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*Via Federal Express*

January 30, 2008

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

RECEIVED  
JAN 31 2008

RE: Sprint Nextel Corporation - Exempt Modifications

CONNECTICUT  
SITING COUNCIL

Dear Mr. Phelps:

Enclosed for filing are Sprint Nextel Corporation's Notice of Exempt Modification for the addition of WiMAX antennas to an existing tower (2189 Black Rock Turnpike, Fairfield) and a silo (890 Evergreen Avenue Hamden). I have enclosed two separate checks, each in the amount of \$500.00 in payment of the filing fee. If you have any questions, please feel free to contact me.

Very truly yours,

**BROWN RUDNICK BERLACK ISRAELS LLP**

By: Thomas J. Regan  
Thomas J. Regan

cc: Town of Fairfield via 1<sup>st</sup> Class Mail  
Town of Hamden via 1<sup>st</sup> Class Mail

# 40247599 v1 - MERCIECM - 025064/0015

CONNECTICUT SITING COUNCIL

ORIGINAL

In re:

EM-SPRINT-NEXTEL-051-080131

Sprint Nextel Corporation's Notice to Make an Exempt Modification to an Existing Facility at 2189 Black Rock Turnpike in Fairfield, Connecticut. : E : January 30, 2008

NOTICE OF EXEMPT MODIFICATION

Pursuant to Conn. Agencies Regs. §§ 16-50j-73 and 16-50j-72(b), Sprint Nextel Corporation ("Sprint") hereby gives notice to the Connecticut Siting Council ("Council") and the Town of Fairfield of Sprint's intent to make an exempt modification to an existing tower (the "Tower") located at 2189 Black Rock Turnpike in Fairfield, Connecticut. Specifically, Sprint plans to add WiMAX antennas to the Tower. Under the Council's regulations (Conn. Agencies Regs. § 16-50j-72(b)), Sprint's plans do not constitute a modification subject to the Council's review because Sprint will not change the height of the Tower, will not extend the boundaries of the compound, will not increase the noise levels at the site, and will not increase the total radio frequency electromagnetic radiation power density at the site to levels above applicable standards.

Sprint is currently undertaking an upgrade to its wireless communications system in Connecticut. As part of the upgrade, Sprint is implementing WiMAX technology to enable enhanced wireless data communications. In order to accomplish the upgrade at this site, Sprint plans to add three WiMAX antennas to the Tower and install additional WiMAX-related electronic equipment at the base of the Tower.

The 90-foot Tower is located behind a shopping center located at 2189 Black Rock Turnpike in Fairfield, Connecticut (41.1817° N, -73.2539° W). The Tower is camouflaged as a flagpole. The Tower is owned by Crown Castle International (“Crown”). Currently, Sprint has both CDMA and iDEN network antennas located on the Tower with equipment sheds at the base of the Tower. A site plan with the Tower specifications is attached.

Because all the spaces on the Tower are being utilized, Crown has authorized the installation of Sprint’s three WiMAX antennas (one per sector) on the outside of the Tower with an antenna centerline at 68 feet. Sprint will flush mount the WiMAX antennas and will paint them to match the exterior of the Tower. To confirm the Tower can support this addition, Sprint commissioned Vertical Solutions, Inc. to perform a structural analysis of the Tower (attached). According to the structural analysis, dated November 30, 2007, the Tower does have “sufficient capacity” to support the existing and proposed loading.

Sprint will install two WiMAX related equipment cabinets on the same steel frame and concrete slab as Sprint’s two existing equipment cabinets. Hence, there will be no need to increase the size of the equipment pad or compound. In addition, Sprint will mount a global positioning system (“GPS”) antenna to the roof of the commercial building that forms one side of the compound, near the its existing CDMA GPS antenna. Therefore, excluding brief, minor, construction-related noise during the addition of the antennas and the installation of the equipment cabinets, Sprint’s changes to the Tower will not increase noise levels at the site.

The new WiMAX antennas will not adversely impact the health and safety of the surrounding community or the people working on the Tower. The total radio frequency exposure measured around the Tower will be well below the National Council on Radiation Protection and Measurements’ (“NCRP”) standard adopted by the Federal Communications

Commission ("FCC"). The worst-case power density analysis measured at the base of the Tower indicates that Sprint's WiMAX antennas will emit 13.1044% of the NCRP's standard for maximum permissible exposure. A cumulative power density analysis indicates that together, all of the antennas on the Tower will emit only 29.7657% of the NCRP's standard for maximum permissible exposure. Therefore, the power density levels will be well below the FCC mandated radio frequency exposure limits in all locations around the Tower, even with extremely conservative assumptions. The power density analysis is attached.

In conclusion, Sprint's proposed plan to add WiMAX antennas at this site does not constitute a modification subject to the Council's jurisdiction because Sprint will not increase the height of the Tower, will not extend the boundaries of the site, will not increase the noise levels at the site, and the total radio frequency electromagnetic radiation power density will stay within all applicable standards. *See* Conn. Agencies Regs. § 16-50j-72.

