brownrudnick

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August 19, 2019

VIA OVERNIGHT COURIER &
E-MAIL (siting.council@ct.gov)

Melanie A. Bachman, Esq.
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: Sprint's Notice of Exempt Modification
24 Hospital Avenue, Danbury, CT 06810
41° 24' 17.9" N, 73° 26' 45.21" W

Dear Executive Director Bachman:

Sprint Corporation ("Sprint") currently maintains six (6) antennas (1 per sector) and twenty-four (24) remote radio heads ("RRH"s) at various elevations (131', 155', 159') on the rooftop installation at 24 Hospital Avenue in Danbury, Connecticut. The property is owned by Danbury Hospital. Attached as **Exhibit A** are the letter of authorization, property map and property card for this site.

In order to achieve the higher data speeds required for 5G, Sprint intends add 6 antennas, 6 cables and 2 equipment cabinets to this site. Attached as **Exhibit B** is the Site Plan. Specifically, Sprint will add six (6) 2500 MHz antennas (two (2) at 131', three (3) at 155' and one (1) at 159') to its existing rooftop installation (Exhibit B, p. A-1, A-4). The new antennas are combination units which include both the antenna and the RRH. As a result of installing the combination antennas, Sprint will remove its six (6) existing 2500 MHz RRHs which will leave a total of 18 RRHs remaining (Exhibit B, p. A-5, Figure 1). To support the new antennas, Sprint will also replace one (1) hybrid cable per sector (for a total of six (6) cables) and will add two (2) fiber distribution cabinets within the existing equipment area (Exhibit B, p. A-2, A-3). The purpose of the fiber distribution cabinets is to connect the hybrid cables to the radio cabinet. Finally, Sprint intends to relocate one of its existing antennas from a centerline of 155' to 159' (Exhibit B, p. A-5).

This facility was approved by the Siting Council in Docket No. 79 on September 10, 1987. The approval did not include any conditions that would be violated by Sprint's intended modifications. Sprint previously modified the facility in dockets EM-SPRINT-NEXTEL-034-110616 and EM-SPRINT-034-150828.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this Notice of Exempt Modification (with exhibits) is being sent today via UPS to: Mark D. Boughton (Mayor for the City of Danbury), Sharon B. Calitro (Director of Planning and Zoning for the City of Danbury) and Charles Geyer (Network Director of Engineering, Plant Operations and Biomedical Engineering at Danbury Hospital [property owners] and signatory for Danbury Hospital on the Letter of Authorization). Included as **Exhibit C** are the UPS verifications that the aforementioned individuals were sent a copy of this notice with exhibits.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2) as follows:

1. The proposed modifications will not result in an increase in the height of the existing structure (see Exhibit B, Site Plan);

2. The proposed modifications will not require the extension of the site boundary (see Exhibit B, Site Plan);

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria;

4. The operation of the new antennas and will not increase the radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard (**Exhibit D,** Radio Frequency Exposure Report);

5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site; and

6. The existing structure and its foundation can support Sprint's proposed antenna loading (**Exhibit E**, Structural Report).

For the foregoing reasons, Sprint respectfully submits that its proposed modifications to the above-referenced telecommunications facility constitute an exempt modification under R.S.C.A. § 16-50j-72(b)(2).

Sincerely,

BROWN RUDNICK LLP

Thomas J. Regan

Enclosures

cc via UPS:

Mayor Mark D. Boughton
City of Danbury
155 Deer Hill Avenue
Danbury, CT 06810

Director Sharon B. Calitro
Planning & Zoning
City of Danbury
155 Deer Hill Avenue
Danbury, CT 06810

Charles Geyer, Network Director of Engineering
Danbury Hospital
24 Hospital Avenue
Danbury, CT 06810

63467669

EXHIBIT A

Sprint

LETTER OF AUTHORIZATION – PERMIT APPLICATION

TO THE CONNECTICUT SITING COUNCIL

APPLICATIONS FOR PERMITS / APPROVALS

The undersigned authorized representative of The Danbury Hospital, as owner of the below described property (the "Owner"), does hereby authorize applicant Sprint Corp., including its affiliates/subsidiaries, their employees and agents ("Sprint") to file and complete the necessary applications for all required Connecticut Siting Council permits and approvals, as may be required for the construction/installation of Sprint's proposed upgrade to its existing communication facility including the installation of panel antennas, remote radio units, cabling, upgraded electronics cabinets and associated supporting equipment on the Property. Sprint will be responsible for all costs, fees and expenses incurred in securing its required permits and approvals from the Connecticut Siting Council.

Property Located at: 24 Hospital Avenue, City of Danbury, State of Connecticut 06810 ("Property")

Assessor's Parcel Number ID: I12 / 001

Owner's Name: The Danbury Hospital

Signature (and title, if applicable) of Property Owner Representative:

The Danbury Hospital

By: Charles Geyer

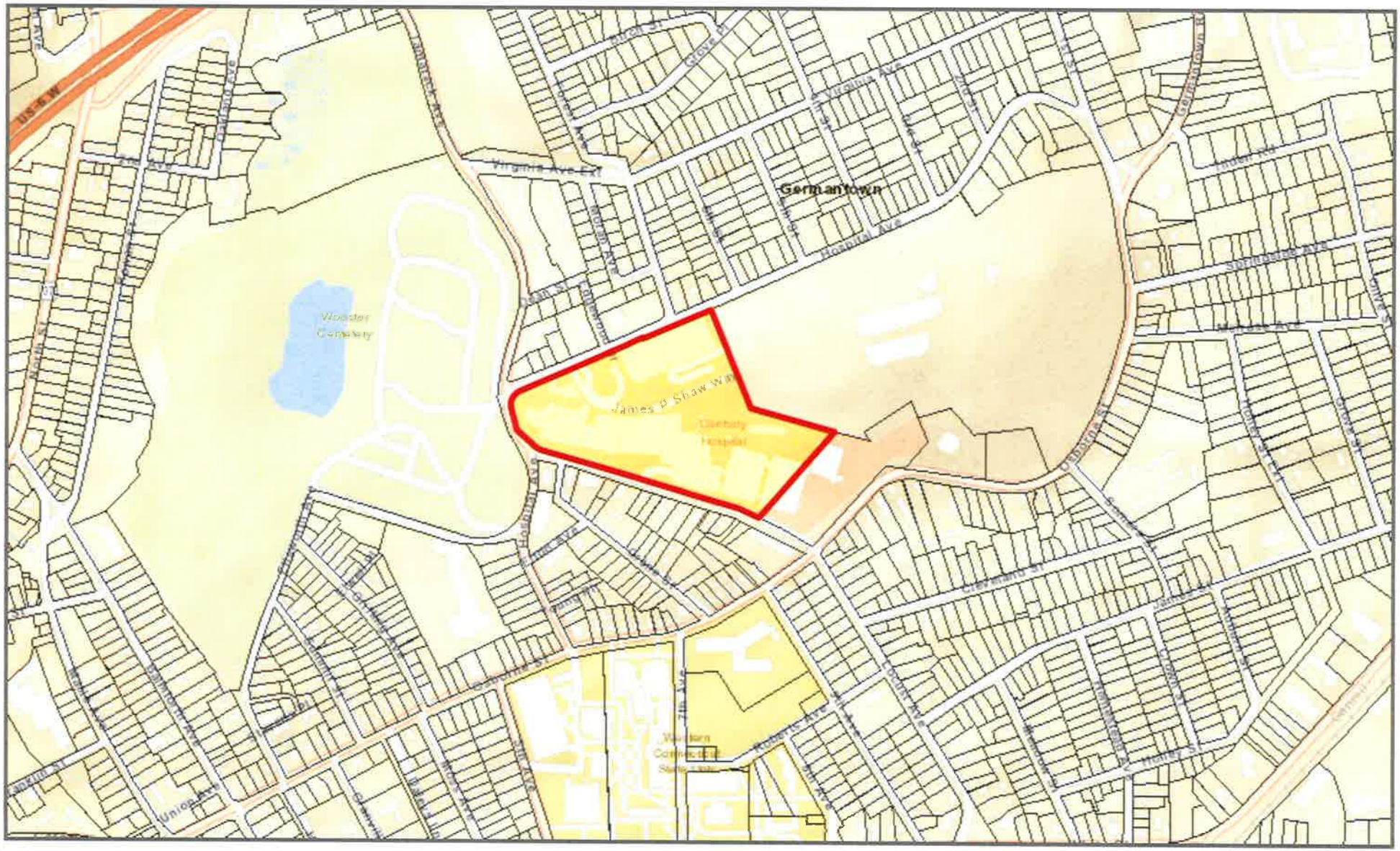
Printed Name: Charles Geyer

Title: Network Director of Engineering

Date: 6/13/19, 2019

Site Cascade ID #: CT81XC007 / CT03XC350

Site Name: Danbury Hospital



Property Map

1 inch = 930 feet

N
W E
S

Data and scale shown on this map are provided for planning and informational purposes only. DANBURY (CT) and Vision Government Solutions are not responsible for any use for other purposes or misuse or misrepresentation of this information.

8/1/2019

LOCUST AV

Location	LOCUST AV	**Mblu**	I12/ / 1/ /
Acct#		**Owner**	DANBURY HOSPITAL
Assessment	$256,676,700	**Appraisal**	$366,680,100
PID	24190	**Building Count**	16

Assessing Distr...

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$308,036,700	$58,643,400	$366,680,100
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$215,626,300	$41,050,400	$256,676,700

Owner of Record

Owner	DANBURY HOSPITAL	**Sale Price**	$0
Co-Owner		**Book & Page**	0679/0464
Address	24 HOSPITAL AVE DANBURY, CT 06810	**Sale Date**	05/26/1983

Ownership History

Ownership History			
Owner	**Sale Price**	**Book & Page**	**Sale Date**
DANBURY HOSPITAL	$0	0679/0464	05/26/1983

Building Information

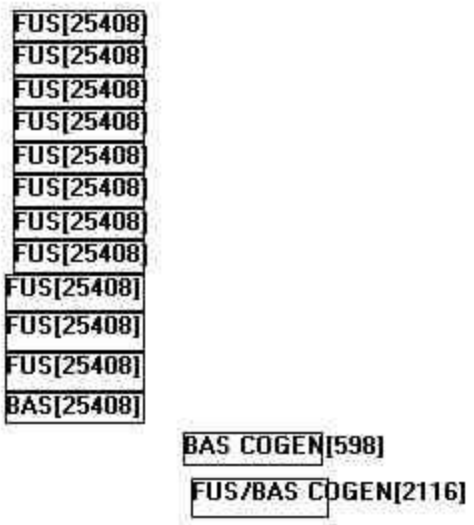
Building 1 : Section 1

Year Built: 1970
Living Area: 295,646
Replacement Cost: $72,929,305
Building Percent Good: 72
Replacement Cost Less Depreciation: $52,509,100

Building Attributes	
Field	**Description**
STYLE	Hospital
MODEL	Commercial
Grade	Excellent
Stories:	6
Occupancy	1
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Flat

Building Photo

Building Layout



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Roof Cover	Tar & Gravel
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Floor 1	Vinyl/Asphalt
Interior Floor 2	
Heating Fuel	Gas
Heating Type	Forced Air-Duc
AC Type	Central
Bldg Use	Commercial MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	200
Heat/AC	HEAT/AC SPLIT
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	10
% Comn Wall	0

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
FUS	Finished Upper Story	281,604	267,524
BAS	First Floor	28,122	28,122
		309,726	295,646

Building 1 : Section 1

Year Built: 1970
Living Area: 0
Replacement Cost: $72,929,305

Building Percent Good:	72
Replacement Cost Less Depreciation:	$52,509,100

Building Attributes	
Field	**Description**
Style	Outbuildings
Model	
Grade:	
Stories:	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure:	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtrs:	

Building Photo

(http://images.vgsi.com/photos2/DanburyCTPhotos//default.jpg)

Building Layout

Building Layout
(http://images.vgsi.com/photos2/DanburyCTPhotos//Sketches/2

Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

Total Rooms:	
Bath Style:	
Kitchen Style:	
Fireplaces	
Whirlpool	
Addn'l Kitchen	
Bsm Gar	
Fin Bsm Area	
Fin Bsm Qual	
Nhbd	
MH Park	

Building 2 : Section 1

Year Built: 1968
Living Area: 15,232
Replacement Cost: $4,047,834
Building Percent Good: 66
Replacement Cost Less Depreciation: $2,671,600

Building Attributes : Bldg 2 of 16	
Field	**Description**
STYLE	Hospital
MODEL	Commercial
Grade	Excellent
Stories:	3

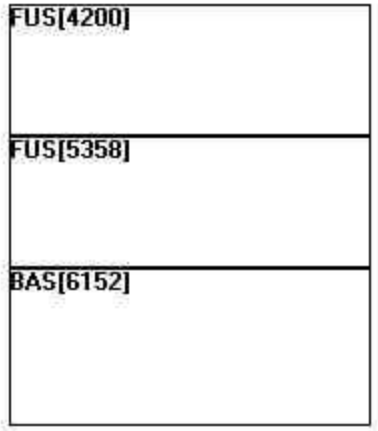
Building Photo

(http://images.vgsi.com/photos2/DanburyCTPhotos//default.jpg)

Occupancy	1
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar & Gravel
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Floor 1	Vinyl/Asphalt
Interior Floor 2	
Heating Fuel	Gas
Heating Type	Forced Air-Duc
AC Type	Central
Bldg Use	Commercial MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	200
Heat/AC	HEAT/AC SPLIT
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	10
% Comn Wall	0

Building 3 : Section 1

Building Layout



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Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
FUS	Finished Upper Story	9,558	9,080
BAS	First Floor	6,152	6,152
		15,710	15,232

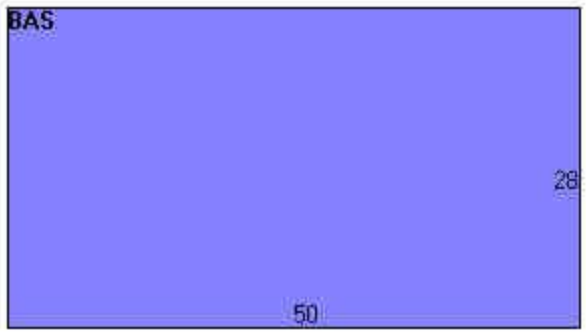
Year Built:	1970
Living Area:	1,400
Replacement Cost:	$97,090
Building Percent Good:	72
Replacement Cost Less Depreciation:	$69,900

Building Attributes : Bldg 3 of 16	
Field	**Description**
STYLE	Warehouse
MODEL	Ind/Comm
Grade	Excellent
Stories:	1
Occupancy	1
Exterior Wall 1	Concr/Cinder
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar & Gravel
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Concr-Finished
Interior Floor 2	
Heating Fuel	Coal or Wood
Heating Type	None
AC Type	None
Bldg Use	Commercial MDL-96

Building Photo

(http://images.vgsi.com/photos2/DanburyCTPhotos//default.jpg)

Building Layout



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Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	200I
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & MIN WL
Rooms/Prtns	AVERAGE
Wall Height	14
% Comn Wall	0

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	1,400	1,400
		1,400	1,400

Building 4 : Section 1

Year Built: 1989
Living Area: 3,000
Replacement Cost: $786,732
Building Percent Good: 80
Replacement Cost Less Depreciation: $629,400

Building Attributes : Bldg 4 of 16	
Field	**Description**
STYLE	Hospital
MODEL	Commercial
Grade	Average+
Stories:	1

Building Photo

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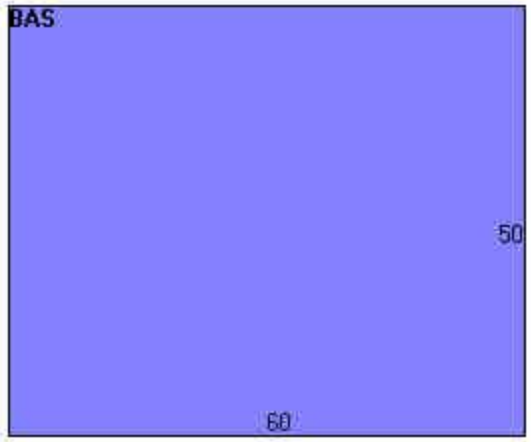
Occupancy	1
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar & Gravel
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Floor 1	Carpet
Interior Floor 2	
Heating Fuel	Gas
Heating Type	Forced Air-Duc
AC Type	Central
Bldg Use	Commercial MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	200
Heat/AC	HEAT/AC PKGS
Frame Type	STEEL
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	12
% Comn Wall	0

Building 5 : Section 1

Building Layout



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Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	3,000	3,000
		3,000	3,000

Year Built:	1989
Living Area:	9,610
Replacement Cost:	$2,994,187
Building Percent Good:	80
Replacement Cost Less Depreciation:	$2,395,300

Building Attributes : Bldg 5 of 16	
Field	**Description**
STYLE	Hospital
MODEL	Commercial
Grade	Excellent+
Stories:	2
Occupancy	1
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar & Gravel
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Floor 1	Carpet
Interior Floor 2	Ceram Clay Til
Heating Fuel	Gas
Heating Type	Forced Air-Duc
AC Type	Central
Bldg Use	Commercial MDL-94

Building Photo

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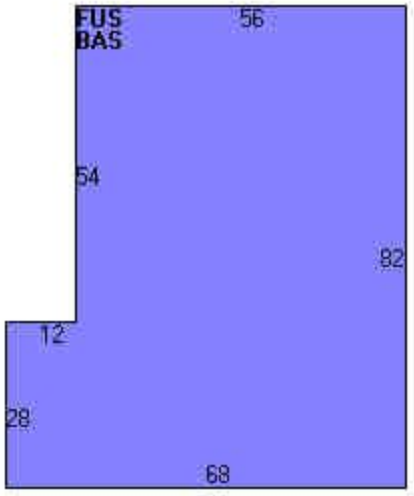
Building Layout



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Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	200
Heat/AC	HEAT/AC SPLIT
Frame Type	STEEL
Baths/Plumbing	AVERAGE
Ceiling/Wall	SUS-CEIL & WL
Rooms/Prtns	AVERAGE
Wall Height	10
% Comn Wall	0

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	4,928	4,928
FUS	Finished Upper Story	4,928	4,682
		9,856	9,610

Building 6 : Section 1

Year Built: 1983
Living Area: 167,220
Replacement Cost: $41,125,585
Building Percent Good: 80
Replacement Cost Less Depreciation: $32,900,500

Building Attributes : Bldg 6 of 16	
Field	**Description**
STYLE	Hospital
MODEL	Commercial
Grade	Excellent
Stories:	3

Building Photo

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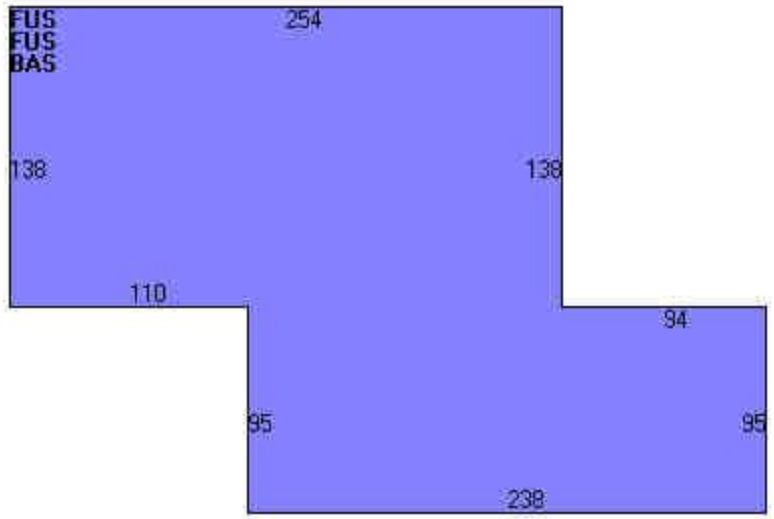
Occupancy	1
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar & Gravel
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Floor 1	Vinyl/Asphalt
Interior Floor 2	Carpet
Heating Fuel	Gas
Heating Type	Forced Air-Duc
AC Type	None
Bldg Use	Commercial MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	200
Heat/AC	NONE
Frame Type	STEEL
Baths/Plumbing	AVERAGE
Ceiling/Wall	SUS-CEIL & WL
Rooms/Prtns	AVERAGE
Wall Height	12
% Comn Wall	

Building 7 : Section 1

Building Layout



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Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
FUS	Finished Upper Story	115,324	109,558
BAS	First Floor	57,662	57,662
		172,986	167,220

Year Built: 1983
Living Area: 165,411
Replacement Cost: $6,379,503
Building Percent Good: 88
Replacement Cost Less Depreciation: $5,614,000

Building Attributes : Bldg 7 of 16	
Field	**Description**
STYLE	Parking Garage
MODEL	Ind/Comm
Grade	Good+
Stories:	2
Occupancy	1
Exterior Wall 1	Reinforc Concr
Exterior Wall 2	
Roof Structure	Reinforc Concr
Roof Cover	Concrete Tile
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Concr-Finished
Interior Floor 2	
Heating Fuel	Coal or Wood
Heating Type	None
AC Type	None
Bldg Use	Commercial MDL-96

Building Photo

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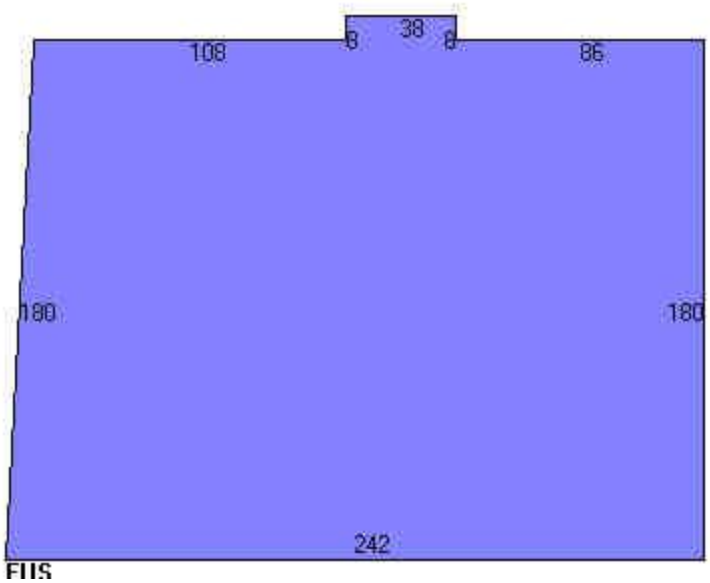
Building Layout



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Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	200I
Heat/AC	NONE
Frame Type	STEEL
Baths/Plumbing	NONE
Ceiling/Wall	CEILING ONLY
Rooms/Prtns	LIGHT
Wall Height	10
% Comn Wall	0

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
FUS	Finished Upper Story	128,892	122,447
BAS	First Floor	42,964	42,964
BSM	Basement	42,964	0
		214,820	165,411

Building 8 : Section 1

Year Built: 1995
Living Area: 2,120
Replacement Cost: $829,382
Building Percent Good: 81
Replacement Cost Less Depreciation: $671,800

Building Attributes : Bldg 8 of 16	
Field	**Description**
STYLE	Hospital
MODEL	Commercial
Grade	Excellent
Stories:	1

Building Photo

(http://images.vgsi.com/photos2/DanburyCTPhotos//default.jpg)

Occupancy	1
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar & Gravel
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Floor 1	Carpet
Interior Floor 2	
Heating Fuel	Gas
Heating Type	Forced Air-Duc
AC Type	Central
Bldg Use	Commercial MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	200
Heat/AC	HEAT/AC PKGS
Frame Type	STEEL
Baths/Plumbing	AVERAGE
Ceiling/Wall	SUS-CEIL & WL
Rooms/Prtns	AVERAGE
Wall Height	10
% Comn Wall	0

Building 9 : Section 1

Building Layout

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Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	2,120	2,120
		2,120	2,120

Year Built: 1993
Living Area: 2,766
Replacement Cost: $1,041,765
Building Percent Good: 81
Replacement Cost Less Depreciation: $843,800

Building Attributes : Bldg 9 of 16	
Field	**Description**
STYLE	Hospital
MODEL	Commercial
Grade	Excellent
Stories:	1
Occupancy	1
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar & Gravel
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Floor 1	Carpet
Interior Floor 2	Vinyl/Asphalt
Heating Fuel	Gas
Heating Type	Forced Air-Duc
AC Type	Central
Bldg Use	Commercial MDL-94

Building Photo

(http://images.vgsi.com/photos2/DanburyCTPhotos//default.jpg)

Building Layout

(http://images.vgsi.com/photos2/DanburyCTPhotos//Sketches/2

Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	200
Heat/AC	HEAT/AC PKGS
Frame Type	STEEL
Baths/Plumbing	AVERAGE
Ceiling/Wall	SUS-CEIL & WL
Rooms/Prtns	AVERAGE
Wall Height	18
% Comn Wall	0

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	2,766	2,766
		2,766	2,766

Building 10 : Section 1

Year Built: 1976
Living Area: 6,400
Replacement Cost: $257,088
Building Percent Good: 76
Replacement Cost Less Depreciation: $195,400

Building Attributes : Bldg 10 of 16	
Field	**Description**
STYLE	Warehouse
MODEL	Ind/Comm
Grade	Average
Stories:	1

Building Photo

(http://images.vgsi.com/photos2/DanburyCTPhotos//\00\02\17/2

Occupancy	1
Exterior Wall 1	Concr/Cinder
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar & Gravel
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Concr-Finished
Interior Floor 2	
Heating Fuel	Gas
Heating Type	Forced Air-Duc
AC Type	None
Bldg Use	Commercial MDL-96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	200I
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & MIN WL
Rooms/Prtns	AVERAGE
Wall Height	12
% Comn Wall	0

Building 12 : Section 1

Building Layout

(http://images.vgsi.com/photos2/DanburyCTPhotos//Sketches/2

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	6,400	6,400
		6,400	6,400

Year Built: 1991
Living Area: 381,271
Replacement Cost: $15,597,492
Building Percent Good: 81
Replacement Cost Less Depreciation: $12,634,000

Building Attributes : Bldg 12 of 16	
Field	**Description**
STYLE	Parking Garage
MODEL	Ind/Comm
Grade	Excellent
Stories:	5
Occupancy	707
Exterior Wall 1	Pre-cast Concr
Exterior Wall 2	
Roof Structure	Reinforc Concr
Roof Cover	Concrete Tile
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Concr Abv Grad
Interior Floor 2	
Heating Fuel	
Heating Type	
AC Type	None
Bldg Use	Commercial MDL-94

Building Photo

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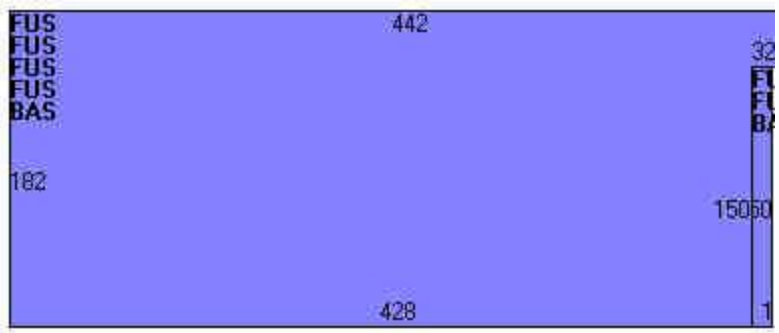
Building Layout



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Total Rooms	
Total Bedrms	
Total Baths	
1st Floor Use:	
Heat/AC	NONE
Frame Type	REINF. CONCR
Baths/Plumbing	NONE
Ceiling/Wall	NONE
Rooms/Prtns	AVERAGE
Wall Height	19
% Comn Wall	

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
FUS	Finished Upper Story	316,976	301,127
BAS	First Floor	80,144	80,144
		397,120	381,271

Building 13 : Section 1

Year Built: 2007
Living Area: 155,010
Replacement Cost: $9,308,522
Building Percent Good: 92
Replacement Cost Less Depreciation: $8,563,800

Building Attributes : Bldg 13 of 16	
Field	**Description**
STYLE	Parking Garage
MODEL	Commercial
Grade	Excellent++
Stories:	3

