EM-SPRINT-118-130322
76 EAST RIDGE
RIDGEFIELD

Alcatel·Lucent

1 Robbins Road
Westford, MA 01886

July 9, 2014

State of Connecticut
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: Notification of Construction Completion on telecommunication facilities

To whom it may concern:

Alcatel Lucent hereby acknowledges that the list of attached sites have completed construction per the approval granted on the specified date. Please advise if further information is needed..

Very truly yours,

Martha Powers

Martha Powers
Lead Development Manager
Alcatel-Lucent
Sprint Vision Project
1 Robbins Road
Westford, MA 01886

Cc: FST, Siterra

EM/TS #	Address	Town	Sprint ID	Decision Date
EM-SPRINT-062-130912	1065 Wintergreen Avenue	Hamden	CT03XC003	10/15/2013
EM-SPRINT-NEXTEL-060-130118	10 Tanner Marsh Road	Guilford	CT03XC022	2/14/2013
EM-SPRINT-004-130822	181 Montevideo Road	Avon	CT03XC053	9/6/2013
EM-SPRINT-NEXTEL-155-130214A	1358 New Britain Ave.	West Hartford	CT03XC057	3/1/2013
EM-SPRINT-NEXTEL-164-130201	440 Hayden Station Road	Windsor	CT03XC065	3/8/2013
EM-SPRINT-NEXTEL-132-130201	59 McGuire Road	South Windsor	CT03XC066	3/1/2013
EM-SPRINT-NEXTEL-054-130201	299 Paxton Way	Glastonbury	CT03XC081	3/1/2013
EM-SPRINT-NEXTEL-094-130214B	36 Prospect Street	Newington	CT03XC084	3/1/2013
EM-SPRINT-110-130725	10 Sparks Street	Plainville	CT03XC086	8/8/2013
EM-SPRINT-007-130314	260 Beckley Road	Kensington	CT03XC088	4/5/2013
EM-SPRINT-NEXTEL-155-130201	570 New Park Avenue	West Hartford	CT03XC091	3/1/2013
EM-SPRINT-NEXTEL-106-130201	430 Middlesex Turnpike	Old Saybrook	CT03XC102	3/1/2013
EM-SPRINT-NEXTEL-105-130201	30 Short Hills Road	Old Lyme	CT03XC104	3/1/2013
EM-SPRINT-NEXTEL-152-130201	41 Manitock Hill Road	Waterford	CT03XC105	3/1/2013
EM-SPRINT-NEXTEL-045-130201	93 Roxbury Road	East Lyme	CT03XC110	3/1/2013
EM-SPRINT-152-130114	45R Fargo Road	Waterford	CT03XC112	2/14/2013
EM-SPRINT-NEXTEL-027-130201	48 Cow Hill Road	Clinton	CT03XC156	3/1/2013
EM-SPRINT-NEXTEL-082-130201	238 Meridan Road	Middlefield	CT03XC160	3/8/2013
EM-SPRINT-047-130109	160 Plantation Road	East Windsor	CT03XC202	2/7/2013
EM-SPRINT-NEXTEL-077-130214	53 Slater Street	Manchester	CT03XC211	3/1/2013
EM-SPRINT-142-130109	497 Old Post Road	Tolland	CT03XC212	2/7/2013
EM-SPRINT-NEXTEL-042-130222	94 East High Street	East Hampton	CT03XC335	3/8/2013
EM-SPRINT-057-121226	Butternut Hollow Road	Greenwich	CT03XC343	1/11/2013
EM-SPRINT-158-130213	515 Boston Post Road	Westport	CT03XC355	3/1/2013
EM-SPRINT-046-130402	206 Everett Road	Easton	CT03XC362	4/19/2013
EM-SPRINT-085-130322	474 MAIN STREET	MONROE	CT03XC365	4/5/2013
EM-SPRINT-086-131011	57 Cook Drive	Montville	CT03XC365	10/25/2013
EM-SPRINT-118-130322	76 EAST RIDGE	RIDGEFIELD	CT03XC370	4/5/2013
EM-SPRINT-097-131230	20 Barnabas Road	Newtown	CT03XC383	1/21/2014
EM-SPRINT-051-130207	3965 Congress Street	Fairfield	CT03XC385	3/1/2013
EM-SPRINT-NEXTEL-094-130214A	123 Costello Road	Newington	CT23XC555	3/1/2013
EM-SPRINT-119-131008	699 Old Main Street	Rocky Hill	CT23XC556	10/25/2013
EM-SPRINT-077-131008	60 Adams Street	Manchester	CT23XC557	10/25/2013
EM-SPRINT-NEXTEL-080-130123	462 West Main Street	Meriden	CT25XC840	2/14/2013
EM-SPRINT-096-130920	18 Hilltop View Lane	New Milford	CT33XC095	10/4/2013
EM-SPRINT-157-130213	237 Godfrey Road	Weston	CT33XC522	3/1/2013
EM-SPRINT-018-131008	20 Vale Road	Brookfield	CT33XC525	10/25/2013
EM-SPRINT-077-130528	595 Keeney Street	Manchester	CT33XC538	6/14/2013
EM-SPRINT-NEXTEL-129-130214	400 Main Street	Somers	CT33XC554	3/1/2013
EM-SPRINT-047-130322	15 CHAMBERLAIN	BROADBROOK	CT33XC565	4/5/2013
EM-SPRINT-004-130502	277 Huckleberry Road	Avon	CT33XC589	5/17/2013

EM-SPRINT-143-130604	218 Wheeler Road	Torrington	CT33XC592	6/28/2013
EM-SPRINT-140-130724	583 Chapel Street	Thomaston	CT33XC603	8/8/2013
EM-SPRINT-103-130920	Charles Marshall Drive	Norwalk	CT33XC802	10/4/2013
EM-SPRINT-NEXTEL-064-130214	439-455 Homestead Ave.	Hartford	CT43XC805	3/1/2013
EM-SPRINT-064-130311	99 Meadow Street	Hartford	CT43XC806	4/5/2013
EM-SPRINT-083-131127	290 Preston Ave.	Middletown	CT43XC816	12/16/2013
EM-SPRINT-128-130920	530 Bushy Hill Road	Simsbury	CT43XC825	10/4/2013
EM-SPRINT-164-130405A	340 Bloomfield Avenue	Windsor	CT43XC826	4/19/2013
EM-SPRINT-077-130109	239 Middle Turnpike	Manchester	CT43XC827	2/13/2013
EM-SPRINT-165-130118	2-4 Volunteer Drive	Windsor Locks	CT43XC828	2/14/2013
EM-SPRINT-NEXTEL-139-130214	44 Fyler Place	Suffield	CT43XC829	3/8/2013
EM-SPRINT-111-130712	171 Town Hill Road	Plymouth	CT54XC712	7/26/2013
EM-SPRINT-009-130322	38 Spring Hill Road	Bethel	CT54XC749	4/5/2013
EM-SPRINT-154-131011	315 Spencer Plains Road	Westbrook	CT54XC758	10/25/2013
EM-SPRINT-023-130405	14 Canton Springs Road	Canton	CT54XC760	4/19/2013
EM-SPRINT-104-130606	153 Old Salem Road	Norwich	CT54XC775	6/28/2013
EM-SPRINT-164-130405B	99 Day Hill Road	Windsor	CT54XC787	4/19/2013
EM-SPRINT-132-130920	300 Governor's Highway	South Windsor	CT60XC014	10/4/2013
EM-SPRINT-094-130108	605 Willard Avenue	Newington	CT60XC018	1/25/2013
EM-SPRINT-146-130506	197 South Street	Vernon	CT60XC935	5/24/2013
EM-SPRINT-146-130311	777 Talcottville Road	Vernon	CT70XC147	4/5/2013
EM-SPRINT-126-130531	62 Birdseye Road	Shelton	CT73XC004	6/21/2013

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

April 5, 2013

Jennifer Young Gaudet
HPC Wireless Services
46 Mill Plain Road, Floor 2
Danbury, CT 06811

RE: **EM-SPRINT-118-130322** – Sprint Spectrum L.P. notice of intent to modify an existing telecommunications facility located at 76 East Ridge Avenue, Ridgefield, Connecticut.

Dear Ms. Gaudet:

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:

- 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;
- Within 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 March 21, 2013. 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/cm

c: The Honorable Rudolph P. Marconi, First Selectman, Town of Ridgefield
Betty Brosius, Town Planner, Town of Ridgefield

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

March 22, 2013

The Honorable Rudolph P. Marconi
First Selectman
Town of Ridgefield
400 Main Street
Ridgefield, CT 06877

RE: **EM-SPRINT-118-130322** – Sprint Spectrum L.P. notice of intent to modify an existing telecommunications facility located at 76 East Ridge Avenue, Ridgefield, Connecticut.

Dear First Selectman Marconi:

The Connecticut Siting Council (Council) received a request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72, a copy of which has already been provided to you.