Sprint Nextel Corporation

By: Thomas J. Regan  
Thomas J. Regan  
Brown Rudnick Berlack Israels LLP  
185 Asylum Street, CityPlace I  
Hartford, CT 06103-3402  
Email - tregan@brownrudnick.com  
Phone - 860.509.6522  
Fax - 860.509.6622

# 40247999 v1 - MERCIECM - 025064/0015





**Sprint Nextel Corp.**  
 1 INTERNATIONAL BLVD.,  
 SUITE 800  
 MAHWAH, NJ 07495

TRANSCEND WIRELESS, LLC  
 479 ROUTE 17 NORTH,  
 2ND FLOOR  
 MAHWAH, NJ 07430

A&E FIRM

**URS CORPORATION A/E**  
 500 ENTERPRISE DRIVE, SUITE 3B  
 ROCKY HILL, CONNECTICUT  
 1-(866)-529-8882

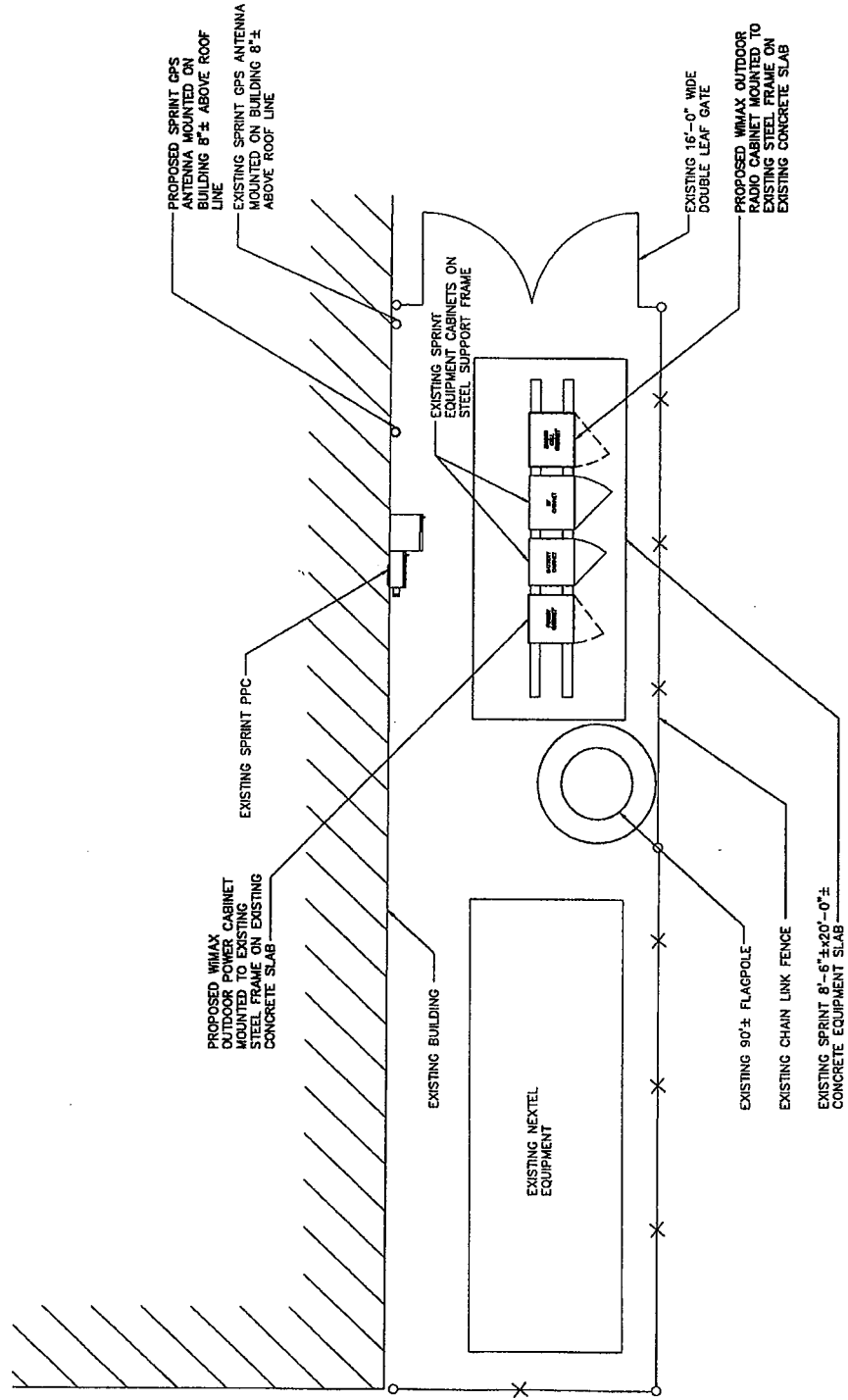
NO.	DATE	REVISIONS	BY	CHK/APPRD
1	01/24/08	LISTING COUNCIL	JES	PJS/AA
2	01/16/08	REVIEW	JES	PJS/AA
3				