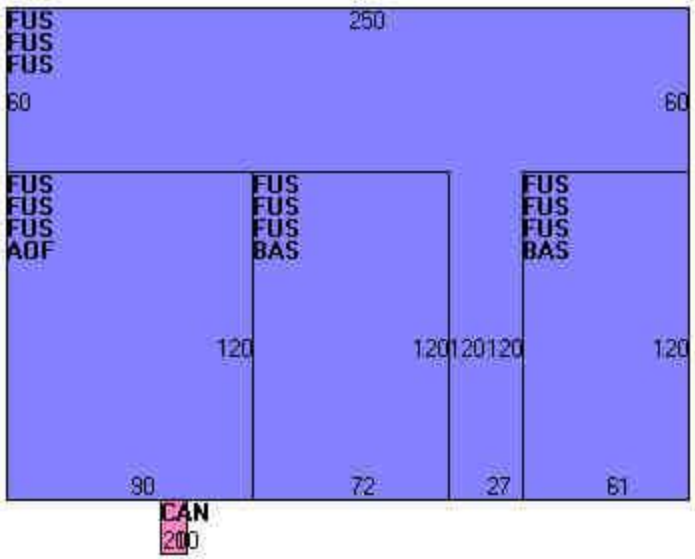
Building Photo

(http://images.vgsi.com/photos2/DanburyCTPhotos//\00\02\48/4

Occupancy	2
Exterior Wall 1	Concr/Cinder
Exterior Wall 2	Brick/Masonry
Roof Structure	Reinforc Concr
Roof Cover	Concrete Tile
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Floor 1	Ceram Clay Til
Interior Floor 2	Carpet
Heating Fuel	Gas
Heating Type	Forced Air-Duc
AC Type	Central
Bldg Use	Commercial MDL-94
Total Rooms	
Total Bedrms	
Total Baths	
1st Floor Use:	
Heat/AC	HEAT/AC PKGS
Frame Type	REINF. CONCR
Baths/Plumbing	ABOVE AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	ABOVE AVERAGE
Wall Height	9
% Comn Wall	

Building 14 : Section 1

Building Layout



(http://images.vgsi.com/photos2/DanburyCTPhotos//Sketches/24

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
FUS	Finished Upper Story	135,000	128,250
BAS	First Floor	15,960	15,960
AOF	Office, (Average)	10,800	10,800
CAN	Canopy	200	0
		161,960	155,010

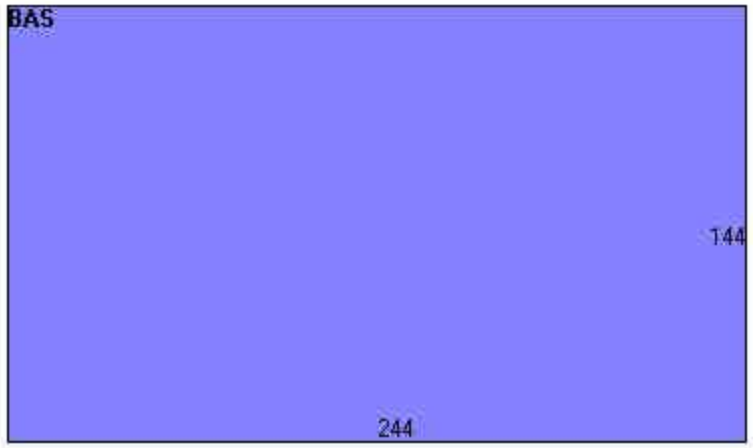
Year Built:	2007
Living Area:	35,136
Replacement Cost:	$1,352,392
Building Percent Good:	92
Replacement Cost Less Depreciation:	$1,244,200

Building Attributes : Bldg 14 of 16	
Field	**Description**
STYLE	Parking Garage
MODEL	Commercial
Grade	Good+
Stories:	6
Occupancy	707
Exterior Wall 1	Reinforc Concr
Exterior Wall 2	
Roof Structure	Reinforc Concr
Roof Cover	Concrete Tile
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Concr Abv Grad
Interior Floor 2	
Heating Fuel	Coal or Wood
Heating Type	None
AC Type	None
Bldg Use	Commercial MDL-94

Building Photo

(http://images.vgsi.com/photos2/DanburyCTPhotos//default.jpg)

Building Layout



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Total Rooms	
Total Bedrms	
Total Baths	
1st Floor Use:	
Heat/AC	NONE
Frame Type	REINF. CONCR
Baths/Plumbing	NONE
Ceiling/Wall	NONE
Rooms/Prtns	AVERAGE
Wall Height	15
% Comn Wall	

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	35,136	35,136
		35,136	35,136

Building 15 : Section 1

Year Built: 2007
Living Area: 58,869
Replacement Cost: $11,049,292
Building Percent Good: 91
Replacement Cost Less Depreciation: $10,054,900

Building Attributes : Bldg 15 of 16	
Field	**Description**
STYLE	Profess. Bldg
MODEL	Commercial
Grade	Excellent+++
Stories:	3

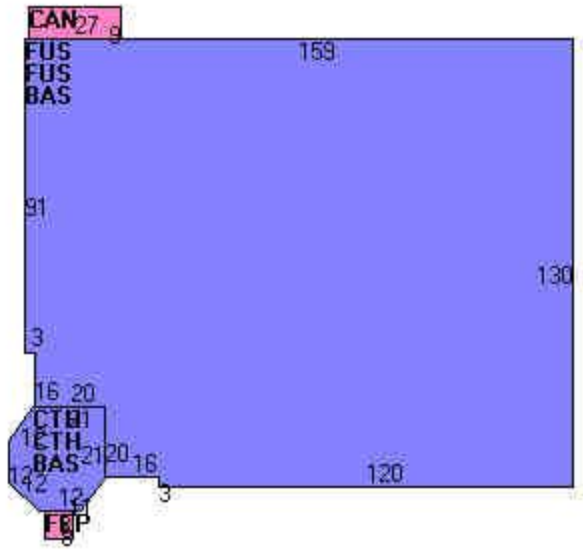
Building Photo

(http://images.vgsi.com/photos2/DanburyCTPhotos//\00\02\73/3

Occupancy	1
Exterior Wall 1	Stucco/Masonry
Exterior Wall 2	Brick Veneer
Roof Structure	Flat
Roof Cover	Tar & Gravel
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Floor 1	Ceram Clay Til
Interior Floor 2	Carpet
Heating Fuel	Gas
Heating Type	Forced Air-Duc
AC Type	Central
Bldg Use	Commercial MDL-94
Total Rooms	
Total Bedrms	
Total Baths	
1st Floor Use:	
Heat/AC	HEAT/AC PKGS
Frame Type	FIREPRF STEEL
Baths/Plumbing	ABOVE AVERAGE
Ceiling/Wall	SUS-CEIL & WL
Rooms/Prtns	ABOVE AVERAGE
Wall Height	9
% Comn Wall	

Building 16 : Section 1

Building Layout



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Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
FUS	Finished Upper Story	40,090	38,086
BAS	First Floor	20,783	20,783
CAN	Canopy	243	0
CTH	Cathedral Ceiling	1,476	0
FEP	Fin. Enclosed Porch	64	0
		62,656	58,869

Year Built:	2012
Living Area:	300,000
Replacement Cost:	$101,202,000
Building Percent Good:	138
Replacement Cost Less Depreciation:	$139,658,800

Building Attributes : Bldg 16 of 16	
Field	**Description**
STYLE	Hospital
MODEL	Commercial
Grade	Excellent+++
Stories:	6
Occupancy	1
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar & Gravel
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Floor 1	Carpet
Interior Floor 2	Vinyl/Asphalt
Heating Fuel	Gas
Heating Type	Forced Air-Duc
AC Type	Central
Bldg Use	Hospital

Building Photo


Building Photo
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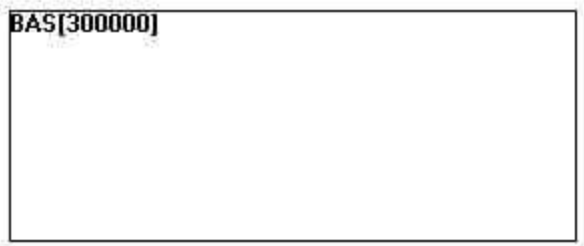
Building Layout



(http://images.vgsi.com/photos2/DanburyCTPhotos//Sketches/24

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	300,000	300,000
		300,000	300,000

Total Rooms	
Total Bedrms	
Total Baths	
1st Floor Use:	
Heat/AC	HEAT/AC PKGS
Frame Type	STEEL
Baths/Plumbing	AVERAGE
Ceiling/Wall	SUS-CEIL & WL
Rooms/Prtns	AVERAGE
Wall Height	10
% Comn Wall	

Extra Features

Extra Features				Legend
Code	**Description**	**Size**	**Value**	**Bldg #**
ELV1	Elevator	5 STOPS	$176,400	7
SPR1	Sprinklers-Wet	172986 S.F.	$211,800	6
SPR1	Sprinklers-Wet	18147 S.F.	$23,100	2
SPR1	Sprinklers-Wet	2120 S.F.	$2,800	8
SPR1	Sprinklers-Wet	268385 S.F.	$395,200	16
SPR1	Sprinklers-Wet	2766 S.F.	$3,800	9
SPR1	Sprinklers-Wet	3000 S.F.	$3,800	4
SPR1	Sprinklers-Wet	38890 S.F.	$51,200	13
SPR1	Sprinklers-Wet	9856 S.F.	$12,400	5

A/C	Air Condition	14820 UNITS	$32,800	13
ELV1	Elevator	4 STOPS	$137,800	2
ELV1	Elevator	5 STOPS	$176,400	7
ELV1	Elevator	5 STOPS	$197,400	12
SPR1	Sprinklers-Wet	304896 S.F.	$330,800	1
SPR1	Sprinklers-Wet	62413 S.F.	$87,100	15
ELV1	Elevator	3 STOPS	$113,400	15
ELV1	Elevator	4 STOPS	$151,200	13
ELV1	Elevator	5 STOPS	$197,400	12
ELV1	Elevator	7 STOPS	$232,300	6
ELV1	Elevator	3 STOPS	$113,400	15
ELV1	Elevator	7 STOPS	$232,300	6
ELV1	Elevator	3 STOPS	$113,400	15
ELV1	Elevator	7 STOPS	$232,300	6
ELV1	Elevator	6 STOPS	$199,100	6
ELV1	Elevator	5 STOPS	$165,900	6
ELV2	Freight Elevator	3 STOPS	$75,800	6

Land

Land Use

Use Code	951
Description	Hospital
Zone	RH3
Neighborhood	7500
Alt Land Appr	No

Land Line Valuation

Size (Acres)	23.46
Frontage	0
Depth	0
Assessed Value	$41,050,400
Appraised Value	$58,643,400

Category

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
	EXPANSION			1	$1,720,000	14
LT2	Light 2			8 UNITS	$5,800	12
PAV1	Paving-Asphalt			243936 S.F.	$307,400	1
PAV1	Paving-Asphalt			56580 S.F.	$59,400	15
CNP2	Canopy-Gd			1686 S.F.	$30,300	6
CNP2	Canopy-Gd			2607 S.F.	$46,900	5
CEL	Cell Tower			1 UNITS	$300,000	1
LT1	Light 1			9 UNITS	$1,600	2
LT2	Light 2			4 UNITS	$1,500	7
	RENOVATE LAB		10-1-05 LIST	1	$500,000	1
LT2	Light 2			2 UNITS	$700	13
LT2	Light 2			9 UNITS	$3,300	2
	FM BOOSTER FACILITY		10-1-06 LIST	1	$235,300	1
	FM BOOSTER/REN		10-1-06 LIST	1	$435,000	1
LT3	Lights 3			4 UNITS	$2,100	13
	RENOVATION TO 10 BED UNIT		10-1-06 LIST	1	$200,000	1
LT1	Light 1			18 UNITS	$3,200	15
	4TH FLR CONV/RED LOT		10-1-06 LIST	1	$2,000,300	1
	4TH FLR CONVERT STGE RM TO OR		10-1-06 LIST	1	$250,000	1

LT2	Light 2			2 UNITS	$700	15
	FIELD PRICE		RED LOT PARKING EXPANSION	1	$1,750,000	1
	1800 SQ FT M			1	$900,000	1
	ALTERATIONS		10-1-10 LIST	1	$3,200,000	1
	OFFICES		10-1-10 LIST	1	$400,000	1
	RENOVATE 1ST FLOOR SOUTH		10-1-10 LIST	1	$750,000	1
	BLDG. EXPANSION		BLDG. EXANSION	1	$2,000,000	1
	TOWER ADD		TOWER ADDITION	1	$18,000,000	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$308,036,700	$58,643,400	$366,680,100
2016	$300,531,000	$55,850,900	$356,381,900
2015	$300,531,000	$55,850,900	$356,381,900

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$215,626,300	$41,050,400	$256,676,700
2016	$210,371,500	$39,095,600	$249,467,100
2015	$210,371,500	$39,095,600	$249,467,100

EXHIBIT B

Sprint

PROJECT:	MASSIVE MIMO UPGRADE
SITE NAME:	DANBURY HOSPITAL
SITE CASCADE:	CT81XC007/CT03XC350
SITE ADDRESS:	24 HOSPITAL AVE DANBURY, CT 06810
SITE TYPE:	ROOF TOP
MARKET:	SOUTHERN CONNECTICUT

SITE INFORMATION

PROPERTY OWNER:
DANBURY HOSPITAL
24 HOSPITAL AVE
DANBURY, CT 06810

LATITUDE (NAD83):
41° 24' 17.9" N
41.404972°

LONGITUDE (NAD83):
73° 26' 45.21" W
-73.445892°

COUNTY:
FAIRFIELD

ZONING JURISDICTION:
CITY OF DANBURY

ZONING DISTRICT:
RESIDENTIAL

TAX MAP PARCEL:
I12/1

POWER COMPANY:
CONNECTICUT LIGHT & POWER

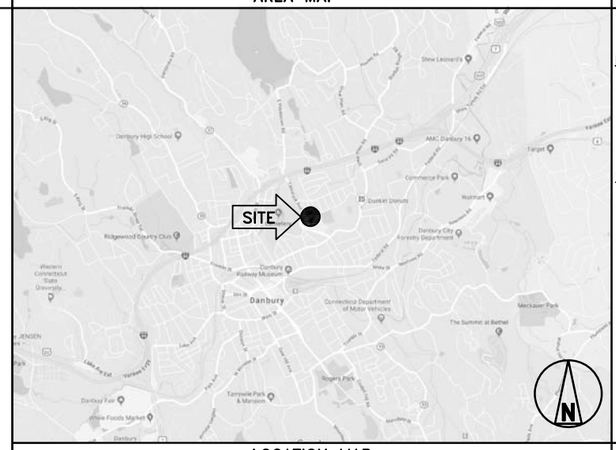
AAV PROVIDER:
VERIZON

PROJECT MANAGER:
SPRINT
CONTACT: WHITNEY JONES
PHONE: 201-355-5172
EMAIL: WHITNEY.JONES@SPRINT.COM

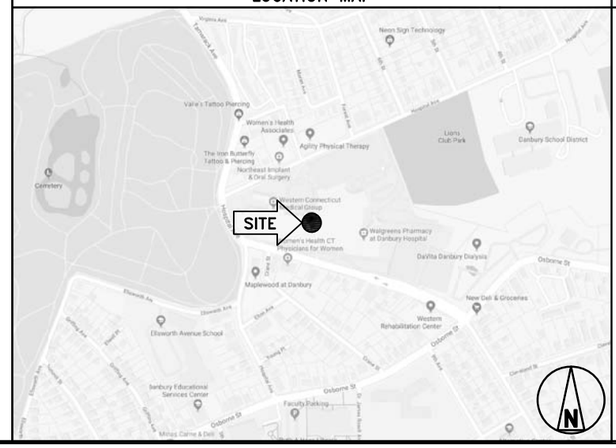
CONSTRUCTION MANAGER:
SPRINT
CONTACT: RICHARD SAVONAROLA
PHONE: 201-355-5172
EMAIL: RICHARD.SAVONAROLA@SPRINT.COM

SITE ACQUISITION:
J.P. WIRELESS CONSULTING, LLC
CONTACT: JOSEPH A. PAPA, JR.
PHONE: 518-365-9711
EMAIL: JOSEPH.A.PAPA@GMAIL.COM

AREA MAP



LOCATION MAP



PROJECT DESCRIPTION

SPRINT PROPOSES TO MODIFY AN EXISTING UNMANNED TELECOMMUNICATIONS FACILITY.

EXISTING SPRINT EQUIPMENT TO BE REMOVED:

- REMOVE (6) ACATEL-LUCENT 2500 MHZ RRH'S P/N: TD-RRH8X20
- REMOVE (6) HYBRID CABLES
- REMOVE (24) DIPLEXERS, (4) PER SECTOR

SPRINT EQUIPMENT TO BE INSTALLED:

- INSTALL (6) NOKIA MIMO ANTENNAS P/N: AAHC
- INSTALL (6) HUBER AND SUHNER FIBER CABLE P/N: MLC6C-06C-008R-008R
- INSTALL (2) FIBER DISTRIBUTION BOX WITHIN EXISTING LEASE AREA

THESE PLANS HAVE BEEN DEVELOPED FOR THE MODIFICATION OF AN EXISTING UNMANNED TELECOMMUNICATIONS FACILITY OWNED OR LEASED BY SPRINT IN ACCORDANCE WITH THE SCOPE OF WORK PROVIDED BY SPRINT. INFINIGY HAS INCORPORATED THIS SCOPE OF WORK IN THE PLANS. THESE PLANS ARE NOT FOR CONSTRUCTION UNLESS ACCOMPANIED BY A PASSING STRUCTURAL STABILITY ANALYSIS PREPARED BY A LICENSED STRUCTURAL ENGINEER. STRUCTURAL ANALYSIS MUST INCLUDE BOTH TOWER AND MOUNT.

APPLICABLE CODES

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALL IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

1. INTERNATIONAL BUILDING CODE (2015 IBC)
2. TIA-222-G OR LATEST EDITION
3. NFPA 780 – LIGHTNING PROTECTION CODE
4. 2011 NATIONAL ELECTRIC CODE OR LATEST EDITION
5. ANY OTHER NATIONAL OR LOCAL APPLICABLE CODES, MOST RECENT EDITIONS
6. CT BUILDING CODE
7. LOCAL BUILDING CODE
8. CITY/COUNTY ORDINANCES

811 Know what's below. Call before you dig. www.call811.com

DRAWING INDEX

SHEET NO.	SHEET TITLE	REV.
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SP-1	SPRINT SPECIFICATIONS	1
SP-2	SPRINT SPECIFICATIONS	1
SP-3	SPRINT SPECIFICATIONS	1
A-1	ROOFTOP SITE PLAN	1
A-2	FLOOR SITE PLAN	1
A-3	EQUIPMENT SITE PLAN	1
A-4	BUILDING ELEVATION & CABLE PLAN	1
A-5	ANTENNA LAYOUTS & MOUNTING DETAILS	1
A-6	ANTENNA LAYOUTS & MOUNTING DETAILS	1
A-7	EQUIPMENT & MOUNTING DETAILS	1
A-8	HYBRID CABLE DETAIL	1
A-9	PLUMBING DIAGRAM	1
E-1	ELECTRICAL & GROUNDING PLAN	1
E-2	ELECTRICAL & GROUNDING DETAILS	1

PLANS PREPARED FOR:
Sprint
6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:
INFINIGY
INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793
JOB NUMBER 526-103

ENGINEERING LICENSE:
STATE OF CONNECTICUT
JOHN S. STEVENS
24705
LICENSED PROFESSIONAL ENGINEER
04/15/2019

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REVISIONS:

DESCRIPTION	DATE	BY	REV
REVISED / ISSUED FOR CONSTRUCTION	03/25/19	MAP	1
ISSUED FOR CONSTRUCTION	03/06/19	MAP	0

SITE NAME:
DANBURY HOSPITAL

SITE CASCADE:
CT81XC007/CT03XC350

SITE ADDRESS:
24 HOSPITAL AVE
DANBURY, CT 06810

SHEET DESCRIPTION:
TITLE SHEET
& PROJECT DATA

SHEET NUMBER:
T-1

THESE OUTLINE SPECIFICATIONS IN CONJUNCTION WITH THE SPRINT STANDARD CONSTRUCTION SPECIFICATIONS, INCLUDING CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

SECTION 01 100 – SCOPE OF WORK

PART 1 – GENERAL

1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE SPRINT CONSTRUCTION STANDARDS FOR WIRELESS SITES, CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 RELATED DOCUMENTS:

A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.

B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

1.3 PRECEDENCE: SHOULD CONFLICTS OCCUR BETWEEN THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES INCLUDING THE STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES AND THE CONSTRUCTION DRAWINGS, INFORMATION ON THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE. NOTIFY SPRINT CONSTRUCTION MANAGER IF THIS OCCURS.

1.4 NATIONALLY RECOGNIZED CODES AND STANDARDS:

A. THE WORK SHALL COMPLY WITH APPLICABLE NATIONAL AND LOCAL CODES AND STANDARDS, LATEST EDITION, AND PORTIONS THEREOF, INCLUDED BUT NOT LIMITED TO THE FOLLOWING:

1. GR-63-CORE NEBS REQUIREMENTS: PHYSICAL PROTECTION
5. GR-78-CORE GENERIC REQUIREMENTS FOR THE PHYSICAL DESIGN AND MANUFACTURE OF TELECOMMUNICATIONS EQUIPMENT.
3. GR-1089 CORE, ELECTROMAGNETIC COMPATIBILITY AND ELECTRICAL SAFETY –GENERIC CRITERIA FOR NETWORK TELECOMMUNICATIONS EQUIPMENT.
4. NATIONAL FIRE PROTECTION ASSOCIATION CODES AND STANDARDS (NFPA) INCLUDING NFPA 70 (NATIONAL ELECTRICAL CODE – "NEC") AND NFPA 101 (LIFE SAFETY CODE).
5. AMERICAN SOCIETY FOR TESTING OF MATERIALS (ASTM)
6. INSTITUTE OF ELECTRONIC AND ELECTRICAL ENGINEERS (IEEE)
7. AMERICAN CONCRETE INSTITUTE (ACI)
8. AMERICAN WIRE PRODUCERS ASSOCIATION (AWPA)
9. CONCRETE REINFORCING STEEL INSTITUTE (CRSI)
10. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)
11. PORTLAND CEMENT ASSOCIATION (PCA)
12. NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA)
13. BRICK INDUSTRY ASSOCIATION (BIA)
14. AMERICAN WELDING SOCIETY (AWS)
15. NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA)
16. SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION (SMACNA)
17. DOOR AND HARDWARE INSTITUTE (DHI)
18. OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA)
19. APPLICABLE BUILDING CODES INCLUDING UNIFORM BUILDING CODE, SOUTHERN BUILDING CODE, BOCA, AND THE INTERNATIONAL BUILDING CODE.

1.5 DEFINITIONS:

A. WORK: THE SUM OF TASKS AND RESPONSIBILITIES IDENTIFIED IN THE CONTRACT DOCUMENTS.

B. COMPANY: SPRINT CORPORATION

C. ENGINEER: SYNONYMOUS WITH ARCHITECT & ENGINEER AND "A&E". THE DESIGN PROFESSIONAL HAVING PROFESSIONAL RESPONSIBILITY FOR DESIGN OF THE PROJECT.

D. CONTRACTOR: CONSTRUCTION CONTRACTOR; CONSTRUCTION VENDOR; INDIVIDUAL OR ENTITY WHO AFTER EXECUTION OF A CONTRACT IS BOUND TO ACCOMPLISH THE WORK.

E. THIRD PARTY VENDOR OR AGENCY: A VENDOR OR AGENCY ENGAGED SEPARATELY BY THE COMPANY, A&E, OR CONTRACTOR TO PROVIDE MATERIALS OR TO ACCOMPLISH SPECIFIC TASKS RELATED TO BUT NOT INCLUDED IN THE WORK.

F. OFCI: OWNER FURNISHED, CONTRACTOR INSTALLED EQUIPMENT.

G. CONSTRUCTION MANAGER – ALL PROJECTS RELATED COMMUNICATION TO FLOW THROUGH SPRINT REPRESENTATIVE IN CHARGE OF PROJECT...

1.6 SITE FAMILIARITY: CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE SPRINT CONSTRUCTION MANAGER PRIOR TO THE COMMENCEMENT OF WORK. NO COMPENSATION WILL BE AWARDED BASED ON CLAIM OF LACK OF KNOWLEDGE OR FIELD CONDITIONS.

1.7 POINT OF CONTACT: COMMUNICATION BETWEEN SPRINT AND THE CONTRACTOR SHALL FLOW THROUGH THE SINGLE SPRINT CONSTRUCTION MANAGER APPOINTED TO MANAGE THE PROJECT FOR SPRINT.

1.8 ON-SITE SUPERVISION: THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL EMPLOY A COMPETENT SUPERINTENDENT WHO SHALL BE IN ATTENDANCE AT THE SITE AT ALL TIMES DURING PERFORMANCE OF THE WORK.

1.9 DRAWINGS, SPECIFICATIONS AND DETAILS REQUIRED AT JOBSITE: THE CONSTRUCTION CONTRACTOR SHALL MAINTAIN A FULL SET OF THE CONSTRUCTION DRAWINGS, STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES AND THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES AT THE JOBSITE FROM MOBILIZATION THROUGH CONSTRUCTION COMPLETION.

A. THE JOBSITE DRAWINGS, SPECIFICATIONS AND DETAILS SHALL BE CLEARLY MARKED DAILY IN RED PENCIL WITH ANY CHANGES IN CONSTRUCTION OVER WHAT IS DEPICTED IN THE DOCUMENTS. AT CONSTRUCTION COMPLETION, THIS JOBSITE MARKUP SET SHALL BE DELIVERED TO THE COMPANY OR COMPANY'S DESIGNATED REPRESENTATIVE TO BE FORWARDED TO THE COMPANY'S A&E VENDOR FOR PRODUCTION OF "AS-BUILT" DRAWINGS.

B. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK. CONTRACTOR SHALL NOTIFY SPRINT CONSTRUCTION MANAGER OF ANY VARIATIONS PRIOR TO PROCEEDING WITH THE WORK.

C. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS NOTED OTHERWISE. SPACING BETWEEN EQUIPMENT IS THE REQUIRED CLEARANCE. SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, EXISTING CONDITIONS AND/OR DESIGN INTENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE SPRINT CONSTRUCTION MANAGER PRIOR TO PROCEEDING WITH THE WORK.

1.10 USE OF JOB SITE: THE CONTRACTOR SHALL CONFINE ALL CONSTRUCTION AND RELATED OPERATIONS INCLUDING STAGING AND STORAGE OF MATERIALS AND EQUIPMENT, PARKING, TEMPORARY FACILITIES, AND WASTE STORAGE TO THE LEASE PARCEL UNLESS OTHERWISE PERMITTED BY THE CONTRACT DOCUMENTS.

1.11 UTILITIES SERVICES: WHERE NECESSARY TO CUT EXISTING PIPES, ELECTRICAL WIRES, CONDUITS, CABLES, ETC., OF UTILITY SERVICES, OR OF FIRE PROTECTION OR COMMUNICATIONS SYSTEMS, THEY SHALL BE CUT AND CAPPED AT SUITABLE PLACES OR WHERE SHOWN. ALL SUCH ACTIONS SHALL BE COORDINATED WITH THE UTILITY COMPANY INVOLVED:

1.12 PERMITS / FEES: WHEN REQUIRED THAT A PERMIT OR CONNECTION FEE BE PAID TO A PUBLIC UTILITY PROVIDER FOR NEW SERVICE TO THE CONSTRUCTION PROJECT, PAYMENT OF SUCH FEE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

1.13 CONTRACTOR SHALL TAKE ALL MEASURES AND PROVIDE ALL MATERIAL NECESSARY FOR PROTECTING EXISTING EQUIPMENT AND PROPERTY.

1.14 METHODS OF PROCEDURE (MOPS) FOR CONSTRUCTION: CONTRACTOR SHALL PERFORM WORK AS DESCRIBED IN THE FOLLOWING INSTALLATION AND COMMISSIONING MOPS.

NOTE: IN SHORT-FORM SPECIFICATIONS ON THE DRAWINGS, A/E TO INSERT LIST OF APPLICABLE MOPS INCLUDING EN-2012-001, EN-2013-002, EL-0568, AND TS-0193

1.15 USE OF ELECTRONIC PROJECT MANAGEMENT SYSTEMS:

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 TEMPORARY UTILITIES AND FACILITIES: THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITIES AND FACILITIES NECESSARY EXCEPT AS OTHERWISE INDICATED IN THE CONSTRUCTION DOCUMENTS. TEMPORARY UTILITIES AND FACILITIES INCLUDE POTABLE WATER, HEAT, HVAC, ELECTRICITY, SANITARY FACILITIES, WASTE DISPOSAL FACILITIES, AND TELEPHONE/COMMUNICATION SERVICES. PROVIDE TEMPORARY UTILITIES AND FACILITIES IN ACCORDANCE WITH OSHA AND THE AUTHORITY HAVING JURISDICTION. CONTRACTOR MAY UTILIZE THE COMPANY ELECTRICAL SERVICE IN THE COMPLETION OF THE WORK WHEN IT BECOMES AVAILABLE. USE OF THE LESSORS OR SITE OWNER'S UTILITIES OR FACILITIES IS EXPRESSLY FORBIDDEN EXCEPT AS OTHERWISE ALLOWED IN THE CONTRACT DOCUMENTS.

3.2 ACCESS TO WORK: THE CONTRACTOR SHALL PROVIDE ACCESS TO THE JOB SITE FOR AUTHORIZED COMPANY PERSONNEL AND AUTHORIZED REPRESENTATIVES OF THE ARCHITECT/ENGINEER DURING ALL PHASES OF THE WORK.