If you have any questions or comments regarding the proposal, please call me or inform the Council by April 5, 2013.

Thank you for your cooperation and consideration.

Very truly yours,

LRoberts

Linda Roberts
Executive Director

LR/cm

c: Betty Brosius, Town Planner, Town of Ridgefield

HPC Wireless Services
46 Mill Plain Rd.
Floor 2
Danbury, CT, 06811
P.: 203.797.1112

EM-SPRINT-118-130322

March 21, 2013

VIA OVERNIGHT COURIER

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

Re: Sprint Spectrum, L.P. – exempt modification
76 East Ridge Avenue, Ridgefield, Connecticut

Dear Ms. Roberts:

This letter and attachments are submitted on behalf of Sprint Spectrum, L.P. ("Sprint"). Sprint is undertaking modifications to certain existing sites in its Connecticut system in order to implement updated technology. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction that 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 First Selectman of the Town of Ridgefield.

Sprint plans to modify the existing wireless communications facility owned by the Town of Ridgefield and located at 76 East Ridge Avenue in the Town of Ridgefield (coordinates 41°-16'-50.84", 73°-29'-34.21"). Attached are a compound plan and elevation depicting the planned changes, and documentation of the structural sufficiency of the structure to accommodate the revised antenna configuration, subject to modifications detailed in the structural analysis report. Also included is a power density report reflecting the modification to Sprint's operations at the site.

The changes to the facility do not constitute a modification 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. 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. Sprint will replace six (6) existing CDMA antennas with three (3) dual-pole CDMA antennas and three (3) dual-band panel antennas at the existing center line of approximately 118'. Six (6) RRHs (remote radio heads) will be mounted to the pole

below the antennas. Sprint will also install three (3) hybriflex cables along the existing coaxial cable run. After an interim period of up to one year, the three CDMA antennas and the existing coaxial cable will be removed. The proposed modifications will not extend the height of the approximately 130' structure.

2. The proposed changes will not extend the site boundaries. Sprint will replace three (3) existing cabinets and add a fiber distribution box on unistruts on its concrete pad. These changes will have no effect on the site boundaries.

3. The proposed changes will not increase the noise level at the existing facility by six decibels or more. The incremental effect of the proposed changes will be negligible.

4. The changes to the facility will not increase the calculated "worst case" power density for the combined operations at the site to a level at or above the applicable standards for uncontrolled environments as calculated for a mixed frequency site. As indicated on the attached report prepared by EBI Consulting, Sprint's operations at the site will result in a power density of approximately 23.801%; the combined site operations will result in a total power density of approximately 50.381%.

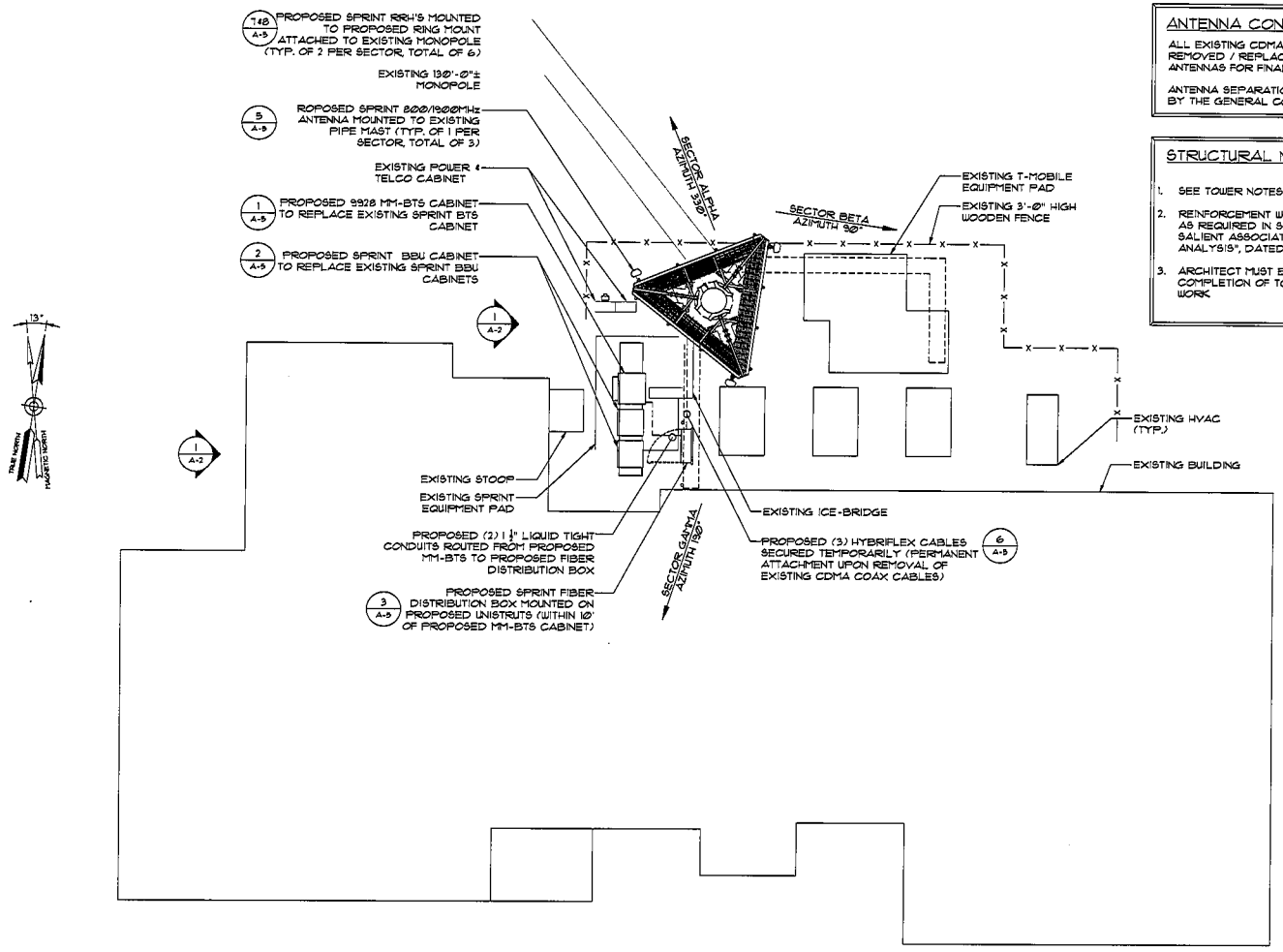
Please feel free to contact me by phone at (860) 798-7454 or by e-mail at jgaudet@hpcwireless.com with questions concerning this matter. Thank you for your consideration.

Respectfully yours,

Jennifer Young Gaudet

Jennifer Young Gaudet

cc: Honorable Rudolph Marconi, First Selectman, Town of Ridgefield
Town of Ridgefield (underlying property owner)



ANTENNA CONFIGURATION NOTE

ALL EXISTING CDMA ANTENNAS TO BE REMOVED / REPLACED WITH NETWORK VISION ANTENNAS FOR FINAL CONFIGURATION.

ANTENNA SEPARATION TO BE FIELD VERIFIED BY THE GENERAL CONTRACTOR.

STRUCTURAL NOTE

1. SEE TOWER NOTES ON DWG. GN-2
2. REINFORCEMENT WORK TO BE COMPLETED AS REQUIRED IN STRUCTURAL ANALYSIS BY SALIENT ASSOCIATES, TITLED "MONOPOLE ANALYSIS", DATED 11/02/2012
3. ARCHITECT MUST BE NOTIFIED UPON COMPLETION OF TOWER REINFORCEMENT WORK

1 COMPOUND PLAN

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

Sprint VISION
1 INTERNATIONAL BLVD, SUITE 800
MAHWAH, NJ 07495
P: 800-357-7641

Alcatel·Lucent
600-700 MOUNTAIN AVE
MURRAY HILL, NJ 07974

Salient ARCHITECTS, LLC
New Jersey Office:
8 East Palisade Avenue
Englewood, NJ 07631
P: 201-567-0032 - F: 201-567-9556