NOT TO SCALE | DESIGNED BY: PJS | DRAWN BY: JES  
 A&E SEAL



**FAIRFIELD 2**  
 CT01YC067/CT33XC611  
 2189 BLACK ROCK  
 TURNPIKE  
 FAIRFIELD, CT  
 06430

PROJECT NO.	DRAWING NAME	DATE	SHEET NO.	REV
TW1-041	SC-1	01/24/08	2	0
36817301				



**1** **COMPOUND PLAN**  
 SCALE: 1" = 10'-0"  
 NORTH



**Sprint Nextel Corp.**  
 1 INTERNATIONAL BLVD.,  
 SUITE 800  
 MAHWAH, NJ 07495

TRANSCEND WIRELESS, LLC  
 479 ROUTE 17 NORTH,  
 2ND FLOOR  
 MAHWAH, NJ 07430

A&E FIRM

**URS CORPORATION A/E/S**

500 ENTERPRISE DRIVE, SUITE 3B  
 ROCKY HILL, CONNECTICUT  
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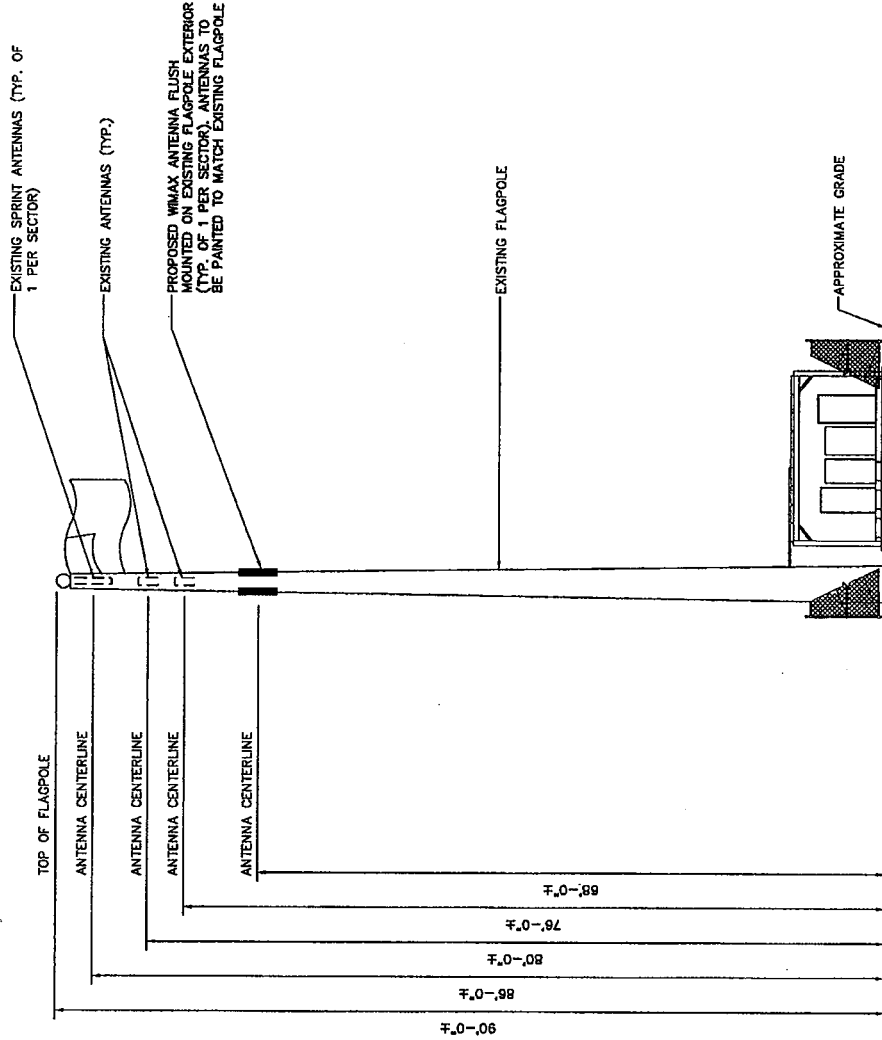
NO.	DATE	REVISIONS	BY	CHK/APPR
A	01/24/08	STRING COUNCIL	JES	PJS/AA
A	01/16/08	REVIEW	JES	PJS/AA

NOT TO SCALE DESIGNED BY: PJS DRAWN BY: JES  
 A&E SEAL



**FAIRFIELD 2**  
**CT01YC067/CT33XC611**  
**2189 BLACK ROCK**  
**TURNPIKE**  
**FAIRFIELD, CT**  
**06430**

PROJECT NO.	DRAWING NAME	DATE	SHEET NO.	REV
TW1-041	SC-2	01/24/08	3	0



**1** FLAGPOLE ELEVATION  
 SCALE: 1" = 20'-0"



November 30, 2007

Mr. Marco Morales  
Crown Castle International  
1200 MacArthur Blvd  
Mahwah, NJ 07430  
(201) 236-9032

Vertical Solutions, Inc.  
PO Box 579 / 354 Raleigh Street  
Holly Springs, NC 27540  
(919) 321-6167  
[mlassiter@verticalsolutions-inc.com](mailto:mlassiter@verticalsolutions-inc.com)

