BRACKET AND HARDWARE TO BE PROVIDED BY MANUFACTURER.

2 RRH MOUNTING DETAIL
C04 SCALE: NTS



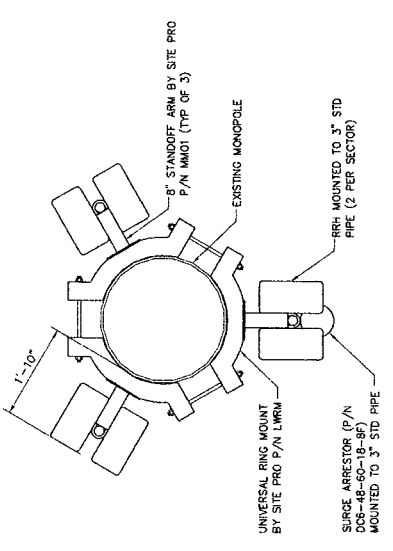
NOTE:
SURGE ARRESTOR MOUNTING BRACKET AND HARDWARE TO BE PROVIDED BY MANUFACTURER.

5 SURGE ARRESTOR MOUNTING DETAIL
C04 SCALE: NTS

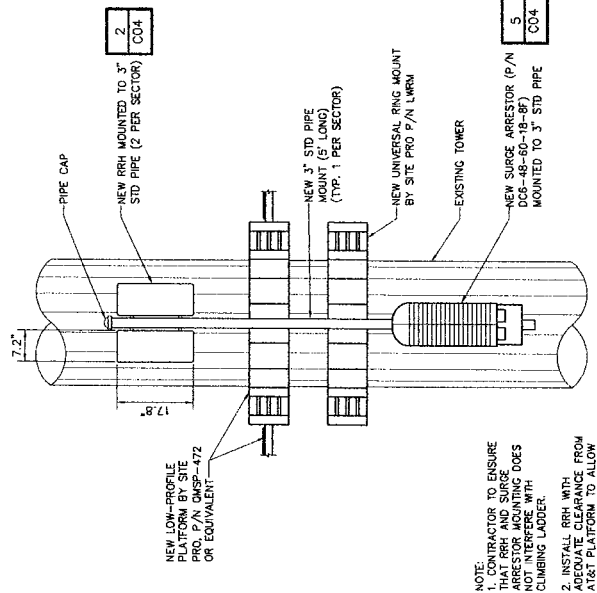


NOTES:
1. REPLACE EXISTING SURFACE CONDITIONS IN KIND TO INCLUDE, BUT NOT LIMITED TO, CONCRETE, CRUSHED STONE, SELECT GRAVEL, ASPHALT, TOPSOIL AND GRASS.
2. .38" MIN. COVER.

7 UNDERGROUND CONDUITS
C04 SCALE: NTS



1 RRH/SURGE ARRESTOR MOUNTING DETAIL
C04 SCALE: NTS

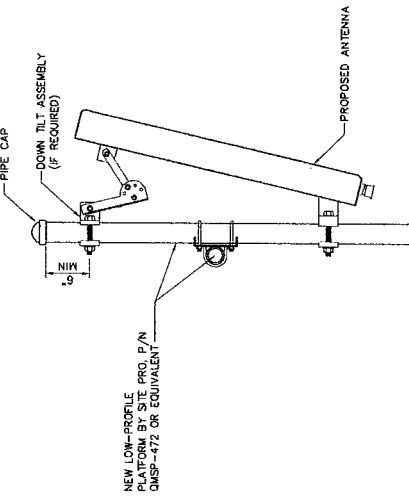


5 SURGE ARRESTOR MOUNTING DETAIL
C04 SCALE: NTS

NOTE:
1. CONTRACTOR TO ENSURE THAT RRH AND SURGE ARRESTOR MOUNTING DOES NOT INTERFERE WITH CLIMBING LADDER.
2. INSTALL RRH WITH APPROPRIATE CLEARANCE FROM AT&T PLATFORM TO ALLOW ROOM FOR ACCESS.

6 TYPICAL ANTENNA MOUNTING DETAIL
C04 SCALE: NTS

NOTE:
1. MOUNT ANTENNA IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED PROCEDURE.



NEW LOW-PROFILE PLATFORM BY SITE P/N QMSP-472 OR EQUIVALENT

ELEVATION

PLAN



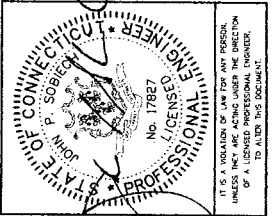
NEW ORANGE WIRELESS PCS, LLC
 1000 ROCKY HILL, CT 06067

Drawing: 03/29/11



CHA PROJECT NO:
 22702 - 1037 - 43000

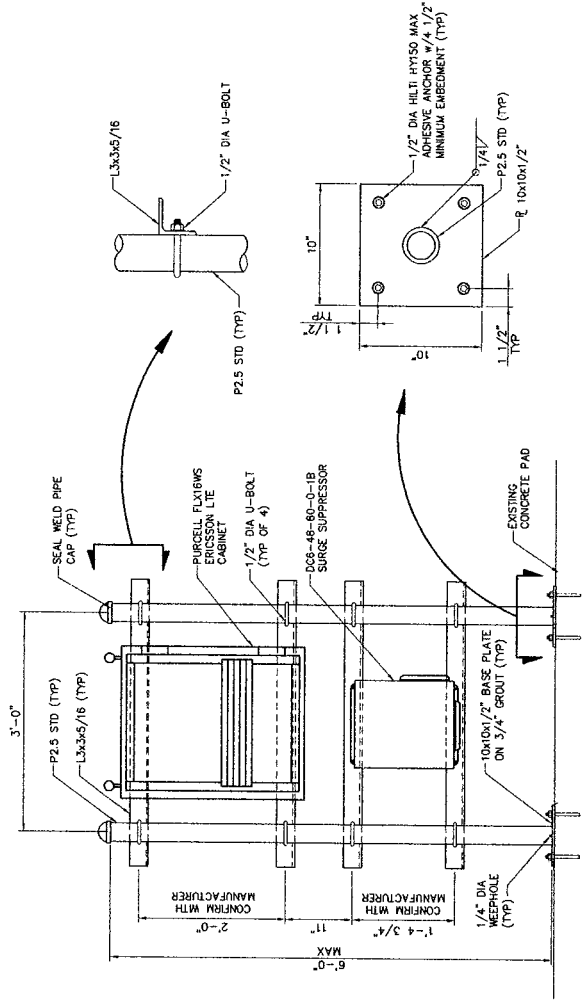
NO.	DATE	DESCRIPTION
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1	07/20/11	DATE PAID
2	08/11/11	DATE PAID
3	09/01/11	DATE PAID
4	09/20/11	DATE PAID



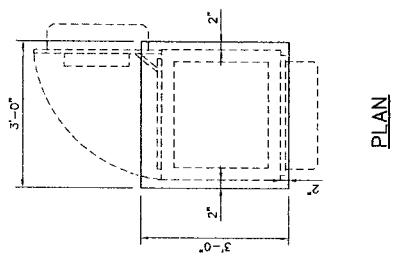
SITE ID:
 CT15511
 SITE NAME:
 NEWTOWN - SR302
 SITE ADDRESS:
 8 FERRIS ROAD
 NEWTOWN, CT
 06470
 FAIRFIELD COUNTY

SHEET TITLE
 STRUCTURAL DETAILS

SHEET NUMBER
 C05



1 PURCELL AND SURGE ARRESTOR MOUNTING DETAIL
 SCALE: NTS



ELEVATION

2 CONCRETE PAD DETAIL
 SCALE: NTS

PLAN

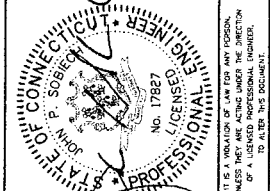


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 NEW CINGULAR WIRELESS PCS, LLC
 1000 WEST WASHINGTON ST.
 ROCKY HILL, CT 06867

CHA PROJECT NO.
 22702 - 1037 - 43000

CHA
 238 Shaw Street, Wallingford, CT 06495
 Phone: 203.261.2007 Fax: 203.261.2008
 www.cha-engineering.com

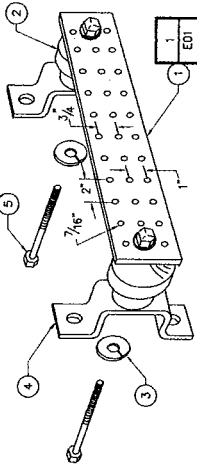
NO.	DATE	DESCRIPTION
0	03/22/11	DESIGN FOR REVIEW
1	03/24/11	DATE P.N.
2	03/24/11	DESIGN FOR CONSTRUCTION
3	03/24/11	FINAL
4	03/24/11	ISSUED FOR CONSTRUCTION
5	03/24/11	ISSUED FOR CONSTRUCTION



SITE ID:
 CT15511
 SITE NAME:
 NEWTOWN - SR302
 SITE ADDRESS:
 8 FERRIS ROAD
 NEWTOWN, CT
 06470
 FAIRFIELD COUNTY

SHEET TITLE
 GROUNDING DETAILS &
 PLUMBING DIAGRAM

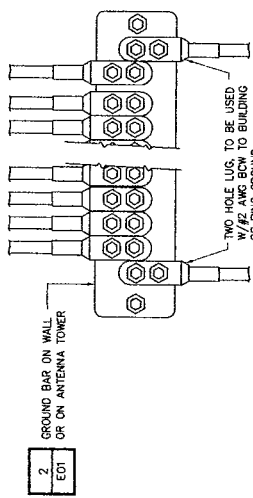
SHEET NUMBER
 E01



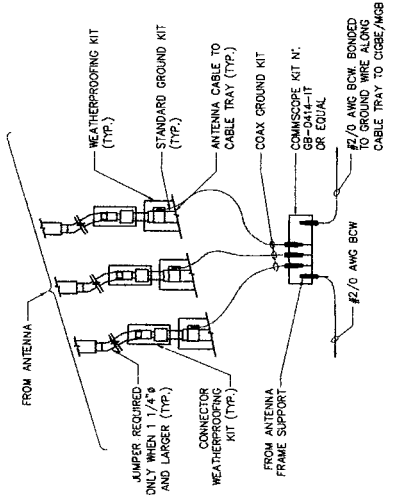
1 - CORNER GROUND BAR. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.