PAUL GIONFRIDDO P.E.
CT # 13666

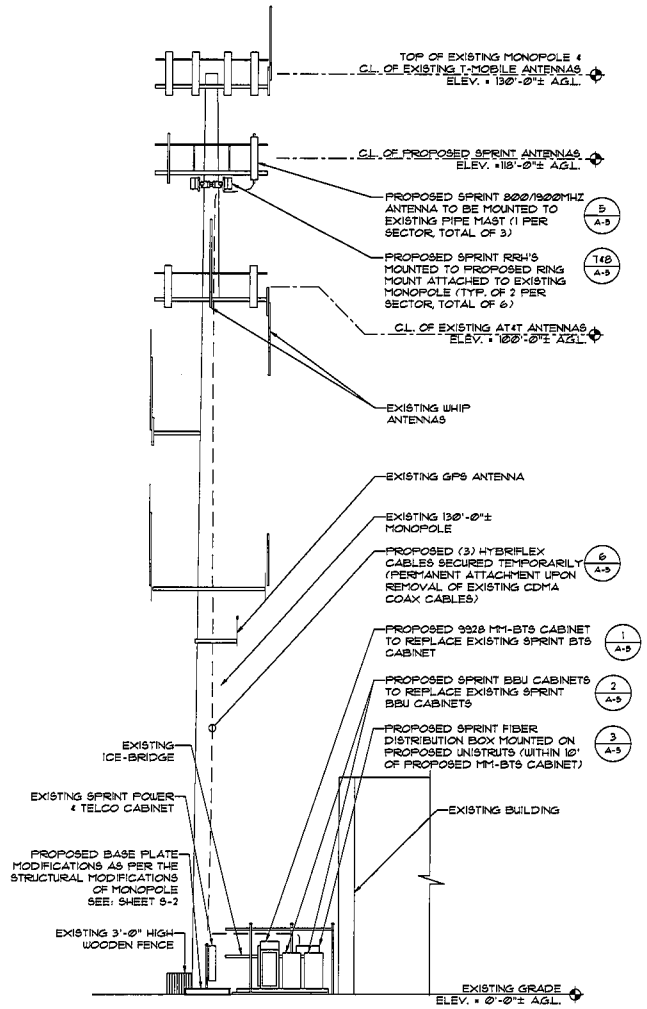
SUBMITTALS

NO	DATE	DESCRIPTION	BY
1	06/04/12	PRELIMINARY	PJF
2	06/21/12	REVISED PER COMMENTS	KS
3	11/13/12	ISSUED AS FINAL	AD

SITE NUMBER:
CT03XC370
SITE NAME:
EAST RIDGE STREET - RIDGEFIELD POLICE STATION
SITE ADDRESS:
76 EAST RIDGE ST
RIDGEFIELD, CT 06877

SHEET TITLE:
COMPOUND PLAN

SALIENT PROJ. NO: CT03XC370
DATE:
CHECKED BY: JHP
SHEET NO: A-1



1 WEST SIDE ELEVATION

SCALE = 1/8"=1'-0"

ANTENNA CONFIGURATION NOTE

ALL EXISTING CDMA ANTENNAS TO BE REMOVED / REPLACED WITH NETWORK VISION ANTENNAS FOR FINAL CONFIGURATION.

ANTENNA SEPARATION TO BE FIELD VERIFIED BY THE GENERAL CONTRACTOR.

STRUCTURAL NOTE

1. SEE TOWER NOTES ON DWG. GN-2
2. REINFORCEMENT WORK TO BE COMPLETED AS REQUIRED IN STRUCTURAL ANALYSIS BY SALIENT ASSOCIATES, TITLED "MONOPOLE ANALYSIS", DATED 11/02/2012
3. ARCHITECT MUST BE NOTIFIED UPON COMPLETION OF TOWER REINFORCEMENT WORK

Sprint VISION
1 INTERNATIONAL BLVD, SUITE 800
MAHWAH, NJ 07495
P: 800-357-7641

Alcatel·Lucent
600-700 MOUNTAIN AVE
MURRAY HILL, NJ 07974

Salient ARCHITECTS, LLC
New Jersey Office:
8 East Palisade Avenue
Englewood, NJ 07631
P: 201-567-0032 – F: 201-567-0556

PAUL GIONFRIDDO P.E.
CT # 13866

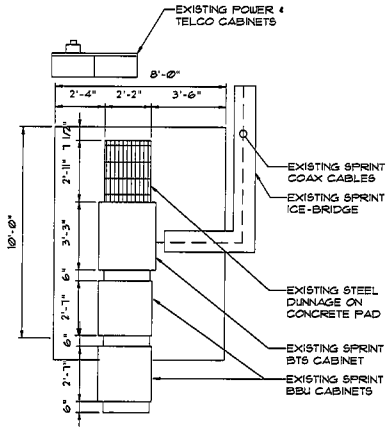
SUBMITTALS

NO	DATE	DESCRIPTION	BY
1	06/04/12	PRELIMINARY	PJP
2	06/21/12	REVISED PER COMMENTS	KS
3	11/13/12	ISSUED AS FINAL	AD

SITE NUMBER:
CT03XC370
SITE NAME:
EAST RIDGE STREET - RIDGEFIELD POLICE STATION
SITE ADDRESS:
76 EAST RIDGE ST
RIDGEFIELD, CT 06877

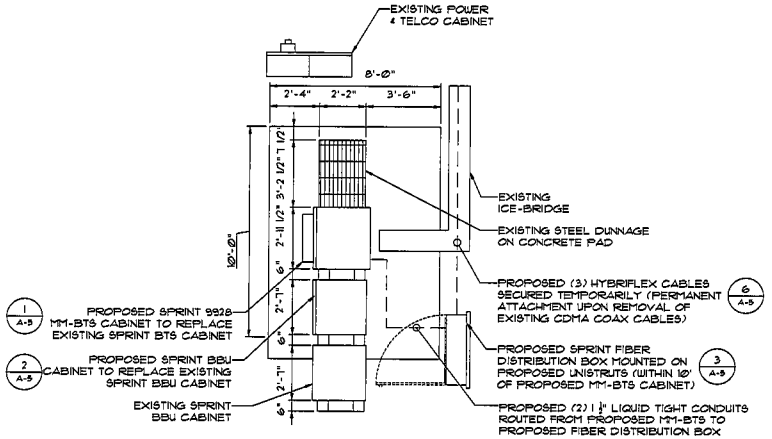
SHEET TITLE:
ELEVATION

SALIENT PROJ. NO: CT03XC370
DATE:
CHECKED BY: JHP
SHEET NO: A-2



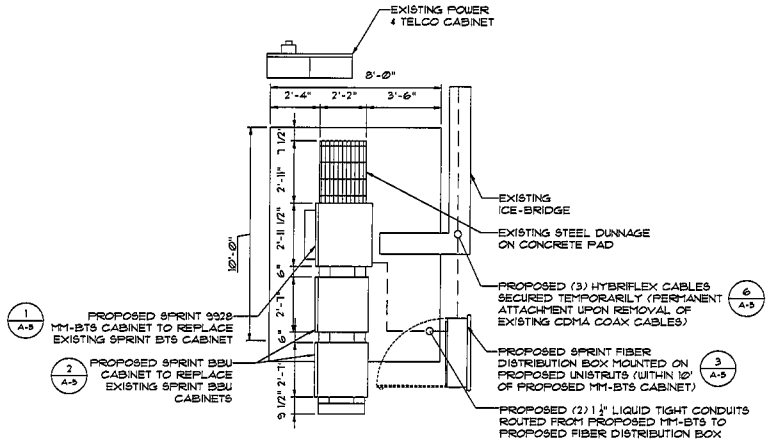
1 ENLARGED EXISTING EQUIPMENT CABINET LAYOUT

SCALE = 3/8"=1'-0"



2 ENLARGED INTERIM EQUIPMENT CABINET LAYOUT

SCALE = 3/8"=1'-0"



EQUIPMENT CABINET CONFIGURATION

EXISTING LAYOUT: 3 CABINETS
PROPOSED LAYOUT: 3 CABINETS

3 ENLARGED FINAL EQUIPMENT CABINET LAYOUT

SCALE = 3/8"=1'-0"

Sprint VISION
1 INTERNATIONAL BLVD, SUITE 800
MAHWAH, NJ 07495
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MURRAY HILL, NJ 07974

Salient ARCHITECTS, LLC
New Jersey Office:
6 East Palisade Avenue
Englewood, NJ 07631
P: 201-567-0032 - F: 201-567-9556

PAUL GIONFRIDDO P.E.
CT # 13566

SUBMITTALS

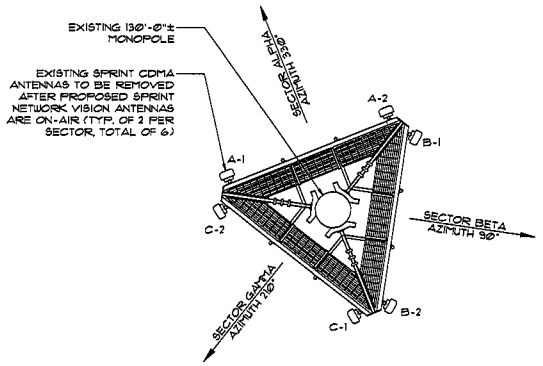
NO	DATE	DESCRIPTION	BY
1	06/04/12	PRELIMINARY	PJP
2	06/21/12	REVISED PER COMMENTS	KS
3	11/13/12	ISSUED AS FINAL	AD