3.3 TESTING: REQUIREMENTS FOR TESTING BY THIS CONTRACTOR SHALL BE AS INDICATED HEREWITH, ON THE CONSTRUCTION DRAWINGS, AND IN THE INDIVIDUAL SECTIONS OF THESE SPECIFICATIONS. SHOULD COMPANY CHOOSE TO ENGAGE ANY THIRD-PARTY TO CONDUCT ADDITIONAL TESTING, THE CONTRACTOR SHALL COOPERATE WITH AND PROVIDE A WORK AREA FOR COMPANY'S TEST AGENCY.

3.4 DIMENSIONS: VERIFY DIMENSIONS INDICATED ON DRAWINGS WITH FIELD DIMENSIONS BEFORE FABRICATION OR ORDERING OF MATERIALS. DO NOT SCALE DRAWINGS.

3.5 EXISTING CONDITIONS: NOTIFY THE SPRINT CONSTRUCTION MANAGER OF EXISTING CONDITIONS DIFFERING FROM THOSE INDICATED ON THE DRAWINGS. DO NOT REMOVE OR ALTER STRUCTURAL COMPONENTS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ARCHITECT AND ENGINEER.

SECTION 01 200 – COMPANY FURNISHED MATERIAL AND EQUIPMENT

PART 1 – GENERAL

1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 RELATED DOCUMENTS:

A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.

B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 RECEIPT OF MATERIAL AND EQUIPMENT:

A. A COMPANY FURNISHED MATERIAL AND EQUIPMENT IS IDENTIFIED ON THE RF DATA SHEET IN THE CONSTRUCTION DOCUMENTS.

B. THE CONTRACTOR IS RESPONSIBLE FOR SPRINT PROVIDED MATERIAL AND EQUIPMENT AND UPON RECEIPT SHALL:

1 ACCEPT DELIVERIES AS SHIPPED AND TAKE RECEIPT.

2. VERIFY COMPLETENESS AND CONDITION OF ALL DELIVERIES.

3. TAKE RESPONSIBILITY FOR EQUIPMENT AND PROVIDE INSURANCE PROTECTION AS REQUIRED IN AGREEMENT.

4. RECORD ANY DEFECTS OR DAMAGES AND WITHIN TWENTY-FOUR HOURS AFTER RECEIPT, REPORT TO SPRINT OR ITS DESIGNATED PROJECT REPRESENTATIVE OF SUCH.

5. PROVIDE SECURE AND NECESSARY WEATHER PROTECTED WAREHOUSING.

6. COORDINATE SAFE AND SECURE TRANSPORTATION OF MATERIAL AND EQUIPMENT, DELIVERING AND OFF-LOADING FROM CONTRACTOR'S WAREHOUSE TO SITE.

3.2 DELIVERABLES:

A. COMPLETE SHIPPING AND RECEIPT DOCUMENTATION IN ACCORDANCE WITH COMPANY PRACTICE.

B. IF APPLICABLE, COMPLETE LOST/STOLEN/DAMAGED DOCUMENTATION REPORT AS NECESSARY IN ACCORDANCE WITH COMPANY PRACTICE, AND AS DIRECTED BY COMPANY.

C. UPLOAD DOCUMENTATION INTO SPRINT SITE MANAGEMENT SYSTEM (SMS) AND/OR PROVIDE HARD COPY DOCUMENTATION AS REQUESTED.

SECTION 01 300 – CELL SITE CONSTRUCTION CO.

PART 1 – GENERAL

1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 RELATED DOCUMENTS:

A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.

B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

1.3 NOTICE TO PROCEED

A. NO WORK SHALL COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED AND THE ISSUANCE OF THE WORK ORDER.

B. UPON RECEIVING NOTICE TO PROCEED, CONTRACTOR SHALL FULLY PERFORM ALL WORK NECESSARY TO PROVIDE SPRINT WITH AN OPERATIONAL WIRELESS FACILITY.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 FUNCTIONAL REQUIREMENTS:

A. THE ACTIVITIES DESCRIBED IN THIS PARAGRAPH REPRESENT MINIMUM ACTIONS AND PROCESSES REQUIRED TO SUCCESSFULLY COMPLETE THE WORK. THE ACTIVITIES DESCRIBED ARE NOT EXHAUSTIVE, AND CONTRACTOR SHALL TAKE ANY AND ALL ACTIONS AS NECESSARY TO SUCCESSFULLY COMPLETE THE CONSTRUCTION OF A FULLY FUNCTIONING WIRELESS FACILITY AT THE SITE IN ACCORDANCE WITH COMPANY PROCESSES.

B. SUBMIT SPECIFIC DOCUMENTATION AS INDICATED HEREIN, AND OBTAIN REQUIRED APPROVALS WHILE THE WORK IS BEING PERFORMED.

C. MANAGE AND CONDUCT ALL FIELD CONSTRUCTION SERVICE RELATED ACTIVITIES

D. PROVIDE CONSTRUCTION ACTIVITIES TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

PLANS PREPARED FOR:

Sprint
6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

INFINIGY
INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793
JOB NUMBER 526-103

ENGINEERING LICENSE:

STATE OF CONNECTICUT
JOHN S. STEVENS
24705
LICENSED PROFESSIONAL ENGINEER
04/15/2019

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV
REVISED / ISSUED FOR CONSTRUCTION	03/25/19	MAP	1
ISSUED FOR CONSTRUCTION	03/06/19	MAP	0

SITE NAME:

DANBURY HOSPITAL

SITE CASCADE:

CT81XC007/CT03XC350

SITE ADDRESS:

24 HOSPITAL AVE
DANBURY, CT 06810

SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

SHEET NUMBER:

SP-1

CONTINUE FROM SP-1

1. PERFORM ANY REQUIRED SITE ENVIRONMENTAL MITIGATION.
2. PREPARE GROUND SITES; PROVIDE DE-GRUBBING; AND ROUGH AND FINAL GRADING, AND COMPOUND SURFACE TREATMENTS.
3. MANAGE AND CONDUCT ALL ACTIVITIES FOR INSTALLATION OF UTILITIES INCLUDING ELECTRICAL AND TELCO BACKHAUL.
4. INSTALL UNDERGROUND FACILITIES INCLUDING UNDERGROUND POWER AND COMMUNICATIONS CONDUITS, AND UNDERGROUND GROUNDING SYSTEM.
5. INSTALL ABOVE GROUND GROUNDING SYSTEMS.
6. PROVIDE NEW HVAC INSTALLATIONS AND MODIFICATIONS.
7. INSTALL "H-FRAMES", CABINETS AND SHELTERS AS INDICATED.
8. INSTALL ROADS, ACCESS WAYS, CURBS AND DRAINS AS INDICATED.
9. ACCOMPLISH REQUIRED MODIFICATION OF EXISTING FACILITIES.
10. PROVIDE ANTENNA SUPPORT STRUCTURE FOUNDATIONS.
11. PROVIDE SLABS AND EQUIPMENT PLATFORMS.
12. INSTALL COMPOUND FENCING, SIGHT SHIELDING, LANDSCAPING AND ACCESS BARRIERS.
13. PERFORM INSPECTION AND MATERIAL TESTING AS REQUIRED HEREINAFTER.
14. CONDUCT SITE RESISTANCE TO EARTH TESTING AS REQUIRED HEREINAFTER
15. INSTALL FIXED GENERATOR SETS AND OTHER STANDBY POWER SOLUTIONS.
16. INSTALL TOWERS, ANTENNA SUPPORT STRUCTURES AND PLATFORMS ON EXISTING TOWERS AS REQUIRED.
17. INSTALL CELL SITE RADIOS, MICROWAVE, GPS, COAXIAL MAINLINE, ANTENNAS, CROSS BAND COUPLERS, TOWER TOP AMPLIFIERS, LOW NOISE AMPLIFIERS AND RELATED EQUIPMENT.
18. PERFORM, DOCUMENT, AND CLOSE OUT ANY CONSTRUCTION CONTROL DOCUMENTS THAT MAY BE REQUIRED BY GOVERNMENT AGENCIES AND LANDLORDS.
19. PERFORM ANTENNAL AND COAX SWEEP TESTING AND MAKE ANY AND ALL NECESSARY CORRECTIONS.
20. REMAIN ON SITE MOBILIZED THROUGHOUT HAND-OFF AND INTEGRATION TO ASSIST AS NEEDED UNTIL SITE IS DEEMED SUBSTANTIALLY COMPLETE AND PLACED "ON AIR."

3.2 GENERAL REQUIREMENTS FOR CIVIL CONSTRUCTION:

A. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH. AT THE COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE FROM THE SITE ALL REMAINING RUBBISH, IMPLEMENTS, TEMPORARY FACILITIES, AND SURPLUS MATERIALS.

B. EQUIPMENT ROOMS SHALL AT ALL TIMES BE MAINTAINED "BROOM CLEAN" AND CLEAR OF DEBRIS.

C. CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO DISCOVER AND LOCATE ANY HAZARDOUS CONDITION.

1. IN THE EVENT CONTRACTOR ENCOUNTERS ANY HAZARDOUS CONDITION WHICH HAS NOT BEEN ABATED OR OTHERWISE MITIGATED, CONTRACTOR AND ALL OTHER PERSONS SHALL IMMEDIATELY STOP WORK IN THE AFFECTED AREA AND NOTIFY COMPANY IN WRITING. THE WORK IN THE AFFECTED AREA SHALL NOT BE RESUMED EXCEPT BY WRITTEN NOTIFICATION BY COMPANY.
2. CONTRACTOR AGREES TO USE CARE WHILE ON THE SITE AND SHALL NOT TAKE ANY ACTION THAT WILL OR MAY RESULT IN OR CAUSE THE HAZARDOUS CONDITION TO BE FURTHER RELEASED IN THE ENVIRONMENT, OR TO FURTHER EXPOSE INDIVIDUALS TO THE HAZARD.

D. CONTRACTOR'S ACTIVITIES SHALL BE RESTRICTED TO THE PROJECT LIMITS. SHOULD AREAS OUTSIDE THE PROJECT LIMITS BE AFFECTED BY CONTRACTOR'S ACTIVITIES, CONTRACTOR SHALL IMMEDIATELY RETURN THEM TO ORIGINAL CONDITION

E. CONDUCT TESTING AS REQUIRED HEREIN.

3.3 DELIVERABLES:

A. CONTRACTOR SHALL REVIEW, APPROVE, AND SUBMIT TO SPRINT SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND SIMILAR SUBMITTALS AS REQUIRED HEREINAFTER

B. PROVIDE DOCUMENTATION INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING. DOCUMENTATION SHALL BE FORWARDED IN ORIGINAL FORMAT AND/OR UPLOADED INTO SMS.

1. ALL CORRESPONDENCE AND PRELIMINARY CONSTRUCTION REPORTS.
2. PROJECT PROGRESS REPORTS.
3. CIVIL CONSTRUCTION START DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
4. ELECTRICAL SERVICE COMPLETION DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
5. LINES AND ANTENNA INSTALL DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
6. POWER INSTALL DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
7. TELCO READY DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
8. PPC (OR SHELTER) INSTALL DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
9. TOWER CONSTRUCTION START DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
10. TOWER CONSTRUCTION COMPLETE DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
11. BTS AND RADIO EQUIPMENT DELIVERED AT SITE DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
12. NETWORK OPERATIONS HANDOFF CHECKLIST (HOC WALK) COMPLETE (UPLOAD FORM IN SMS)
13. CIVIL CONSTRUCTION COMPLETE DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
14. SITE CONSTRUCTION PROGRESS PHOTOS UNLOADED INTO SMS.

SECTION 01 400 – SUBMITTALS & TESTS

PART 1 – GENERAL

1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 RELATED DOCUMENTS:

A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.

B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

1.3 SUBMITTALS:

A. THE WORK IN ALL ASPECTS SHALL COMPLY WITH THE CONSTRUCTION DRAWINGS AND THESE SPECIFICATIONS.

B. SUBMIT THE FOLLOWING TO COMPANY REPRESENTATIVE FOR APPROVAL.

1. CONCRETE MIX-DESIGNS FOR TOWER FOUNDATIONS, ANCHORS PIERS, AND CONCRETE PAVING.
2. CONCRETE BREAK TESTS AS SPECIFIED HEREIN.
3. SPECIAL FINISHES FOR INTERIOR SPACES, IF ANY.
4. ALL EQUIPMENT AND MATERIALS SO IDENTIFIED ON THE CONSTRUCTION DRAWINGS.
5. CHEMICAL GROUNDING DESIGN

D. ALTERNATES: AT THE COMPANY'S REQUEST, ANY ALTERNATIVES TO THE MATERIALS OR METHODS SPECIFIED SHALL BE SUBMITTED TO SPRINT'S CONSTRUCTION MANAGER FOR APPROVAL PRIOR TO BEING SHIPPED TO SITE. SPRINT WILL REVIEW AND APPROVE ONLY THOSE REQUESTS MADE IN WRITING. NO VERBAL APPROVALS WILL BE CONSIDERED. SUBMITTAL FOR APPROVAL SHALL INCLUDE A STATEMENT OF COST REDUCTION PROPOSED FOR USE OF ALTERNATE PRODUCT.

1.4 TESTS AND INSPECTIONS:

A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTS, INSPECTIONS AND PROJECT DOCUMENTATION.

B. CONTRACTOR SHALL ACCOMPLISH TESTING INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. COAX SWEEPS AND FIBER TESTS PER CURRENT VERSION OF SPRINT'S TS-0200 ANTENNA LINE ACCEPTANCE STANDARDS.
2. AGL, AZIMUTH AND DOWNTILT USING ELECTRONIC COMMERCIAL MADE-FOR-THE-PURPOSE ANTENNA ALIGNMENT TOOL.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL CORRECTIONS TO ANY WORK IDENTIFIED AS UNACCEPTABLE IN SITE INSPECTION ACTIVITIES AND/OR AS A RESULT OF TESTING.

C. REQUIRED CLOSEOUT DOCUMENTATION INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING;

1. AZIMUTH, DOWNTILT, AGL – UPLOAD REPORT FROM ANTENNA ALIGNMENT TOOL TO SITERRA TASK 465. INSTALLED AZIMUTH, DOWNTILT, AND AGL MUST CONFORM TO THE RF DATA SHEETS. SWEEP AND FIBER TESTS
2. SCANABLE BARCODE PHOTOGRAPHS OF TOWER TOP AND INACCESSIBLE SERIALIZED EQUIPMENT
3. ALL AVAILABLE JURISDICTIONAL INFORMATION
4. PDF SCAN OF REDLINES PRODUCED IN FIELD
5. ELECTRONIC AS-BUILT DRAWINGS IN AUTOCAD AND PDF FORMATS. ANY FIELD CHANGE MUST BE REFLECTED BY MODIFYING THE PLANS, ELEVATIONS, AND DETAILS IN THE DRAWING SETS. GENERAL NOTES INDICATING MODIFICATIONS WILL NOT BE ACCEPTED. CHANGES SHALL BE HIGHLIGHTED AS "CLOUDS" IDENTIFIED AS THE "AS-BUILT" CONDITION.
6. LIEN WAIVERS
7. FINAL PAYMENT APPLICATION
8. REQUIRED FINAL CONSTRUCTION PHOTOS
9. CONSTRUCTION AND COMMISSIONING CHECKLIST COMPLETE WITH NO DEFICIENT ITEMS
10. ALL POST NTP TASKS INCLUDING DOCUMENT UPLOADS COMPLETED IN SITERRA (SPRINTS DOCUMENT REPOSITORY OF RECORD).

1.5 COMMISSIONING: PERFORM ALL COMMISSIONING AS REQUIRED BY APPLICABLE MOPs

1.6 INTEGRATION: PERFORM ALL INTEGRATION ACTIVITIES AS REQUIRED BY APPLICABLE MOPs

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 REQUIREMENTS FOR TESTING:

A. THIRD PARTY TESTING AGENCY:

1. WHEN THE USE OF A THIRD PARTY INDEPENDENT TESTING AGENCY IS REQUIRED, THE AGENCY THAT IS SELECTED MUST PERFORM SUCH WORK ON A REGULAR BASIS IN THE STATE WHERE THE PROJECT IS LOCATED AND HAVE A THOROUGH UNDERSTANDING OF LOCAL AVAILABLE MATERIALS, INCLUDING THE SOIL, ROCK, AND GROUNDWATER CONDITIONS.
2. THE THIRD PARTY TESTING AGENCY IS TO BE FAMILIAR WITH THE APPLICABLE REQUIREMENTS FOR THE TESTS TO BE DONE, EQUIPMENT TO BE USED, AND ASSOCIATED HEALTH AND SAFETY ISSUES.
3. EXPERIENCE IN SOILS, CONCRETE, MASONRY, AGGREGATE, AND ASPHALT TESTING USING ASTM, AASJTO, AND OTHER METHODS IS NEEDED.
4. EXPERIENCE IN SOILS, CONCRETE, MASONRY, AGGREGATE, AND ASPHALT TESTING USING ASTM, AASJTO, AND OTHER METHODS IS NEEDED.

3.2 REQUIRED TESTS:

A. CONTRACTOR SHALL ACCOMPLISH TESTING INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. CONCRETE CYLINDER BREAK TESTS FOR THE TOWER AND ANCHOR FOUNDATIONS AS SPECIFIED IN SECTION: PORTLAND CEMENT CONCRETE PAVING.
2. ASPHALT ROADWAY COMPACTED THICKNESS, SURFACE SMOOTHNESS, AND COMPACTED DENSITY TESTING AS SPECIFIED IN SECTION: HOT MIX ASPHALT PAVING.
3. FIELD QUALITY CONTROL TESTING AS SPECIFIED IN SECTION: PORTLAND CEMENT CONCRETE PAVING.
4. TESTING REQUIRED UNDER SECTION: AGGREGATE BASE FOR ACCESS ROADS, PADS AND ANCHOR LOCATIONS
5. STRUCTURAL BACKFILL COMPACTION TESTS FOR THE TOWER FOUNDATION.
6. SITE RESISTANCE TO EARTH TESTING PER EXHIBIT: CELL SITE GROUNDING SYSTEM DESIGN.
7. ANTENNA AND COAX SWEEP TESTS PER EXHIBIT: ANTENNA TRANSMISSION LINE ACCEPTANCE STANDARDS.
8. GROUNDING AT ANTENNA MASTS FOR GPS AND ANTENNAS
9. ALL OTHER TESTS REQUIRED BY COMPANY OR JURISDICTION.

3.3 REQUIRED INSPECTIONS

A. SCHEDULE INSPECTIONS WITH COMPANY REPRESENTATIVE.

B. CONDUCT INSPECTIONS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. GROUNDING SYSTEM INSTALLATION PRIOR TO EARTH CONCEALMENT DOCUMENTED WITH DIGITAL PHOTOGRAPHS BY CONTRACTOR, APPROVED BY A&E OR SPRINT REPRESENTATIVE.
2. FORMING FOR CONCRETE AND REBAR PLACEMENT PRIOR TO POUR DOCUMENTED WITH DIGITAL PHOTOGRAPHS BY CONTRACTOR, APPROVED BY A&E OR SPRINT REPRESENTATIVE.
3. COMPACTION OF BACKFILL MATERIALS; AGGREGATE BASE FOR ROADS, PADS, AND ANCHORS; ASPHALT PAVING; AND SHAFT BACKFILL FOR CONCRETE AND WOOD POLES, BY INDEPENDENT THIRD PARTY AGENCY.
4. PRE- AND POST-CONSTRUCTION ROOFTOP AND STRUCTURAL INSPECTIONS ON EXISTING FACILITIES.
5. TOWER ERECTION SECTION STACKING AND PLATFORM ATTACHMENT DOCUMENTED BY DIGITAL PHOTOGRAPHS BY THIRD PARTY AGENCY.
6. ANTENNA AZIMUTH , DOWN TILT AND PER SUNLIGHT TOOL SUNSIGHT INSTRUMENTS – ANTENNALIGN ALIGNMENT TOOL (AAT)

PLANS PREPARED FOR:

Sprint

6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

INFINIGY

INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793
JOB NUMBER 526-103

ENGINEERING LICENSE:

STATE OF CONNECTICUT
JOHN S. STEVENS
24705
LICENSED PROFESSIONAL ENGINEER

04/15/2019

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV
REVISED / ISSUED FOR CONSTRUCTION	03/25/19	MAP	1
ISSUED FOR CONSTRUCTION	03/06/19	MAP	0

SITE NAME:

DANBURY HOSPITAL

SITE CASCADE:

CT81XC007/CT03XC350

SITE ADDRESS:

24 HOSPITAL AVE
DANBURY, CT 06810

SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

SHEET NUMBER:

SP-2

CONTINUE FROM SP-2

7. VERIFICATION DOCUMENTED WITH THE ANTENNA CHECKLIST REPORT, BY A&E, SITE DEVELOPMENT REP, OR RF REP.

8. FINAL INSPECTION CHECKLIST AND HANDOFF WALK (HOC.). SIGNED FORM SHOWING ACCEPTANCE BY FIELD OPS IS TO BE UPLOADED INTO SMS.

9. COAX SWEEP AND FIBER TESTING DOCUMENTS SUBMITTED VIA SMS FOR RF APPROVAL.

10. SCAN-ABLE BARCODE PHOTOGRAPHS OF TOWER TOP AND INACCESSIBLE SERIALIZED EQUIPMENT

11. ALL AVAILABLE JURISDICTIONAL INFORMATION

12. PDF SCAN OF REDLINES PRODUCED IN FIELD

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL CORRECTIONS TO ANY WORK IDENTIFIED AS UNACCEPTABLE IN SITE INSPECTION ACTIVITIES AND/OR AS A RESULT OF TESTING.

D. CONSTRUCTION INSPECTIONS AND CORRECTIVE MEASURES SHALL BE DOCUMENTED BY THE CONTRACTOR WITH WRITTEN REPORTS AND PHOTOGRAPHS. PHOTOGRAPHS MUST BE DIGITAL AND OF SUFFICIENT QUALITY TO CLEARLY SHOW THE SITE CONSTRUCTION. PHOTOGRAPHS MUST CLEARLY IDENTIFY THE PHOTOGRAPHED ITEM AND BE LABELED WITH THE SITE CASCADE NUMBER, SITE NAME, DESCRIPTION, AND DATE.

3.4 DELIVERABLES: TEST AND INSPECTION REPORTS AND CLOSEOUT DOCUMENTATION SHALL BE UPLOADED TO THE SMS AND/OR FORWARDED TO SPRINT FOR INCLUSION INTO THE PERMANENT SITE FILES.

A. THE FOLLOWING TEST AND INSPECTION REPORTS SHALL BE PROVIDED AS APPLICABLE.

1. CONCRETE MIX AND CYLINDER BREAK REPORTS.

2. STRUCTURAL BACKFILL COMPACTION REPORTS.

3. SITE RESISTANCE TO EARTH TEST.

4. ANTENNA AZIMUTH AND DOWN TILT VERIFICATION

5. TOWER ERECTION INSPECTIONS AND MEASUREMENTS DOCUMENTING TOWER INSTALLED PER SUPPLIER'S REQUIREMENTS AND THE APPLICABLE SECTIONS HEREIN.

6. COAX CABLE SWEEP TESTS PER COMPANY'S "ANTENNA LINE ACCEPTANCE STANDARDS".

B. REQUIRED CLOSEOUT DOCUMENTATION INCLUDES THE FOLLOWING;

1. TEST WELLS AND TRENCHES: PHOTOGRAPHS OF ALL TEST WELLS; PHOTOGRAPHS SHOWING ALL OPEN EXCAVATIONS AND TRENCHING PRIOR TO BACKFILLING SHOWING A TAPE MEASURE VISIBLE IN THE EXCAVATIONS INDICATING DEPTH.

2. CONDUITS, CONDUCTORS AND GROUNDING: PHOTOGRAPHS SHOWING TYPICAL INSTALLATION OF CONDUCTORS AND CONNECTORS; PHOTOGRAPHS SHOWING TYPICAL BEND RADIUS OF INSTALLED GROUND WIRES AND GROUND ROD SPACING;

3. CONCRETE FORMS AND REINFORCING: CONCRETE FORMING AT TOWER AND EQUIPMENT/SHELTER PAD/FOUNDATIONS – PHOTOGRAPHS SHOWING ALL REINFORCING STEEL, UTILITY AND CONDUIT STUB OUTS; PHOTOGRAPHS SHOWING CONCRETE POUR OF SHELTER SLAB/FOUNDATION, TOWER FOUNDATION AND GUY ANCHORS WITH VIBRATOR IN USE; PHOTOGRAPHS SHOWING EACH ANCHOR ON GUYED TOWERS, BEFORE CONCRETE POUR.

4. TOWER, ANTENNAS AND MAINLINE: INSPECTION AND PHOTOGRAPHS OF SECTION STACKING; INSPECTION AND PHOTOGRAPHS OF PLATFORM COMPONENT ATTACHMENT POINTS; PHOTOGRAPHS OF TOWER TOP GROUNDING; PHOTOS OF TOWER COAX LINE COLOR CODING AT THE TOP AND AT GROUND LEVEL; INSPECTION AND PHOTOGRAPHS OF OPERATIONAL OF TOWER LIGHTING, AND PLACEMENT OF FAA REGISTRATION SIGN; PHOTOGRAPHS SHOWING ADDITIONAL GROUNDING POINTS FOR TOWERS GREATER THAN 200 FEET.; PHOTOS OF ANTENNA GROUND BAR, EQUIPMENT GROUND BAR, AND MASTER GROUND BAR; PHOTOS OF GPS ANTENNA(S); PHOTOS OF EACH SECTOR OF ANTENNAS; ONE PHOTOGRAPH LOOKING AT THE SECTOR AND ONE FROM BEHIND SHOWING THE PROJECTED COVERAGE AREA; PHOTOS OF COAX WEATHERPROOFING – TOP AND BOTTOM; PHOTOS OF COAX GROUNDING--TOP AND BOTTOM; PHOTOS OF ANTENNA AND MAST GROUNDING; PHOTOS OF COAX CABLE ENTRY INTO SHELTER; PHOTOS OF PLATFORM MECHANICAL CONNECTIONS TO TOWER/MONOPOLE.

5. ROOF TOPS: PRE-CONSTRUCTION AND POST-CONSTRUCTION VISUAL INSPECTION AND PHOTOGRAPHS OF THE ROOF AND INTERIOR TO DETERMINE AND DOCUMENT CONDITIONS; ROOF TOP CONSTRUCTION INSPECTIONS AS REQUIRED BY THE JURISDICTION; PHOTOGRAPHS OF CABLE TRAY AND/OR ICE BRIDGE; PHOTOGRAPHS OF DOGHOUSE/CABLE EXIT FROM ROOF;

6. SITE LAYOUT – PHOTOGRAPHS OF THE OVERALL COMPOUND, INCLUDING EQUIPMENT PLATFORM FROM ALL FOUR CORNERS.

7. FINISHED UTILITIES: CLOSE-UP PHOTOGRAPHS OF THE PPC BREAKER PANEL; CLOSE-UP PHOTOGRAPH OF THE INSIDE OF THE TELCO PANEL AND NIU; CLOSE-UP PHOTOGRAPH OF THE POWER METER AND DISCONNECT; PHOTOS OF POWER AND TELCO ENTRANCE TO COMPANY ENCLOSURE; PHOTOGRAPHS AT METER BOX AND/OR FACILITY DISTRIBUTION PANEL.

8. REQUIRED MATERIALS CERTIFICATIONS: CONCRETE MIX DESIGNS; MILL CERTIFICATION FOR ALL REINFORCING AND STRUCTURAL STEEL; AND ASPHALT PAVING MIX DESIGN.

9. ANY AND ALL SUBMITTALS BY THE JURISDICTION OR COMPANY.

SECTION 01 400 – SUBMITTALS & TESTS

PART 1 – GENERAL

1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 RELATED DOCUMENTS:

A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.

B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 WEEKLY REPORTS:

A. CONTRACTOR SHALL PROVIDE SPRINT WITH WEEKLY REPORTS SHOWING PROJECT STATUS. THIS STATUS REPORT FORMAT WILL BE PROVIDED TO THE CONTRACTOR BY SPRINT. THE REPORT WILL CONTAIN SITE ID NUMBER, THE MILESTONES FOR EACH SITE, INCLUDING THE BASELINE DATE, ESTIMATED COMPLETION DATE AND ACTUAL COMPLETION DATE.

B. REPORT INFORMATION WILL BE TRANSMITTED TO SPRINT VIA ELECTRONIC MEANS AS REQUIRED. THIS INFORMATION WILL PROVIDE A BASIS FOR PROGRESS MONITORING AND PAYMENT.

3.2 PROJECT CONFERENCE CALLS:

A. SPRINT MAY HOLD WEEKLY PROJECT CONFERENCE CALLS. CONTRACTOR WILL BE REQUIRED TO COMMUNICATE SITE STATUS, MILESTONE COMPLETIONS AND UPCOMING MILESTONE PROJECTIONS, AND ANSWER ANY OTHER SITE STATUS QUESTIONS AS NECESSARY.

3.3 PROJECT TRACKING IN SMS:

A. CONTRACTOR SHALL PROVIDE SCHEDULE UPDATES AND PROJECTIONS IN THE SMS SYSTEM ON A WEEKLY BASIS.

3.4 ADDITIONAL REPORTING:

A. ADDITIONAL OR ALTERNATE REPORTING REQUIREMENTS MAY BE ADDED TO THE REPORT AS DETERMINED TO BE REASONABLY NECESSARY BY COMPANY.