- LEGEND
- 1 - CORNER GROUND BAR. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
 - 2 - INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4. (NOT TO BE USED ON TOWERS OR EQUIPMENT MOUNTED TO TOWER).
 - 3 - 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-B.
 - 4 - WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT. NO. A-45056.
 - 5 - 5/8"-11 X 1" H.H.C.S. BOLT'S, NEWTON INSTRUMENT CO. CAT. NO. 3012-1.

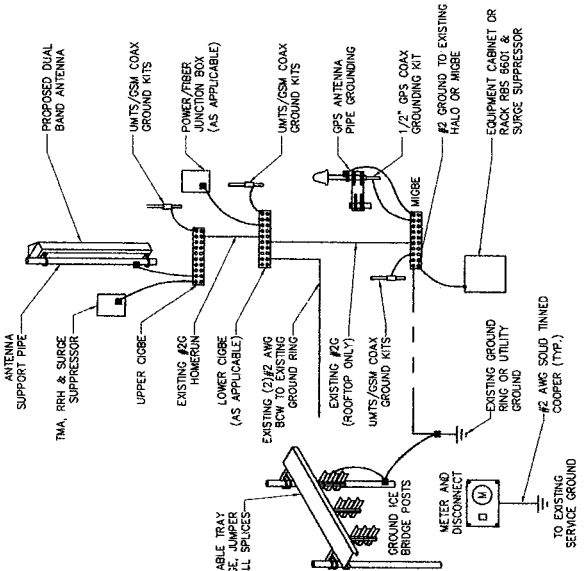
2 GROUND BAR
 E01 NO SCALE



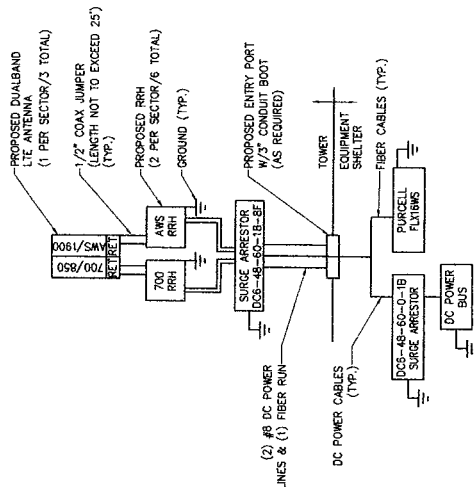
1 GROUND WIRE INSTALLATION TO GROUND BAR
 E01 NO SCALE



3 GROUND WIRE TO GROUND BAR CONNECTION DETAIL
 E01 NO SCALE



4 GROUNDING RISER DIAGRAM
 E01 NO SCALE



5 PLUMBING DIAGRAM
 E01 NO SCALE

- NOTES:
1. CONTRACTOR TO CONFIRM ALL PARTS.
 2. INSTALL ALL EQUIPMENT TO MANUFACTURER'S RECOMMENDATIONS.

GROUNDING SYSTEM NOTES:

- CONDUCTOR USED FOR CELLULAR GROUNDING SYSTEM
EGR - #2 AWG ANNEALED SOLID TINNED BARE COPPER.
INTER-BUS EXTENSION (FROM IGR TO EGR) - #2 AWG ANNEALED SOLID TINNED BARE COPPER.
EXTERNAL BOND CONNECTIONS TO EGR - #2 AWG ANNEALED SOLID TINNED BARE COPPER.
TOWER BOND CONNECTION TO EGR - #2 AWG SOLID COPPER.
- MINIMUM BENDING RADIUS
EGR #2: 2'-0" NOMINAL AND 8" MINIMUM.
CELLULAR GROUNDING CONDUCTOR SHALL BE AS STRAIGHT AS POSSIBLE WITH MINIMUM 8" RADIUS.
- CONNECTIONS (MECHANICAL)
COMPRESSION LUG CONNECTOR - 15 TON COMPRESSION, 2 HOLE, LONG BARREL, ELECTRO TINNED PLATED, HIGH CONDUCTIVITY COPPER, 600V RATED, USE 1/4" DIA. BOLT, 3/4" SPACING LUGS TO BOND OBJECTS FROM IGR.
CONNECTOR SHALL BE BURNDY "HYLUG SERIES" OR EQUAL.
EXOTHERMIC WELD LUG CONNECTOR - 2 HOLE OFFSET, ELECTRO TINNED PLATED, HIGH CONDUCTIVITY COPPER, 600V, USE 1/2" DIA. BOLT, 1"-3/4" SPACING LUGS. CONNECTOR SHALL BE CADWELD CONNECTION STYLE (CABLE TO SURFACE) TYPE "1A". EXOTHERMIC WELD TO LUG AS REQUIRED.
"C" TAP COMPRESSION CONNECTOR - HIGH CONDUCTIVITY COPPER FOR MAIN-BRANCH TAPPING. CONNECTOR SHALL BE BURNDY "HITAP" SERIES OR EQUAL.
USE MATCHING MANUFACTURER TOOL AND DIE FOR COMPRESSION CONNECTION. APPLY ANTI-OXIDANT CONDUCTIVITY ENHANCER COMPOUND ON SURFACES THAT ARE COMPRESSED. SURFACES INTENDED TO BE CONNECTED WITH MECHANICAL CONNECTIONS SHALL BE PREPARED TO BARE METAL. PRIME AND PAINT OVER BOUNDED AREA TO PREVENT CORROSION.
- CONNECTIONS - BELOW GRADE (EXOTHERMIC)
PROVIDE CADWELD CONNECTIONS - STYLE AND TYPE AS REQUIRED.
- WHEN BONDING #2 TO #2
EXTERIOR OF SHELLER - USE EXOTHERMIC WELD CONNECTION.
INTERIOR OF SHELLER - USE EXOTHERMIC WELD CONNECTION.
- WHEN BONDING #2 TO FENCE POST
USE EXOTHERMIC WELD CADWELD TYPE "V6" CONNECTION TO FENCE POST STEEL. PROVIDE CADWELD CONNECTIONS TO FENCE POST STEEL WITH ANTI-OXIDANT CONDUCTIVITY ENHANCER COMPOUND. GALVANIZED CHAINING AS REQUIRED FOR PROPER WELDED PERMANENT BOND. REFER TO MANUFACTURER'S REQUIREMENTS FOR DETAILS.

SECTION 16050 GROUNDING

- ALL NON-CURRENT CARRYING PARTS OF THE ELECTRICAL SYSTEM AND EQUIPMENT SHALL BE PROPERLY GROUNDED TO PROVIDE AN INDEPENDENT RETURN PATH TO THE EQUIPMENT GROUNDING SOURCES.
- GROUNDING SYSTEM WILL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND LOCAL INSPECTOR HAVING JURISDICTION.
- ELECTRICAL AC SERVICE GROUNDED SYSTEM - GROUNDING AT MAIN SERVICE OVERCURRENT PROTECTION DEVICE.
 - THE GROUNDED CONDUCTOR (NEUTRAL) OF THE INCOMING SERVICE FEEDERS SHALL BE GROUNDED TO THE MAIN SERVICE OVERCURRENT PROTECTION DEVICE FROM THE ENCLOSURE.
ELECTRICAL AC SERVICE GROUNDED SYSTEM - GROUNDING AT MAIN SERVICE OVERCURRENT PROTECTION DEVICE.
 - WITHOUT SPLICES OR JOINTS FROM THE MAIN OVERCURRENT DEVICES SOLID NEUTRAL BAR TO THE MAIN SWITCHBOARD GROUND TERMINAL.
EQUIPMENT GROUND BAR KIT SHALL BE LOGGED TO THE ENCLOSURE WITH THE SURFACES BETWEEN THEM BARE METAL TO BARE METAL. PROVIDE BONDING JUMPER BETWEEN EQUIPMENT GROUND BAR AND SOLID NEUTRAL BONDING SURFACE.
EQUIPMENT GROUND BAR KIT SHALL BE LOGGED TO THE MAIN OVERCURRENT PROTECTION DEVICES TERMINATING INTO THE MAIN OVERCURRENT DEVICE ENCLOSURE. ALL CONDUCTORS TERMINATING INTO THE MAIN OVERCURRENT DEVICE ENCLOSURE SHALL HAVE GROUNDING TYPE BUSHINGS. THE BUSHINGS SHALL BE BONDED TOGETHER WITH #10 AWG BARE COPPER WHICH IN TURN IS TERMINATED INTO THE EQUIPMENT GROUND BAR KIT.

1.04 CELLULAR GROUNDING SYSTEM:

- PROVIDE THE CELLULAR GROUNDING SYSTEM AS SPECIFIED ON DRAWINGS INCLUDING BUT NOT LIMITED TO:
- GROUND BARS
 - EXTERIOR GROUNDING RING
 - ANTENNA GROUND CONNECTIONS AND PLATES
- CONTRACTOR, AFTER COMPLETION OF THE COMPLETE GROUNDING SYSTEM BUT PRIOR TO CONCRETE/STRAIGHTENING OF SAME, SHALL NOTIFY THE AIEB CONSTRUCTION REPRESENTATIVE AND LOCAL INSPECTOR OF THE CONSTRUCTION OF THE EXTERIOR GROUNDING SYSTEMS.