SITE NUMBER: CT03XC370
SITE NAME: EAST RIDGE STREET - RIDGEFIELD POLICE STATION
SITE ADDRESS: 76 EAST RIDGE ST RIDGEFIELD, CT 06877

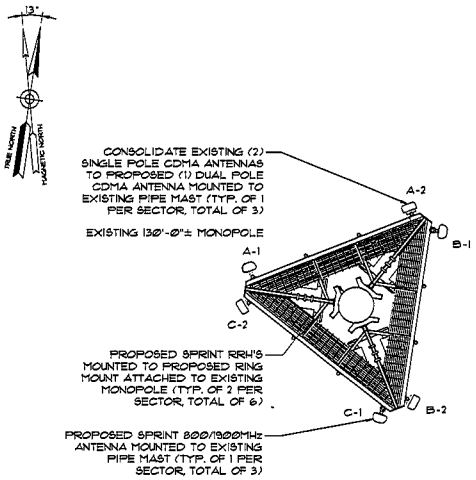
SHEET TITLE: ENLARGED EQUIPMENT CABINET LAYOUT

SALIENT PROJ. NO: CT03XC370
DATE:
CHECKED BY: JHP
SHEET NO: A-3

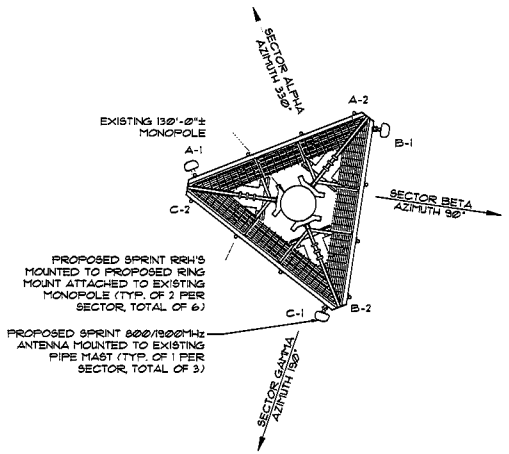
EXISTING ANTENNA PLAN



INTERIM ANTENNA PLAN



FINAL ANTENNA PLAN



1 ANTENNA SCENARIO

SCALE = N.T.S.

	POSITION	ANTENNA STATUS	FREQUENCY (MHZ)	ANTENNA MAKE	ANTENNA MODEL	AZIMUTHS EXISTING (FOR REFERENCE)	AZIMUTHS PROPOSED	MECHANICAL DOWN TILT	ELECTRICAL DOWN TILT	RAD CENTER (AGL)	*HYBRIFLEX CABLE LENGTH (FT.)	RRH MODEL	TOP COAX JUMPER SIZE (IN.)	*TOP COAX JUMPER LENGTH (FT.)	TOP COAX JUMPER MAKE	TOP COAX JUMPER MODEL	COMBINER	*COMBINER JUMPER LENGTH (FT.)	ANTENNA COLOR CODING
ALPHA	A-1	PROPOSED	800/1900	RFS	APXV9PP18-C-A20	330°	330°	0°	-1°	118'-0"±	140	(1) 800MHz	1/2	10	RFS	(1) LCF12-50J	--	--	TBD
								0°	-1°			(1) 1900MHz	1/2	10	RFS	(1) LCF12-50J	--	--	
BETA	B-1	PROPOSED	800/1900	RFS	APXV9PP18-C-A20	90°	90°	0°	-8°	118'-0"±	140	(1) 800MHz	1/2	10	RFS	(1) LCF12-50J	--	--	TBD
								0°	-2°			(1) 1900MHz	1/2	10	RFS	(1) LCF12-50J	--	--	
GAMMA	C-1	PROPOSED	800/1900	RFS	APXV9PP18-C-A20	210°	150°	0°	-1°	118'-0"±	140	(1) 800MHz	1/2	10	RFS	(1) LCF12-50J	--	--	TBD
								0°	0°			(1) 1900MHz	1/2	10	RFS	(1) LCF12-50J	--	--	

* CONTRACTOR TO FIELD VERIFY ALL CABLE/JUMPER LENGTHS AGAINST CURRENT B.O.M.

2 RF SYSTEM SCHEDULE

SCALE = N.T.S.

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P: 800-357-7641

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P: 201-567-0032 - F: 201-567-9556

PAUL GIONFRIDDO P.E.
CT # 13668

SUBMITTALS

NO	DATE	DESCRIPTION	BY
1	06/04/12	PRELIMINARY	PJP
2	06/21/12	REVISED PER COMMENTS	KB
3	11/13/12	ISSUED AS FINAL	AD

SITE NUMBER: CT03XC370
SITE NAME: EAST RIDGE STREET - RIDGEFIELD POLICE STATION
SITE ADDRESS: 76 EAST RIDGE ST RIDGEFIELD, CT 06877

SHEET TITLE: ANTENNA SCENARIO AND RF SYSTEM SCHEDULE

SALIENT PROJ. NO: CT03XC370
DATE:
CHECKED BY: JHP
SHEET NO: A-4

Salient Associates, LLC
8 East Palisade Avenue
Englewood, NJ 07631
Phone: 201-567-0032
Fax: 201-567-9556

October 16, 2012

Site No. CT03XC370
East Ridge Street – Ridgefield Police Station
Monopole Analysis
76 East Ridge Street
Ridgefield, CT 06877

Salient Associates, LLC has performed the tower analysis for the proposed Sprint antennas and equipment upgrade to be mounted on the existing monopole tower at the above referenced site. The proposed Sprint cabinets will be mounted on the existing concrete pad located on the ground at the above referenced site. The analysis was conducted using the IBC2003 w/ State Building Code 2005 Connecticut Supplement and TIA/EIA 222-F Structural Standards for Steel Antenna Towers and Antenna Supporting Structures. This analysis is based on the following load case:

Existing Tower Loading and Sprint Interim Equipment (Existing + Proposed)

One (1) RFS multimodal antenna APXVSPP18-C-A20 with (1) 1900MHz and (1) 800MHz RRH units per sector (Total of 3 antennas and 6 RRHs) will replace the existing CDMA antennas (Total of 6 antennas). The existing BTS equipment cabinets located on the existing concrete pad on the ground will be replaced with one (1) Alcatel-Lucent outdoor BTS equipment cabinet 9927 (1390 lbs.) and two (2) battery backup cabinets 60ECv2 (2830 lbs. each).

The structural analysis was performed without doing any tower mapping. We relied on the information found on Sprint Siterra (CENTEK Engineering, Inc. previous structural analysis dated 7/22/11) and the information collected during the site audit.

Based on the results of our attached structural analysis, the existing 130' monopole does meet the requirements of TIA/EIA 222-F standards for basic wind speed of 85 mph and a wind speed of 74 mph used in combination with 0.5" of radial ice after the existing base plate is reinforced (See modification drawings for details). The foundation reactions were compared to the previous analysis reactions and it was concluded that existing foundation is structurally capable of supporting the additional loads.

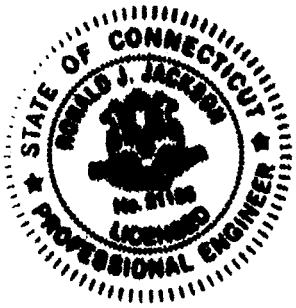
Foundation Reactions Comparison

Maximum Reactions @ Base	Previous Reactions from Valmont	Proposed Reactions	Result
Overturning Moment (in-kips)	27.094	24.017	Pass
Compression (kips)	22.68	24.39	Pass
Shear (kips)	24.31	22.77	Pass

Please contact this office for any questions regarding this structural analysis.

Sincerely,

Ronald J. Jackson, P.E., S.E.C.B.



November 14, 2012

CT03XC370
Monopole Analysis
76 East Ridge Street
Ridgefield, CT 06877

PROJECT: SPRINT NETWORK VISION
SUBJECT: STRUCTURAL ASSESSMENT (EVALUATION) LETTER
SITE ID NO.: CT03XC370 (1- Non - MLA TOWER SITE)

Salient Associates, LLC, is pleased to submit this Structural Assessment Letter for the subject site.

The applicable codes are as follows:

- IBC2003 w/ State Building Code 2005 Connecticut Supplement
- TIA/EIA 222-F Structural Standards for Steel Antenna Towers and Antenna Supporting Structures

The structural analysis/ PE certification completed by Salient Associates, LLC on behalf of ALU was inclusive of the tower platform, tower mast, tower arms, and all other aspects of the structure at the antenna level that will support the Sprint Network Vision Antennas and RRH's deployment along with the interim phase CDMA antennas.

Based on our evaluation, we have determined that, in general, structural designs to support the proposed Sprint Antennas and RRH's within or near the proposed location can be completed and components installed (see below as to whether or not structural upgrades were required) to the existing antenna mounts along with the interim phase CDMA antennas. Salient Associates reviewed the previous structural analysis report by (see below) and field photographs to determine this assessment. See the Salient Associates Construction Drawings dated (see below) for the proposed equipment and locations.