3.5 PROJECT PHOTOGRAPHS:

A. FILE DIGITAL PHOTOGRAPHS OF COMPLETED SITE IN JPEG FORMAT IN THE SMS PHOTO LIBRARY FOR THE RESPECTIVE SITE. PHOTOGRAPHS SHALL BE CLEARLY LABELED WITH SITE NUMBER, NAME AND DESCRIPTION, AND SHALL INCLUDE AT A MINIMUM THE FOLLOWING AS APPLICABLE:

1. 1SHELTER AND TOWER OVERVIEW.

2. TOWER FOUNDATION(S) – FORMS AND STEEL BEFORE POUR (EACH ANCHOR ON GUYED TOWERS).

3. TOWER FOUNDATION(S) POUR WITH VIBRATOR IN USE (EACH ANCHOR ON GUYED TOWERS).

4. TOWER STEEL AS BEING INSTALLED INTO HOLE (SHOW ANCHOR STEEL ON GUYED TOWERS).

5. PHOTOS OF TOWER SECTION STACKING.

6. CONCRETE TESTING / SAMPLES.

7. PLACING OF ANCHOR BOLTS IN TOWER FOUNDATION.

8. BUILDING/WATER TANK FROM ROAD FOR TENANT IMPROVEMENTS OR COMMENTS.

9. SHELTER FOUNDATION--FORMS AND STEEL BEFORE POURING.

10. SHELTER FOUNDATION POUR WITH VIBRATOR IN USE.

11. COAX CABLE ENTRY INTO SHELTER.

12. PLATFORM MECHANICAL CONNECTIONS TO TOWER/MONOPOLE.

13. ROOFTOP PRE AND POST CONSTRUCTION PHOTOS TO INCLUDE PENETRATIONS AND INTERIOR CEILING.

14. PHOTOS OF TOWER TOP COAX LINE COLOR CODING AND COLOR CODING AT GROUND LEVEL.

15. PHOTOS OF ALL APPROPRIATE COMPANY OR REGULATORY SIGNAGE.

16. PHOTOS OF EQUIPMENT BOLT DOWN INSIDE SHELTER.

17. POWER AND TELCO ENTRANCE TO COMPANY ENCLOSURE AND POWER AND TELCO SUPPLY LOCATIONS INCLUDING METER/DISCONNECT.

18. ELECTRICAL TRENCH(S) WITH ELECTRICAL / CONDUIT BEFORE BACKFILL.

19. ELECTRICAL TRENCH(S) WITH FOIL-BACKED TAPE BEFORE FURTHER BACKFILL.

20. TELCO TRENCH WITH TELEPHONE / CONDUIT BEFORE BACKFILL.

21. TELCO TRENCH WITH FOIL-BACKED TAPE BEFORE FURTHER BACKFILL.

22. SHELTER GROUND-RING TRENCH WITH GROUND-WIRE BEFORE BACKFILL (SHOW ALL CAD WELDS AND BEND RADII).

23. TOWER GROUND-RING TRENCH WITH GROUND-WIRE BEFORE BACKFILL (SHOW ALL CAD WELDS AND BEND RADII).

24. FENCE GROUND-RING TRENCH WITH GROUND-WIRE BEFORE BACKFILL (SHOW ALL CAD WELDS AND BEND RADII).

25. ALL BTS GROUND CONNECTIONS.

26. ALL GROUND TEST WELLS.

27. ANTENNA GROUND BAR AND EQUIPMENT GROUND BAR.

28. ADDITIONAL GROUNDING POINTS ON TOWERS ABOVE 200'.

29. HVAC UNITS INCLUDING CONDENSERS ON SPLIT SYSTEMS.

30. GPS ANTENNAS.

31. CABLE TRAY AND/OR WAVEGUIDE BRIDGE.

32. DOGHOUSE/CABLE EXIT FROM ROOF.

33. EACH SECTOR OF ANTENNAS; ONE PHOTOGRAPH LOOKING AT THE SECTOR AND ONE FROM BEHIND SHOWING THE PROJECTED COVERAGE AREA.

34. MASTER BUS BAR.

35. TELCO BOARD AND NIU.

36. ELECTRICAL DISTRIBUTION WALL.

37. CABLE ENTRY WITH SURGE SUPPRESSION.

38. ENTRANCE TO EQUIPMENT ROOM.

39. COAX WEATHERPROOFING-TOP AND BOTTOM OF TOWER.

40. COAX GROUNDING -TOP AND BOTTOM OF TOWER.

41. ANTENNA AND MAST GROUNDING.

42. LANDSCAPING – WHERE APPLICABLE.

3.6 FINAL PROJECT ACCEPTANCE: COMPLETE ALL REQUIRED REPORTING TASKS PER CONTRACT, CONTRACT DOCUMENTS OR THE SPRINT INTEGRATED CONSTRUCTION STANDARDS FOR WIRELESS SITES AND UPLOAD INTO SITERRA.

PLANS PREPARED FOR:

Sprint

6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

INFINIGY

INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793
JOB NUMBER 526-103

ENGINEERING LICENSE:

STATE OF CONNECTICUT
KEVIN S. STEBBINS
24705
LICENSED PROFESSIONAL ENGINEER
04/15/2019

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV
REVISED / ISSUED FOR CONSTRUCTION	03/25/19	MAP	1
ISSUED FOR CONSTRUCTION	03/06/19	MAP	0

SITE NAME:

DANBURY HOSPITAL

SITE CASCADE:

CT81XC007/CT03XC350

SITE ADDRESS:

24 HOSPITAL AVE
DANBURY, CT 06810

SHEET DESCRIPTION:

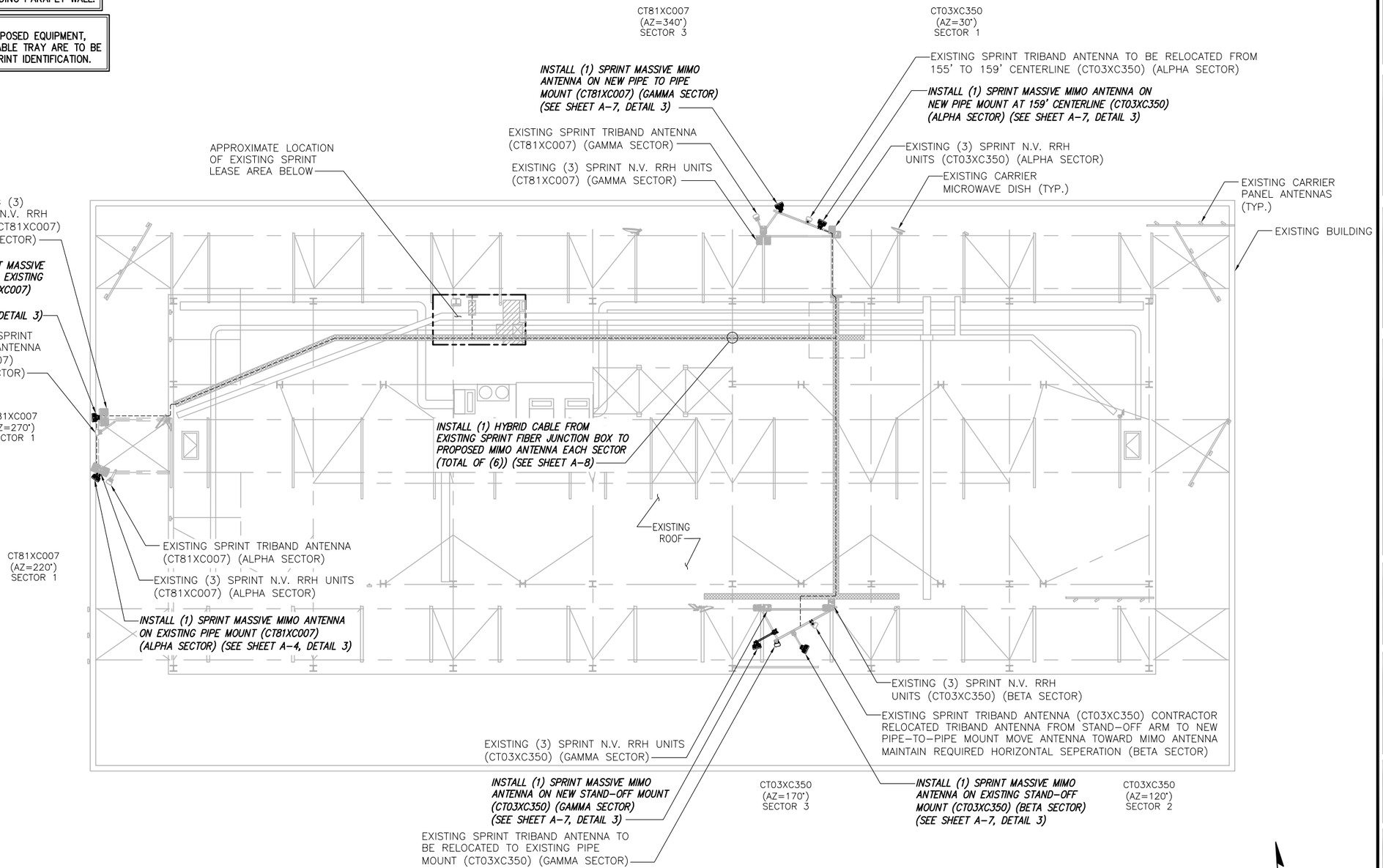
SPRINT SPECIFICATIONS

SHEET NUMBER:

SP-3

NOTE:
EXISTING AND PROPOSED SPRINT EQUIPMENT IS NOT TO EXTEND BEYOND THE BUILDING PARAPET WALL.

NOTE:
ALL EXISTING PROPOSED EQUIPMENT, CONDUITS AND CABLE TRAY ARE TO BE LABELED WITH SPRINT IDENTIFICATION.



N

SCALE: 22"x34" SHEET 1" = 10'-0"
SCALE: 11"x17" SHEET 1" = 20'-0"

5' 0 5' 10' 20'
(IN FEET)

INFORMATION CONTAINED WITHIN DRAWINGS ARE BASED ON PROVIDED INFORMATION AND ARE NOT THE RESULT OF A FIELD SURVEY.

ROOFTOP SITE PLAN | SCALE: AS NOTED | 1

PLANS PREPARED FOR:

Sprint
6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

INFINIGY
INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793
JOB NUMBER 526-103

ENGINEERING LICENSE:

STATE OF CONNECTICUT
JOHN S. STEVENS
24705
LICENSED PROFESSIONAL ENGINEER
04/15/2019

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DANBURY HOSPITAL

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CT81XC007/CT03XC350

SITE ADDRESS:

24 HOSPITAL AVE
DANBURY, CT 06810

SHEET DESCRIPTION:

ROOFTOP SITE PLAN

SHEET NUMBER:

A-1

NOTE:
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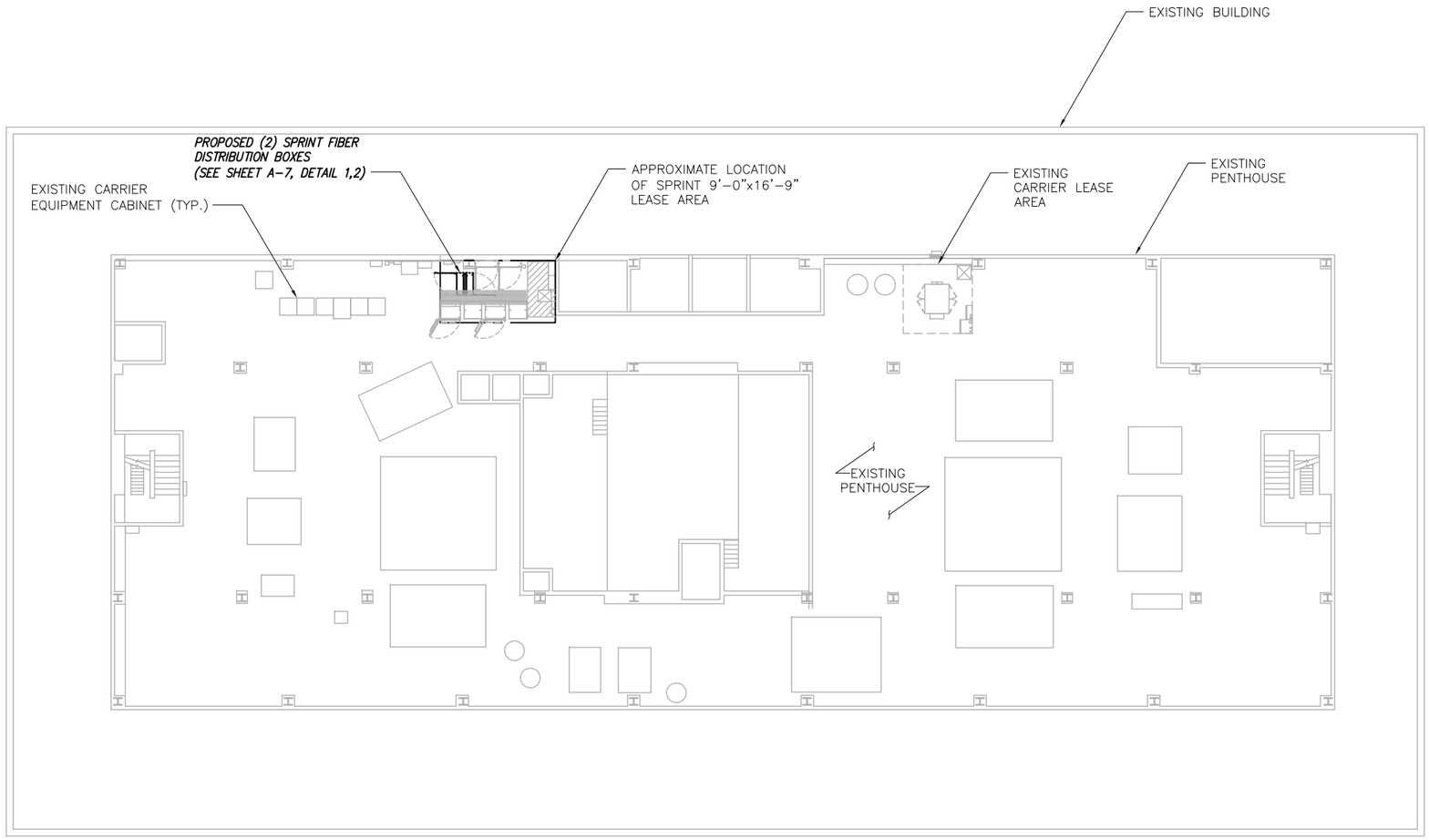
NOTE:
ALL EXISTING PROPOSED EQUIPMENT, CONDUITS AND CABLE TRAY ARE TO BE LABELED WITH SPRINT IDENTIFICATION.



INFORMATION CONTAINED WITHIN DRAWINGS ARE BASED ON PROVIDED INFORMATION AND ARE NOT THE RESULT OF A FIELD SURVEY.

N

SCALE: 22"x34" SHEET 1" = 10'-0"
SCALE: 11"x17" SHEET 1" = 20'-0"

5' 0 5' 10' 20'
(IN FEET)

FLOOR SITE PLAN | SCALE: AS NOTED | 1

PLANS PREPARED FOR:

Sprint

6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

INFINIGY

INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
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JOB NUMBER 526-103

ENGINEERING LICENSE:

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04/15/2019

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SITE NAME:

DANBURY HOSPITAL

SITE CASCADE:

CT81XC007/CT03XC350

SITE ADDRESS:

24 HOSPITAL AVE
DANBURY, CT 06810

SHEET DESCRIPTION:

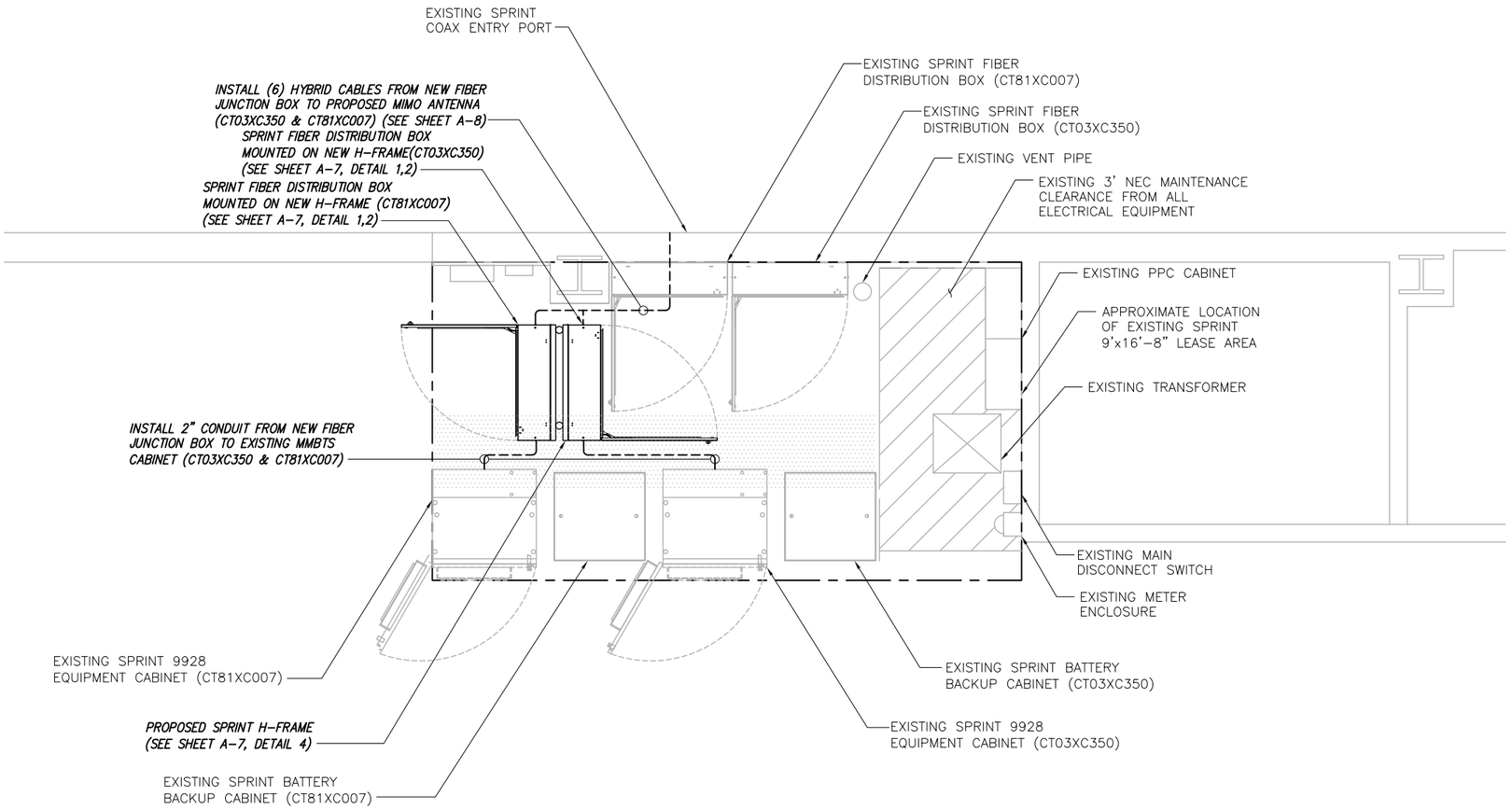
FLOOR SITE PLAN

SHEET NUMBER:

A-2

NOTE:
EXISTING AND PROPOSED SPRINT EQUIPMENT IS NOT TO EXTEND BEYOND THE BUILDING PARAPET WALL.

NOTE:
ALL EXISTING PROPOSED EQUIPMENT, CONDUITS AND CABLE TRAY ARE TO BE LABELED WITH SPRINT IDENTIFICATION.



N

SCALE: 22"x34" SHEET 1" = 2'-0"
SCALE: 11"x17" SHEET 1" = 4'-0"

1' 0 1' 2' 4'
(IN FEET)

INFORMATION CONTAINED WITHIN DRAWINGS ARE BASED ON PROVIDED INFORMATION AND ARE NOT THE RESULT OF A FIELD SURVEY.

SPRINT EQUIPMENT PLAN | SCALE: AS NOTED | 1

PLANS PREPARED FOR:

Sprint
6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

INFINIGY
INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
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04/15/2019

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SITE CASCADE:

CT81XC007/CT03XC350

SITE ADDRESS:

24 HOSPITAL AVE
DANBURY, CT 06810

SHEET DESCRIPTION:

EQUIPMENT SITE PLANS

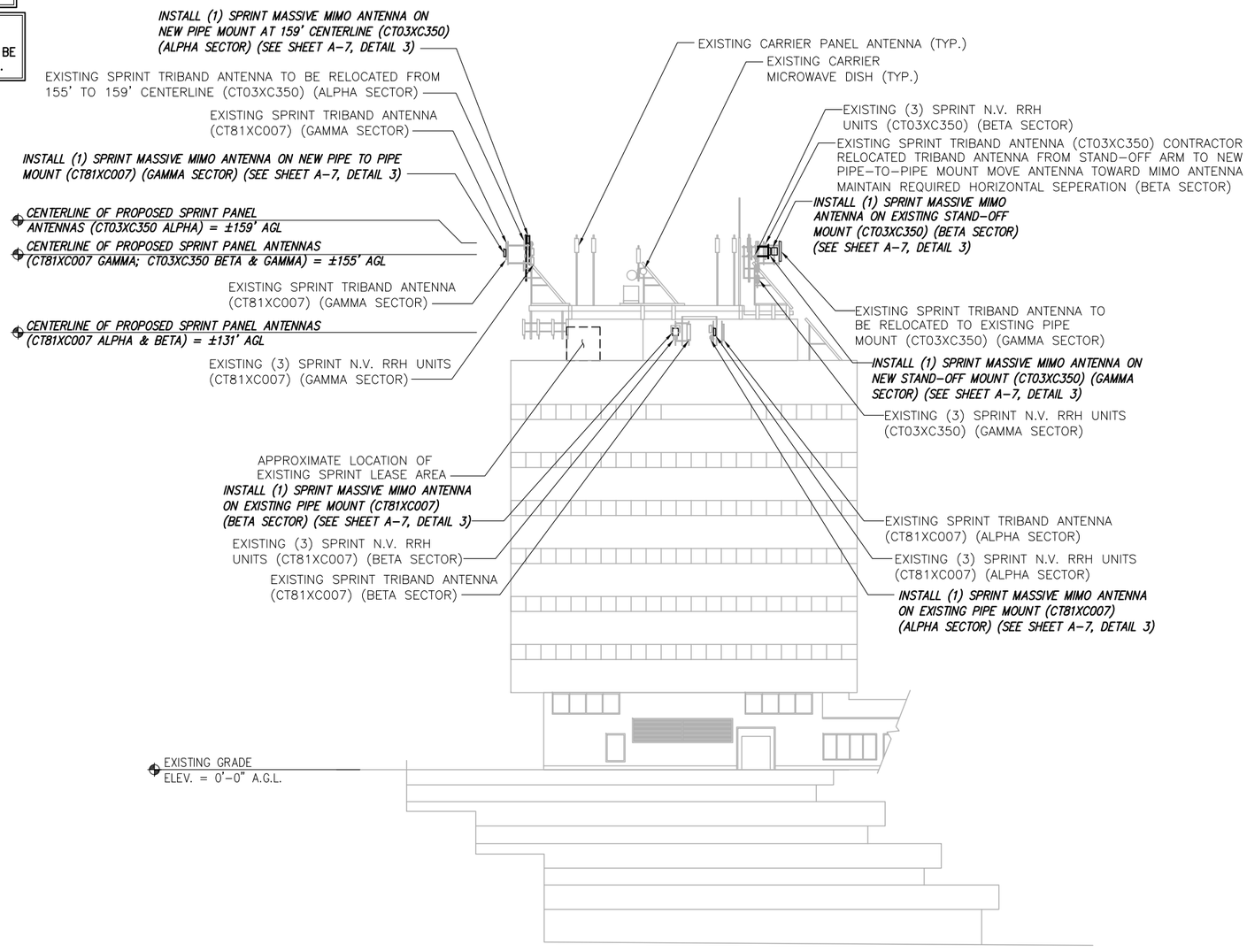
SHEET NUMBER:

A-3

NOTE:
EXISTING AND PROPOSED SPRINT EQUIPMENT IS NOT TO EXTEND BEYOND THE BUILDING PARAPET WALL.

NOTE:
ALL EXISTING PROPOSED EQUIPMENT, CONDUITS AND CABLE TRAY ARE TO BE LABELED WITH SPRINT IDENTIFICATION.

NOTE:
- STRUCTURAL ANALYSIS COMPLETED BY INFINIGY. FOR ADDITIONAL INFORMATION SEE REPORT TITLED: "STRUCTURAL ANALYSIS REPORT, CARRIER SITE NUMBER: CT81XC007-CT03XC350", DATED: "APRIL 12, 2019". ACCORDING TO RESULTS OF STRUCTURAL ANALYSIS REPORT, THE STRUCTURE HAS SUFFICIENT CAPACITY TO SUPPORT THE PROPOSED LOADING.