SECTION 16120 CONDUCTORS

- ALL CONDUCTORS SHALL BE THE TYPE THIN (INTERIOR) AND XHHW (EXTERIOR), 75 DEGREES C, 600VOLT INSULATION, 50% FINANCALED STRANDED PRESSURE CONDUCTORS, ACCEPTABLE #2 AWG SHALL BE MINIMUM SIZE CONDUCTOR FOR LINE VOLTAGE BRANCH CIRCUITS. REFER TO PANEL SCHEDULE FOR BRANCH CIRCUIT CONDUCTOR SIZES. CONDUCTORS SHALL BE COLOR CODED FOR CONSISTENT PHASE IDENTIFICATION:
120 / 240 VAC - 1 PHASE, 3 WIRE SYSTEM
PHASE: BLACK
A RED
B WHITE
C CONTINUOUS GREEN
CONDUCTORS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM SPECIFICATION A123. UNLESS OTHERWISE NOTED, CONDUCTORS SHALL BE PERFORMED AFTER SHOP FABRICATION TO THE GREATEST EXTENT POSSIBLE. ALL DINGS, SCRAPES, MARKS AND WELDS IN THE GALVANIZED AREAS SHALL BE REPAIRED BY FIELD TOUCHUP PRIOR TO COMPLETION OF THE WORK USING ZRC COLO GALVANIZING COMPOUND OR APPROVED EQUAL.
- CONNECTIONS:
A. ALL BOLTS, NUTS AND WASHERS USED IN EXTERIOR APPLICATIONS SHALL A. BE GALVANIZED.

GENERAL NOTES:

- ALL DIMENSIONS TO, OF, AND IN EXISTING STRUCTURES SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
- DO NOT CHANGE THE SIZE NOR SPACING OF STRUCTURAL ELEMENTS WITHOUT THE APPROVAL OF THE ENGINEER.
- DETAILS SHOWN ARE TYPICAL AND APPLY TO SIMILAR CONDITIONS UNLESS NOTED OTHERWISE.
- THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
- BRACE STRUCTURES AS REQUIRED FOR CONSTRUCTION AND WIND LOADS UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: (LATERAL BRACING MEMBERS, ANCHOR BOLTS, ETC.)
- THE DESIGN IS BASED ON THE 2005 CONNECTICUT STATE BUILDING CODE (IBC 2003), 2005 CONNECTICUT SUPPLEMENT AND THE 2009 AMENDMENT TO THE 2005 CONNECTICUT SUPPLEMENT AND TIA/EIA-222-G.
- CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE UNDERGROUND UTILITIES.
- INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE DEFECTIVE OR UNCONFORMING ITEMS OR CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE ENGINEER'S APPROVAL.
- EACH CONTRACTOR SHALL COOPERATE WITH THE OWNER'S REPRESENTATIVE AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
- VERIFY SIZE AND LOCATION OF OPENINGS PRIOR TO BEGINNING WORK. FOR DIMENSIONS NOT SHOWN, SEE CIVIL DRAWINGS.
- VERIFY SIZE AND LOCATION OF EQUIPMENT PADS WITH MECHANICAL AND/OR ELECTRICAL CONTRACTOR AND EQUIPMENT MANUFACTURER.
- CONTRACTOR TO FOLLOW ALL STATE, LOCAL AND NATIONAL CODES AS APPLICABLE.

APPURTENANCE SUPPORT BRACKET NOTES:

- DESIGN RESPONSIBILITY OF APPURTENANCE MOUNTING BRACKETS AND POLES AND RESPONSIBILITY OF THE MANUFACTURER. MANUFACTURER SHALL PROVIDE TO THE ENGINEER FOR APPROVAL, DRAWINGS DETAILING ALL COMPONENTS OF THE ASSEMBLY, INCLUDING CONNECTIONS, DESIGN LOADS, AND ALL OTHER PERTINENT DATA. ALL SUBMISSIONS SHALL BEAR THE STAMP AND SIGNATURE OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF CONNECTICUT.
- BRACKETS SHALL BE DESIGNED TO SUPPORT CURRENT AND FUTURE PANEL ANTENNAS, REMOTE RADIO HEADS, SURGE ARRESTORS, AND COAXIAL CABLES AS SHOWN.

STEEL NOTES:

- STRUCTURAL STEEL FABRICATION AND ERECTION SHALL CONFORM TO THE LATEST EDITION OF THE AISC STEEL CONSTRUCTION MANUAL.
- STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:
A. WIDE FLANGE AND CHANNEL SHAPES - A992 OR 50 (50 KSI) UNLESS OTHERWISE NOTED
B. ANGLES AND PLATES - ASTM A36 (36 KSI)
C. STEEL PIPE - ASTM A53, GRADE B A500 GRADE B (35 KSI)
- ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM SPECIFICATION A123. UNLESS OTHERWISE NOTED, CONDUCTORS SHALL BE PERFORMED AFTER SHOP FABRICATION TO THE GREATEST EXTENT POSSIBLE. ALL DINGS, SCRAPES, MARKS AND WELDS IN THE GALVANIZED AREAS SHALL BE REPAIRED BY FIELD TOUCHUP PRIOR TO COMPLETION OF THE WORK USING ZRC COLO GALVANIZING COMPOUND OR APPROVED EQUAL.
- CONNECTIONS:
A. ALL BOLTS, NUTS AND WASHERS USED IN EXTERIOR APPLICATIONS SHALL A. BE GALVANIZED.

DESIGN LOADS:

THE FOLLOWING DESIGN LOADS WERE USED FOR THIS BUILDING BASED ON THE 2005 CONNECTICUT STATE BUILDING CODE (IBC 2003), 2005 CONNECTICUT SUPPLEMENT AND THE 2009 AMENDMENT TO THE 2005 CONNECTICUT SUPPLEMENT AND TIA/EIA-222-G.

ICE LOAD:
3/4" RADIAL ON ALL COMPONENTS AND CABLE

WIND DESIGN DATA:
BASIC WIND SPEED (3 SECOND GUST): 110 MPH
WIND IMPORTANCE FACTOR = 1.0
WIND EXPOSURE CATEGORY: B

EARTHQUAKE DESIGN DATA:
SEISMIC IMPORTANCE FACTOR, I: 1.0
MAPPED SPECTRAL RESPONSE ACCELERATIONS: SS=0.273 S1=0.085
CL-D
SEISMIC DESIGN CATEGORY: B

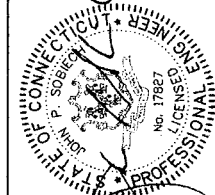


NEW CONULAR WIRELESS PCS, LLC
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067



CHA PROJECT NO:
27702 - 1017 - 43000

NO.	DATE	DESCRIPTION
1	03/29/11	SUBMITTAL
2	04/20/11	ISSUED FOR REVIEW
3	05/03/11	DATE FOR ISSUE
4	05/17/11	DATE FOR ISSUE
5	05/17/11	DATE FOR ISSUE



THIS IS A DECLARATION OF MY BEST KNOWLEDGE AND BELIEF THAT I AM A LICENSED PROFESSIONAL ENGINEER, AND I AM THE DESIGNER OF THIS DOCUMENT.

SITE ID:
C15511
SITE NAME:
NEWTOWN - SR302
SITE ADDRESS:
8 FERRIS ROAD
NEWTOWN, CT
06470
FAIRFIELD COUNTY

SHEET TITLE:
GENERAL NOTES

SHEET NUMBER:
GN01



PASS
 (Foundation, 100% capacity)



May 23, 2010

Mr. Stephen Rambeau
 TowerCo, LLC
 5000 Valleystone Drive
 Cary, NC 27519
 (919) 653-5722

Vertical Solutions, Inc.
 PO Box 579
 Holly Springs, NC 27540
 (888) 321-6167
operations@verticalsolutions-inc.com

Subject: **Rigorous Structural Analysis**

Carrier Designation **AT&T, Reconfiguration**
Site Number: 5511
Site Name: Newtown-Ferris Road

TowerCo Designation **Site Number: CT2008**
Site Name: Newtown-Ferris Rd

Engineering Firm Designation **Vertical Solutions Project: 110591.01Rev 0**

Site Data **8 Ferris Road, Newtown, Fairfield County, CT 06470**
Latitude: N41° 23' 23.09"±; Longitude: W073° 20' 18.40"±
Elevation: 783 ft±,
118-ft Self Supporting Pole Structure (Monopole)

Dear Mr. Rambeau,

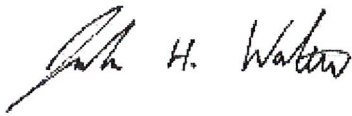
To your request, we present our structural analysis.

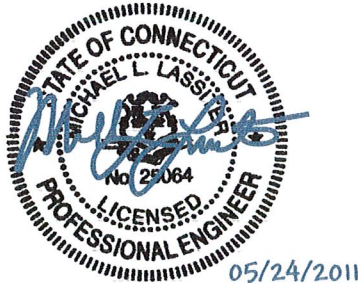
Our work indicates that with the proposed appurtenance configuration, the tower and foundation **will** satisfy the structural strength requirements of TIA/EIA-222-F-1996, *Structural Standards for Steel Antenna Towers and Supporting Structures* (industry standard) and the *2006 International Building Code* (local building code) for:

- 85-mph fastest mile basic wind speed
- 75-mph fastest mile basic wind speed with ½" radial ice

We trust you find our work satisfactory. Please do not hesitate to call should you have any questions.

Sincerely,


 Joshua H. Walton, E.I.
 Structural Engineer-In-Training



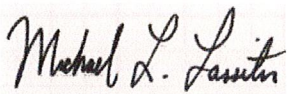

 Michael L. Lassiter, S.E., P.E., C.W.I.
 Structural Engineer, Civil Engineer, Certified Weld Inspector
 & President
 CT PE License: 25064

Table 1: Existing, Proposed and Reserved Appurtenance Configuration

Elevation (AGL, ft)	Carrier	Mount	Equipment	Coax	Location ¹
130	Town of Newtown	Pipe off of Platform at 118'	(1) Decibel DB222	(1) 7/8	Inside
118			(1) Telewave ANT150D	(1) 7/8	Inside
118.75	Sprint Nextel	Low Profile Platform	(9) Decibel DB844H90E-XY	(10) 7/8	Inside
105 ²	Sprint Nextel (Design)	Low Profile Platform	(12) DAPA 48000	(12) 1 5/8	Inside
	Sprint Nextel (Existing)		(6) Decibel DB980H90E-M	(6) 1 5/8	Inside
98	Verizon Wireless	Low Profile Platform	(3) Powerwave P65-16-XL-2 (4) Andrew DB846H80E-SX (2) RFS APL868013 (3) RYMSA Wireless MG D3-800TX	(12) 1 5/8	Inside
91	AT&T	Low Profile Platform	(3) Powerwave 7770 (6) LGP 21401 TMAs (3) Powerwave P65-16-XLH-RR (6) Ericsson RRUS-11 (1) Raycap Surge Suppressor	(12) 7/8 (1) 3/8" Fiber cable (2) 5/8" DC cables	Inside
81	T-Mobile	Low Profile Platform	(6) RFS APX16DWV-16DWV (6) S20057A1 TMAs	(24) 7/8	Inside
75	Sprint Nextel	Flush	(1) GPS	(1) 1/2	Outside

1 – See coax configuration plan, QP-P for coax locations.