Site ID No.	Site Address	MLA Owner	Date of Previous MLA Structural Analysis Report	Date of Salient's Construction Drawings	Structural Upgrade Required: Yes/No
CT03XC370	76 East Ridge Street	N/A	N/A	11/13/12	No

This determination was based on the following limitations and assumptions:

1. Equipment and locations should not deviate from the construction drawings without written approval of the Engineer.

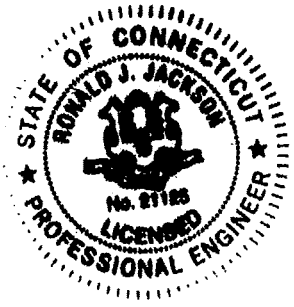
2. Salient Associates is not responsible for any modifications completed prior to and hereafter, for which Salient Associates was not directly involved.

3. All tower structural members and their connections are assumed to be in good condition and free from defects with no physical deterioration that will reduce any member's load carrying capacity.

4. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer requirements.

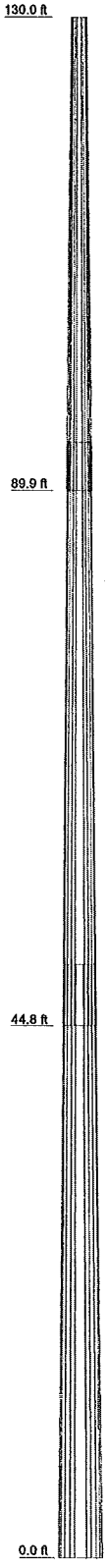
Please contact this office should you have any questions regarding this matter.

Very Truly Yours,



Ronald J. Jackson, P.E., S.E.C.B.
M: (774) 266-5050

Section	3	2	1
Length (ft)	50.00	49.17	40.08
Number of Sides	12	12	12
Thickness (in)	0.3750	0.3130	0.2190
Socket Length (ft)		5.17	4.08
Top Dia (in)	32.7968	23.7442	16.2600
Bot Dia (in)	43.8000	34.5600	25.0800
Grade		A572-65	
Weight (lb) 14621.1	7791.1	4863.1	1966.9



DESIGNED APPURTENANCE LOADING

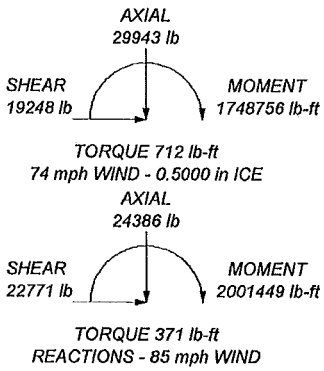
TYPE	ELEVATION	TYPE	ELEVATION
BXA-80080/4CF (VZW)	130	PD1142-1	100
MGD3-800TX (VZW)	130	440-3	100
APX75-866512-CT0 (VZW)	130	PD1142-1	100
APX75-866512-CT0 (VZW)	130	RR90-17-02DP (T-Mobile)	100
BXA-80080/4CF (VZW)	130	RR90-17-02DP (T-Mobile)	100
MGD3-800TX (VZW)	130	RR90-17-02DP (T-Mobile)	100
APX75-866512-CT0 (VZW)	130	APX16DWV-16DWV-A20 (T-Mobile)	100
APX75-866512-CT0 (VZW)	130	APX16DWV-16DWV-A20 (T-Mobile)	100
BXA-80080/4CF (VZW)	130	APX16DWV-16DWV-A20 (T-Mobile)	100
MGD3-800TX (VZW)	130	ATMAA1412D-1A20 Twin TMA (T-Mobile)	100
APX75-866512-CT0 (VZW)	130		
APX75-866512-CT0 (VZW)	130	ATMAA1412D-1A20 Twin TMA (T-Mobile)	100
440-3	130		
PiROD 13' Platform w/handrails (Monopole) (VZW)	127	ATMAA1412D-1A20 Twin TMA (T-Mobile)	100
RFS APXVSPP18-C 800/1900 MHz (Sprint NV)	118	ATMAWSD-1A20 TMA (T-Mobile)	100
		ATMAWSD-1A20 TMA (T-Mobile)	100
RFS APXVSPP18-C 800/1900 MHz (Sprint NV)	118	ATMAWSD-1A20 TMA (T-Mobile)	100
RFS APXVSPP18-C 800/1900 MHz (Sprint NV)	118	PiROD 13' Platform w/handrails (Monopole) (T-Mobile)	96
		3' Side Mount Standoff (1)	86
1900 MHz RRH (Sprint NV)	118	PD1142-1	86
1900 MHz RRH (Sprint NV)	118	PD1121-6	86
1900 MHz RRH (Sprint NV)	118	PD1167	58
800 MHz RRH (Sprint NV)	118	3' Side Mount Standoff (1)	58
800 MHz RRH (Sprint NV)	118	PD1142-1	58
800 MHz RRH (Sprint NV)	118	3' Side Mount Standoff (1)	58
DB948F85T2E-M (Sprint CDMA)	118	GPS (VZW)	50
DB948F85T2E-M (Sprint CDMA)	118	3' Side Mount Standoff (1)	50
DB980H90E-M (Sprint CDMA)	118		
PiROD 13' Platform w/handrails (Monopole) (Sprint)	114		

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 60 mph wind.
5. Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
6. TOWER RATING: 87.5%



Salient Associates LLC
15 New England Executive Park
Burlington, MA 01803
Phone: (781) 791-5019
FAX: (781) 791-5018
Architecture Engineering

Job: CT03XC370 (Ridgefield Police Station); Ridgefield, C			
Project: 130' monopole			
Client: Sprint/ Alcatel-Lucent	Drawn by: sabed	App'd:	
Code: TIA/EIA-222-F	Date: 11/02/12	Scale: NTS	
Path:		Dwg No. E-1	

SALIENT ASSOCIATES	Job	Page
Salient Associates LLC 15 New England Executive Park Burlington, MA 01803 Phone: (781) 791-5019 FAX: (781) 791-5018	CT03XC370 (Ridgefield Police Station); Ridgefield, CT	1 of 10
	Project 130' monopole	**Date** 18:14:15 11/02/12
	Client Sprint/ Alcatel-Lucent	**Designed by** sabed

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 0.5000 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 60 mph.
Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards..
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*	*Section Length*	*Splice Length*	*Number of Sides*	*Top Diameter*	*Bottom Diameter*	*Wall Thickness*	*Bend Radius*	*Pole Grade*
	ft	*ft*	*ft*		*in*	*in*	*in*	*in*	
L1	130.00-89.92	40.08	4.08	12	16.2600	25.0800	0.2190	0.8760	A572-65 (65 ksi)
L2	89.92-44.83	49.17	5.17	12	23.7442	34.5600	0.3130	1.2520	A572-65 (65 ksi)
L3	44.83-0.00	50.00		12	32.7968	43.8000	0.3750	1.5000	A572-65 (65 ksi)

SALIENT ASSOCIATES

Salient Associates LLC
15 New England Executive Park
Burlington, MA 01803
Phone: (781) 791-5019
FAX: (781) 791-5018

Job	Page
CT03XC370 (Ridgefield Police Station); Ridgefield, CT	2 of 10
Project	**Date**
130' monopole	18:14:15 11/02/12
Client	**Designed by**
Sprint/ Alcatel-Lucent	sabed

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	16.8336	11.3118	371.5183	5.7427	8.4227	44.1093	752.7969	5.5673	3.7708	17.218
	25.9647	17.5315	1383.0622	8.9002	12.9914	106.4595	2802.4590	8.6285	6.1345	28.012
L2	25.5109	23.6153	1654.8830	8.3884	12.2995	134.5491	3353.2417	11.6227	5.5246	17.65
	35.7791	34.5162	5167.1820	12.2604	17.9021	288.6358	10470.1117	16.9878	8.4232	26.911
L3	35.1316	39.1493	5252.7050	11.6070	16.9887	309.1877	10643.4044	19.2681	7.7845	20.759
	45.3451	52.4357	12620.9652	15.5461	22.6884	556.2739	25573.4973	25.8073	10.7334	28.622

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	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
L1 130.00-89.92				1	1	1		
L2 89.92-44.83				1	1	1		
L3 44.83-0.00				1	1	1		

Monopole Base Plate Data

Base Plate Data	
Base plate is square	√
Base plate is grouted	√
Anchor bolt grade	A615
Anchor bolt size	2.2500 in
Number of bolts	12
Embedment length	102.0000 in
f'_c	4 ksi
Grout space	4.5000 in
Base plate grade	A607-60
Base plate thickness	2.5000 in
Bolt circle diameter	49.7500 in
Outer diameter	56.0800 in
Inner diameter	24.0000 in
Corner clipped	6.2500 in
Base plate type	Stiffened Plate
Bolts per stiffener	1
Stiffener thickness	0.5000 in
Stiffener height	12.0000 in