NOTE:
SEE DETAIL 2 ON A-5 FOR ANTENNA LAYOUT

BUILDING ELEVATION | NO SCALE | 1

PLANS PREPARED FOR:

Sprint

6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

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04/15/2019

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SITE ADDRESS:

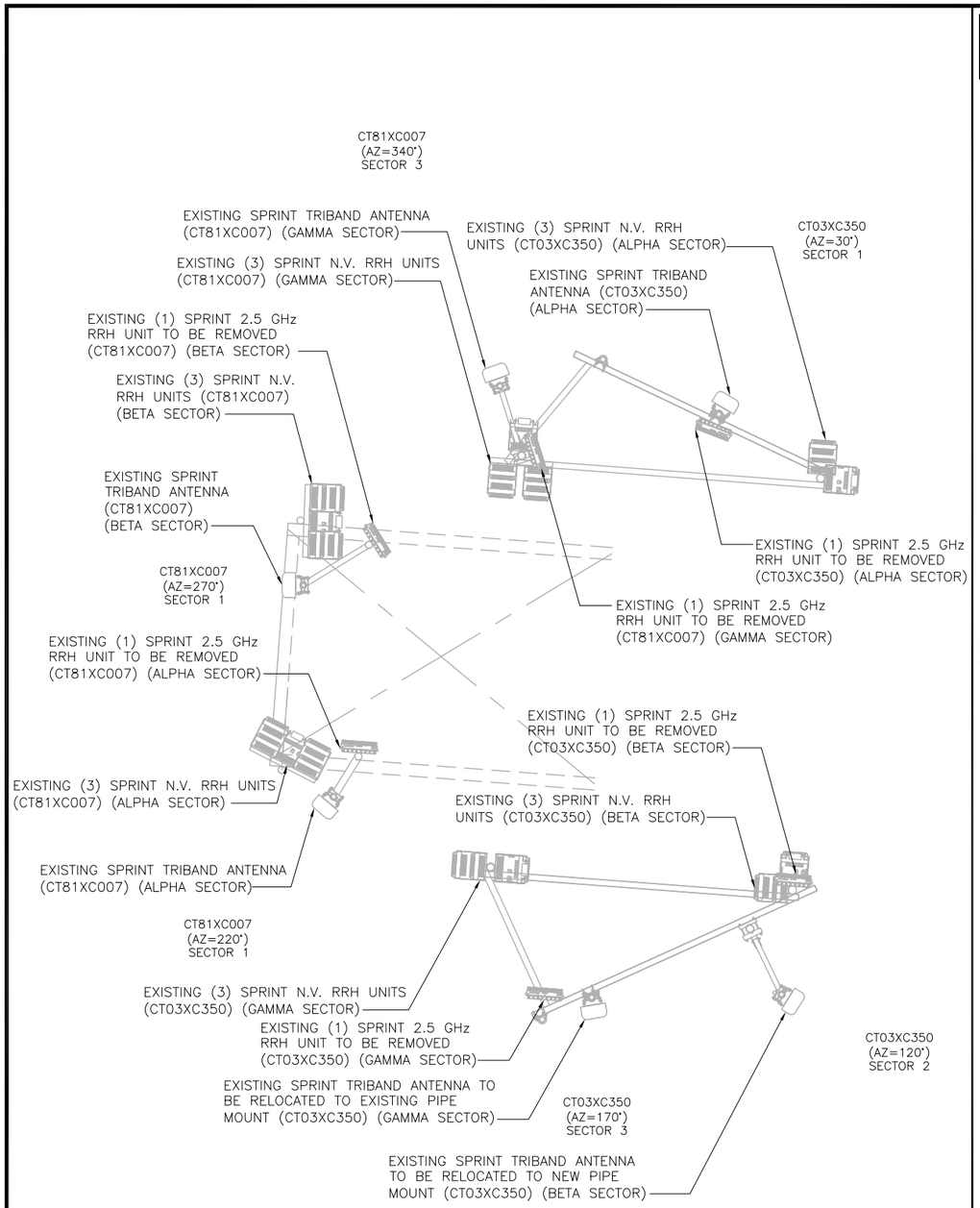
24 HOSPITAL AVE
DANBURY, CT 06810

SHEET DESCRIPTION:

BUILDING ELEVATION
& CABLE PLAN

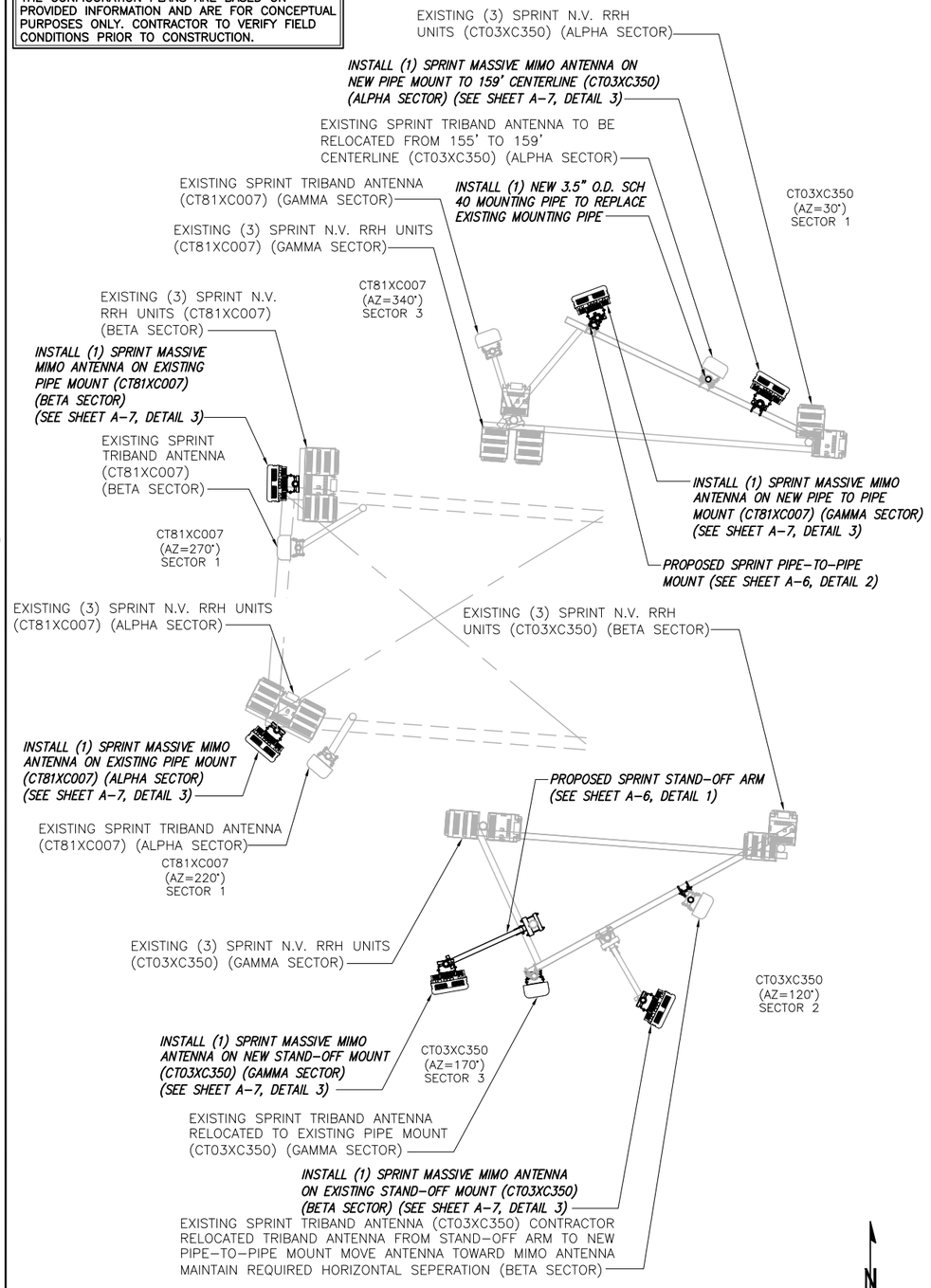
SHEET NUMBER:

A-4



EXISTING ANTENNA & RRH LAYOUT | NO SCALE | 1

THE CONFIGURATION PLANS ARE BASED ON PROVIDED INFORMATION AND ARE FOR CONCEPTUAL PURPOSES ONLY. CONTRACTOR TO VERIFY FIELD CONDITIONS PRIOR TO CONSTRUCTION.



FINAL ANTENNA & RRH LAYOUT | NO SCALE | 2

PLANS PREPARED FOR:

Sprint
6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

INFINIGY
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04/15/2019

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DANBURY HOSPITAL

SITE CASCADE:

CT81XC007/CT03XC350

SITE ADDRESS:

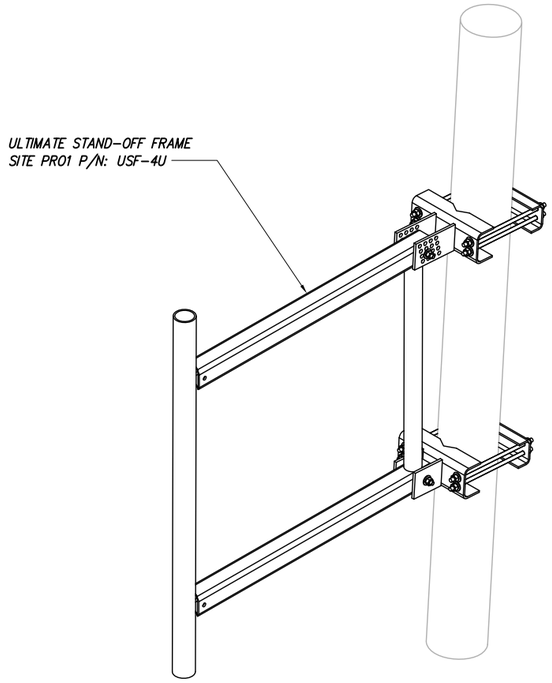
24 HOSPITAL AVE
DANBURY, CT 06810

SHEET DESCRIPTION:

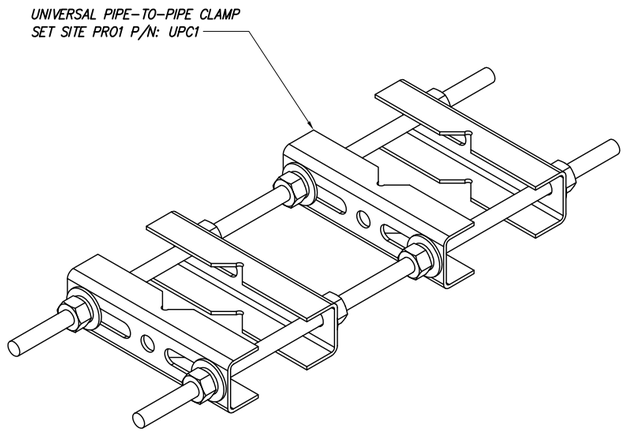
ANTENNA LAYOUT
& MOUNTING DETAILS

SHEET NUMBER:

A-5



STAND-OFF MOUNT DETAIL | NO SCALE | 1



PIPE TO PIPE MOUNT DETAIL | NO SCALE | 2

CT81XC007 SITE LOADING CHART

SECTOR	EXISTING/ PROPOSED	ANTENNA MODEL #	VENDOR	AZIMUTH	QTY.	REMAIN/ REMOVED	RRH (QTY/MODEL)	CABLE	CABLE LENGTH	RAD CENTER
ALPHA	EXISTING	HPA33R-CS4AA	CCI	220°	1	REMAIN	(1) 800 MHZ RRH (2) 1900 MHZ RRH	EXISTING HYBRID	±110'*	±131' AGL
	PROPOSED	AAHC	NOKIA	220°	1	–		SEE SHEET A-6		
BETA	EXISTING	HPA33R-CS4AA	CCI	270°	1	REMAIN	(1) 800 MHZ RRH (2) 1900 MHZ RRH	EXISTING HYBRID	±110'*	±131' AGL
	PROPOSED	AAHC	NOKIA	270°	1	–		SEE SHEET A-6		
GAMMA	EXISTING	HPA33R-CS4AA	CCI	340°	1	REMAIN	(1) 800 MHZ RRH (2) 1900 MHZ RRH	EXISTING HYBRID	±130'*	±155' AGL
	PROPOSED	AAHC	NOKIA	340°	1	–		SEE SHEET A-6		

PROJECT SCOPE:

INSTALL: (3) PANEL ANTENNAS REMOVE: (3) 2500 MHz RRH'S, (3) HYBRID CABLES, (12) DIPLEXERS

* PROPOSED CABLE LENGTH WAS DETERMINED USING THE SUM OF THE RAD CENTER OF ANTENNAS, AND DISTANCE FROM EXISTING EQUIPMENT AREA TO TOWER BASE WITH AN ADDITIONAL 20' BUFFER. LENGTH TO BE VERIFIED IN FIELD PRIOR TO ORDERING MATERIALS.

CT03XC350 SITE LOADING CHART

SECTOR	EXISTING/ PROPOSED	ANTENNA MODEL #	VENDOR	AZIMUTH	QTY.	REMAIN/ REMOVED	RRH (QTY/MODEL)	CABLE	CABLE LENGTH	RAD CENTER
ALPHA	EXISTING	HPA33R-CS4AA	CCI	30°	1	REMAIN	(1) 800 MHZ RRH (2) 1900 MHZ RRH	EXISTING HYBRID	±130'*	±159' AGL
	PROPOSED	AAHC	NOKIA	30°	1	–		SEE SHEET A-6		
BETA	EXISTING	HPA33R-CS4AA	CCI	120°	1	REMAIN	(1) 800 MHZ RRH (2) 1900 MHZ RRH	EXISTING HYBRID	±160'*	±155' AGL
	PROPOSED	AAHC	NOKIA	120°	1	–		SEE SHEET A-6		
GAMMA	EXISTING	HPA33R-CS4AA	CCI	170°	1	REMAIN	(1) 800 MHZ RRH (2) 1900 MHZ RRH	EXISTING HYBRID	±160'*	±155' AGL
	PROPOSED	AAHC	NOKIA	170°	1	–		SEE SHEET A-6		

PROJECT SCOPE:

INSTALL: (3) PANEL ANTENNAS REMOVE: (3) 2500 MHz RRH'S, (3) HYBRID CABLES, (12) DIPLEXERS

* PROPOSED CABLE LENGTH WAS DETERMINED USING THE SUM OF THE RAD CENTER OF ANTENNAS, AND DISTANCE FROM EXISTING EQUIPMENT AREA TO TOWER BASE WITH AN ADDITIONAL 20' BUFFER. LENGTH TO BE VERIFIED IN FIELD PRIOR TO ORDERING MATERIALS.

SITE LOADING CHART | NO SCALE | 3

PLANS PREPARED FOR:

Sprint

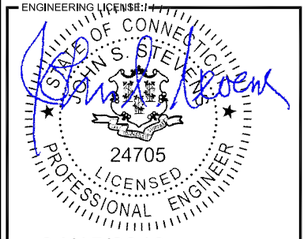
6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

INFINIGY

INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793
JOB NUMBER 526-103

ENGINEERING LICENSE:



04/15/2019

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV
REVISED / ISSUED FOR CONSTRUCTION	03/25/19	MAP	1
ISSUED FOR CONSTRUCTION	03/06/19	MAP	0

SITE NAME:

DANBURY HOSPITAL

SITE CASCADE:

CT81XC007/CT03XC350

SITE ADDRESS:

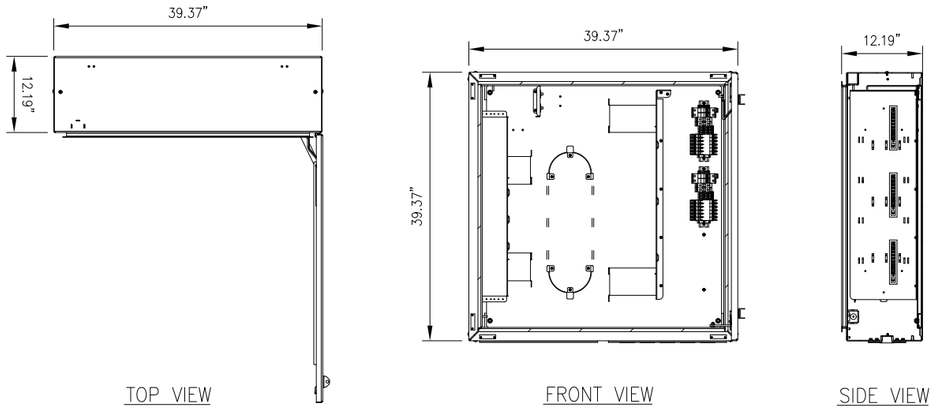
24 HOSPITAL AVE
DANBURY, CT 06810

SHEET DESCRIPTION:

ANTENNA LAYOUT & MOUNTING DETAILS

SHEET NUMBER:

A-6



TOP VIEW FRONT VIEW SIDE VIEW

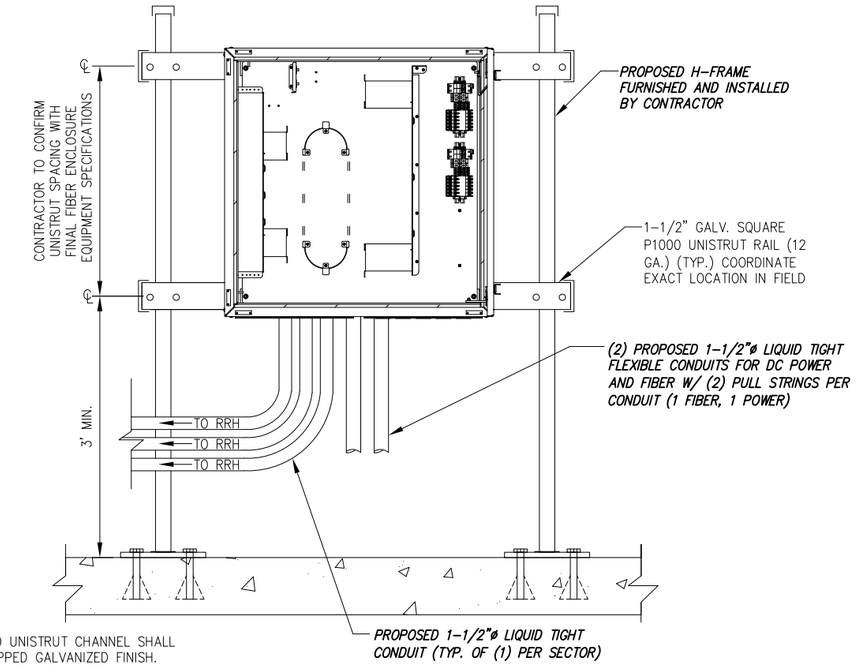
NOTES:

– DISTRIBUTION BOX IS KITTED WITH 1–1/2" LIQUID–TIGHT CONDUIT AND CONNECTORS. THIS SHOULD BE:
* SPLIT IN HALF,
* TERMINATED TO THE DISTRIBUTION BOX AS SHOWN,
* RAN TO AND COILED AS CLOSE TO WHERE THE CABINET IS GOING TO BE MOUNTED AS POSSIBLE.

– DISTRIBUTION BOX IS KITTED WITH 24AWG, POWER CABLE 27' x 2EA. RUNS RED AND 2EA. RUNS BLACK. THIS SHOULD BE COILED AND LEFT INSIDE DISTRIBUTION BOX.

– BTS INSTALLATION TEAM WILL TERMINATE LIQUID–TIGHT, RUN THE FIBER JUMPERS AND POWER CABLES FROM BTS CABINET TO DISTRIBUTION BOX.

DISTRIBUTION BOX DETAIL | NO SCALE | 1

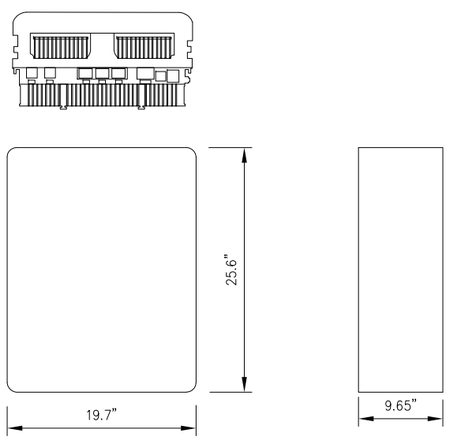


NOTE:
1. ANCHORS AND UNISTRUT CHANNEL SHALL HAVE HOT–DIPPED GALVANIZED FINISH.
2. MOUNT FIBER AND POWER DISTRIBUTION BOX WITH FOUR (4) 1/4"ø UNISTRUT BOLTING HARDWARE AND SPRING NUTS.

DISTRIBUTION BOX ON EXISTING HANDRAIL | NO SCALE | 2

ANTENNA NOKIA AAHC

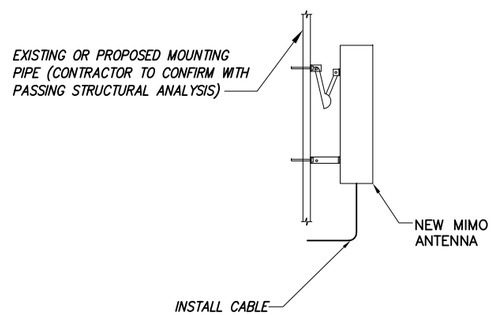
RADOME MATERIAL:	FIBERGLASS
RADOME COLOR:	LIGHT GREY
DIMENSIONS, HxWxD.in(mim):	25.6"x19.7"x9.9" (651x501x245mm)
WEIGHT:	99.2 lbs
CONNECTORS:	(2) 7/16" DIN FEMALE
	(8) 4.1/9.5 DIN FEMALE



2.5 ANTENNA DETAIL | NO SCALE | 3

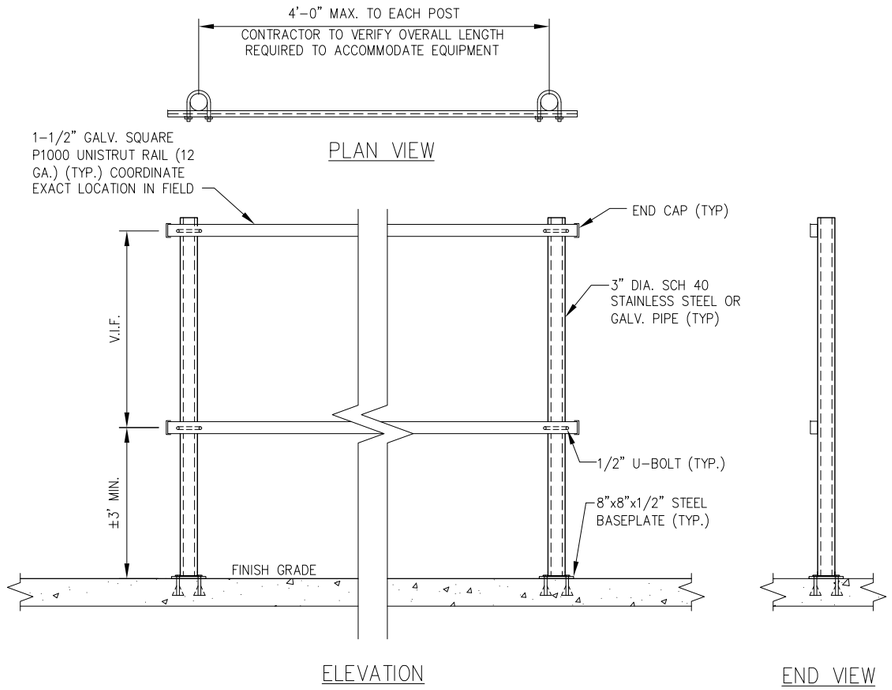
NOTE:
CONTRACTOR TO POSITION RRH ON MOUNT BEHIND ANTENNA SUCH THAT THE RRH DOES NOT INTERFERE WITH THE EXISTING PLATFORM/T–ARM MOUNTING HARDWARE.

NOTE:
THE DIAGRAM IS FOR CONCEPTUAL PURPOSES ONLY. CONTRACTOR IS TO REFER TO PASSING STRUCTURAL ANALYSIS FOR ANTENNA AND RRH MOUNTING DETAILS



NOTE:
1. CUT DC CONDUCTORS TO LENGTH.
2. COIL FIBER CABLE AND SECURE AT SIDE OF RRH.
3. DO NO EXCEED BEND RADIUS.

ANTENNA MOUNTING DETAIL | NO SCALE | 4



H–FRAME DETAIL | NO SCALE | 4

PLANS PREPARED FOR:
Sprint
6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:
INFINIGY
INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793
JOB NUMBER 526–103

ENGINEERING LICENSE:
STATE OF CONNECTICUT
JOHN S. STEVENS
24705
LICENSED PROFESSIONAL ENGINEER
04/15/2019

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV
REVISED / ISSUED FOR CONSTRUCTION	03/25/19	MAP	1
ISSUED FOR CONSTRUCTION	03/06/19	MAP	0

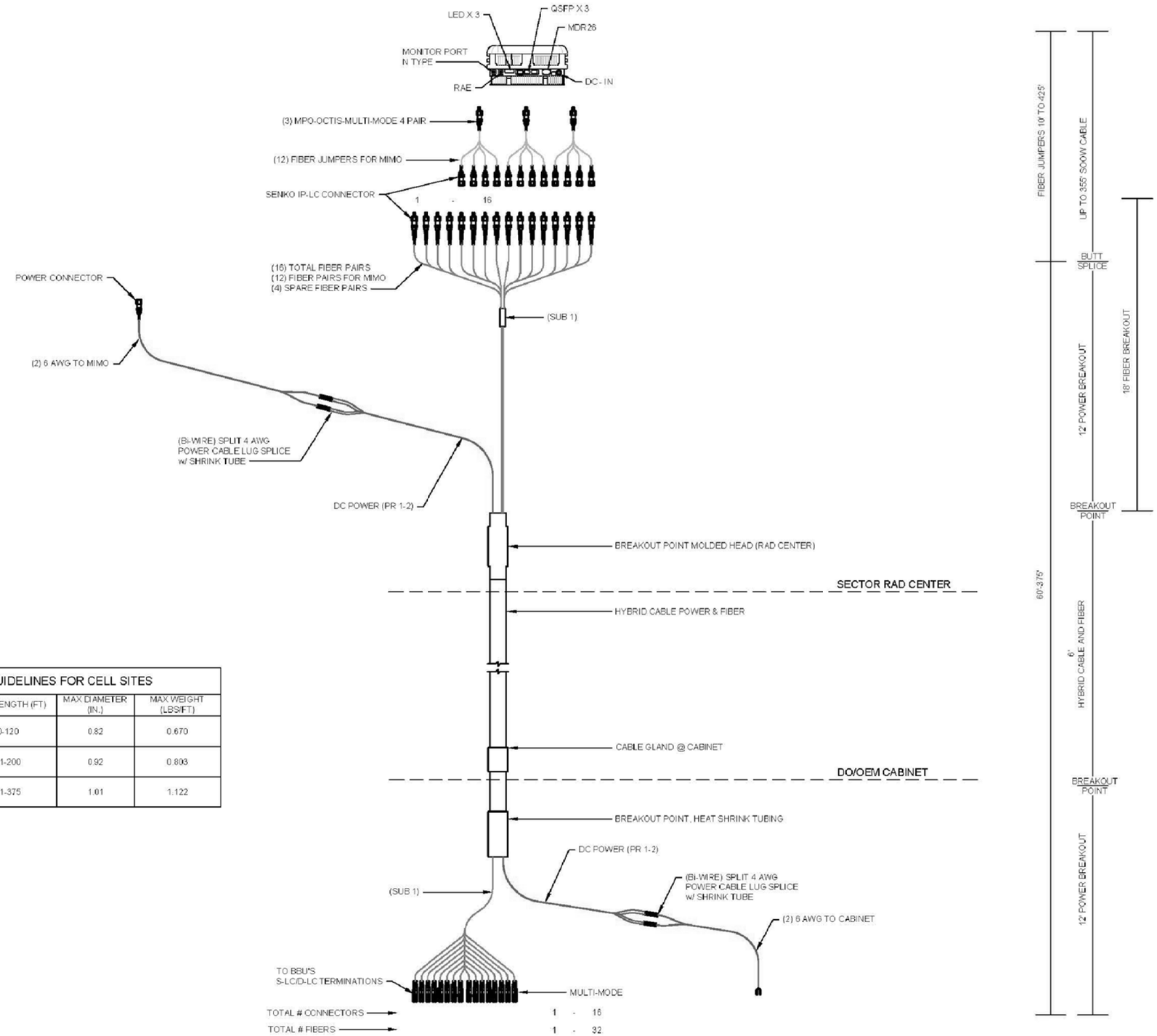
SITE NAME:
DANBURY HOSPITAL

SITE CASCADE:
CT81XC007/CT03XC350

SITE ADDRESS:
24 HOSPITAL AVE
DANBURY, CT 06810

SHEET DESCRIPTION:
EQUIPMENT & MOUNTING DETAILS

SHEET NUMBER:
A-7



SPRINT CABLE GUIDELINES FOR CELL SITES			
CABLE DESCRIPTION	CABLE LENGTH (FT)	MAX DIAMETER (IN.)	MAX WEIGHT (LBS/FT)
1 PAIR OF #6 AWG DC CONDUCTORS W/ 16 MULTI-MODE FIBER PAIRS	60-120	0.82	0.670
1 PAIR OF #4 AWG DC CONDUCTORS W/ 16 MULTI-MODE FIBER PAIRS	121-200	0.92	0.803
2 PAIRS OF #4 AWG DC CONDUCTORS W/ 16 MULTI-MODE FIBER PAIRS	201-375	1.01	1.122

HYBRID CABLE DETAIL | NO SCALE | 1

PLANS PREPARED FOR:

Sprint

6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

INFINIGY

INFINIGY ENGINEERING, PLLC
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Albany, NY 12205
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LICENSED PROFESSIONAL ENGINEER

04/15/2019

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DANBURY HOSPITAL

SITE CASCADE:

CT81XC007/CT03XC350

SITE ADDRESS:

24 HOSPITAL AVE
DANBURY, CT 06810

SHEET DESCRIPTION:

HYBRID CABLE DETAIL

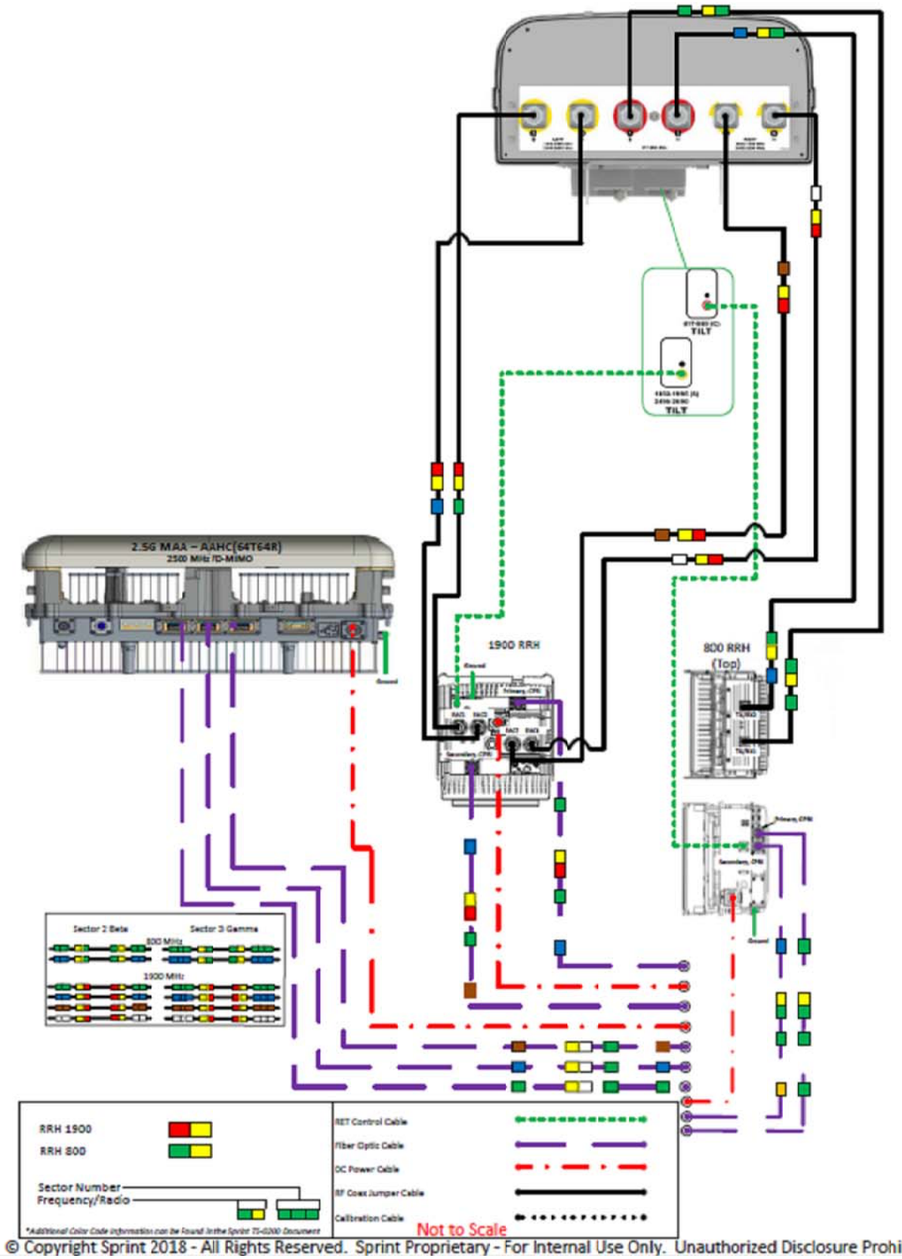
SHEET NUMBER:

A-8

Prepared By	Revision Date	Revision Number
Mark Elliott	March 24, 2018	R1
Approved By	**Approval Date**	
RAN Hardware & Antenna Teams	Final-Macro Generated	

Sprint

ALU 11-MIMO HPA33R-CS4AA-K wo Filters



PLUMBING DIAGRAM | NO SCALE | 1

PLANS PREPARED FOR:

Sprint
6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

INFINIGY
INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
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04/15/2019

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ISSUED FOR CONSTRUCTION	03/06/19	MAP	0

SITE NAME:

DANBURY HOSPITAL

SITE CASCADE:

CT81XC007/CT03XC350

SITE ADDRESS:

24 HOSPITAL AVE
DANBURY, CT 06810

SHEET DESCRIPTION:

PLUMBING DIAGRAM

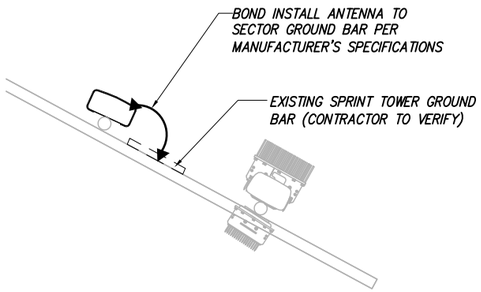
SHEET NUMBER:

A-9

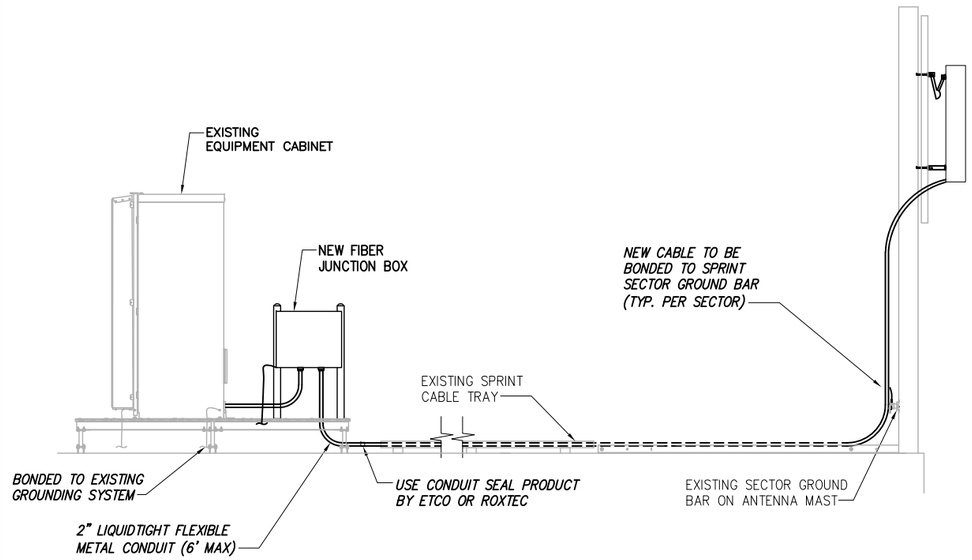
DETAIL NOT USED | NO SCALE | 1

LEGEND:

- G — EXISTING GROUND RING
- ■ CADWELD CONNECTION (EXOTHERMIC WELD)
- ▲ MECHANICAL CONNECTION
- ⊗ GROUND ROD
- ● CABLE GROUND KIT



TYPICAL ANTENNA GROUNDING PLAN | NO SCALE | 2



TYPICAL EQUIPMENT GROUNDING PLAN (ELEVATION) | NO SCALE | 3

PLANS PREPARED FOR:

Sprint

6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

INFINIGY

INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793
JOB NUMBER 526-103

ENGINEERING LICENSE:

STATE OF CONNECTICUT
JOHN S. STEVENS
24705
LICENSED
PROFESSIONAL ENGINEER

04/15/2019

DRAWING NOTICE:

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REVISED / ISSUED FOR CONSTRUCTION	03/25/19	MAP	1
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SITE NAME:

DANBURY HOSPITAL

SITE CASCADE:

CT81XC007/CT03XC350

SITE ADDRESS:

24 HOSPITAL AVE
DANBURY, CT 06810

SHEET DESCRIPTION:

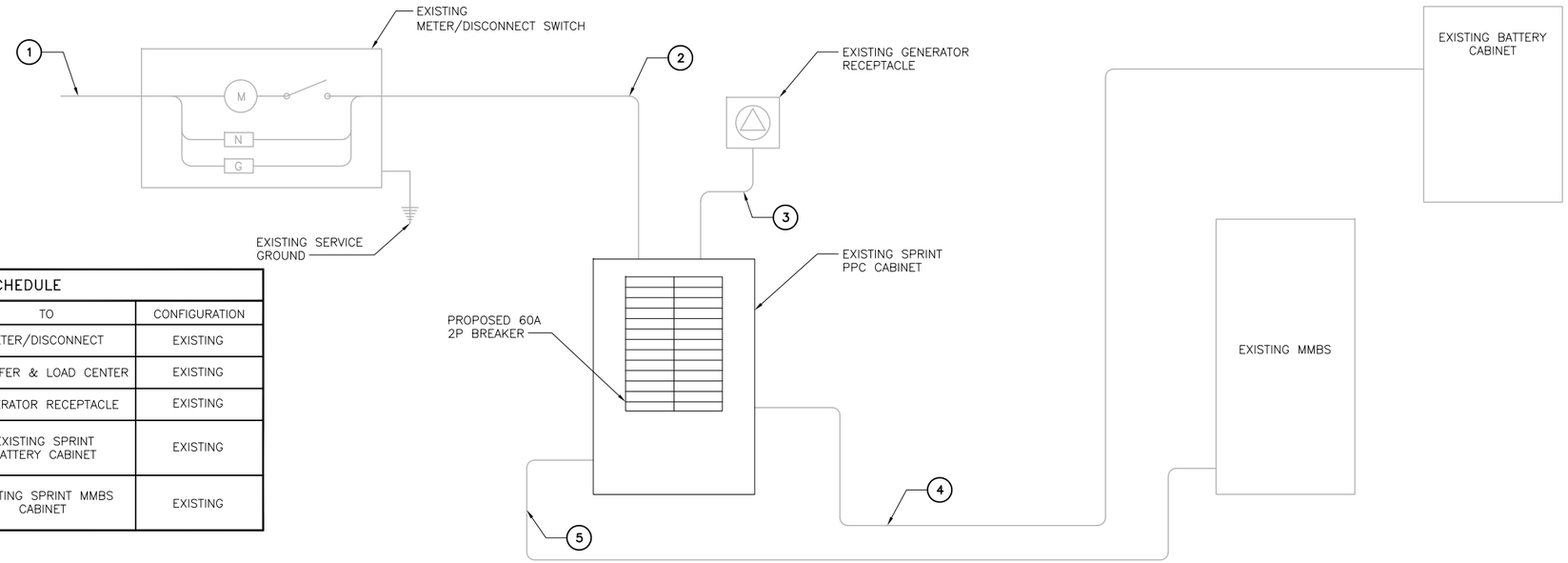
ELECTRICAL & GROUNDING DETAILS

SHEET NUMBER:

E-1

NOTES

CG SHALL REFERENCE ALL SPECS FOR "CONNECTING THE POWER SUPPLY" OF THE NEW INSTALLATION DOCUMENTS, FOR ALL CONNECTION SPECIFICATIONS.



CIRCUIT SCHEDULE			
NO	FROM	TO	CONFIGURATION
1	UTILITY SOURCE	METER/DISCONNECT	EXISTING
2	METER/DISCONNECT	TRANSFER & LOAD CENTER	EXISTING
3	TRANSFER & LOAD CENTER	GENERATOR RECEPTACLE	EXISTING
4	TRANSFER & LOAD CENTER	EXISTING SPRINT BATTERY CABINET	EXISTING
5	TRANSFER & LOAD CENTER	EXISTING SPRINT MMBS CABINET	EXISTING

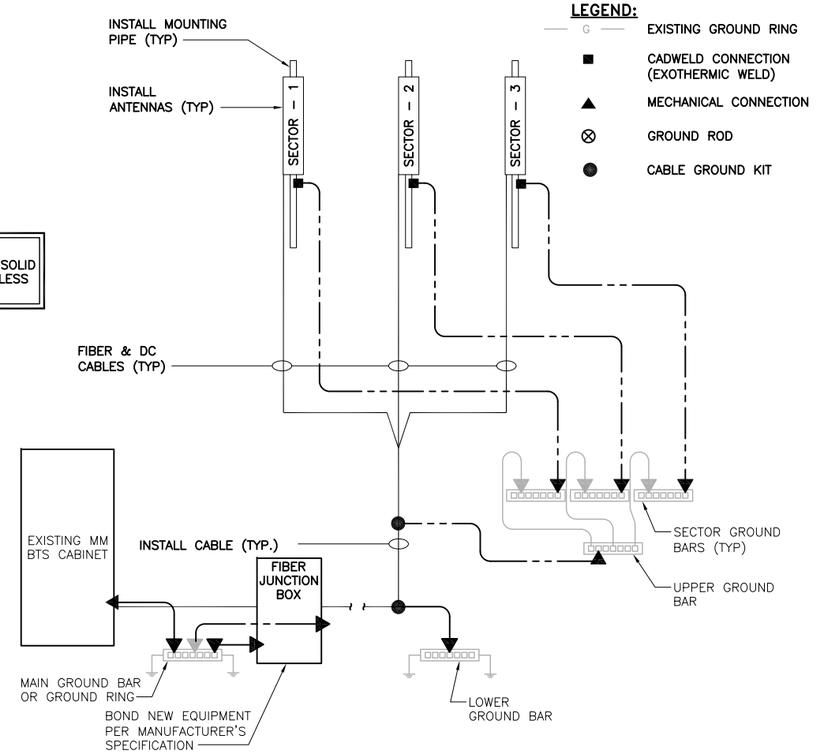
ELECTRICAL ONE-LINE DIAGRAM | NO SCALE | 1

DETAIL NOT USED | NO SCALE | 2

LEGEND:

- G — EXISTING GROUND RING
- ■ CADWELD CONNECTION (EXOTHERMIC WELD)
- ▲ MECHANICAL CONNECTION
- ⊗ GROUND ROD
- ● CABLE GROUND KIT

NOTE:
USE #6 AWG BARE SOLID TINNED COPPER UNLESS NOTED OTHERWISE



GROUNDING RISER DIAGRAM | NO SCALE | 3

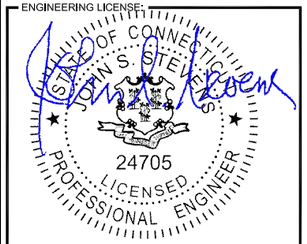
PLANS PREPARED FOR:

Sprint
6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

INFINIGY
INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793
JOB NUMBER 526-103

ENGINEERING LICENSE:



04/15/2019

DRAWING NOTICE:

REVISIONS:

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SITE NAME:

DANBURY HOSPITAL

SITE CASCADE:

CT81XC007/CT03XC350

SITE ADDRESS:

24 HOSPITAL AVE
DANBURY, CT 06810

SHEET DESCRIPTION:

ELECTRICAL & GROUNDING DETAILS

SHEET NUMBER:

E-2

EXHIBIT C

Shipment Receipt

Transaction Date: 19 Aug 2019 **Tracking Number:** 1Z77X79X0199134430

1 ADDRESS INFORMATION

Ship To:
City of Danbury
Mayor Mark D. Boughton
155 Deer Hill Avenue
DANBURY CT 06810

Ship From:
BROWN RUDNICK LLP
THOMAS J. REGAN
185 Asylum Street
Hartford CT 06103
Telephone:860-509-6522
email:tregan@brownrudnick.com

Return Address:
BROWN RUDNICK LLP
THOMAS J. REGAN
185 Asylum Street
Hartford CT 06103
Telephone:860-509-6522 email:tregan@brownrudnick.com

2 PACKAGE INFORMATION

	WEIGHT	DIMENSIONS / PACKAGING	DECLARED VALUE	REFERENCE NUMBERS
1.	Letter (Letter billable)	UPS Letter		Client Matter Code - 080563.3289 Employee ID - 0825

3 UPS SHIPPING SERVICE AND SHIPPING OPTIONS

Service: UPS Next Day Air

Guaranteed By: 10:30 AM Tuesday, Aug 20, 2019

Shipping Fees Subtotal: 26.30 USD

Transportation 24.64 USD

Fuel Surcharge 1.66 USD

Additional Shipping Options

Quantum View Notify E-mail Notifications: No Charge

1 cteitelbaum@brownrudnick.com: Exception, Delivery

4 PAYMENT INFORMATION

Bill Shipping Charges to: Shipper's Account 77X79X

Shipping Charges: **26.30 USD**

A discount has been applied for this shipment.

Negotiated Charges: **10.52 USD**

Subtotal Shipping Charges: **10.52 USD**

Total Charges: **10.52 USD**

Note: This document is not an invoice. Your final invoice may vary from the displayed reference rates.

* For delivery and guarantee information, see the UPS Service Guide ({0}). To speak to a customer service representative, call 1-800-PICK-UPS for domestic services an 1-800-782-7892 for international services.

Shipment Receipt

Transaction Date: 19 Aug 2019 **Tracking Number:** 1Z77X79X0199845841

1 ADDRESS INFORMATION

Ship To:
City of Danbury
Director Sharon B. Calitro
155 Deer Hill Avenue
Planning & Zoning
DANBURY CT 06810

Ship From:
BROWN RUDNICK LLP
THOMAS J. REGAN
185 Asylum Street
Hartford CT 06103
Telephone:860-509-6522
email:tregan@brownrudnick.com

Return Address:
BROWN RUDNICK LLP
THOMAS J. REGAN
185 Asylum Street
Hartford CT 06103
Telephone:860-509-6522 email:tregan@brownrudnick.com

2 PACKAGE INFORMATION

	WEIGHT	DIMENSIONS / PACKAGING	DECLARED VALUE	REFERENCE NUMBERS
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1 cteitelbaum@brownrudnick.com: Exception, Delivery

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* For delivery and guarantee information, see the UPS Service Guide ({0}). To speak to a customer service representative, call 1-800-PICK-UPS for domestic services an 1-800-782-7892 for international services.

Shipment Receipt

Transaction Date: 19 Aug 2019 **Tracking Number:** 1Z77X79X0197436653

1 ADDRESS INFORMATION

Ship To:
Danbury Hospital
Charles Geyer, Dir. of Engineering
24 Hospital Avenue
DANBURY CT 06810

Ship From:
BROWN RUDNICK LLP
THOMAS J. REGAN
185 Asylum Street
Hartford CT 06103
Telephone:860-509-6522
email:tregan@brownrudnick.com

Return Address:
BROWN RUDNICK LLP
THOMAS J. REGAN
185 Asylum Street
Hartford CT 06103
Telephone:860-509-6522 email:tregan@brownrudnick.com

2 PACKAGE INFORMATION

	WEIGHT	DIMENSIONS / PACKAGING	DECLARED VALUE	REFERENCE NUMBERS
1.	Letter (Letter billable)	UPS Letter		Client Matter Code - 080563.3289 Employee ID - 0825

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Fuel Surcharge 1.66 USD

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Quantum View Notify E-mail Notifications: No Charge

1 cteitelbaum@brownrudnick.com: Exception, Delivery

4 PAYMENT INFORMATION

Bill Shipping Charges to: Shipper's Account 77X79X

Shipping Charges:	**26.30 USD**
A discount has been applied for this shipment.	
Negotiated Charges:	**10.52 USD**
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Note: This document is not an invoice. Your final invoice may vary from the displayed reference rates.

* For delivery and guarantee information, see the UPS Service Guide ({0}). To speak to a customer service representative, call 1-800-PICK-UPS for domestic services an 1-800-782-7892 for international services.

EXHIBIT D

C Squared Systems, LLC
65 Dartmouth Drive
Auburn, NH 03032
Phone: (603) 644-2800
support@csquaredsystems.com

RADIO FREQUENCY EXPOSURE REPORT

CT81XC007/CT03XC350 – DANBURY HOSPITAL

24 HOSPITAL AVENUE
DANBURY, CT 06810

July 2, 2019

Table of Contents

List of Tables

List of Figures

1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed modifications to the existing Sprint antennas, mounted on the rooftop of Danbury Hospital, located at 24 Hospital Avenue in Danbury, CT. The coordinates of the building are 41° 24' 18.03" N, 73° 26' 46.33" W. Sprint's antenna installation consists of six sectors split across two sites (CT81XC007 & CT03XC350).

Sprint is proposing to add a total of six 2500 MHz antennas and RRU's with six integrated RRU/antenna units (one per sector).

Figure 1: View of Danbury Hospital

Site Address	24 Hospital Ave, Danbury, CT
Latitude	41° 24' 18.03" N
Longitude	73° 26' 46.33" W
Site Elevation AMSL	467'
Survey Engineer	Sokol Andoni
Survey Date/Time	6/19/2019; 1:30PM – 4:00PM

Table 1: Site Specific Data

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include Maximum Permissible Exposure (MPE) limits for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based upon those recommended by the National Council on Radiation Protection and Measurements (NCRP), developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm^2). The general population exposure limits for the various frequency ranges are defined in the attached "FCC Limits for Maximum Permissible Exposure (MPE)" in Attachment B of this report.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment provided they are fully aware of the potential for exposure, and are able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels considered acceptable for occupational, or radio frequency trained individuals. Attachment B contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population / uncontrolled exposure and for occupational / controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

3. Measurement Procedure

Frequencies from 300 KHz to 50 GHz were measured using the Narda Probe EA 5091, E-Field, shaped, FCC probe in conjunction with the NBM550 survey meter. The EA 5091 probe is "shaped" such that in a mixed signal environment (i.e.: more than one frequency band is used in a particular location), it accurately measures the percent of MPE.

From FCC OET Bulletin No. 65 - Edition 97-01 – "A useful characteristic of broadband probes used in multiple-frequency RF environments is a frequency-dependent response that corresponds to the variation in MPE limits with frequency. Broadband probes having such a "shaped" response permit direct assessment of compliance at sites where RF fields result from antennas transmitting over a wide range of frequencies. Such probes can express the composite RF field as a percentage of the applicable MPEs".

Probe Description - As suggested in FCC OET Bulletin No. 65 - Edition 97-01, the response of the measurement instrument should be essentially isotropic, (i.e., independent of orientation or rotation angle of the probe). For this reason, the Narda EA 5091 probe was used for these measurements.

Sampling Description - At each measurement location, a spatially averaged measurement is collected over the height of an average human body. The NBM550 survey meter performs a time average measurement while the user slowly moves the probe over a distance range of 20 cm to 200 cm (about 6 feet) above ground level. The results recorded at each measurement location include average values over the spatial distance.

Instrumentation Information - A summary of specifications for the equipment used is provided in the table below.

Manufacturer	Narda Microwave			
Probe	EA 5091, Serial# 01265			
Calibration Date	June 2018			
Calibration Interval	24 Months			
Meter	NBM550, Serial# F-0147			
Calibration Date	January 2019			
Calibration Interval	24 Months			
Probe Specifications	**Frequency Range**	**Field Measured**	**Standard**	**Measurement Range**
	300 KHz-50 GHz	Electric Field	U.S. FCC 1997 Occupational/Controlled	0.2 – 600 % of Standard

Table 2: Instrumentation Information

Instrument Measurement Uncertainty - The total measurement uncertainty of the NARDA measurement probe and meter is no greater than ±3 dB (0.5% to 6%), ±1 dB (6% to 100%), ±2 dB (100% to 600%). The factors which contribute to this include the probe's frequency response deviation, calibration uncertainty, ellipse ratio, and isotropic response[1]. Every effort is taken to reduce the overall uncertainty during measurement collection including pointing the probe directly at the likely highest source of emissions.

[1] For further details, please refer to Narda Safety Test Solutions NBM550 Probe Specifications, pg. 64
http://www.narda-sts.us/pdf_files/DataSheets/NBM-Probes_DataSheet.pdf

4. Measured Results

Measurements were recorded at ground level and on the top level of two parking garages located in close proximity to the hospital to establish a baseline % MPE value for the existing facility. The measured results and a description of each survey location are detailed in Table 3 below. The table consists of the 27 measurements recorded on June 19, 2019 between 1:00 P.M. and 2:00 P.M. in these publicly accessible areas around the hospital.

The highest spatially averaged measurement was **1.96%** (Uncontrolled/General Population MPE) and was recorded on the top level of the Red Parking Garage (Location 26).

Meas. Location	Location Description	Latitude	Longitude	Measured % MPE (Uncontrolled / General)
1	Duracell Center - Eastern Visitor Parking Lot	41.405379	-73.443911	<1.00
2	Duracell Center - Ambulatory Surgery Entrance	41.405211	-73.444386	<1.00
3	Anna Maria & Steven Kellen Emergency Parking Lot	41.405879	-73.443995	<1.00
4	Anna Maria & Steven Kellen Emergency Entrance	41.405812	-73.444791	<1.00
5	Rizzo Parking Garage - Top Level	41.405777	-73.445601	1.13
6	Rizzo Parking Garage - Top Level	41.406164	-73.445826	0.79
7	Rizzo Parking Garage - Top Level	41.406386	-73.445057	1.01
8	Rizzo Parking Garage - Top Level	41.406562	-73.444482	1.20
9	Rizzo Parking Garage - Top Level	41.406202	-73.444320	<1.00
10	Rizzo Parking Garage - Top Level	41.406037	-73.444842	1.07
11	Hospital Ave & Rizzo Parking Garage Eastern Access Road	41.406719	-73.444270	1.20
12	Hospital Ave & Forest Ave Intersection	41.406661	-73.445060	<1.00
13	Walking Path to Peter & Carmen Luccia Buck Pavilion Entrance	41.406020	-73.446228	1.02
14	Near Peter & Carmen Luccia Buck Pavilion Entrance	41.405499	-73.446245	1.07
15	Hospital Ave, near Edgewood Center	41.406187	-73.446433	1.42
16	Hospital Ave & Tamarack Ave Intersection	41.405757	-73.447778	1.81
17	Near 92 Locust Ave	41.404773	-73.446663	1.62
18	Locust Ave, Near Shipping & Receiving Dock	41.404443	-73.445952	1.51
19	Locust Ave, Near Red Garage Access Road	41.404481	-73.445571	1.37
20	Locust Ave, Near Red Garage Access Road	41.404366	-73.444632	1.34
21	Pharmacy Parking Area	41.404566	-73.443962	1.13
22	Red Parking Garage - Top Level	41.404261	-73.444118	1.61
23	Red Parking Garage - Top Level	41.404177	-73.443597	1.67
24	Red Parking Garage - Top Level	41.404417	-73.443497	1.80
25	Red Parking Garage - Top Level	41.404717	-73.443405	1.69
26	**Red Parking Garage - Top Level**	**41.404840**	**-73.443886**	**1.96**
27	Duracell Center - Eastern Visitor Parking Lot	41.40521	-73.44345	1.41

Table 3: Measurement Results[2]

[2] Due to measurement uncertainty at low levels (See Table 2), any readings outside the measurement range of the probe (< 1.00 % FCC General Population/Uncontrolled MPE) are noted as such.

Figure 2 below is an aerial view of the facility location and the surrounding area. Labeled points indicate the locations of the measurements recorded on June 19, 2019, as listed above in Table 3.

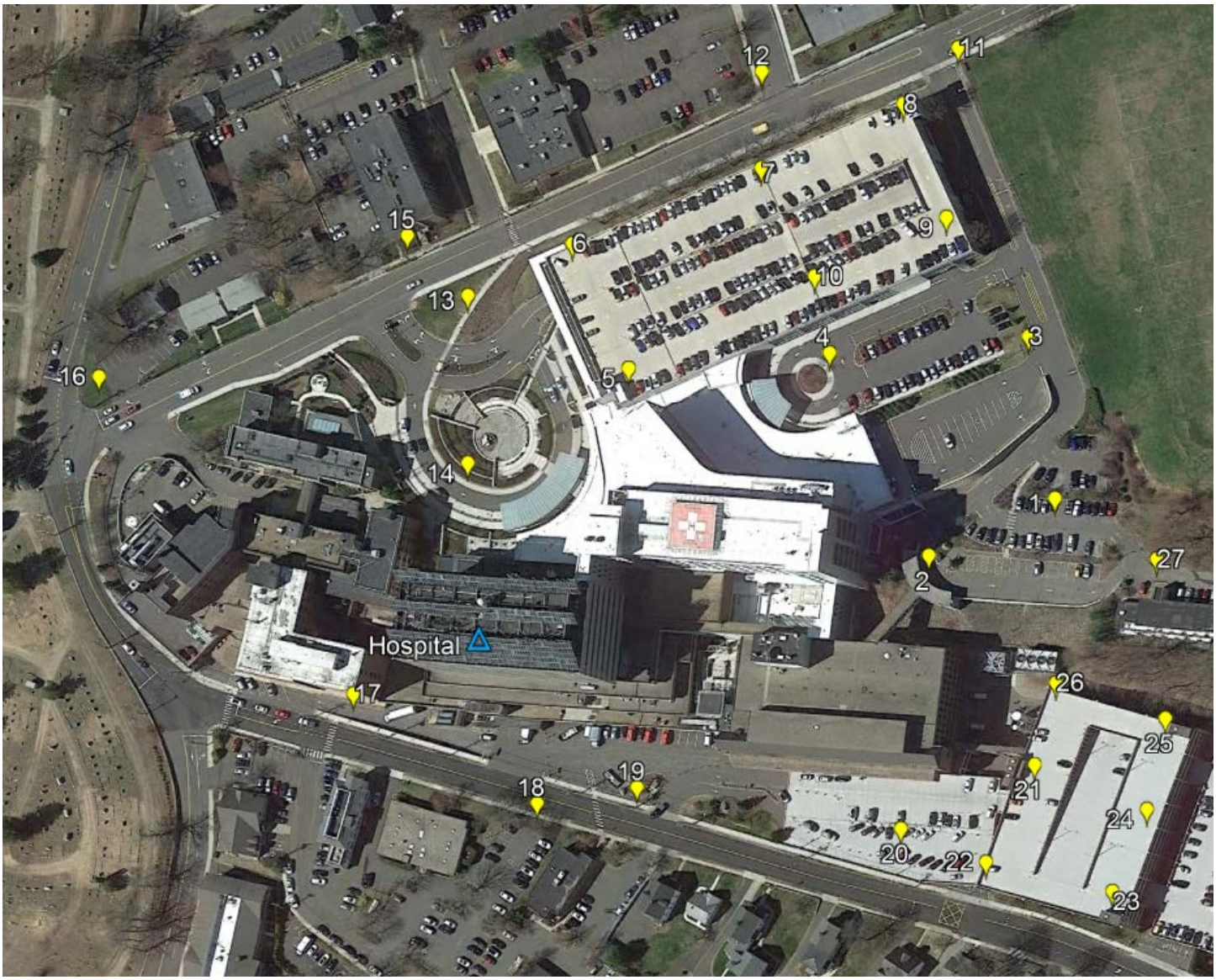


Figure 2: Aerial View of Facility & Measurement Locations

5. Proposed Antenna Configuration

Table 4 below lists the specifications of the proposed Sprint antenna configuration.