2_Existing Loading [EPA(A) = 24.4 sq ft]; Design Loading [EPA(A) = 76.8 sq ft]; Maximum Loading [EPA(A) = 92.4 sq ft]; Design loading used in analysis.

Table 2: Tower Structure Results, Percent Capacity Utilized

Elevation (ft)	Shaft	Result	Connections	Result
118 to 91.3	44	O. K.	--	--
91.3 to 45.13	83	O. K.	--	--
45.13 to 0	77	O. K.	98	O. K.

Table 3: Foundation Results, Percent Capacity Utilized

Component	Design Reactions	Analysis Reactions	Percent Utilized	Result
Moment (k-ft)	2006	1930	96	O. K.
Shear (kips)	22.0	22	100	O. K.

Attachments:

- Project History
- Coax configuration plan, Sheet QP-P
- Program input and output
- Base Plate and Anchor Rod

Project History, 110591.01, CT2008 Newtown-Ferris Rd

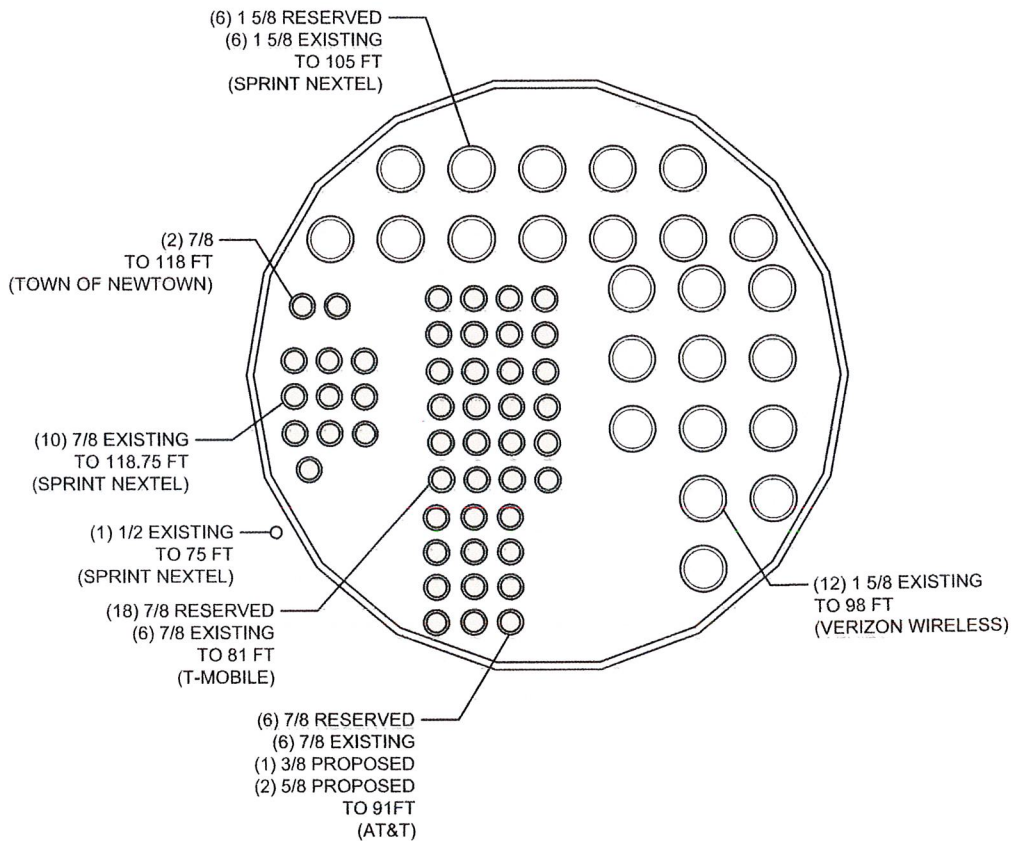
TowerCo Doc ID:	File	By: / For:	Description
242372	19990607_GEO_CT2008.pdf	Applied Earth Technologies / Herbst -- Musciano	Geotechnical Investigation Report
242370	19990629_TFDC_CT2008.pdf	Engineered Endeavors Inc. / Nextel	Tower and Foundation Design Calculations
242396	20020308_SAR_CT2008.pdf	Engineered Endeavors Inc. / Sprint PCS	Structural Analysis
506182	20030731_PEL_CT2008.pdf	Engineered Endeavors Inc. / Town of Newtown	PE Letter
470864	20061025_SAR_CT2008.pdf	Semaan Engineering / Sprint USA	Structural Analysis
242404	20080708_SAR_CT2008.pdf	Semaan Engineering / Sprint USA	Structural Analysis
714947	20081102_TEP_CT2008.pdf	SiteMaster / TowerCo	Tower Elevation Profile
719728	20081102_SIR_CT2008.pdf	SiteMaster / TowerCo	Site Inspection Report
	20100129_RTA_CT2008.doc	Verizon Wireless / TowerCo	Reconfiguration Application
---	20100201_COR_CT2008.mht	TowerCo / Vertical Solutions Inc	Correspondence, Email
	20100507_SAR_CT2008.pdf	Vertical Solutions / TowerCo	Structural Analysis Report
	20110512_RTA_CT2008.doc	TowerCo / Vertical Solutions	Reconfiguration Application

Table Note:

Files name format YYYYMMDD-XXX-ZZZZZZ.pdf

Where:

YYYY=year
MM=month
DD=day published/issued
XXX=file describer
ZZZZZ=TowerCo Site ID



COAX CONFIGURATION PLAN AT 81-FT

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

DRAWN BY:	MLO	CHECKED BY:	MLL
SHEET NUMBER:	QP-P		
REVISION:	0		
VSI #:	110591.01		

REV	DATE
0	5/20/11

PREPARED FOR:

TowerCo

5000 Valley Stone Drive
 Cary, NC 27519
 Office: (919) 489-5559
 Fax: (919) 489-5530
 www.towerco.com

PROJECT NAME:
Newtown-Ferris Rd

TOWERCO JOB #:
CT2008

PREPARED BY:

vertical solutions

2002 Production Drive
 Apex, NC 27539
 Office: (866) 321-6167
 Fax: (919) 321-1768
 www.verticalsolutions-inc.com

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
DB222 (Newton)	130	RYMSA Wireless MG D3-800TX (Verizon)	98
(3) DB844H90E-XY w/Mount Pipe (Sprint)	118.75	(2) Powerwave LGP2140X (ATTI)	91
(3) DB844H90E-XY w/Mount Pipe (Sprint)	118.75	(2) Powerwave LGP2140X (ATTI)	91
(3) DB844H90E-XY w/Mount Pipe (Sprint)	118.75	7770.00 (ATTI)	91
PIROD 13' Low Profile Platform (Sprint)	118	7770.00 (ATTI)	91
Telewave ANT150D (Newton)	118	(2) Powerwave LGP2140X (ATTI)	91
PIROD 13' Low Profile Platform (Sprint)	105	PIROD 13' Low Profile Platform (ATTI)	91
(4) 48000 w/Mount Pipe (Sprint)	105	Powerwave P65-16-XLH-RR w/ MP (ATTI)	91
(4) 48000 w/Mount Pipe (Sprint)	105	Powerwave P65-16-XLH-RR w/ MP (ATTI)	91
Powerwave P65-16-XL-2 with Mount Pipe (Verizon)	98	(2) Ericsson RRUS-11 (ATTI)	91
Powerwave P65-16-XL-2 with Mount Pipe (Verizon)	98	(2) Ericsson RRUS-11 (ATTI)	91
Powerwave P65-16-XL-2 with Mount Pipe (Verizon)	98	(2) Ericsson RRUS-11 (ATTI)	91
PIROD 13' Low Profile Platform (Verizon)	98	Raycap Surge Arrestor 24" X 11" (ATTI)	91
(2) DB846H80E-SX w/Mount Pipe (Verizon)	98	(2) 12" x 6" x 2" TMA (T-Mobile)	81
(2) DB846H80E-SX w/Mount Pipe (Verizon)	98	PIROD 13' Low Profile Platform (T-Mobile)	81
(2) APL868013 w/Mount Pipe (Verizon)	98	(2) APX16DWW-16DWW w/MP (T-Mobile)	81
RYMSA Wireless MG D3-800TX (Verizon)	98	(2) APX16DWW-16DWW w/MP (T-Mobile)	81
RYMSA Wireless MG D3-800TX (Verizon)	98	(2) 12" x 6" x 2" TMA (T-Mobile)	81
		(2) 12" x 6" x 2" TMA (T-Mobile)	81
		GPS (Sprint)	75

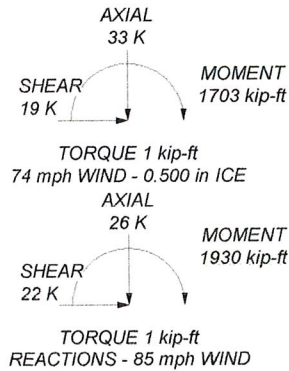
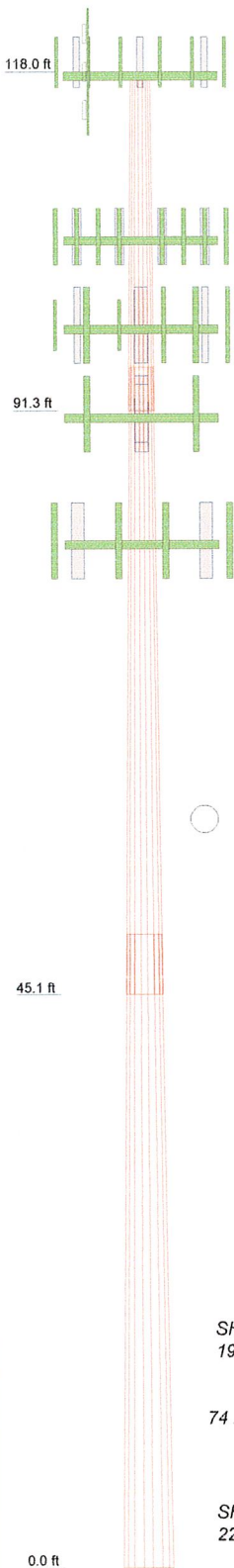
MATERIAL STRENGTH

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

TOWER DESIGN NOTES

1. Tower is located in Fairfield County, Connecticut.
2. Tower designed for a 85 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 74 mph basic wind with 0.50 in ice.
4. Deflections are based upon a 50 mph wind.