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight klf
7/8 (VZW)	A	No	Inside Pole	130.00 - 10.00	12	No Ice	0.00	0.00
						1/2" Ice	0.00	0.00
1/2 (VZW)	A	No	Inside Pole	50.00 - 10.00	1	No Ice	0.00	0.00
						1/2" Ice	0.00	0.00
LCF158-50J (1 5/8 FOAM) (Sprint)	C	No	Inside Pole	120.00 - 10.00	3	No Ice	0.00	0.00
						1/2" Ice	0.00	0.00

SALIENT ASSOCIATES	Job	Page
Salient Associates LLC 15 New England Executive Park Burlington, MA 01803 Phone: (781) 791-5019 FAX: (781) 791-5018	CT03XC370 (Ridgefield Police Station); Ridgefield, CT	3 of 10
	Project 130' monopole	**Date** 18:14:15 11/02/12
	Client Sprint/ Alcatel-Lucent	**Designed by** sabed

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight klf
HB114-1-08U4-M5F (1 1/4") (Sprint NV)	C	No	Inside Pole	120.00 - 10.00	3	No Ice	0.00	0.00
						1/2" Ice	0.00	0.00
LCF78-50J (7/8 FOAM) (T-Mobile)	C	No	Inside Pole	100.00 - 10.00	24	No Ice	0.00	0.00
						1/2" Ice	0.00	0.00
1/2	A	No	Inside Pole	50.00 - 28.00	2	No Ice	0.00	0.00
						1/2" Ice	0.00	0.00
1/2	A	No	Inside Pole	86.00 - 28.00	2	No Ice	0.00	0.00
						1/2" Ice	0.00	0.00
1/2	A	No	Inside Pole	130.00 - 28.00	3	No Ice	0.00	0.00
						1/2" Ice	0.00	0.00
1/2	A	No	Inside Pole	130.00 - 28.00	1	No Ice	0.00	0.00
						1/2" Ice	0.00	0.00

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
L1	130.00-89.92	A	0.000	0.000	0.000	0.000	299.80
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	328.55
L2	89.92-44.83	A	0.000	0.000	0.000	0.000	361.74
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	873.84
L3	44.83-0.00	A	0.000	0.000	0.000	0.000	268.07
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	675.01

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_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
L1	130.00-89.92	A	0.500	0.000	0.000	0.000	0.000	299.80
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	328.55
L2	89.92-44.83	A	0.500	0.000	0.000	0.000	0.000	361.74
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	873.84
L3	44.83-0.00	A	0.500	0.000	0.000	0.000	0.000	268.07
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	675.01

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	130.00-89.92	0.0000	0.0000	0.0000	0.0000
L2	89.92-44.83	0.0000	0.0000	0.0000	0.0000

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
L3	44.83-0.00	0.0000	0.0000	0.0000	0.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
PiROD 13' Platform w/handrails (Monopole) (Sprint)	B	None			0.0000	114.00	No Ice 1/2" Ice	31.30 40.20	31.30 40.20	1822.00 2452.00
RFS APXVSPP18-C 800/1900 MHz (Sprint NV)	C	From Face	3.00 0.00 0.00		0.0000	118.00	No Ice 1/2" Ice	8.50 9.15	6.95 8.13	90.05 155.24
RFS APXVSPP18-C 800/1900 MHz (Sprint NV)	B	From Face	3.00 0.00 0.00		0.0000	118.00	No Ice 1/2" Ice	8.50 9.15	6.95 8.13	90.05 155.24
RFS APXVSPP18-C 800/1900 MHz (Sprint NV)	A	From Face	3.00 0.00 0.00		0.0000	118.00	No Ice 1/2" Ice	8.50 9.15	6.95 8.13	90.05 155.24
1900 MHz RRH (Sprint NV)	C	From Face	0.50 0.00 0.00		0.0000	118.00	No Ice 1/2" Ice	2.89 3.14	2.83 3.07	59.50 84.59
1900 MHz RRH (Sprint NV)	B	From Face	0.50 0.00 0.00		0.0000	118.00	No Ice 1/2" Ice	2.89 3.14	2.83 3.07	59.50 84.59
1900 MHz RRH (Sprint NV)	A	From Face	0.50 0.00 0.00		0.0000	118.00	No Ice 1/2" Ice	2.89 3.14	2.83 3.07	59.50 84.59
800 MHz RRH (Sprint NV)	C	From Face	0.50 0.00 0.00		0.0000	118.00	No Ice 1/2" Ice	2.40 2.61	2.25 2.46	64.00 86.12
800 MHz RRH (Sprint NV)	B	From Face	0.50 0.00 0.00		0.0000	118.00	No Ice 1/2" Ice	2.40 2.61	2.25 2.46	64.00 86.12
800 MHz RRH (Sprint NV)	A	From Face	0.50 0.00 0.00		0.0000	118.00	No Ice 1/2" Ice	2.40 2.61	2.25 2.46	64.00 86.12
DB948F85T2E-M (Sprint CDMA)	A	From Face	3.00 0.00 0.00		0.0000	118.00	No Ice 1/2" Ice	1.92 2.22	3.26 3.62	8.50 27.57
DB948F85T2E-M (Sprint CDMA)	B	From Face	3.00 0.00 0.00		0.0000	118.00	No Ice 1/2" Ice	1.92 2.22	3.26 3.62	8.50 27.57
DB980H90E-M (Sprint CDMA)	C	From Face	3.00 0.00 0.00		0.0000	118.00	No Ice 1/2" Ice	3.80 4.18	2.19 2.56	8.50 28.62
PiROD 13' Platform w/handrails (Monopole) (T-Mobile)	C	None			0.0000	96.00	No Ice 1/2" Ice	31.30 40.20	31.30 40.20	1822.00 2452.00
BXA-80080/4CF (VZW)	A	From Face	3.00 6.00 0.00		0.0000	130.00	No Ice 1/2" Ice	5.25 5.64	2.84 3.15	14.30 45.30

SALIENT ASSOCIATES	Job: CT03XC370 (Ridgefield Police Station); Ridgefield, CT	Page: 5 of 10
Salient Associates LLC 15 New England Executive Park Burlington, MA 01803 Phone: (781) 791-5019 FAX: (781) 791-5018	Project: 130' monopole	Date: 18:14:15 11/02/12
	Client: Sprint/ Alcatel-Lucent	Designed by: sabed

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
MGD3-800TX	A	From Face	3.00	0.0000	130.00	No Ice	3.25	3.51	41.06
(VZW)			4.00			1/2" Ice	3.59	4.12	73.76
			0.00						
APX75-866512-CT0	A	From Face	3.00	0.0000	130.00	No Ice	6.19	2.63	19.80
(VZW)			-4.00			1/2" Ice	6.61	2.95	52.60
			0.00						
APX75-866512-CT0	A	From Face	3.00	0.0000	130.00	No Ice	6.19	2.63	19.80
(VZW)			-6.00			1/2" Ice	6.61	2.95	52.60
			0.00						
BXA-80080/4CF	B	From Face	3.00	0.0000	130.00	No Ice	5.25	2.84	14.30
(VZW)			6.00			1/2" Ice	5.64	3.15	45.30
			0.00						
MGD3-800TX	B	From Face	3.00	0.0000	130.00	No Ice	3.25	3.51	41.06
(VZW)			4.00			1/2" Ice	3.59	4.12	73.76
			0.00						
APX75-866512-CT0	B	From Face	3.00	0.0000	130.00	No Ice	6.19	2.63	19.80
(VZW)			-4.00			1/2" Ice	6.61	2.95	52.60
			0.00						
APX75-866512-CT0	B	From Face	3.00	0.0000	130.00	No Ice	6.19	2.63	19.80
(VZW)			-6.00			1/2" Ice	6.61	2.95	52.60
			0.00						
BXA-80080/4CF	C	From Face	3.00	0.0000	130.00	No Ice	5.25	2.84	14.30
(VZW)			6.00			1/2" Ice	5.64	3.15	45.30
			0.00						
MGD3-800TX	C	From Face	3.00	0.0000	130.00	No Ice	3.25	3.51	41.06
(VZW)			4.00			1/2" Ice	3.59	4.12	73.76
			0.00						
APX75-866512-CT0	C	From Face	3.00	0.0000	130.00	No Ice	6.19	2.63	19.80
(VZW)			-4.00			1/2" Ice	6.61	2.95	52.60
			0.00						
APX75-866512-CT0	C	From Face	3.00	0.0000	130.00	No Ice	6.19	2.63	19.80
(VZW)			-6.00			1/2" Ice	6.61	2.95	52.60
			0.00						
PiROD 13' Platform	C	From Face	0.00	0.0000	127.00	No Ice	31.30	31.30	1822.00
w/handrails (Monopole)			0.00			1/2" Ice	40.20	40.20	2452.00
(VZW)			0.00						
PD1142-1	B	From Face	3.00	0.0000	100.00	No Ice	1.32	1.32	10.00
			0.00			1/2" Ice	3.21	3.21	23.85
			5.00						
440-3	C	From Face	3.00	0.0000	100.00	No Ice	1.48	1.48	20.00
			0.00			1/2" Ice	2.66	2.66	26.00
			5.00						
440-3	B	From Face	3.00	0.0000	130.00	No Ice	1.48	1.48	20.00
			0.00			1/2" Ice	2.66	2.66	26.00
			5.00						
PD1142-1	A	From Face	3.00	0.0000	100.00	No Ice	1.32	1.32	10.00
			0.00			1/2" Ice	3.21	3.21	23.85
			5.00						
PD1121-6	A	From Face	3.00	0.0000	86.00	No Ice	0.23	0.23	3.00
			0.00			1/2" Ice	0.41	0.41	3.90
			0.00						
PD1142-1	A	From Face	3.00	0.0000	86.00	No Ice	1.32	1.32	10.00
			0.00			1/2" Ice	3.21	3.21	23.85
			5.00						
3' Side Mount Standoff (1)	A	From Face	0.00	0.0000	86.00	No Ice	2.45	2.45	49.00
			0.00			1/2" Ice	3.89	3.89	75.00
			0.00						