Cascade ID	Sector	TX Freq. (MHz)	Power at Antenna (Watts)	Ant Gain (dBd)	Power ERP (Watts)	Antenna Model	Beam Width	Mech. Downtilt	Length (ft)	Antenna Centerline Height (ft)
CT03XC350	Alpha / 30°	865	70	14.1	1779	HPA-33R-CS4AA	46	0	6	159.0
		1900	140	16.3	5904		37			
		2500	120	13.1	2422	Nokia AAHC_2	65	0	2.1	159.0
	Beta / 120°	865	70	14.1	1779	HPA-33R-CS4AA	46	0	6	155.0
		1900	140	16.3	5904		37			
		2500	120	13.1	2422	Nokia AAHC_2	65	0	2.1	155.0
	Gamma / 170°	865	70	14.1	1779	HPA-33R-CS4AA	46	0	6	155.0
		1900	140	16.3	5904		37			
		2500	120	13.1	2422	Nokia AAHC_2	65	0	2.1	155.0
CT81XC007	Alpha / 220°	865	70	14.1	1779	HPA-33R-CS4AA	46	0	4.0	131.0
		1900	140	16.3	5904		37			
		2500	120	13.1	2422	Nokia AAHC_2	65	0	2.1	131.0
	Beta / 270°	865	70	14.1	1779	HPA-33R-CS4AA	46	0	6	131.0
		1900	140	16.3	5904		37			
		2500	120	13.1	2422	Nokia AAHC_2	65	0	2.1	131.0
	Gamma / 340°	865	70	14.1	1779	HPA-33R-CS4AA	46	0	6	155.0
		1900	140	16.3	5904		37			
		2500	120	13.1	2422	Nokia AAHC_2	65	0	2.1	155.0

Table 4: Proposed Antenna Configuration [3] [4]

6. RF Exposure Calculation Methods

The power density calculation results were generated using the following formula as outlined in FCC bulletin OET 65 and Connecticut Siting Council recommendations:

$$\text{Power Density} = \left(\frac{1.6^2 \times 1.64 \times \text{ERP}}{4\pi \times R^2}\right) \text{X Off Beam Loss}$$

Where:

EIRP = Effective Isotropic Radiated Power = 1.64 x ERP

R = Radial Distance = $\sqrt{(H^2 + V^2)}$

H = Horizontal Distance from antenna

V = Vertical Distance from radiation center of antenna

Ground reflection factor of 1.6

Off Beam Loss is determined by the selected antenna patterns

These calculations assume that the antennas are operating at 100 percent capacity and power, and that all antenna channels are transmitting simultaneously. As a result, the calculated levels reported are much higher than the actual levels will be from the final site configuration.

[3] Transmit power assumes 0 dB of cable loss.

[4] Antenna heights for Sprint are based on the stamped Infinigy Engineering, PLLC construction drawings dated 3/25/2019 (Rev. 1).

7. Calculated Results

Table 5 below outlines the power density information of Sprint's proposed configuration. All six Sprint sectors have identical power assumptions; however, two of the sectors involve antennas mounted at 131' AGL (alpha & beta on CT81XC007) compared to the other sectors. Therefore, only the results of the sectors at 131' AGL are reflected in the table below since it yields the more conservative result (higher % MPE).

Due to the directional nature of the Sprint panel antennas, the majority of the RF power will be focused out towards the horizon. As a result, there will be less RF power directed below the antennas relative to the horizon, and consequently lower power density levels around the base of the building. Please refer to Attachment C for the vertical patterns of the Sprint panel antennas. All power density values shown in Table 5 include a nominal 10 dB off-beam pattern loss to account for the lower relative gain below the antenna.

	Carrier	Antenna Height (Feet)	Operating Frequency (MHz)	Number of Trans.	ERP Per Transmitter (Watts)	Power Density (mw/cm^2)	Limit	% MPE
Proposed Configuration	Sprint CDMA	131	865	1	508	0.0012	0.5767	0.20%
	Sprint LTE	131	865	1	1270	0.0029	0.5767	0.51%
	Sprint CDMA/EVDO	131	1900	3	2530	0.0175	1.0000	1.75%
	Sprint LTE	131	1900	2	1687	0.0078	1.0000	0.78%
	Sprint LTE	131	2500	1	2422	0.0056	1.0000	0.56%
							Total	**3.79%**

Table 5: Calculated % MPE – Worst Case Sprint Sector (CT81XC007 alpha & beta)[5] [6]

[5] Existing CSC filing for Sprint should be removed and replaced with the updated Sprint technologies and values provided in Table 5.

[6] Please note that %MPE values listed are rounded to two decimal points. The total %MPE listed is a summation of each unrounded contribution. Therefore, summing each rounded value may not reflect the total value listed in the table.

8. Summary of Findings

A number of publicly accessible areas at ground level and on the parking garage decks in the vicinity of Danbury Hospital were surveyed and found to be well within the mandated General Population/Uncontrolled limits for Maximum Permissible Exposure, as delineated in the Federal Communications Commission's Radio Frequency exposure rules published in 47 CFR 1.1307(b)(1)-(b)(3).

The highest spatially averaged % MPE measurement of all surveyed points based on the 1997 FCC standard for exposure to the general population is **1.96%** MPE. This measurement was recorded at Location 26, on the top level of the Red Parking Garage.

Power density values were calculated for the proposed Sprint antenna configuration. The highest calculated power density is **3.79% of the FCC General Population MPE limit**. Please note that the maximum measured % MPE occurs on the top level of the Red Garage, whereas the calculated % MPE for Sprint's proposed antenna configuration is calculated at a closer point (the base of the hospital).

The above analysis verifies that exposure levels in the areas surrounding the hospital; both currently and after the proposed modifications, are well below the Maximum Permissible Exposure levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01.

9. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The field measurements and calculated results were obtained with properly calibrated equipment using techniques and guidelines set forth in FCC OET Bulletin 65 Edition 97-01, IEEE Std. C95.1, IEEE Std. C95.3, and IEEE Std. C95.7.

Sokol Andoni

Report Prepared By: Sokol Andoni
RF Engineer
C Squared Systems, LLC

July 2, 2019
Date

Keith Vellante

Reviewed/Approved By: Keith Vellante
RF Manager
C Squared Systems, LLC

July 2, 2019
Date

Attachment A: References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

IEEE C95.1-2005, IEEE Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz IEEE-SA Standards Board

IEEE C95.3-2002 (R2008), IEEE Recommended Practice for Measurements and Computations of Radio Frequency Electromagnetic Fields With Respect to Human Exposure to Such Fields, 100 kHz-300 GHz IEEE-SA Standards Board

IEEE C95.7-2005 (R2014), IEEE Recommended Practice for Radio Frequency Safety Programs, 3 kHz to 300 GHz. IEEE-SA Standards Board

Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure[7]

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $|E|^2$, $|H|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	f/300	6
1500-100,000	-	-	5	6

(B) Limits for General Population/Uncontrolled Exposure[8]

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $|E|^2$, $|H|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz * Plane-wave equivalent power density

Table 6: FCC Limits for Maximum Permissible Exposure

[7] Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

[8] General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

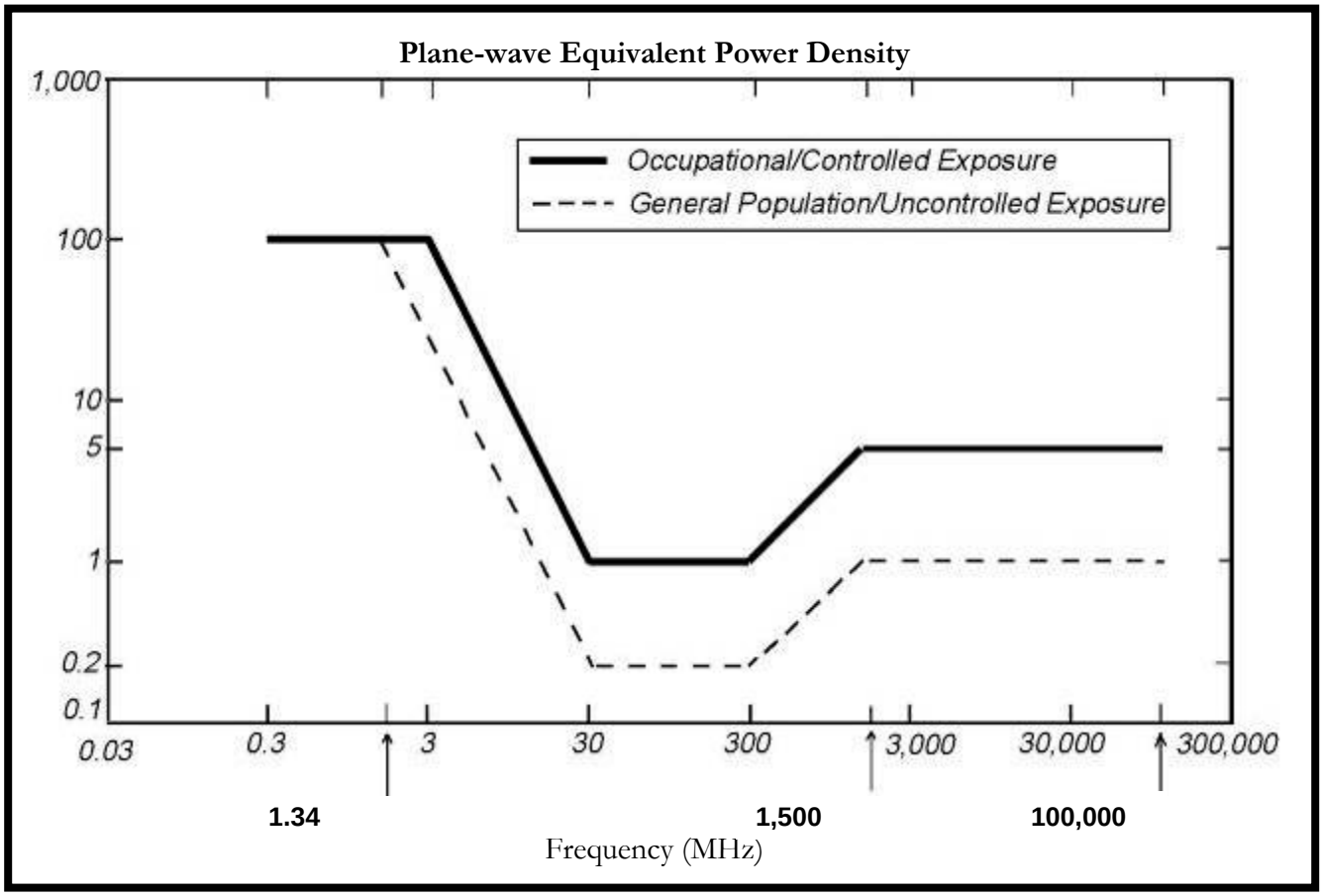
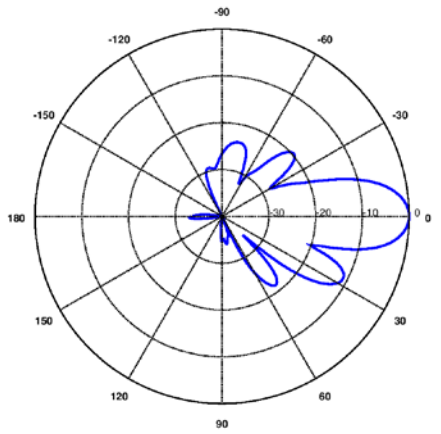


Figure 3: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

Attachment C: Sprint Antenna Model Data Sheets and Patterns

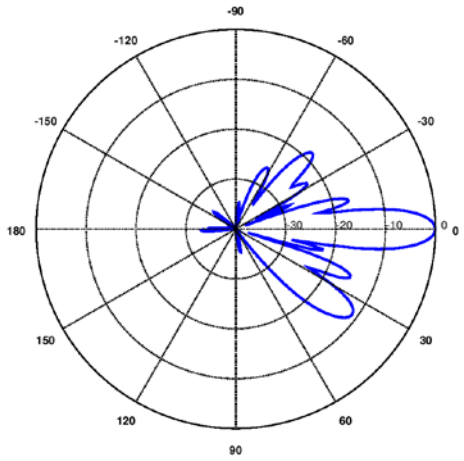
865 MHz

Manufacturer:	CCI
Model #:	HPA33R-CS4A
Frequency Band:	817-869 MHz
Gain:	14.1 dBd
Vertical Beamwidth:	16.6°
Horizontal Beamwidth:	46°
Polarization:	Dual Pol ±45°
Size L x W x D:	47.5” x 18.2” x 8.5”



1900 MHz

Manufacturer:	CCI
Model #:	HPA33R-CS4A
Frequency Band:	1850-1995 MHz
Gain:	16.3 dBd
Vertical Beamwidth:	9.1°
Horizontal Beamwidth:	37°
Polarization:	Dual Pol ±45°
Size L x W x D:	47.5” x 18.2” x 8.5”



2500 MHz

Manufacturer:	NOKIA
Model #:	AAHC
Frequency Band:	2490-2690 MHz
Gain:	13.1 dBd
Vertical Beamwidth:	9.0°
Horizontal Beamwidth:	65°
Polarization:	±45°
Size L x W x D:	25.6” x 19.7” x 9.6”

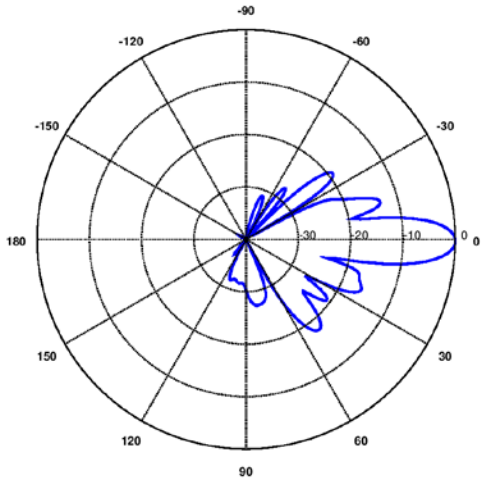


EXHIBIT E

INFINIGY

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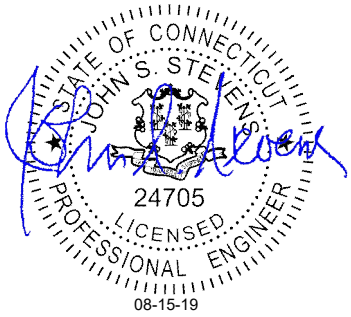
Structural Analysis Report

August 14, 2019

Site Name	Danbury Hospital
Site Cascade	CT81XC007-CT03XC350
Client	JP Consulting
Proposed Carrier	Sprint
Infinigy Job Number	526-101
Site Location	24 Hospital Ave, Danbury, CT 06810 41° 24' 17.90" N NAD83 73° 26' 45.21" W NAD83
Mount Centerline	131.0, 155.0, 159.0 ft
Mount Classification	Pipe Mount and Pipe Standoff
Structural Usage	**69.4%**
Overall Result	**Pass**

Upon reviewing the results of this analysis, it is our opinion that the proposed structure meets the specified TIA code requirements. The pipe standoff, antenna pipe mount and anchors are therefore deemed adequate to support the existing and proposed loading as listed in this report.



Kevin Berger Jr.

Contents

Introduction

Infinigy Engineering has been requested to analyze a pipe standoff and antenna supporting structures. All supporting documents have been obtained from the client and are assumed to be accurate and applicable to this site. The structure was analyzed using RISA 3D v. 17.0.2 software.

Supporting Documentation

Construction Drawings	Infinigy Engineering Job #526-101, dated March 25, 2019
Site Photos	Infinigy Engineering Job #526-101, dated November 26, 2018
Structural Analysis	Infinigy Engineering Job #195-036, dated June 17, 2015

Analysis Code Requirements

Wind Speed	93 mph (3-Second Gust, V_{asd})/ 120 mph (3-Second Gust, V_{ult})
Wind Speed w/ ice	50 mph (3-Second Gust) w/ 0.75" ice
TIA Revision	ANSI/TIA-222-G
Adopted IBC	2015 IBC / 2018 Connecticut State Building Code
Structure Class	II
Exposure Category	C
Topographic Category	1
Calculated Crest Height	0 ft

Conclusion

Upon reviewing the results of this analysis, it is our opinion that the proposed structure meets the specified TIA code requirements. The pipe standoff, antenna pipe mount and anchors are therefore deemed adequate to support the existing and proposed loading as listed in this report.

If you have any questions, require additional information, or actual conditions differ from those as detailed in this report please contact me via the information below:

Kevin Berger Jr. | INFINIGY
1033 Watervliet Shaker Road, Albany, NY 12205
(518) 690-0790 | Structural@infinigy.com

Existing & Reserved Loading

Rad Center (ft)	Qty.	Appurtenance	Mount Type	Sector
159.0	1	CCI HPA33R-CS4AA-K	Pipe Mount	Alpha
	1	Alcatel-Lucent 800 Mhz RRH		
	2	Alcatel-Lucent 1900 Mhz RRH		
	1	Alcatel-Lucent 2500 Mhz RRH		
	4	Diplexers		
131.0	1	CCI HPA33R-CS4AA-K		
	1	Alcatel-Lucent 800 Mhz RRH		
	2	Alcatel-Lucent 1900 Mhz RRH		
	1	Alcatel-Lucent 2500 Mhz RRH		
	4	Diplexers		
155.0	1	CCI HPA33R-CS4AA-K	Pipe Mount	Beta
	1	Alcatel-Lucent 800 Mhz RRH		
	2	Alcatel-Lucent 1900 Mhz RRH		
	1	Alcatel-Lucent 2500 Mhz RRH		
	4	Diplexers		
131.0	1	CCI HPA33R-CS4AA-K		
	1	Alcatel-Lucent 800 Mhz RRH		
	2	Alcatel-Lucent 1900 Mhz RRH		
	1	Alcatel-Lucent 2500 Mhz RRH		
	4	Diplexers		
155.0	2	CCI HPA33R-CS4AA-K	Pipe Mount	Gamma
	2	Alcatel-Lucent 800 Mhz RRH		
	4	Alcatel-Lucent 1900 Mhz RRH		
	2	Alcatel-Lucent 2500 Mhz RRH		
	8	Diplexers		

To be Removed Loading

Rad Center (ft)	Qty.	Appurtenance	Mount Type	Sector
159.0	1	Alcatel-Lucent 2500 Mhz RRH	--	Alpha
	4	Diplexers		
131.0	1	Alcatel-Lucent 2500 Mhz RRH		
	4	Diplexers		
155.0	1	Alcatel-Lucent 2500 Mhz RRH		Beta
	4	Diplexers		
131.0	1	Alcatel-Lucent 2500 Mhz RRH		
	4	Diplexers		
155.0	2	Alcatel-Lucent 2500 Mhz RRH		Gamma
	8	Diplexers		

Proposed Loading

Rad Center (ft)	Qty.	Appurtenance	Mount Type	Sector
159.0	1	NOKIA AAHC	--	Alpha
131.0	1	NOKIA AAHC		
155.0	1	NOKIA AAHC		Beta
131.0	1	NOKIA AAHC		
155.0	2	NOKIA AAHC		Gamma

Final Configuration Loading

Rad Center (ft)	Qty.	Appurtenance	Mount Type	Sector
159.0	1	CCI HPA33R-CS4AA-K	Pipe Mount	Alpha
	1	NOKIA AAHC		
	1	Alcatel-Lucent 800 Mhz RRH		
	2	Alcatel-Lucent 1900 Mhz RRH		
131.0	1	CCI HPA33R-CS4AA-K		
	1	NOKIA AAHC		
	1	Alcatel-Lucent 800 Mhz RRH		
	2	Alcatel-Lucent 1900 Mhz RRH		
155.0	1	CCI HPA33R-CS4AA-K	Pipe Mount	Beta
	1	NOKIA AAHC	Pipe Stand-off	
	1	Alcatel-Lucent 800 Mhz RRH	Pipe Mount	
	2	Alcatel-Lucent 1900 Mhz RRH		
131.0	1	CCI HPA33R-CS4AA-K	Pipe Mount	
	1	NOKIA AAHC		
	1	Alcatel-Lucent 800 Mhz RRH		
	2	Alcatel-Lucent 1900 Mhz RRH		
155.0	2	CCI HPA33R-CS4AA-K	Pipe Mount	Gamma
	2	NOKIA AAHC	Pipe Stand-off	
	2	Alcatel-Lucent 800 Mhz RRH	Pipe Mount	
	4	Alcatel-Lucent 1900 Mhz RRH		

CT81XC007 Alpha/Beta Structure Usages

	Summary	
Mount Pipe	31.6%	Pass
Max Usage	**31.6%**	**Pass**

CT03XC350 Alpha/CT81XC007 Gamma Structure Usages

	Summary	
Mount Pipe	19.7%	Pass
X Bracing	65.8%	Pass
Support Pipe	60.0%	Pass
Horizontal Bracing	69.4%	Pass
Max Usage	**69.4%**	**Pass**

CT81XC007 Alpha/Beta Mount Connection Reactions

Reaction Data	Design Reactions	Analysis Reactions	Result
Max Tension (lbs)	12340.0	578.3	4.7%
Max Shear (lbs)	7770.0	839.7	10.8%
Unity Check	--	--	15.5%

***Assumed (2) 1/2" A307 Anchors. Contractor to field to verify anchor diameters prior to proper installation.**

- Anchor reactions are acceptable when compared to manufacturer's listed capacities.

CT03XC350 Alpha/CT81XC007 Gamma Mount Connection Reactions

Reaction Data	Design Reactions	Analysis Reactions	Result
Max Tension (lbs)	12340.0	5782.4	46.9%
Max Shear (lbs)	7770.0	3574.2	46.0%
Unity Check	--	--	92.6%

***Assumed (2) 1/2" A307 Anchors. Contractor to field to verify anchor diameters prior to proper installation.**

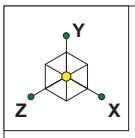
- Anchor reactions are acceptable when compared to manufacturer's listed capacities.

Assumptions and Limitations

Our structural calculations are completed assuming all information provided to Infinigy Engineering is accurate and applicable to this site. For the purposes of calculations, we assume an overall structure condition of "like new" and all members, connections, anchors, and masonry to be free of corrosion and/or structural defects. The structure owner and/or contractor shall verify the structure's condition prior to installation of any proposed equipment. If actual conditions differ from those described in this report Infinigy Engineering should be notified immediately to complete a revised evaluation.

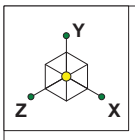
Our evaluation is completed using standard TIA, AISC, ACI, and ASCE methods and procedures. Our structural results are proprietary and should not be used by others as their own. Infinigy Engineering is not responsible for decisions made by others that are or are not based on our supplied assumptions and conclusions.

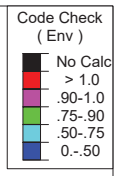
This report is an evaluation of the any rooftop mounted equipment and/or antenna supporting structures to be proposed or modified as shown in the referenced construction drawings. Applicable building element adequacy to support these structures is also evaluated when the applied forces increase significantly based on engineering judgment.



Envelope Only Solution

Infinigy Engineering, PLLC.	CT81XC007 Alpha/Beta	Final Configuration
KLB		Apr 12, 2019 at 4:27 PM
526-101		CT81XC007A-B.r3d





Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Infinigy Engineering, PLLC.	CT81XC007 Alpha/Beta	Bending Check
KLB		Apr 12, 2019 at 4:26 PM
526-101		CT81XC007A-B.r3d

Site Name:	CT03XC350/CT81XC007
Client:	JP Consulting
Carrier:	Sprint
Engineer:	KLB
Date:	8/14/2019

INFINIGY
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INFINIGY WIND LOAD CALCULATOR 4.0.2

Site Information Inputs:

Adopted Building Code:	2015 IBC
Structure Load Standard:	TIA-222-G
Antenna Load Standard:	TIA-222-G
Structure Risk Category:	II
Structure Type:	Mount - Pipe
Number of Sectors:	6
Main Structure Shape:	Round

Rooftop Inputs:

Rooftop Wind Speed-Up?:	No

Wind Loading Inputs:

Design Wind Velocity:	93	mph (nominal 3-second gust)
Wind Centerline 1 (z_1):	131.0	ft
Side Face Angle (θ):	60	degrees
Exposure Category:	C	
Topographic Category:	1	

Wind with No Ice		
q_z (psf)	Gh	F_{ST} (psf)
28.18	1.00	**33.81**

Wind with Ice		
q_z (psf)	Gh	F_{ST} (psf)
8.15	1.00	**21.48**

Ice Loading Inputs:

Is Ice Loading Needed?:	Yes	
Ice Wind Velocity:	50	mph (nominal 3-second gust)
Base Ice Thickness:	0.75	in

Appurtenances	Elevation (ft)	Total Quantity	Ka	Front Shape	Side Shape	q_z (psf)	EPA (ft^2)	Fz (lbs)	Fx (lbs)	Fz(60) (lbs)	Fx(30) (lbs)
CCI ANTENNAS HPA33R-CS4AA-K	131.0	2	1.00	Flat	Flat	28.18	7.23	203.83	105.65	130.20	179.29
CCI ANTENNAS HPA33R-CS4AA-K	155.0	2	1.00	Flat	Flat	29.19	7.23	211.18	109.46	134.89	185.75
CCI ANTENNAS HPA33R-CS4AA-K	159.0	2	1.00	Flat	Flat	29.35	7.23	212.31	110.05	135.62	186.75
NOKIA AAHC	131.0	1	1.00	Flat	Flat	28.18	4.21	118.68	58.41	73.48	103.62
NOKIA AAHC	131.0	1	1.00	Flat	Flat	28.18	4.21	118.68	58.41	73.48	103.62
NOKIA AAHC	155.0	2	1.00	Flat	Flat	29.19	4.21	122.96	60.52	76.13	107.35
NOKIA AAHC	159.0	2	1.00	Flat	Flat	29.35	4.21	123.62	60.85	76.54	107.93
ALCATEL LUCENT TME-800MHZ RRH	131.0	1	1.00	Flat	Flat	28.18	2.13	60.14	49.96	52.51	57.59
ALCATEL LUCENT TME-800MHZ RRH	131.0	1	1.00	Flat	Flat	28.18	2.13	60.14	49.96	52.51	57.59
ALCATEL LUCENT TME-800MHZ RRH	155.0	2	1.00	Flat	Flat	29.19	2.13	62.31	51.76	54.40	59.67
ALCATEL LUCENT TME-800MHZ RRH	159.0	2	1.00	Flat	Flat	29.35	2.13	62.64	52.04	54.69	59.99
ALCATEL LUCENT TME-1900MHZ RRH	131.0	1	1.00	Flat	Flat	28.18	2.49	70.21	91.82	86.41	75.61
ALCATEL LUCENT TME-1900MHZ RRH	131.0	1	1.00	Flat	Flat	28.18	2.49	70.21	91.82	86.41	75.61
ALCATEL LUCENT TME-1900MHZ RRH	131.0	2	1.00	Flat	Flat	28.18	2.49	70.21	91.82	86.41	75.61
ALCATEL LUCENT TME-1900MHZ RRH	155.0	6	1.00	Flat	Flat	29.19	2.49	72.74	95.13	89.53	78.34
ALCATEL LUCENT TME-1900MHZ RRH	159.0	2	1.00	Flat	Flat	29.35	2.49	73.13	95.64	90.01	78.76

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	MP1	N1A	N1			3.5" STD Pipe	Beam	None	A53 Gr.B	Typical
2	M2A	N3	N3A			RIGID	None	None	RIGID	Typical
3	M3	N4	N5			RIGID	None	None	RIGID	Typical

Material Takeoff

	Material	Size	Pieces	Length[in]	Weight[LB]
1	General				
2	RIGID		2	6	0
3	Total General		2	6	0
4					
5	Hot Rolled Steel				
6	A53 Gr.B	PIPE_2.5	1	72	32.9
7	Total HR Steel		1	72	32.9

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Self Weight	DL		-1			5			
2	Wind Load AZI 000	WLZ					5		1	
3	Wind Load AZI 090	WLX					5		1	
4	Ice Weight	OL1					5	3		
5	Wind + Ice Load AZI ...	OL2					5		1	
6	Wind + Ice Load AZI ...	OL3					5		1	
7	Service Live 1	LL								
8	BLC 2 Transient Area...	None						1		
9	BLC 3 Transient Area...	None						3		
10	BLC 5 Transient Area...	None						1		
11	BLC 6 Transient Area...	None						3		

Load Combinations

	Description	Sol...	PD...	SR...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...
1	1.4D	Yes	Y		DL	1.4																				
2	1.2D + 1.6..	Yes	Y		DL	1.2	WLZ	1.6																		
3	1.2D + 1.6..	Yes	Y		DL	1.2	WLZ	1.386	W...	.8																
4	1.2D + 1.6..	Yes	Y		DL	1.2	WLZ	.8	W...	1.386																
5	1.2D + 1.6..	Yes	Y		DL	1.2			W...	1.6																
6	1.2D + 1.6..	Yes	Y		DL	1.2	WLZ	-.8	W...	1.386																
7	1.2D + 1.6..	Yes	Y		DL	1.2	WLZ	-1.3...	W...	.8																
8	1.2D + 1.6..	Yes	Y		DL	1.2	WLZ	-1.6																		
9	1.2D + 1.6..	Yes	Y		DL	1.2	WLZ	-1.3...	W...	-.8																
10	1.2D + 1.6..	Yes	Y		DL	1.2	WLZ	-.8	W...	-1.3...																
11	1.2D + 1.6..	Yes	Y		DL	1.2			W...	-1.6																
12	1.2D + 1.6..	Yes	Y		DL	1.2	WLZ	.8	W...	-1.3...																
13	1.2D + 1.6..	Yes	Y		DL	1.2	WLZ	1.386	W...	-.8																
14	0.9D + 1.6..	Yes	Y		DL	.9	WLZ	1.6																		
15	0.9D + 1.6..	Yes	Y		DL	.9	WLZ	1.386	W...	.8																
16	0.9D + 1.6..	Yes	Y		DL	.9	WLZ	.8	W...	1.386																
17	0.9D + 1.6..	Yes	Y		DL	.9			W...	1.6																
18	0.9D + 1.6..	Yes	Y		DL	.9	WLZ	-.8	W...	1.386																
19	0.9D + 1.6..	Yes	Y		DL	.9	WLZ	-1.3...	W...	.8																
20	0.9D + 1.6..	Yes	Y		DL	.9	WLZ	-1.6																		
21	0.9D + 1.6..	Yes	Y		DL	.9	WLZ	-1.3...	W...	-.8																