1	26.710	18	0.188	17.000	23.220	1.1
2	49.580	18	0.313	22.049	33.480	4.6
3	49.877	18	0.375	31.760	45.190	7.7
			4.750			
			3.417			
						A572-65
						13.4



 TowerCo 5000 Vallestone Drive Cary, NC 27519 Phone: (919) 469-5559 FAX: (919) 469-5530	Job: CT2008 Project: 110591	Client: TowerCo Code: TIA/EIA-222-F Path: L:\20110591 Newtown-Ferris Rd_CTYTask 1\Modals\RI\SACT2008.er	Drawn by: jwalton Date: 05/24/11 Scale: NTS Dwg No: E-1
	App'd:		

RISATower TowerCo 5000 Valleystone Drive Cary, NC 27519 Phone: (919) 469-5559 FAX: (919) 469-5530	Job CT2008	Page 1 of 6
	Project 110591	Date 10:44:47 05/24/11
	Client TowerCo	Designed by jwalton

Tower Input Data

There is a pole section.

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

The following design criteria apply:

Tower is located in Fairfield County, Connecticut.

Basic wind speed of 85 mph.

Nominal ice thickness of 0.500 in.

Ice density of 56 pcf.

A wind speed of 74 mph is used in combination with ice.

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 50 mph.

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

Pressures are calculated at each section.

Stress ratio used in pole design is 1.333.

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

Options

Consider Moments - Legs	Distribute Leg Loads As Uniform	Treat Feedline Bundles As Cylinder
Consider Moments - Horizontals	Assume Legs Pinned	Use ASCE 10 X-Brace Ly Rules
Consider Moments - Diagonals	√ Assume Rigid Index Plate	√ Calculate Redundant Bracing Forces
Use Moment Magnification	√ Use Clear Spans For Wind Area	Ignore Redundant Members in FEA
√ Use Code Stress Ratios	√ Use Clear Spans For KL/r	SR Leg Bolts Resist Compression
√ Use Code Safety Factors - Guys	√ Retension Guys To Initial Tension	√ All Leg Panels Have Same Allowable
Escalate Ice	Bypass Mast Stability Checks	Offset Girt At Foundation
Always Use Max Kz	√ Use Azimuth Dish Coefficients	Consider Feedline Torque
Use Special Wind Profile	√ Project Wind Area of Appurt.	Include Angle Block Shear Check
√ Include Bolts In Member Capacity	√ Autocalc Torque Arm Areas	Poles
√ Leg Bolts Are At Top Of Section	SR Members Have Cut Ends	√ Include Shear-Torsion Interaction
√ Secondary Horizontal Braces Leg	Sort Capacity Reports By Component	Always Use Sub-Critical Flow
Use Diamond Inner Bracing (4 Sided)	√ Triangulate Diamond Inner Bracing	Use Top Mounted Sockets
Add IBC .6D+W Combination		

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	118.000-91.290	26.710	3.417	18	17.000	23.220	0.188	0.750	A572-65 (65 ksi)
L2	91.290-45.127	49.580	4.750	18	22.049	33.480	0.313	1.250	A572-65 (65 ksi)
L3	45.127-0.000	49.877		18	31.760	45.190	0.375	1.500	A572-65 (65 ksi)

RISATower TowerCo 5000 Vallestone Drive Cary, NC 27519 Phone: (919) 469-5559 FAX: (919) 469-5530	Job	CT2008	Page	2 of 6
	Project	110591	Date	10:44:47 05/24/11
	Client	TowerCo	Designed by	jwalton

Tapered Pole Properties

Section	Tip Dia. in	Area in ²	I in ⁴	r in	C in	I/C in ³	J in ⁴	I/Q in ²	w in	w/t
L1	17.262	10.006	357.308	5.968	8.636	41.374	715.086	5.004	2.662	14.197
	23.578	13.707	918.690	8.177	11.796	77.883	1838.588	6.855	3.757	20.036
L2	23.189	21.560	1287.016	7.717	11.201	114.901	2575.726	10.782	3.331	10.658
	33.996	32.898	4572.278	11.774	17.008	268.834	9150.572	16.452	5.342	17.096
L3	33.549	37.356	4648.763	11.142	16.134	288.134	9303.644	18.681	4.930	13.146
	45.887	53.341	13534.613	15.909	22.957	589.576	27087.035	26.676	7.293	19.449

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A _f	Adjust. Factor A _r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in
ft	ft ²	in						
L1 118.000-91.290				1	1	1		
L2 91.290-45.127				1	1	1		
L3 45.127-0.000				1	1	1		

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number	C _A A _A	Weight
						ft ² /ft	plf
LDF5-50A (7/8 FOAM) (Sprint / Nextel)	C	No	Inside Pole	118.000 - 0.000	10	No Ice 1/2" Ice	0.000 0.330
LDF7-50A (1-5/8 FOAM) (Sprint / Nextel)	C	No	Inside Pole	105.000 - 0.000	12	No Ice 1/2" Ice	0.000 0.820
LDF5-50A (7/8 FOAM) (Newton)	C	No	Inside Pole	118.000 - 0.000	2	No Ice 1/2" Ice	0.000 0.330
LDF5-50A (7/8 FOAM) (AT&T)	C	No	Inside Pole	91.000 - 0.000	12	No Ice 1/2" Ice	0.000 0.330
LDF7-50A (1-5/8 FOAM) (Verizon)	C	No	Inside Pole	98.000 - 0.000	12	No Ice 1/2" Ice	0.000 0.820
LDF5-50A (7/8 FOAM) (T-Mobile)	C	No	Inside Pole	81.000 - 0.000	24	No Ice 1/2" Ice	0.000 0.330
LDF4P-50A (1/2 FOAM) (Sprint / Nextel) ***	C	No	CaAa (Out Of Face)	75.000 - 0.000	1	No Ice 1/2" Ice	0.063 0.840
LDF2-50 (3/8 FOAM) (AT&T)	C	No	Inside Pole	91.000 - 0.000	1	No Ice 1/2" Ice	0.000 0.080
LDF4.5-50 (5/8 FOAM) (AT&T)	C	No	Inside Pole	91.000 - 0.000	2	No Ice 1/2" Ice	0.000 0.150

Feed Line/Linear Appurtenances Section Areas

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Tower Section	Tower Elevation ft	Face	A_R ft ²	A_F ft ²	$C_A A_A$ In Face ft ²	$C_A A_A$ Out Face ft ²	Weight K
L1	118.000-91.290	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.000	0.307
L2	91.290-45.127	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	1.882	1.579
L3	45.127-0.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	2.843	1.627

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft ²	A_F ft ²	$C_A A_A$ In Face ft ²	$C_A A_A$ Out Face ft ²	Weight K
L1	118.000-91.290	A	0.500	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	0.000	0.307
L2	91.290-45.127	A	0.500	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	4.869	1.600
L3	45.127-0.000	A	0.500	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	7.356	1.658

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	$C_A A_A$ Front ft ²	$C_A A_A$ Side ft ²	Weight K	
(3) DB844H90E-XY w/Mount Pipe (Sprint)	A	From Leg	4.000	0.000	118.750	No Ice	3.579	5.396	0.036
			0.000			1/2" Ice	4.201	6.491	0.077
(3) DB844H90E-XY w/Mount Pipe (Sprint)	B	From Leg	4.000	0.000	118.750	No Ice	3.579	5.396	0.036
			0.000			1/2" Ice	4.201	6.491	0.077
(3) DB844H90E-XY w/Mount Pipe (Sprint)	C	From Leg	4.000	0.000	118.750	No Ice	3.579	5.396	0.036
			0.000			1/2" Ice	4.201	6.491	0.077
PiROD 13' Low Profile Platform (Sprint) *** ***	C	None		0.000	118.000	No Ice	15.700	15.700	1.300
						1/2" Ice	20.100	20.100	1.765
DB222 (Newton)	A	From Leg	4.000	0.000	130.000	No Ice	1.600	1.600	0.016
			0.000			1/2" Ice	2.880	2.880	0.021
Telewave ANT150D (Newton)	C	From Leg	4.000	0.000	118.000	No Ice	9.064	9.064	0.032
			0.000			1/2" Ice	9.837	9.837	0.118
			0.000						

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Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C _{A1} Front ft ²	C _{A1} Side ft ²	Weight K