SALIENT ASSOCIATES	Job	Page
Salient Associates LLC 15 New England Executive Park Burlington, MA 01803 Phone: (781) 791-5019 FAX: (781) 791-5018	CT03XC370 (Ridgefield Police Station); Ridgefield, CT	6 of 10
	Project 130' monopole	**Date** 18:14:15 11/02/12
	Client Sprint/ Alcatel-Lucent	**Designed by** sabed

Description	*Face or Leg*	*Offset Type*	*Offsets: Horz Lateral Vert* *ft* *ft* *ft*	*Azimuth Adjustment* °	*Placement* *ft*		C_AA_A *Front* ft^2	C_AA_A *Side* ft^2	*Weight* *lb*
PD1142-1	A	From Face	3.00 0.00 7.50	0.0000	58.00	No Ice 1/2" Ice	1.32 3.21	1.32 3.21	10.00 23.85
3' Side Mount Standoff (1)	A	From Face	0.00 0.00 0.00	0.0000	58.00	No Ice 1/2" Ice	2.45 3.89	2.45 3.89	49.00 75.00
PD1167	B	From Face	3.00 0.00 4.00	0.0000	58.00	No Ice 1/2" Ice	1.06 2.26	1.06 2.26	8.00 18.18
3' Side Mount Standoff (1)	B	From Face	0.00 0.00 0.00	0.0000	58.00	No Ice 1/2" Ice	2.45 3.89	2.45 3.89	49.00 75.00
GPS (VZW)	A	From Face	3.00 0.00 0.00	0.0000	50.00	No Ice 1/2" Ice	1.00 1.50	1.00 1.50	10.00 15.00
3' Side Mount Standoff (1)	A	From Face	0.00 0.00 0.00	0.0000	50.00	No Ice 1/2" Ice	2.45 3.89	2.45 3.89	49.00 75.00
RR90-17-02DP (T-Mobile)	A	From Face	3.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice	4.36 4.77	1.97 2.31	18.00 40.42
RR90-17-02DP (T-Mobile)	B	From Face	3.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice	4.36 4.77	1.97 2.31	18.00 40.42
RR90-17-02DP (T-Mobile)	C	From Face	3.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice	4.36 4.77	1.97 2.31	18.00 40.42
APX16DWV-16DWV-A20 (T-Mobile)	A	From Face	3.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice	7.52 7.99	2.34 2.70	41.80 76.75
APX16DWV-16DWV-A20 (T-Mobile)	B	From Face	3.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice	7.52 7.99	2.34 2.70	41.80 76.75
APX16DWV-16DWV-A20 (T-Mobile)	C	From Face	3.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice	7.52 7.99	2.34 2.70	41.80 76.75
ATMAA1412D-1A20 Twin TMA (T-Mobile)	A	From Face	2.50 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice	1.17 1.31	0.47 0.57	13.00 20.62
ATMAA1412D-1A20 Twin TMA (T-Mobile)	B	From Face	2.50 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice	1.17 1.31	0.47 0.57	13.00 20.62
ATMAA1412D-1A20 Twin TMA (T-Mobile)	C	From Face	2.50 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice	1.17 1.31	0.47 0.57	13.00 20.62
ATMAWSD-1A20 TMA (T-Mobile)	A	From Face	2.50 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice	0.85 0.98	0.27 0.36	8.40 13.69
ATMAWSD-1A20 TMA (T-Mobile)	B	From Face	2.50 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice	0.85 0.98	0.27 0.36	8.40 13.69
ATMAWSD-1A20 TMA (T-Mobile)	C	From Face	2.50 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice	0.85 0.98	0.27 0.36	8.40 13.69

SALIENT ASSOCIATES

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Job	Page
CT03XC370 (Ridgefield Police Station); Ridgefield, CT	7 of 10
Project	**Date**
130' monopole	18:14:15 11/02/12
Client	**Designed by**
Sprint/ Alcatel-Lucent	sabed

Load Combinations

Comb. No.	*Description*
1	Dead Only
2	Dead+Wind 0 deg - No Ice
3	Dead+Wind 30 deg - No Ice
4	Dead+Wind 60 deg - No Ice
5	Dead+Wind 90 deg - No Ice
6	Dead+Wind 120 deg - No Ice
7	Dead+Wind 150 deg - No Ice
8	Dead+Wind 180 deg - No Ice
9	Dead+Wind 210 deg - No Ice
10	Dead+Wind 240 deg - No Ice
11	Dead+Wind 270 deg - No Ice
12	Dead+Wind 300 deg - No Ice
13	Dead+Wind 330 deg - No Ice
14	Dead+Ice+Temp
15	Dead+Wind 0 deg+Ice+Temp
16	Dead+Wind 30 deg+Ice+Temp
17	Dead+Wind 60 deg+Ice+Temp
18	Dead+Wind 90 deg+Ice+Temp
19	Dead+Wind 120 deg+Ice+Temp
20	Dead+Wind 150 deg+Ice+Temp
21	Dead+Wind 180 deg+Ice+Temp
22	Dead+Wind 210 deg+Ice+Temp
23	Dead+Wind 240 deg+Ice+Temp
24	Dead+Wind 270 deg+Ice+Temp
25	Dead+Wind 300 deg+Ice+Temp
26	Dead+Wind 330 deg+Ice+Temp
27	Dead+Wind 0 deg - Service
28	Dead+Wind 30 deg - Service
29	Dead+Wind 60 deg - Service
30	Dead+Wind 90 deg - Service
31	Dead+Wind 120 deg - Service
32	Dead+Wind 150 deg - Service
33	Dead+Wind 180 deg - Service
34	Dead+Wind 210 deg - Service
35	Dead+Wind 240 deg - Service
36	Dead+Wind 270 deg - Service
37	Dead+Wind 300 deg - Service
38	Dead+Wind 330 deg - Service

Maximum Tower Deflections - Service Wind

Section No.	*Elevation*	*Horz. Deflection*	*Gov. Load Comb.*	*Tilt*	*Twist*
	ft	*in*		°	°
L1	130 - 89.92	44.351	33	3.0584	0.0064
L2	94 - 44.83	23.015	33	2.4001	0.0013
L3	50 - 0	6.242	33	1.1683	0.0004

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
130.00	BXA-80080/4CF	33	44.351	3.0584	0.0064	14291
127.00	PiROD 13' Platform w/handrails (Monopole)	33	42.464	3.0113	0.0059	14291
118.00	RFS APXVSPP18-C 800/1900 MHz	33	36.850	2.8666	0.0044	5954
114.00	PiROD 13' Platform w/handrails (Monopole)	33	34.400	2.7991	0.0038	4465
100.00	PD1142-1	33	26.237	2.5336	0.0019	2380
96.00	PiROD 13' Platform w/handrails (Monopole)	33	24.066	2.4462	0.0015	2109
86.00	PD1121-6	33	19.052	2.1998	0.0009	1941
58.00	PD1142-1	33	8.357	1.3951	0.0005	1810
50.00	GPS	33	6.242	1.1683	0.0004	1809

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	130 - 89.92	88.586	8	6.0982	0.0129
L2	94 - 44.83	46.037	8	4.7990	0.0025
L3	50 - 0	12.498	8	2.3392	0.0015