**Subject:** Structural Analysis Report

**Carrier Designation:** Sprint PCS Re-Configuration  
Site Name: Fairfield 2  
Site Number: CT33XC611

**Crown Castle Designation:** BU Number: 876398  
Site Name: Fairfield 2 / Sun Reality  
JDE Job Number: 97901

**Engineering Firm Designation:** Vertical Solutions Project Number: 071172.01

**Site Data:** 2189-2215 Black Rock Tpke., Fairfield, Fairfield County, CT  
Latitude N41° 10' 51.6"±, Longitude W073° 15' 14.4"±  
90 Foot – Self-Supporting Pole Structure

Dear Mr. Morales

Vertical Solutions is pleased to submit this “**Structural Analysis Report**” to determine the structural integrity of the aforementioned tower. This analysis has been performed in accordance with the Crown Castle Structural ‘Statement of Work’.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower and foundation stress level for the structure, under the following load case, to be:

LC1: Existing + Reserved + Proposed Equipment  
Note: See Table I and Table II for the proposed and existing/reserved loading.

**Sufficient Capacity**

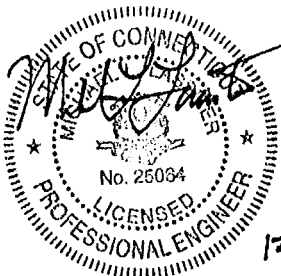
The analysis has been performed in accordance with the TIA-222-F standard for a 90-mph fastest-mile basic wind speed and 1/2-in radial ice

All equipment and modifications proposed in this report shall be installed in accordance with the attached drawings for the determined available structural capacity to be effective.

We at Vertical Solutions appreciate the opportunity of providing our continuing professional services to you and Crown Castle International. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted,

Kingsley C. Igboanugo, E.I.  
Structural Engineer In Training



12/12/2007

Michael L. Lassiter, S.E., P.E., C.W.I.  
Structural Engineer, Civil Engineer, Certified Weld Inspector





November 30, 2007

Mr. Marco Morales  
Crown Castle International  
1200 MacArthur Blvd  
Mahwah, NJ 07430  
(201) 236-9032

Vertical Solutions, Inc.  
PO Box 579 / 354 Raleigh Street  
Holly Springs, NC 27540  
(919) 321-6167  
[mlassiter@verticalsolutions-inc.com](mailto:mlassiter@verticalsolutions-inc.com)

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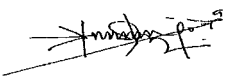
**Sufficient Capacity**

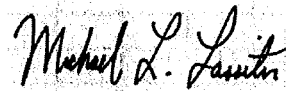
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Kingsley C. Igboanugo, E.I.  
Structural Engineer In Training

  
Michael L. Lassiter, S.E., P.E., C.W.I.  
Structural Engineer, Civil Engineer, Certified Weld Inspector

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RISA Tower Output

## 1) INTRODUCTION

The subject tower is a 90-foot Self-supporting pole structure manufactured in 2000 by Engineered Endeavours Inc.

## 2) ANALYSIS CRITERIA

Analysis, specific standard(s) and code:

- ANSI/TIA-222-F, 90-mph fastest-mile basic wind speed, 1/2-in radial ice

**Table 1 – Proposed (P) Antenna and Cable Information**

Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount	Number Of Feed Lines	Feed Line Size (in)
68	3	KMW Comm	AM-X-WM-17-65-00T	Flush Mount	6	1 5/8
	3		KMDAPS2050000			

**Table 2 – Existing and Reserved (R) Antenna and Cable Information**

Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount	Number Of Feed Lines	Feed Line Size (in)
86	3	EMS	RR90-17-00DP	Flagpole	6	1 1/4
80	3	Kathrein	AP9-850/090	Flagpole	6	7/8
76	3	Kathrein	AP9-850/090	Flagpole	6	7/8

### 3) ANALYSIS PROCEDURE

#### 3.1) Documents Reviewed

Refer to Appendix A for listing and descriptions of documents reviewed.

#### 3.2) Analysis Method

RISA Tower (version 5.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various dead, live, wind, and ice load cases. All loads were computed in accordance with the ANSI/TIA-222-F or the local building code requirements. Selected output from the analysis is included in Appendix.

#### 3.3) Assumptions

1. This structural analysis **does not** include a grouted base plate.
2. Tower and structures were built in accordance with the manufacturer's specifications.
3. The tower and structures have been maintained in accordance with manufacturer's specifications.
4. The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.

If any of these assumptions are not valid or have been made in error, this analysis may be affected, and Vertical Solutions should be allowed to review any new information to determine its effect on the structural integrity of the tower.