7770.00 (AT&T)	A	From Leg	4.000 0.000 0.000	0.000	91.000	No Ice 1/2" Ice	5.882 6.314	2.928 3.273	0.035 0.068
7770.00 (AT&T)	B	From Leg	4.000 0.000 0.000	0.000	91.000	No Ice 1/2" Ice	5.882 6.314	2.928 3.273	0.035 0.068
7770.00 (AT&T)	C	From Leg	4.000 0.000 0.000	0.000	91.000	No Ice 1/2" Ice	5.882 6.314	2.928 3.273	0.035 0.068
(2) Powerwave LGP2140X (AT&T)	A	From Leg	4.000 0.000 0.000	0.000	91.000	No Ice 1/2" Ice	1.288 1.445	0.364 0.479	0.014 0.021
(2) Powerwave LGP2140X (AT&T)	B	From Leg	4.000 0.000 0.000	0.000	91.000	No Ice 1/2" Ice	1.288 1.445	0.364 0.479	0.014 0.021
(2) Powerwave LGP2140X (AT&T)	C	From Leg	4.000 0.000 0.000	0.000	91.000	No Ice 1/2" Ice	1.288 1.445	0.364 0.479	0.014 0.021

(2) APX16DWV-16DWV w/MP (T-Mobile)	A	From Leg	4.000 0.000 0.000	0.000	81.000	No Ice 1/2" Ice	6.837 7.305	3.190 3.822	0.036 0.079
(2) APX16DWV-16DWV w/MP (T-Mobile)	B	From Leg	4.000 0.000 0.000	0.000	81.000	No Ice 1/2" Ice	6.837 7.305	3.190 3.822	0.036 0.079
(2) APX16DWV-16DWV w/MP (T-Mobile)	C	From Leg	4.000 0.000 0.000	0.000	81.000	No Ice 1/2" Ice	6.837 7.305	3.190 3.822	0.036 0.079
(2) 12" x 6" x 2" TMA (T-Mobile)	A	From Leg	4.000 0.000 0.000	0.000	81.000	No Ice 1/2" Ice	0.700 0.821	0.233 0.328	0.010 0.014
(2) 12" x 6" x 2" TMA (T-Mobile)	B	From Leg	4.000 0.000 0.000	0.000	81.000	No Ice 1/2" Ice	0.700 0.821	0.233 0.328	0.010 0.014
(2) 12" x 6" x 2" TMA (T-Mobile)	C	From Leg	4.000 0.000 0.000	0.000	81.000	No Ice 1/2" Ice	0.700 0.821	0.233 0.328	0.010 0.014
PiROD 13' Low Profile Platform (T-Mobile)	C	None		0.000	81.000	No Ice 1/2" Ice	15.700 20.100	15.700 20.100	1.300 1.765

Powerwave P65-16-XL-2 with Mount Pipe (Verizon)	A	From Leg	4.000 0.000 0.000	0.000	98.000	No Ice 1/2" Ice	8.637 9.290	5.779 6.949	0.059 0.119
Powerwave P65-16-XL-2 with Mount Pipe (Verizon)	B	From Leg	4.000 0.000 0.000	0.000	98.000	No Ice 1/2" Ice	8.637 9.290	5.779 6.949	0.059 0.119
Powerwave P65-16-XL-2 with Mount Pipe (Verizon)	C	From Leg	4.000 0.000 0.000	0.000	98.000	No Ice 1/2" Ice	8.637 9.290	5.779 6.949	0.059 0.119
PiROD 13' Low Profile Platform (Verizon)	C	None		0.000	98.000	No Ice 1/2" Ice	15.700 20.100	15.700 20.100	1.300 1.765

(2) DB846H80E-SX	A	From Leg	4.000	0.000	98.000	No Ice	5.321	7.725	0.041

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Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _A A ₁ Front ft ²	C _A A ₁ Side ft ²	Weight K
w/Mount Pipe (Verizon)			0.000 0.000			1/2" Ice 5.874	8.915	0.096
(2) DB846H80E-SX w/Mount Pipe (Verizon)	B	From Leg	4.000 0.000 0.000	0.000	98.000	No Ice 1/2" Ice 5.874	7.725 8.915	0.041 0.096
(2) APL868013 w/Mount Pipe (Verizon)	C	From Leg	4.000 0.000 0.000	0.000	98.000	No Ice 1/2" Ice 4.201	5.396 6.491	0.032 0.073
RYMSA Wireless MG D3-800TX (Verizon)	A	From Leg	4.000 0.000 0.000	0.000	98.000	No Ice 1/2" Ice 4.591	3.994 4.773	0.035 0.070
RYMSA Wireless MG D3-800TX (Verizon)	B	From Leg	4.000 0.000 0.000	0.000	98.000	No Ice 1/2" Ice 4.591	3.994 4.773	0.035 0.070
RYMSA Wireless MG D3-800TX (Verizon)	C	From Leg	4.000 0.000 0.000	0.000	98.000	No Ice 1/2" Ice 4.591	3.994 4.773	0.035 0.070
*** PiROD 13' Low Profile Platform (Sprint)	C	None		0.000	105.000	No Ice 1/2" Ice 20.100	15.700 20.100	1.300 1.765
(4) 48000 w/Mount Pipe (Sprint)	A	From Leg	4.000 0.000 0.000	0.000	105.000	No Ice 1/2" Ice 5.788	3.486 4.537	0.044 0.082
(4) 48000 w/Mount Pipe (Sprint)	B	From Leg	4.000 0.000 0.000	0.000	105.000	No Ice 1/2" Ice 5.788	3.486 4.537	0.044 0.082
(4) 48000 w/Mount Pipe (Sprint)	C	From Leg	4.000 0.000 0.000	0.000	105.000	No Ice 1/2" Ice 5.788	3.486 4.537	0.044 0.082
GPS (Sprint) ***	C	None		0.000	75.000	No Ice 1/2" Ice 3.802	2.275 2.506	0.008 0.033
PiROD 13' Low Profile Platform (AT&T)	C	None		0.000	91.000	No Ice 1/2" Ice 20.100	15.700 20.100	1.300 1.765
Powerwave P65-16-XLH-RR w/ MP (AT&T)	A	From Leg	4.000 0.000 0.000	0.000	91.000	No Ice 1/2" Ice 9.290	6.362 7.538	0.090 0.152
Powerwave P65-16-XLH-RR w/ MP (AT&T)	B	From Leg	4.000 0.000 0.000	0.000	91.000	No Ice 1/2" Ice 9.290	6.362 7.538	0.090 0.152
Powerwave P65-16-XLH-RR w/ MP (AT&T)	C	From Leg	4.000 0.000 0.000	0.000	91.000	No Ice 1/2" Ice 9.290	6.362 7.538	0.090 0.152
(2) Ericsson RRUS-11 (AT&T)	A	From Leg	4.000 0.000 0.000	0.000	91.000	No Ice 1/2" Ice 3.172	1.190 1.351	0.055 0.075
(2) Ericsson RRUS-11 (AT&T)	B	From Leg	4.000 0.000 0.000	0.000	91.000	No Ice 1/2" Ice 3.172	1.190 1.351	0.055 0.075
(2) Ericsson RRUS-11 (AT&T)	C	From Leg	4.000 0.000 0.000	0.000	91.000	No Ice 1/2" Ice 3.172	1.190 1.351	0.055 0.075
Raycap Surge Arrestor 24" X 11" (AT&T)	C	None		0.000	91.000	No Ice 1/2" Ice 1.667	1.467 1.667	0.050 0.068

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Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	SF*P _{allow} K	% Capacity	Pass Fail	
L1	118 - 91.29	Pole	TP23.22x17x0.188	1	-5.608	687.980	43.8	Pass	
L2	91.29 - 45.1267	Pole	TP33.48x22.049x0.313	2	-15.131	1653.800	83.5	Pass	
L3	45.1267 - 0	Pole	TP45.19x31.76x0.375	3	-22.720	2535.606	76.9	Pass	
							Summary		
							Pole (L2)	83.5	Pass
							RATING =	83.5	Pass

FLANGE PLATE DESIGN, DEFORMATION METHOD (DIFFERENT AREAS)

Input - $M := 1930 \cdot \text{kip} \cdot \text{ft}$ = moment at top of flange plate
 $P := 26 \cdot \text{kip}$ = axial load (use zero if base plate is grouted)
 $F_y := 60 \cdot \text{ksi}$ = yield stress of flange plate
 $b_{\text{eff}} := 11.322 \cdot \text{in}$ = effective width of flange plate in flexure
 $t := 1.75 \cdot \text{in}$ = thickness of flange plate
 $\text{ASI} := 133 \cdot \%$ = allowable stress increase

CONSTANTS:

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

$$\text{ksi} \equiv 1000 \cdot \text{psi}$$

$$\text{kip} \equiv 1000 \cdot \text{lb}$$

$$\begin{matrix} Q := \\ \begin{pmatrix} 2 \\ 4 \\ 4 \\ 2 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{pmatrix} \end{matrix}
 \quad
 \begin{matrix} d := \\ \begin{pmatrix} 2 \cdot 12 + 2 \\ 1 \cdot 12 + 10 + \frac{1}{2} \\ 1 \cdot 12 + 1 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{pmatrix} \cdot \text{in} \end{matrix}
 \quad
 \begin{matrix} A_{\text{stiff}} := \\ \begin{pmatrix} 3.98 \\ 3.98 \\ 3.98 \\ 3.98 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{pmatrix} \text{in}^2 \end{matrix}
 \quad
 \begin{matrix} A_{\text{stress}} := \\ \begin{pmatrix} 3.25 \\ 3.25 \\ 3.25 \\ 3.25 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{pmatrix} \text{in}^2 \end{matrix}
 \quad
 \begin{matrix} F_t := \\ \begin{pmatrix} 0.6 \cdot 75 \\ 0.6 \cdot 75 \\ 0.6 \cdot 75 \\ 0.6 \cdot 75 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{pmatrix} \cdot \text{ksi} \end{matrix}$$

$$\sum \overrightarrow{(Q)} = 12 \quad \text{sumQAd} := \sum \overrightarrow{(Q \cdot d^2 \cdot A_{\text{stiff}})}$$

$$\text{sumQAd} = 16131 \cdot \text{in}^4$$

$$\overrightarrow{R} := \frac{M \cdot \overrightarrow{(d \cdot A_{\text{stiff}})}}{\text{sumQAd}} + \frac{P \cdot A_{\text{stiff}}}{\sum (A_{\text{stiff}} \cdot Q)}$$

$$\overrightarrow{f_t} := \left(\frac{\overrightarrow{R}}{A_{\text{stress}}} \right) \quad \overrightarrow{r} := \left(\frac{\overrightarrow{f_t}}{\text{ASI} \cdot F_t} \right)$$

$$\begin{matrix} R = \\ \begin{pmatrix} 150.7 \\ 130.7 \\ 76.5 \\ 2.2 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \end{pmatrix} \cdot \text{kip} \end{matrix}
 \quad
 \begin{matrix} f_t = \\ \begin{pmatrix} 46.4 \\ 40.2 \\ 23.5 \\ 0.7 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \end{pmatrix} \cdot \text{ksi} \end{matrix}
 \quad
 \begin{matrix} r = \\ \begin{pmatrix} 77 \\ 67 \\ 39 \\ 1 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{pmatrix} \cdot \% \end{matrix}$$