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
130.00	BXA-80080/4CF	8	88.586	6.0982	0.0129	7308
127.00	PiROD 13' Platform w/handrails (Monopole)	8	84.826	6.0057	0.0118	7308
118.00	RFS APXVSPP18-C 800/1900 MHz	8	73.634	5.7215	0.0088	3043
114.00	PiROD 13' Platform w/handrails (Monopole)	8	68.750	5.5886	0.0075	2281
100.00	PD1142-1	8	52.468	5.0639	0.0037	1214
96.00	PiROD 13' Platform w/handrails (Monopole)	8	48.136	4.8906	0.0030	1075
86.00	PD1121-6	8	38.122	4.4003	0.0019	985
58.00	PD1142-1	8	16.733	2.7930	0.0013	908
50.00	GPS	8	12.498	2.3392	0.0015	906

Base Plate Design Data

Plate Thickness	Number of Anchor Bolts	Anchor Bolt Size	Actual Allowable Ratio Bolt Tension	Actual Allowable Ratio Concrete Stress	Actual Allowable Ratio Plate Stress	Actual Allowable Ratio Stiffener Stress	Controlling Condition	Critical Ratio
in		in	lb	ksi	ksi	ksi		
2.5000	12	2.2500	117851.00	1.941	35.478	12.095	Bolt T	1.00
			118089.52	2.800	45.000	45.000		✔
			1.00	0.69	0.79	0.27		

Compression Checks

Pole Design Data

Section No.	Elevation	Size	L	L_u	Kl/r	F_a	A	Actual P	Allow. P_a	Ratio $\frac{P}{P_a}$
	ft		ft	ft		ksi	in^2	lb	lb	
L1	130 - 89.92 (1)	TP25.08x16.26x0.219	40.08	130.00	181.8	4.516	16.8983	-7895.00	76313.30	0.103
L2	89.92 - 44.83 (2)	TP34.56x23.7442x0.313	49.17	130.00	131.6	8.621	33.3700	-14109.20	287698.00	0.049
L3	44.83 - 0 (3)	TP43.8x32.7968x0.375	50.00	130.00	100.3	14.830	52.4357	-24364.40	777633.00	0.031

Pole Bending Design Data

Section No.	Elevation	Size	Actual M_x	Actual f_{bx}	Allow. F_{bx}	Ratio $\frac{f_{bx}}{F_{bx}}$	Actual M_y	Actual f_{by}	Allow. F_{by}	Ratio $\frac{f_{by}}{F_{by}}$
	ft		lb-ft	ksi	ksi		lb-ft	ksi	ksi	
L1	130 - 89.92 (1)	TP25.08x16.26x0.219	286469.17	-34.767	39.000	0.891	0.00	0.000	39.000	0.000
L2	89.92 - 44.83 (2)	TP34.56x23.7442x0.313	979183.33	-43.567	39.000	1.117	0.00	0.000	39.000	0.000
L3	44.83 - 0 (3)	TP43.8x32.7968x0.375	2001450.00	-43.176	39.000	1.107	0.00	0.000	39.000	0.000

Pole Interaction Design Data

Section No.	Elevation	Size	Ratio $\frac{P}{P_a}$	Ratio $\frac{f_{bx}}{F_{bx}}$	Ratio $\frac{f_{by}}{F_{by}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
	ft							
L1	130 - 89.92 (1)	TP25.08x16.26x0.219	0.103	0.891	0.000	0.995 ✔	1.333	H1-3 ✔
L2	89.92 - 44.83 (2)	TP34.56x23.7442x0.313	0.049	1.117	0.000	1.166 ✔	1.333	H1-3 ✔
L3	44.83 - 0 (3)	TP43.8x32.7968x0.375	0.031	1.107	0.000	1.138 ✔	1.333	H1-3 ✔

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Salient Associates LLC 15 New England Executive Park Burlington, MA 01803 Phone: (781) 791-5019 FAX: (781) 791-5018	CT03XC370 (Ridgefield Police Station); Ridgefield, CT	10 of 10
	Project 130' monopole	**Date** 18:14:15 11/02/12
	Client Sprint/ Alcatel-Lucent	**Designed by** sabed

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	$SF*P_{allow}$ lb	% Capacity	Pass Fail
L1	130 - 89.92	Pole	TP25.08x16.26x0.219	1	-7895.00	101725.62	74.6	Pass
L2	89.92 - 44.83	Pole	TP34.56x23.7442x0.313	2	-14109.20	383501.42	87.5	Pass
L3	44.83 - 0	Pole	TP43.8x32.7968x0.375	3	-24364.40	1036584.75	85.4	Pass
							Summary	
						Pole (L2)	87.5	Pass
						Base Plate	74.9	Pass
						RATING =	**87.5**	**Pass**

Program Version 5.4.2.0 - 6/17/2010 File:C:/Users/user/Documents/Projects/Alcatel-Lucent CT/CT03XC370 Monopole/Structural Calculations/Computer Files/CT03XC370 130' Monopole Analysis.eri

EBI Consulting
environmental | engineering | due diligence

RADIO FREQUENCY EMISSIONS ANALYSIS REPORT
EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

Sprint Existing Facility

Site ID: CT03XC370

Ridgefield Police Station
76 East Ridge Street
Ridgefield, CT 06877

March 5, 2013

21 B Street · Burlington, MA 01803 · Tel: (781) 273.2500 · Fax: (781) 273.3311

EBI Consulting
environmental | engineering | due diligence

March 5, 2013

Sprint
Attn: RF Engineering Manager
1 International Boulevard, Suite 800
Mahwah, NJ 07495

Re: Emissions Values for Site: **CT03XC370 – Ridgefield Police Station**

EBI Consulting was directed to analyze the proposed upgrades to the existing Sprint facility located at 76 East Ridge Street, Ridgefield, CT, for the purpose of determining whether the emissions from the proposed Sprint equipment upgrades on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm2). The number of μW/cm2 calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limit for the cellular band is approximately 567 $\mu W/cm^2$, and the general population exposure limit for the PCS band is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed upgrades to the existing Sprint Wireless antenna facility located at 76 East Ridge Street, Ridgefield, CT, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. All calculations were performed assuming the main lobe of the antenna was focused at the base of the tower to present a worst case scenario. Actual values seen from this site will be dramatically less than those shown in this report. For this report the sample point is the top of a 6 foot person standing at the base of the tower.

For all calculations, all emissions were calculated using the following assumptions:

1) 3 CDMA Carriers (1900 MHz) were considered for each sector of the proposed installation.
2) 1 CDMA Carrier (850 MHz) was considered for each sector of the proposed installation
3) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
4) For the following calculations the sample point was the top of a six foot person standing at the base of the tower. The actual gain in this direction was used per the manufactures supplied specifications.
5) The antenna used in this modeling is the APXVSPP18-C-A20. This is based on feedback from the carrier with regards to anticipated antenna selection. This antenna has a 15.9 dBd gain value at its main lobe at 1900 MHz and 13.4 dBd at its main lobe for 850 MHz. All calculations were performed assuming the main lobe of the antenna was focused at the base of the tower to present a worst case scenario.

6) The antenna mounting height centerline of the proposed antennas is **118 feet** above ground level (AGL)
7) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

All calculation were done with respect to uncontrolled / general public threshold limits

Site ID	CT03XC370 - Ridgefield Police Station
Site Addresss	76 East Ridge Street, Ridgefield, CT, 06877
Site Type	Monopole

Sector 1

Antenna Number	Antenna Make	Antenna Model	Radio Type	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	RFS	APXVSPP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	3	60	15.9	118	112	1/2 "	0.5	0	2080.4211	59.62401	5.96240%
1a	RFS	APXVSPP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	118	112	1/2 "	0.5	0	389.96892	11.17635	1.97114%
														Sector total Power Density Value:		7.934%	

Sector 2

Antenna Number	Antenna Make	Antenna Model	Radio Type	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
2a	RFS	APXVSPP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	3	60	15.9	118	112	1/2 "	0.5	0	2080.4211	59.62401	5.96240%
2a	RFS	APXVSPP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	118	112	1/2 "	0.5	0	389.96892	11.17635	1.97114%
														Sector total Power Density Value:		7.934%	

Sector 3

Antenna Number	Antenna Make	Antenna Model	Radio Type	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
3a	RFS	APXVSPP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	3	60	15.9	118	112	1/2 "	0.5	0	2080.4211	59.62401	5.96240%
3a	RFS	APXVSPP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	118	112	1/2 "	0.5	0	389.96892	11.17635	1.97114%
														Sector total Power Density Value:		7.934%	

Site Composite MPE %	
Carrier	MPE %
Sprint	23.801%
Verizon Wireless	26.580%
Total Site MPE %	50.381%

Summary

All calculations performed for this analysis yielded results that were well within the allowable limits for general public exposure to RF Emissions.

The anticipated Maximum Composite contributions from the Sprint facility are **23.801% (7.934% from each sector)** of the allowable FCC established general public limit considering all three sectors simultaneously sampled at the ground level.

The anticipated composite MPE value for this site assuming all carriers present is **50.381%** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government

Scott Heffernan
RF Engineering Director

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