#### 4) ANALYSIS RESULTS

**Table 4 – Tower Component Stresses vs. Capacity – LC1**

Notes	Component	Elevation (ft)	% Capacity	Pass/Fail
<b>RISA Tower Analysis Summary:</b>				
			<b>Summary</b>	
<b>Notes:</b>	<b>Component</b>	<b>Elevation (ft)</b>	<b>% Capacity</b>	<b>Pass/Fail</b>
	L1	74 – 36.17	19	Pass
	L2	36.17 - 0	26	Pass
<b>Individual Components:</b>				
<b>Notes:</b>	<b>Component</b>	<b>Elevation (ft)</b>	<b>% Capacity</b>	<b>Pass/Fail</b>
1	Base Plate	0	44	Pass
1	Anchor Rods	0	27	Pass
	Base Foundation (Comparing actual loads with the design loads)	0	71	Pass
<b>Structure Rating (max from all components) =</b>				<b>71</b>

\*Notes:

- 1) See additional documentation in "Appendix D – Additional Calculations" for calculations supporting the % capacity listed.
- 2) Capacities up to 105% are considered acceptable based on analysis procedures used.

#### 4.1) Recommendations: N/A



**Appendix A  
Project History**

**Table 1 - Project History, 071172, Fairfield 2 – Sun Reality CT**

File	By: / For:	Description
20001010_Geo_1531968	Dr. Clarence Welti, P.E., PC. / URS Greiner Woodward Clyde, Inc.	Geotechnical Exploration
20001013_FDD_2069482	Engineered Endeavors Inc. / Sprint PCS	Foundation Design drawings
20001013_TDD_2069490	Engineered Endeavors Inc. / Sprint PCS	Tower Design Drawings

**Note:**

Files name format YYYYMMDD-XXX-YYYYYYYY.pdf

Where:

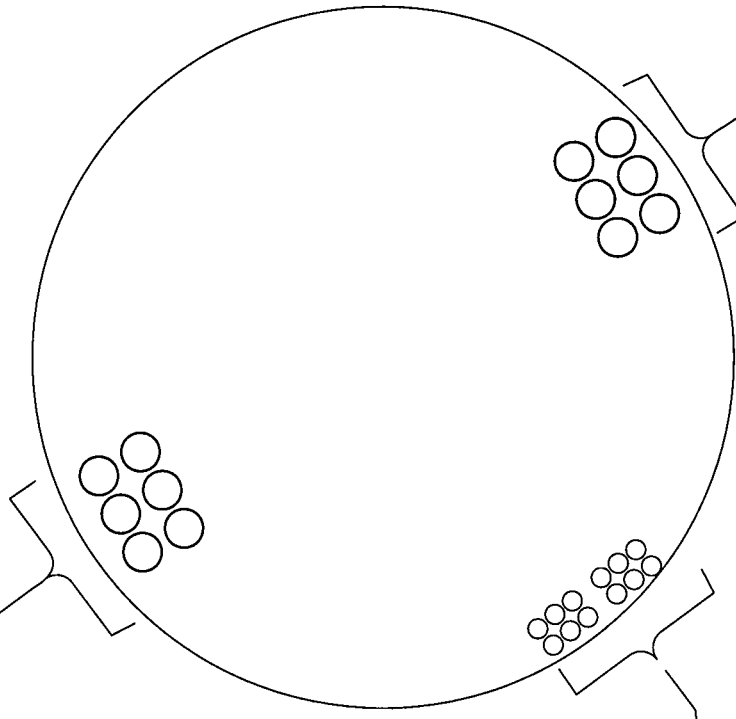
- YYYY=year
- MM=month
- DD=day published/issued
- XXX=file descriptor
- GEO=geotechnical report
- FDD=foundation design drawings
- TDD=tower design drawings
- SAR=structural analysis report
- MDD=modification design drawings
- PMI=post=modification inspection
- YYYYYY=CCI Sites document ID

**Additional Comments:**



**Appendix B**  
**Base Level Drawing**

(6) 1 5/8 TO 68'  
(Sprint)



(6) 1 1/4 TO 78'  
(Sprint)

(6) 7/8 TO 76'  
& (6) 7/8 to 80'  
(Nextel)

**COAX CONFIGURATION PLAN**

SCALE: 1" = 1'-0"

DRAWN BY:	KCI	CHECKED BY:	KCI
SHEET NUMBER:		REVISION:	
<b>QP-P</b>		0	
REV		DATE	
0	11/30/07		

REV	DATE
0	11/30/07

PREPARED FOR:

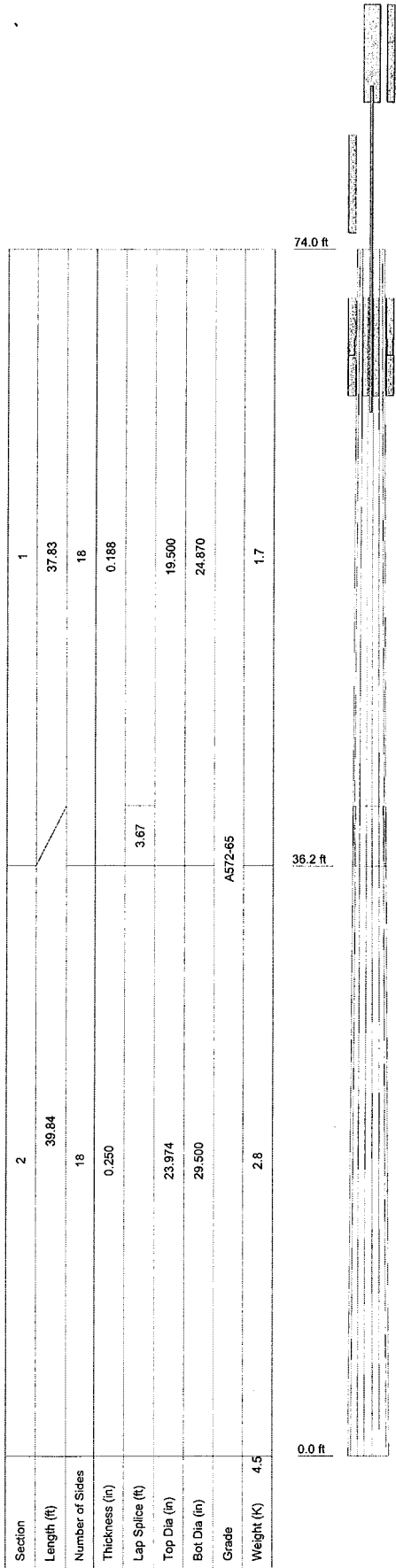
9105 Monroa Road, Suite 150  
Charlotte, NC 28270  
Office: (704) 814-7968

PROJECT NAME:	<b>Fairfield 2 - Sun Reality_CT</b>
BU#	<b>876398</b>

PREPARED BY:

334-B Raleigh Street  
Holly Springs, NC 27540-0579  
Office: (919) 321-6167  
Fax: (919) 321-1768

**Appendix C**  
**RISA Tower Output**



**DESIGNED APPURTENANCE LOADING**

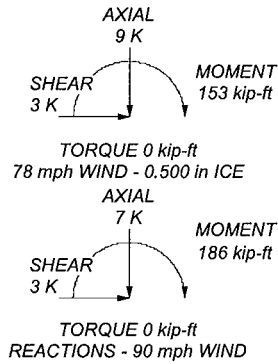
TYPE	ELEVATION	TYPE	ELEVATION
RR90-17-00DP w/Mount Pipe (Sprint)	86	KMW Comm AM-X-WM-17-65-00T w Mount Pipe (Sprint)	68
RR90-17-00DP w/Mount Pipe (Sprint)	86		
RR90-17-00DP w/Mount Pipe (Sprint)	78	KMW COMM KMDAPS2050000 (Sprint)	68
16' x 20" Flagpole	74		
KMW Comm AM-X-WM-17-65-00T w Mount Pipe (Sprint)	68	KMW COMM KMDAPS2050000 (Sprint)	68
KMW Comm AM-X-WM-17-65-00T w Mount Pipe (Sprint)	68	KMW COMM KMDAPS2050000 (Sprint)	68

**MATERIAL STRENGTH**

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

**TOWER DESIGN NOTES**

1. Tower designed for a 90 mph basic wind in accordance with the EIA-222-D Standard.
2. Tower is also designed for a 78 mph basic wind with 0.50 in ice.
3. Deflections are based upon a 60 mph wind.
4. Weld together tower sections have flange connections.
5. Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications.
6. Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
7. Welds are fabricated with ER-70S-6 electrodes.
8. TOWER RATING: 44.7%



	<b>Vertical Solutions Inc</b> 354 B Raleigh Street Holly Springs, NC 27540 Phone: (919) 321-6167 FAX: (919) 321-1768		<b>Job: 90-ft fairfield 2 / Sun Reality (876398)</b> Project: 071172	
	Client: Crown castle International Code: EIA-222-D Path: L:\2007\1172 Fairfield 2-Sun Reality C:\task 1\Modele\071172_01_rev1.dwg	Drawn by: kingsley Date: 12/31/07	App'd: Scale: NTS Dwg No. E-1	

<b>RISATower</b>  <b>Vertical Solutions Inc</b> 354 B Raleigh Street Holly Springs, NC 27540 Phone: (919) 321-6167 FAX: (919) 321-1768	<b>Job</b> 90-ft fairfield 2 / Sun Reality (876398)	<b>Page</b> 1 of 5
	<b>Project</b> 071172	<b>Date</b> 13:53:08 12/31/07
	<b>Client</b> Crown castle International	<b>Designed by</b> kingsley

## Tower Input Data

There is a pole section.

This tower is designed using the EIA-222-D standard.

The following design criteria apply:

Basic wind speed of 90 mph.

Nominal ice thickness of 0.500 in.

Ice density of 56 pcf.

A wind speed of 78 mph is used in combination with ice.

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60 mph.

Weld together tower sections have flange connections..

Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications..

Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards..

Welds are fabricated with ER-70S-6 electrodes..

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

Pressures are calculated at each section.

Stress ratio used in pole design is 1.333.