Q = quantity of fasteners

d = distance from center

A = area of fastener

Ft = allowable tension stress

BASE PLATE DESIGN (with stiffener plates, no grout), TIA-222-F

Input - $P_{max} := 151 \cdot \text{kip}$ = ultimate tension in anchor rod
 $x := 3 \cdot \text{in}$ = distance from centerline of stiffener plate to center of anchor rod
 $y := 4.375 \cdot \text{in}$ = distance from shaft wall to center of anchor rod
 $t := 1.75 \cdot \text{in}$ = thickness of base plate
 $F_y := 60 \cdot \text{ksi}$ = minimum specified yield strength
 $k := 3 \cdot \text{in}$ = distance from center of anchor rod to edge of base plate

CONSTANTS:

$\text{psi} \equiv \frac{\text{lb}}{\text{in}^2}$
 $\text{ksi} \equiv 1000 \cdot \text{psi}$
 $\text{kip} \equiv 1000 \cdot \text{lb}$

$$I_x := \frac{2 \cdot x \cdot t^3}{12} \quad k_x := \frac{3 \cdot I_x}{y^3} \quad S_x := \frac{I_x}{\left(\frac{t}{2}\right)}$$

$$I_y := \frac{(y + k) \cdot t^3}{12} \quad k_y := \frac{3 \cdot I_y}{x^3} \quad S_y := \frac{I_y}{\left(\frac{t}{2}\right)}$$

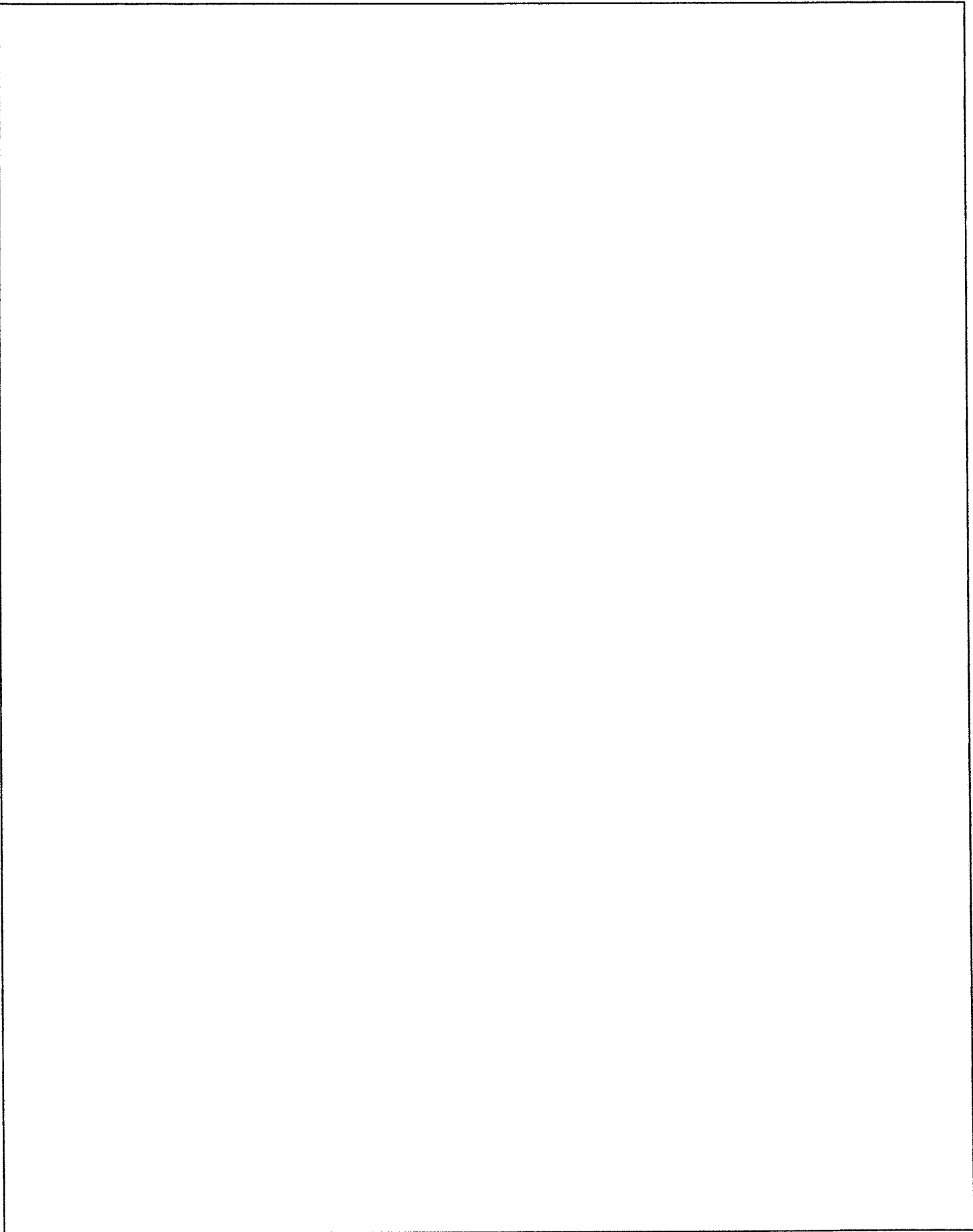
$$M_{xMax} := \frac{k_x}{k_x + 2k_y} \cdot P_{max} \quad M'_{xAll} := F_y \cdot S_x \quad r_x := \frac{M_{xMax}}{M'_{xAll}} \quad r_x = 42.0\%$$

$$M_{yMax} := \frac{k_y}{k_x + 2k_y} \cdot P_{max} \quad M'_{yAll} := F_y \cdot S_y \quad r_y := \frac{M_{yMax}}{M'_{yAll}} \quad r_y = 89.0\%$$

$$r := \sqrt{r_x^2 + r_y^2} \quad r = 98.0\%$$

$$P_{Shaft} := \frac{k_x}{k_x + 2k_y} \cdot P_{max} \quad P_{Shaft} = 17.5 \cdot \text{kip}$$

$$P_{Stiff} := \frac{k_y}{k_x + 2k_y} \cdot P_{max} \quad P_{Stiff} = 66.7 \cdot \text{kip}$$



P65-16-XLH-RR Dual Broadband Antennas

POLARIZATION: Dual linear $\pm 45^\circ$
 FREQUENCY (MHz): 698-894, 1710-2170
 HORIZONTAL BEAM WIDTH ($^\circ$): 65, 65
 GAIN (dBi/dBd): 15.5/13.4 17.5/15.4
 TILT: 1-12, 0-8
 LENGTH: 72"

ELECTRICAL SPECIFICATIONS*

	698-894		1710-1880	1710-2170	
	698-806	806-894		1850-1990	1900-2170
Frequency range (MHz)					
Frequency band (MHz)	698-806	806-894	1710-1880	1850-1990	1900-2170
Gain (dBi/dBd)	14.8/12.7	15.5/13.4	16.9/14.8	17.2/15.1	17.5/15.4
Polarization	Dual Linear +/- 45			Dual Linear +/- 45	
Nominal Impedance (Ω)	50			50	
VSWR	< 1.5:1			< 1.5:1	
Horizontal beam width, -3 dB ($^\circ$)	66	65	60	63	63
Vertical beam width, -3 dB ($^\circ$)	14.7	12.5	6.8	6.4	5.7
Electrical down tilt ($^\circ$)	1 to 12			0 to 8	
Side lobe suppression, vertical 1st upper (dB)	> 16	> 16	> 16		
	> 16	> 16			
Isolation between inputs (dB)	> 30	> 30	> 30	> 30	
Inter band Isolation (dB)	> 40			> 40	
Tracking, horizontal plane $\pm 60^\circ$ (dB)	< 2		< 2	< 2	< 2
First null fill (dB)			> -20	> -20	> -20
Vertical beam squint ($^\circ$)	< 0.8	< 0.8	< 0.5	< 0.5	< 0.5
Front to back ratio (dB) $180^\circ \pm 30^\circ$ copolar	> 24	> 24	> 30	> 30	> 28
Front to back ratio (dB) $180^\circ \pm 30^\circ$ total power					
Cross polar discrimination (XPD) 0° (dB)	> 15	> 15	> 15	> 15	> 15
Cross polar discrimination (XPD) $\pm 60^\circ$ (dB)	> 10	> 10	> 10	> 10	> 10
Far field coupling					
IM3, 2xTx@43dBm (dBc)	< -153			< -153	
IM7, 2xTx@43dBm (dBc)					
Power handling, average per input (W)	500			250	
Power handling, average total (W)	1000			500	

MECHANICAL SPECIFICATIONS*

Connector	4 X 7/16 DIN Female, IP67
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	72" x 12" x 6" (1829 x 305 x 152)
Mounting	Pre-mounted Tilt Brackets
Weight, with brackets, kg (lbs)	29 (64)
Weight, without brackets, kg (lbs)	24 (53)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1380
Maximum operational wind speed, m/s (mph)	100 (45)
Survival wind speed, m/s (mph)	150 (67)
Lightning protection	DC Ground
Operating Temperature	-40C to +60C
Radome material	PVC, IP55
Packet size, HxWxD, mm (ft)	87" x 16" x 10" (2225 x 400 x 225)
Radome colour	Light Grey
Shipping weight, kg (lbs)	34 (75)
RET	iRET AISGv1.1, MET and AISGv2.0
Brackets	7256.00, 7454.00



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

ANTENNA PATTERNS*

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

RRUS 11 – Dual PA RRU.

Technical Data

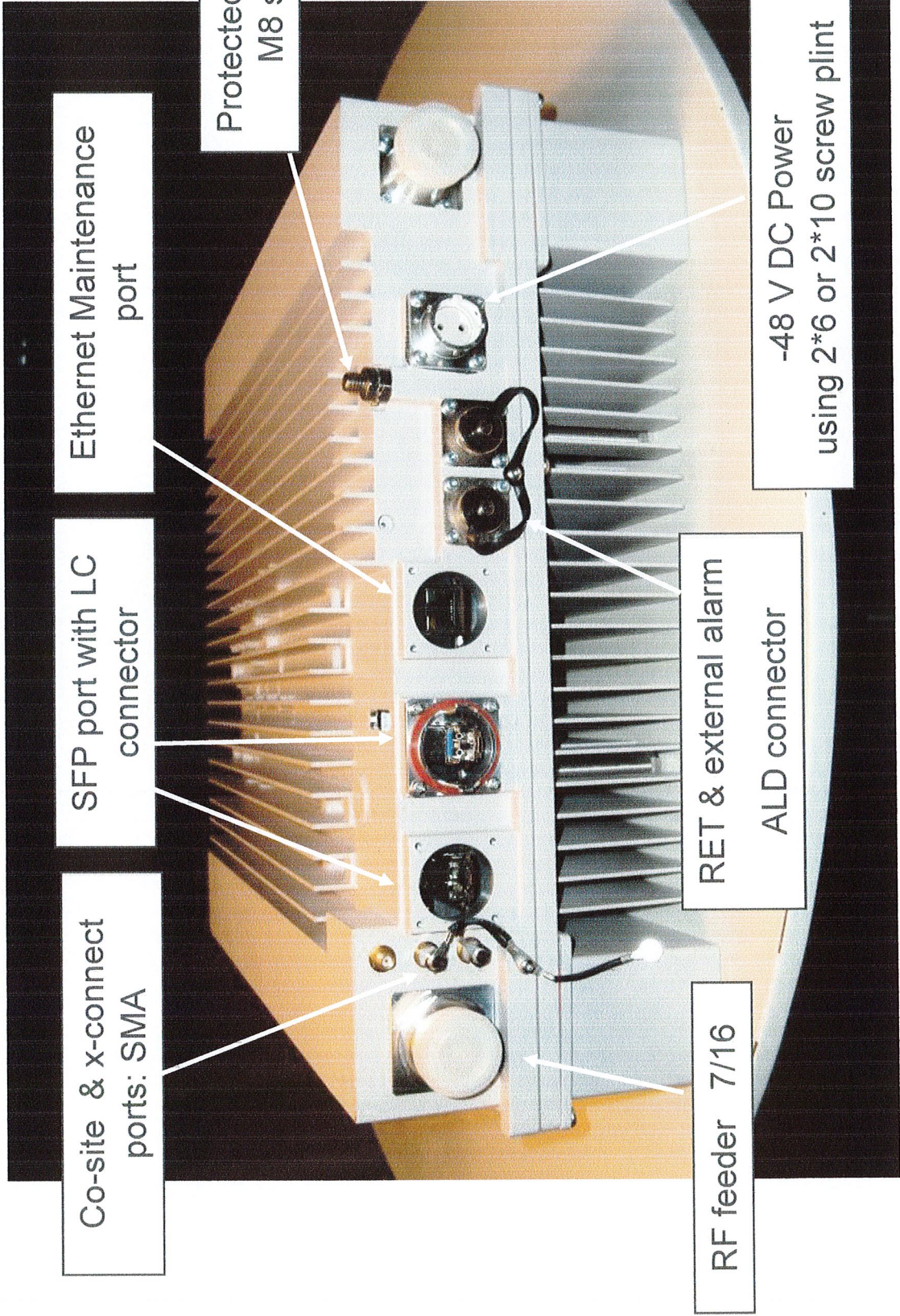
- > Multi standard 2x30 Watts
- > RF: 1.4 – 20 MHz
- > Carrier BW: 2
- > Alarms: 2
- > Dimensions (with sunshield):
 - Width: 17.0 in
 - Height: 17.8 in
 - Depth: 7.2 in
 - Weight: 55 lbs (Band 12)
 - Weight: 50 lbs (Band 4)
- > Temperature: -40 to +131 F
- > Cooling: Self convection
- > Power: -48 VDC
- > Rec. fuse size 20 Amp
 - Rec. DC cable:
 - > 6 mm² up to 60 meters
 - > 10 mm² over 60 meters
 - > Shielded
- > Power Cons: 200 Watts typ.



RRUS-11 I/F



RBS6000



POWER

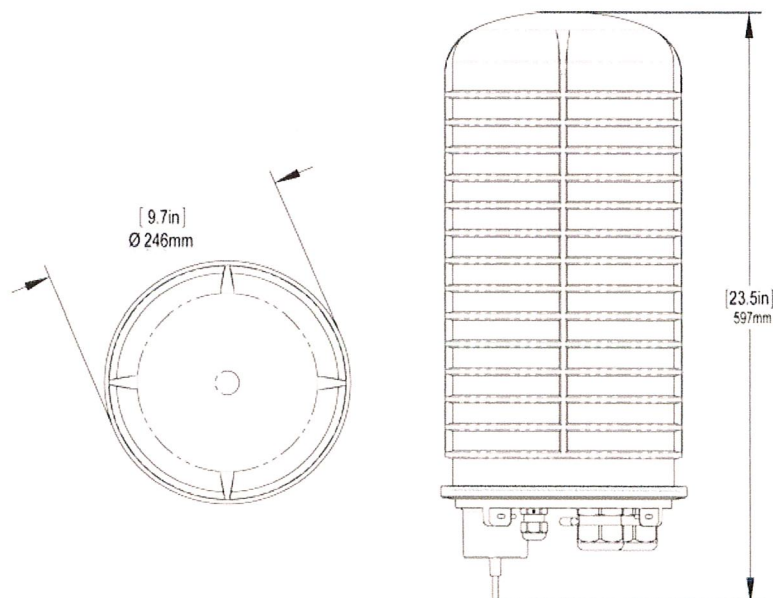
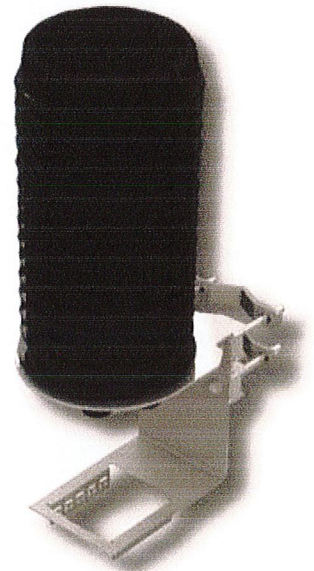
DC6-48-60-18-8F

DC Surge Suppression Solution

The DC6-48-60-18 is a dual chambered, DC surge suppression system for use in multi-circuit, Distributed Antenna Systems. The system will protect up to 6 Remote Radio Heads from voltage surges and lightning, and connect up to 18 fiber pairs. The system is enclosed in a NEMA 4 rated, waterproof enclosure.

FEATURES

- Protects up to 6 Remote Radio Heads, each with its own protection circuit.
- Flexible design allows for installation at the top of a tower for Remote Radio Head protection.
- Includes fiber connections for up to 18 pairs of fiber.
- LED indicators on individual circuits provide visual indication of suppressor status.
- Form 'C' relays allow for remote monitoring of the suppressor status.
- Patented Strikesorb technology provides over 60 kA of surge current capacity per circuit.
- Strikesorb suppression modules are fully recognized to UL 1449-3rd Edition Safety Standard, meeting all intermediate and high current fault requirements to facilitate use in OEM applications.
- Raycap recommends that DC protection system be installed within 2 meters or 6 feet of the radio.
- Dome design is lightweight and aerodynamic providing maximum flexibility for installation on top of towers.



Raycap

DC6-48-60-18-8F

DC Power Surge Protection

Electrical Specifications	
Model Number	DC6-48-60-18-8F
Nominal Operating Voltage	48 VDC
Nominal Discharge Current (I_n)	20 kA 8/20 μ s
Maximum Discharge Current (I_{max}) per NEMA LS-1	60 kA 8/20 μ s
Maximum Continuous Operating Voltage (U_c)	75 VDC
Voltage Protection Rating	400 V

Mechanical Specifications	
Suppression Connection Method	Compression lug, #2-#14 AWG Copper, #2-#12 Aluminum
Fiber Connection Method	LC-LC Single mode duplex
Environmental Rating	IP 68, 7m 72hrs
Operating Temperature	-40° C to + 80° C
Storage Temperature	-70° C to + 80° C
Cold Temperature Cycling	IEC 61300-2-22e -30° C to + 60° C 200 hrs @ 5 psi
Resistance to Aggressive Materials	CEI IEC 61073-2 including acids and bases
UV Protection	ISO 4892-2 Method A Xenon-Arc 2160 hrs
Weight	20 lbs without Mounting Bracket

STANDARDS

Strikesorb modules are compliant to the following Surge Protection Device (SPD) Standards:

- ANSI/UL 1449 - 3rd Edition
- IEEE C62.41
- NEMA LS-1, IEC 61643-1:2005 2nd Edition:2005
- IEC 61643-12
- EN 61643-11:2002 (including A11:2007)



Raycap

G02-00-068 REV 050610



GS-07F-0435V



Certified to
ISO 9001:2000



TUV Rheinland
of North America

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

Douglas L. Culp
Real Estate Consultant

June 2, 2011

Honorable E. Patricia Llodra
First Selectman Newtown
Newtown Town Hall
3 Primrose Street
Newtown, CT 06470

Re: Telecommunications Facility – 3 Primrose Street Newtown, CT

Dear First Selectman Llodra:

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