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

## Options

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

## 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	74.00-36.17	37.83	3.67	18	19.500	24.870	0.188	0.750	A572-65 (65 ksi)
L2	36.17-0.00	39.84		18	23.974	29.500	0.250	1.000	A572-65 (65 ksi)

<b>RISATower</b>  <b>Vertical Solutions Inc</b> 354 B Raleigh Street Holly Springs, NC 27540 Phone: (919) 321-6167 FAX: (919) 321-1768	<b>Job</b> 90-ft fairfield 2 / Sun Reality (876398)	<b>Page</b> 2 of 5
	<b>Project</b> 071172	<b>Date</b> 13:53:08 12/31/07
	<b>Client</b> Crown castle International	<b>Designed by</b> kingsley

### Tapered Pole Properties

Section	Tip Dia. in	Area in <sup>2</sup>	I in <sup>4</sup>	r in	C in	I/C in <sup>3</sup>	J in <sup>4</sup>	I/Q in <sup>2</sup>	w in	w/t
L1	19.801	11.493	541.578	6.856	9.906	54.672	1083.869	5.748	3.102	16.544
	25.254	14.689	1130.611	8.762	12.634	89.490	2262.709	7.346	4.047	21.585
L2	24.861	18.825	1338.616	8.422	12.179	109.913	2678.994	9.414	3.779	15.118
	29.955	23.210	2508.777	10.384	14.986	167.408	5020.854	11.607	4.752	19.008

Tower Elevation ft	Gusset Area (per face) ft <sup>2</sup>	Gusset Thickness in	Gusset Grade	Adjust. Factor A <sub>r</sub>	Adjust. Factor A <sub>r</sub>	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in
L1 74.00-36.17				1	1	1		
L2 36.17-0.00				1	1	1		

### Monopole Base Plate Data

Base Plate Data	
Base plate is square	
Base plate is grouted	
Anchor bolt grade	A615-75
Anchor bolt size	2.500 in
Number of bolts	4
Embedment length	54.000 in
f <sub>c</sub>	4 ksi
Grout space	3.000 in
Base plate grade	A572-60
Base plate thickness	1.500 in
Bolt circle diameter	37.000 in
Outer diameter	43.000 in
Inner diameter	24.000 in
Base plate type	Plain Plate

### Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C <sub>A</sub> A <sub>A</sub> ft <sup>2</sup> /ft	Weight plf
LDF5-50A (7/8 FOAM)	A	No	Inside Pole	74.00 - 0.00	6	No Ice	0.00	0.33
						1/2" Ice	0.00	0.33
FLC 114-50J (1-1/4 FOAM)	C	No	Inside Pole	74.00 - 0.00	6	No Ice	0.00	0.70
						1/2" Ice	0.00	0.70
LDF5-50A (7/8 FOAM)	A	No	Inside Pole	74.00 - 0.00	6	No Ice	0.00	0.33
						1/2" Ice	0.00	0.33
LDF7-50A (1-5/8 FOAM)	B	No	Inside Pole	68.00 - 0.00	6	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82

### Feed Line/Linear Appurtenances Section Areas

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Tower Section	Tower Elevation ft	Face	$A_R$ ft <sup>2</sup>	$A_F$ ft <sup>2</sup>	$C_{AA}$ In Face ft <sup>2</sup>	$C_{AA}$ Out Face ft <sup>2</sup>	Weight K
L1	74.00-36.17	A	0.000	0.000	0.000	0.000	0.15
		B	0.000	0.000	0.000	0.000	0.16
		C	0.000	0.000	0.000	0.000	0.16
L2	36.17-0.00	A	0.000	0.000	0.000	0.000	0.14
		B	0.000	0.000	0.000	0.000	0.18
		C	0.000	0.000	0.000	0.000	0.15

### Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	$A_R$ ft <sup>2</sup>	$A_F$ ft <sup>2</sup>	$C_{AA}$ In Face ft <sup>2</sup>	$C_{AA}$ Out Face ft <sup>2</sup>	Weight K
L1	74.00-36.17	A	0.500	0.000	0.000	0.000	0.000	0.15
		B		0.000	0.000	0.000	0.000	0.16
		C		0.000	0.000	0.000	0.000	0.16
L2	36.17-0.00	A	0.500	0.000	0.000	0.000	0.000	0.14
		B		0.000	0.000	0.000	0.000	0.18
		C		0.000	0.000	0.000	0.000	0.15

### Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	$C_{AA}$ Front ft <sup>2</sup>	$C_{AA}$ Side ft <sup>2</sup>	Weight K
16' x 20" Flagpole	C	None		0.000	74.00	No Ice 22.87 1/2" Ice 23.89	22.87 23.89	1.31 1.53
KMW Comm AM-X-WM-17-65-00T w Mount Pipe (Sprint)	A	From Leg	0.50 0.00 0.00	-10.000	68.00	No Ice 3.82 1/2" Ice 4.24	2.97 3.71	0.04 0.07
KMW Comm AM-X-WM-17-65-00T w Mount Pipe (Sprint)	B	From Leg	0.50 0.00 0.00	-20.000	68.00	No Ice 3.82 1/2" Ice 4.24	2.97 3.71	0.04 0.07
KMW Comm AM-X-WM-17-65-00T w Mount Pipe (Sprint)	C	From Leg	0.50 0.00 0.00	-10.000	68.00	No Ice 3.82 1/2" Ice 4.24	2.97 3.71	0.04 0.07
RR90-17-00DP w/Mount Pipe (Sprint)	A	From Leg	0.50 0.00 0.00	-10.000	86.00	No Ice 4.91 1/2" Ice 5.57	3.64 4.70	0.04 0.08
RR90-17-00DP w/Mount Pipe (Sprint)	B	From Leg	0.50 0.00 0.00	-20.000	86.00	No Ice 4.91 1/2" Ice 5.57	3.64 4.70	0.04 0.08
RR90-17-00DP w/Mount Pipe (Sprint)	C	From Leg	0.50 0.00 0.00	-10.000	78.00	No Ice 4.91 1/2" Ice 5.57	3.64 4.70	0.04 0.08
KMW COMM KMDAPS2050000 (Sprint)	A	From Leg	0.50 0.00 0.00	-10.000	68.00	No Ice 0.85 1/2" Ice 0.98	0.38 0.48	0.02 0.02
KMW COMM KMDAPS2050000 (Sprint)	B	From Leg	0.50 0.00 0.00	-20.000	68.00	No Ice 0.85 1/2" Ice 0.98	0.38 0.48	0.02 0.02

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Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C <sub>AA</sub> Front ft <sup>2</sup>	C <sub>AA</sub> Side ft <sup>2</sup>	Weight K	
KMW COMM KMDAPS2050000 (Sprint)	C	From Leg	0.50 0.00 0.00	-10.000	68.00	No Ice 1/2" Ice	0.85 0.98	0.38 0.48	0.02 0.02

### Base Plate Design Data

Plate Thickness in	Number of Anchor Bolts	Anchor Bolt Size in	Actual Allowable Ratio Bolt Tension K	Actual Allowable Ratio Bolt Compression K	Actual Allowable Ratio Plate Stress ksi	Actual Allowable Ratio Stiffener Stress ksi	Controlling Condition	Ratio
1.500	4	2.500	58.57 161.99 0.36	62.11 268.90 0.23	26.807 45.000 0.60		Plate	0.60 ✓

### Compression Checks

### Pole Design Data

Section No.	Elevation ft	Size	L ft	L <sub>n</sub> ft	KI/r	F <sub>a</sub> ksi	A in <sup>2</sup>	Actual P K	Allow. P <sub>a</sub> K	Ratio $\frac{P}{P_a}$
L1	74 - 36.17 (1)	TP24.87x19.5x0.188	37.83	0.00	0.0	39.000	14.379	-3.50	560.79	0.006
L2	36.17 - 0 (2)	TP29.5x23.974x0.25	39.84	0.00	0.0	39.000	23.210	-7.08	905.18	0.008

### Pole Bending Design Data

Section No.	Elevation ft	Size	Actual M <sub>x</sub> kip-ft	Actual f <sub>bx</sub> ksi	Allow. F <sub>bx</sub> ksi	Ratio $\frac{f_{bx}}{F_{bx}}$	Actual M <sub>y</sub> kip-ft	Actual f <sub>by</sub> ksi	Allow. F <sub>by</sub> ksi	Ratio $\frac{f_{by}}{F_{by}}$
L1	74 - 36.17 (1)	TP24.87x19.5x0.188	68.81	-9.630	39.000	0.247	0.00	0.000	39.000	0.000
L2	36.17 - 0 (2)	TP29.5x23.974x0.25	186.04	-13.336	39.000	0.342	0.00	0.000	39.000	0.000

### Pole Interaction Design Data



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Section No.	Elevation ft	Size	Ratio	Ratio	Ratio	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
			$\frac{P}{P_a}$	$\frac{f_{bx}}{F_{bx}}$	$\frac{f_{by}}{F_{by}}$			
L1	74 - 36.17 (1)	TP24.87x19.5x0.188	0.006	0.247	0.000	0.253 ✓	1.333	H1-3 ✓
L2	36.17 - 0 (2)	TP29.5x23.974x0.25	0.008	0.342	0.000	0.350 ✓	1.333	H1-3 ✓

### Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	SF*P <sub>allow</sub> K	% Capacity	Pass Fail	
L1	74 - 36.17	Pole	TP24.87x19.5x0.188	1	-3.50	747.53	19.0	Pass	
L2	36.17 - 0	Pole	TP29.5x23.974x0.25	2	-7.08	1206.61	26.2	Pass	
							Summary		
							Pole (L2)	26.2	Pass
							Base Plate	44.7	Pass
							<b>RATING =</b>	<b>44.7</b>	<b>Pass</b>

CT01YC067 (2189 Black Rock Turnpike, Fairfield, CT) - Siting Council Power Density Calculations									
Sprint Nextel Directional Antennas ESMR - 2657 MHz 68'									
Note: Power densities are in mW/ cm <sup>2</sup>									
Transmitters:	Frequency in MHz	CT Standard mW/ cm <sup>2</sup>	Number of Channels	ERP (W) per channel	Centerline of Tx antennas AGL (ft.)**	Power density calculated at base of tower			
WiMAX	2657	1.0000	3	562	68	0.1310442	13.1044%		
CDMA	1962.5	1.0000	11	122	86	0.0652129	6.5213%		
From previous filings: per CSC power density data base*									
Nextel									
							10.1400%		
Total % of CT Standard									
							29.7657%		