Load Combinations (Continued)

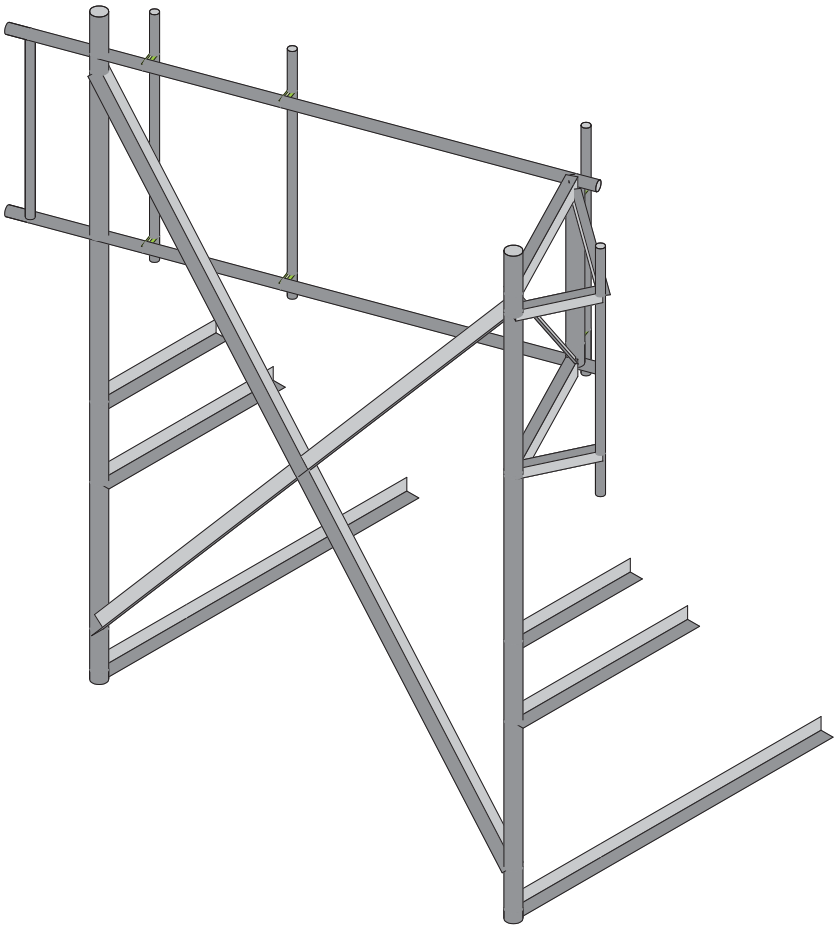
	Description	Sol..	PD..	SR..	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...
22	0.9D + 1.6..	Yes	Y		DL	.9	WLZ	-.8	W...	-1.3...																
23	0.9D + 1.6..	Yes	Y		DL	.9			W...	-1.6																
24	0.9D + 1.6..	Yes	Y		DL	.9	WLZ	.8	W...	-1.3...																
25	0.9D + 1.6..	Yes	Y		DL	.9	WLZ	1.386	W...	-.8																
26	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1																		
27	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1	OL2	1																
28	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1	OL2	.866	OL3	.5														
29	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1	OL2	.5	OL3	.866														
30	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1			OL3	1														
31	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1	OL2	-.5	OL3	.866														
32	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1	OL2	-.866	OL3	.5														
33	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1	OL2	-1																
34	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1	OL2	-.866	OL3	-.5														
35	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1	OL2	-.5	OL3	-.866														
36	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1			OL3	-1														
37	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1	OL2	.5	OL3	-.866														
38	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1	OL2	.866	OL3	-.5														
39	1.2D + 1.5..	Yes	Y		DL	1.2	LL	1.5	WLZ	.104																
40	1.2D + 1.5..	Yes	Y		DL	1.2	LL	1.5	WLZ	.09	W...	.052														
41	1.2D + 1.5..	Yes	Y		DL	1.2	LL	1.5	WLZ	.052	W...	.09														
42	1.2D + 1.5..	Yes	Y		DL	1.2	LL	1.5			W...	.104														
43	1.2D + 1.5..	Yes	Y		DL	1.2	LL	1.5	WLZ	-.052	W...	.09														
44	1.2D + 1.5..	Yes	Y		DL	1.2	LL	1.5	WLZ	-.09	W...	.052														
45	1.2D + 1.5..	Yes	Y		DL	1.2	LL	1.5	WLZ	-.104																
46	1.2D + 1.5..	Yes	Y		DL	1.2	LL	1.5	WLZ	-.09	W...	-.052														
47	1.2D + 1.5..	Yes	Y		DL	1.2	LL	1.5	WLZ	-.052	W...	-.09														
48	1.2D + 1.5..	Yes	Y		DL	1.2	LL	1.5			W...	-.104														
49	1.2D + 1.5..	Yes	Y		DL	1.2	LL	1.5	WLZ	.052	W...	-.09														
50	1.2D + 1.5..	Yes	Y		DL	1.2	LL	1.5	WLZ	.09	W...	-.052														

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N3A	max	10.26	5	14.012	27	10.26	14	1.147	20	2.565	5	2.123	5
2		min	-10.26	11	3.903	20	-10.26	8	-4.202	27	-2.565	11	-2.123	11
3	N5	max	534.735	17	839.727	33	578.287	2	1063.788	20	133.684	17	1125.012	17
4		min	-534.735	23	245.838	14	-578.287	20	-1206.338	2	-133.684	23	-1125.012	23
5	Totals:	max	544.995	17	853.739	38	588.547	14						
6		min	-544.995	11	249.742	14	-588.547	8						

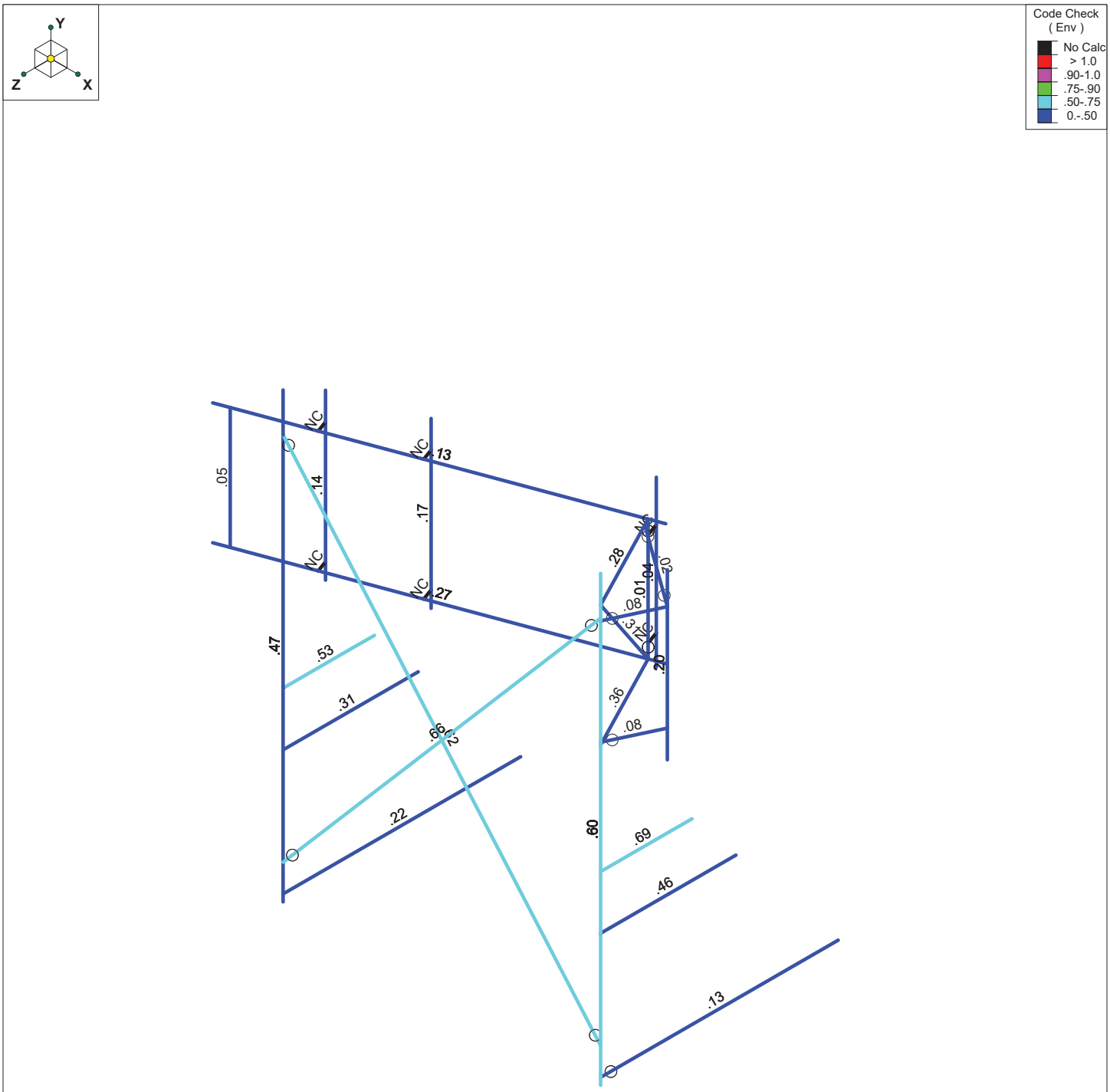
Envelope AISC 15th(360-16): LRFD Steel Code Checks

	Member	Shape	Code Check	Loc[in]	LC	Shear ...	Loc[in]	Dir	LC	phi*Pnc ...	phi*Pnt [...	phi*Mn y...	phi*Mn z...	Cb	Eqn
1	MP1	PIPE_2.5	.316	18	13	.037	18		20	37773.8...	50715	3596.25	3596.25	1...	H1-1b



Envelope Only Solution

Infinigy Engineering, PLLC	CT81XC007 Gamma/ CT03XC350 Alpha	Final Configuration
KLB		Apr 12, 2019 at 4:17 PM
526-101		CT03XC350A-CT81XC007G.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Infinigy Engineering, PLLC	CT81XC007 Gamma/ CT03XC350 Alpha	Bending Check
KLB		Apr 12, 2019 at 4:18 PM
526-101		CT03XC350A-CT81XC007G.r3d

Site Name:	CT03XC350/CT81XC007
Client:	JP Consulting
Carrier:	Sprint
Engineer:	KLB
Date:	8/14/2019

INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless

INFINIGY WIND LOAD CALCULATOR 4.0.2

Site Information Inputs:

Adopted Building Code:	2015 IBC
Structure Load Standard:	TIA-222-G
Antenna Load Standard:	TIA-222-G
Structure Risk Category:	II
Structure Type:	Mount - Pipe
Number of Sectors:	6
Main Structure Shape:	Round

Rooftop Inputs:

Rooftop Wind Speed-Up?:	No

Wind Loading Inputs:

Design Wind Velocity:	93	mph (nominal 3-second gust)
Wind Centerline 1 (z_1):	155.0	ft
Side Face Angle (θ):	60	degrees
Exposure Category:	C	
Topographic Category:	1	

Wind with No Ice		
q_z (psf)	Gh	F_{ST} (psf)
29.19	1.00	**35.03**

Wind with Ice		
q_z (psf)	Gh	F_{ST} (psf)
8.44	1.00	**20.30**

Ice Loading Inputs:

Is Ice Loading Needed?:	Yes	
Ice Wind Velocity:	50	mph (nominal 3-second gust)
Base Ice Thickness:	0.75	in

Appurtenances	Elevation (ft)	Total Quantity	Ka	Front Shape	Side Shape	q_z (psf)	EPA (ft^2)	Fz (lbs)	Fx (lbs)	Fz(60) (lbs)	Fx(30) (lbs)
CCI ANTENNAS HPA33R-CS4AA-K	131.0	2	1.00	Flat	Flat	28.18	7.23	203.83	105.65	130.20	179.29
CCI ANTENNAS HPA33R-CS4AA-K	155.0	1	1.00	Flat	Flat	29.19	7.23	211.18	109.46	134.89	185.75
CCI ANTENNAS HPA33R-CS4AA-K	155.0	1	1.00	Flat	Flat	29.19	7.23	211.18	109.46	134.89	185.75
CCI ANTENNAS HPA33R-CS4AA-K	159.0	2	1.00	Flat	Flat	29.35	7.23	212.31	110.05	135.62	186.75
NOKIA AAHC	155.0	1	1.00	Flat	Flat	29.19	4.21	122.96	60.52	76.13	107.35
NOKIA AAHC	155.0	1	1.00	Flat	Flat	29.19	4.21	122.96	60.52	76.13	107.35
NOKIA AAHC	131.0	2	1.00	Flat	Flat	28.18	4.21	118.68	58.41	73.48	103.62
NOKIA AAHC	159.0	2	1.00	Flat	Flat	29.35	4.21	123.62	60.85	76.54	107.93
ALCATEL LUCENT TME-800MHZ RRH	155.0	1	1.00	Flat	Flat	29.19	2.13	62.31	51.76	54.40	59.67
ALCATEL LUCENT TME-800MHZ RRH	155.0	1	1.00	Flat	Flat	29.19	2.13	62.31	51.76	54.40	59.67
ALCATEL LUCENT TME-800MHZ RRH	131.0	2	1.00	Flat	Flat	28.18	2.13	60.14	49.96	52.51	57.59
ALCATEL LUCENT TME-800MHZ RRH	159.0	2	1.00	Flat	Flat	29.35	2.13	62.64	52.04	54.69	59.99
ALCATEL LUCENT TME-1900MHZ RRH	155.0	1	1.00	Flat	Flat	29.19	2.49	72.74	95.13	89.53	78.34
ALCATEL LUCENT TME-1900MHZ RRH	155.0	1	1.00	Flat	Flat	29.19	2.49	72.74	95.13	89.53	78.34
ALCATEL LUCENT TME-1900MHZ RRH	155.0	1	1.00	Flat	Flat	29.19	2.49	72.74	95.13	89.53	78.34
ALCATEL LUCENT TME-1900MHZ RRH	155.0	1	1.00	Flat	Flat	29.19	2.49	72.74	95.13	89.53	78.34
ALCATEL LUCENT TME-1900MHZ RRH	131.0	4	1.00	Flat	Flat	28.18	2.49	70.21	91.82	86.41	75.61
ALCATEL LUCENT TME-1900MHZ RRH	159.0	2	1.00	Flat	Flat	29.35	2.49	73.13	95.64	90.01	78.76

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N5	N12			Horizontal 1	Beam	Pipe	A53 GR B	Typical
2	M2	N6	N13			Horizontal 1	Beam	Pipe	A53 GR B	Typical
3	M3	N1	N2			Pipe Mast	Beam	Pipe	A53 GR B	Typical
4	M5	N7	N8			Pipe Mount	Beam	Pipe	A53 GR B	Typical
5	M6	N14	N15			Pipe Mast	Beam	Pipe	A53 GR B	Typical
6	MP1	N23	N24			Pipe Mount	Beam	Pipe	A53 GR B	Typical
7	M10	N3	N19			RIGID	None	None	RIGID	Typical
8	M11	N4	N20			RIGID	None	None	RIGID	Typical
9	MP2	N35	N36			Pipe Mount	Beam	Pipe	A53 GR B	Typical
10	M16	N31	N33			RIGID	None	None	RIGID	Typical
11	M17	N32	N34			RIGID	None	None	RIGID	Typical
12	M18	N37	N14		180	L5x3x1/4	Beam	Single Angle	A36 Gr.36	Typical
13	M19	N38	N15		180	L5x3x1/4	Beam	Single Angle	A36 Gr.36	Typical
14	M20	N40	N39			Pipe Mast	Beam	Pipe	A53 GR B	Typical
15	M21	N37	N15			Angle Brace	Beam	Single Angle	A36 Gr.36	Typical
16	MP4	N46	N45			Pipe Mount	Beam	Pipe	A53 GR B	Typical
17	M23	N43	N41			Site Pro Stand...	Beam	SquareTube	A53 GR B	Typical
18	M24	N44	N42			Site Pro Stand...	Beam	SquareTube	A53 GR B	Typical
19	M25	N24A	N49			L4x4x4	Beam	Single Angle	A36 Gr.36	Typical
20	M26	N48	N50			L4x4x4	Beam	Single Angle	A36 Gr.36	Typical
21	M27	N23A	N51			L4x4x4	Beam	Single Angle	A36 Gr.36	Typical
22	M28	N47	N52			L4x4x4	Beam	Single Angle	A36 Gr.36	Typical
23	M29	N43	N73			Tieback	Beam	Single Angle	A36 Gr.36	Typical
24	M30	N85	N88			Mod Bracing	Beam	Single Angle	A36 Gr.36	Typical
25	M31	N87	N86			Mod Bracing	Beam	Single Angle	A36 Gr.36	Typical
26	M32	N91	N95			L4x4x4	Beam	Single Angle	A36 Gr.36	Typical
27	M33	N92	N96			L4x4x4	Beam	Single Angle	A36 Gr.36	Typical
28	M28A	N67	N11			RIGID	None	None	RIGID	Typical
29	M29A	N66	N68			RIGID	None	None	RIGID	Typical
30	MP3	N11B	N11A			Pipe Mount	Beam	Pipe	A53 GR B	Typical

Material Takeoff

	Material	Size	Pieces	Length[in]	Weight[LB]
1	General				
2	RIGID		6	33.6	0
3	Total General		6	33.6	0
4					
5	Hot Rolled Steel				
6	A36 Gr.36	L1/2x1/2x1/8	1	71.8	6
7	A36 Gr.36	L3X3X3	1	36.5	11.3
8	A36 Gr.36	L4X4X4	8	833.4	456.1
9	A36 Gr.36	L5X3X4	2	96.7	53.2
10	A53 GR B	HSS3X3X3	2	44	23.6
11	A53 GR B	PIPE_2.0	5	341	98.6
12	A53 GR B	PIPE_2.5	2	309	141.1
13	A53 GR B	PIPE_4.0X	3	441	517.7
14	Total HR Steel		24	2173.3	1307.6

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Self Weight	DL		-1			14	1		
2	Wind Load AZI 000	WLZ					14		1	
3	Wind Load AZI 090	WLX					14		1	

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
4	Ice Weight	OL1					14	30		
5	Wind + Ice Load AZI ...	OL2					14		1	
6	Wind + Ice Load AZI ...	OL3					14		1	
7	BLC 2 Transient Area...	None						24		
8	BLC 3 Transient Area...	None						30		
9	BLC 5 Transient Area...	None						24		
10	BLC 6 Transient Area...	None						30		

Load Combinations

	Description	Sol..	PD..	SR..	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...
1	1.4D	Yes	Y		DL	1.4																		
2	1.2D + 1.6..	Yes	Y		DL	1.2	WLZ	1.6																
3	1.2D + 1.6..	Yes	Y		DL	1.2	WLZ	1.386	W...	.8														
4	1.2D + 1.6..	Yes	Y		DL	1.2	WLZ	.8	W...	1.386														
5	1.2D + 1.6..	Yes	Y		DL	1.2			W...	1.6														
6	1.2D + 1.6..	Yes	Y		DL	1.2	WLZ	-.8	W...	1.386														
7	1.2D + 1.6..	Yes	Y		DL	1.2	WLZ	-1.3...	W...	.8														
8	1.2D + 1.6..	Yes	Y		DL	1.2	WLZ	-1.6																
9	1.2D + 1.6..	Yes	Y		DL	1.2	WLZ	-1.3...	W...	-.8														
10	1.2D + 1.6..	Yes	Y		DL	1.2	WLZ	-.8	W...	-1.3...														
11	1.2D + 1.6..	Yes	Y		DL	1.2			W...	-1.6														
12	1.2D + 1.6..	Yes	Y		DL	1.2	WLZ	.8	W...	-1.3...														
13	1.2D + 1.6..	Yes	Y		DL	1.2	WLZ	1.386	W...	-.8														
14	0.9D + 1.6..	Yes	Y		DL	.9	WLZ	1.6																
15	0.9D + 1.6..	Yes	Y		DL	.9	WLZ	1.386	W...	.8														
16	0.9D + 1.6..	Yes	Y		DL	.9	WLZ	.8	W...	1.386														
17	0.9D + 1.6..	Yes	Y		DL	.9			W...	1.6														
18	0.9D + 1.6..	Yes	Y		DL	.9	WLZ	-.8	W...	1.386														
19	0.9D + 1.6..	Yes	Y		DL	.9	WLZ	-1.3...	W...	.8														
20	0.9D + 1.6..	Yes	Y		DL	.9	WLZ	-1.6																
21	0.9D + 1.6..	Yes	Y		DL	.9	WLZ	-1.3...	W...	-.8														
22	0.9D + 1.6..	Yes	Y		DL	.9	WLZ	-.8	W...	-1.3...														
23	0.9D + 1.6..	Yes	Y		DL	.9			W...	-1.6														
24	0.9D + 1.6..	Yes	Y		DL	.9	WLZ	.8	W...	-1.3...														
25	0.9D + 1.6..	Yes	Y		DL	.9	WLZ	1.386	W...	-.8														
26	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1																
27	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1	OL2	1														
28	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1	OL2	.866	OL3	.5												
29	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1	OL2	.5	OL3	.866												
30	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1			OL3	1												
31	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1	OL2	-.5	OL3	.866												
32	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1	OL2	-.866	OL3	.5												
33	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1	OL2	-1														
34	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1	OL2	-.866	OL3	-.5												
35	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1	OL2	-.5	OL3	-.866												
36	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1			OL3	-1												
37	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1	OL2	.5	OL3	-.866												
38	1.2D + 1.0..	Yes	Y		DL	1.2	OL1	1	OL2	.866	OL3	-.5												
39	1.2D + 1.5..	Yes	Y		DL	1.2	LL	1.5	WLZ	.104														
40	1.2D + 1.5..	Yes	Y		DL	1.2	LL	1.5	WLZ	.09	W...	.052												
41	1.2D + 1.5..	Yes	Y		DL	1.2	LL	1.5	WLZ	.052	W...	.09												
42	1.2D + 1.5..	Yes	Y		DL	1.2	LL	1.5			W...	.104												
43	1.2D + 1.5..	Yes	Y		DL	1.2	LL	1.5	WLZ	-.052	W...	.09												
44	1.2D + 1.5..	Yes	Y		DL	1.2	LL	1.5	WLZ	-.09	W...	.052												
45	1.2D + 1.5..	Yes	Y		DL	1.2	LL	1.5	WLZ	-.104														

Load Combinations (Continued)

	Description	Sol..	PD..	SR..	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...
46	1.2D + 1.5..	Yes	Y		DL	1.2	LL	1.5	WLZ	-.09	W...	-.052														
47	1.2D + 1.5..	Yes	Y		DL	1.2	LL	1.5	WLZ	-.052	W...	-.09														
48	1.2D + 1.5..	Yes	Y		DL	1.2	LL	1.5			W...	-.104														
49	1.2D + 1.5..	Yes	Y		DL	1.2	LL	1.5	WLZ	.052	W...	-.09														
50	1.2D + 1.5..	Yes	Y		DL	1.2	LL	1.5	WLZ	.09	W...	-.052														

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N49	max	630.25	24	258.932	20	0	50	0	50	0	50	0	50
2		min	-783.431	6	-749.26	27	0	1	0	1	0	1	0	1
3	N50	max	1329.8	11	221.436	17	0	50	0	50	0	50	0	50
4		min	-859.445	17	-2074.86	36	0	1	0	1	0	1	0	1
5	N51	max	113.438	5	30.283	24	0	50	0	50	0	50	0	50
6		min	-62.537	23	-47.921	6	0	1	0	1	0	1	0	1
7	N52	max	47.616	16	47.422	27	0	50	0	50	0	50	0	50
8		min	-79.807	10	6.064	19	0	1	0	1	0	1	0	1
9	N53	max	79.797	25	740.889	31	255.144	28	0	50	0	50	0	50
10		min	-454.694	32	-77.662	24	-114.543	21	0	1	0	1	0	1
11	N54	max	201.402	31	199.782	33	129.732	2	0	50	0	50	0	50
12		min	-41.136	24	32.306	25	-88.41	20	0	1	0	1	0	1
13	N57	max	1349.528	6	1502.11	2	4437.281	2	0	50	0	50	0	50
14		min	-1059.626	24	-659.549	20	-4277.661	20	0	1	0	1	0	1
15	N58	max	1354.274	17	3574.17	37	5782.383	2	0	50	0	50	0	50
16		min	-2050.319	11	-224.819	18	-5714.44	20	0	1	0	1	0	1
17	N93	max	223.972	15	810.221	32	2913.69	20	0	50	0	50	0	50
18		min	-330.068	9	-199.079	25	-3235.559	2	0	1	0	1	0	1
19	N94	max	409.585	4	1201.562	34	4115.353	20	0	50	0	50	0	50
20		min	-282.227	22	-448.69	15	-4267.492	2	0	1	0	1	0	1
21	N95	max	77.694	34	16.987	25	0	50	0	50	0	50	0	50
22		min	-2.209	16	-198.454	31	0	1	0	1	0	1	0	1
23	N96	max	107.812	10	120.796	15	0	50	0	50	0	50	0	50
24		min	-107.376	16	-334.245	34	0	1	0	1	0	1	0	1
25	N97	max	2554.66	5	2026.77	31	917.419	2	0	50	0	50	0	50
26		min	-2395.645	23	263.574	24	-852.163	20	0	1	0	1	0	1
27	Totals:	max	3943.231	5	5965.359	33	3991.986	14						
28		min	-3943.226	23	1691.152	14	-3991.99	8						

Envelope AISC 15th(360-16): LRFD Steel Code Checks

	Member	Shape	Code Check	Loc[in]	LC	Shear ...	Loc[in]	Dir	LC	phi*Pnc ...	phi*Pnt [...	phi*Mn y...	phi*Mn z...	Cb	Eqn
1	M26	L4X4X4	.694	0	27	.108	30	y	36	48730.6...	62532	3137.597	6714.886	2....	H2-1
2	M31	L4X4X4	.658	106....	3	.022	106....	z	2	5864.933	62532	3137.597	4118.705	1....	H2-1
3	M30	L4X4X4	.617	106....	13	.021	106....	z	2	5864.933	62532	3137.597	4145.077	1....	H2-1
4	M20	PIPE_4.0X	.600	82.8...	2	.144	80.8...		2	54393.7...	130410	14516.25	14516.25	2....	H1-1b
5	M25	L4X4X4	.527	0	2	.041	30	z	6	48730.6...	62532	3137.597	6714.886	2....	H2-1
6	M3	PIPE_4.0X	.468	82.8...	2	.148	80.8...		8	54393.7...	130410	14516.25	14516.25	1....	H1-1b
7	M33	L4X4X4	.461	0	9	.042	29.6	y	34	43429.7...	62532	3137.597	6593.561	1....	H2-1
8	M19	L5X3X4	.364	0	27	.018	0	y	27	41950.4...	62856	1574.351	5528.512	1....	H2-1
9	M21	L1/2x1/2x1/8	.306	71.7...	32	.010	0	z	6	615.735	9618.75	105.339	279.779	2....	H2-1
10	M32	L4X4X4	.306	0	7	.029	29.6	y	32	43429.7...	62532	3137.597	6714.886	2....	H2-1
11	M18	L5X3X4	.281	0	4	.023	0	z	4	41950.4...	62856	1938.892	6808.638	1....	H2-1
12	M2	PIPE_2.5	.271	24.1...	28	.173	24.1...		2	13723.0...	50715	3596.25	3596.25	3....	H1-1b
13	M27	L4X4X4	.215	0	30	.029	29.25	y	31	24703.2...	62532	3137.597	5769.819	1....	H2-1
14	MP4	PIPE_2.0	.197	57.75	28	.076	57.75		4	20866.7...	32130	1871.625	1871.625	1....	H1-1b
15	MP2	PIPE_2.0	.170	12	27	.048	64.5		30	20866.7...	32130	1871.625	1871.625	1.8	H1-1b

Envelope AISC 15th(360-16): LRFD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[in]	LC	Shear ...	Loc[in]	Dir	LC	phi*Pnc ...	phi*Pnt [...	phi*Mn y...	phi*Mn z...	Cb	Eqn
16	MP1	PIPE_2.0	.142	64.5	31	.033	12		3	20866.7...	32130	1871.625	1871.625	1....	H1-1b
17	M28	L4X4X4	.135	30.3...	33	.007	0	z	34	24703.2...	62532	3137.597	5209.715	1....	H2-1
18	M1	PIPE_2.5	.127	24.1...	3	.071	24.1...		8	13723.0...	50715	3596.25	3596.25	1....	H1-1b
19	M24	HSS3X3X3	.079	0	29	.048	22	z	10	58412.63	59535	5171.25	5171.25	1....	H1-1b
20	M23	HSS3X3X3	.079	0	29	.041	22	y	4	58412.63	59535	5171.25	5171.25	1....	H1-1b
21	M5	PIPE_2.0	.048	53	13	.016	53		3	25429.3...	32130	1871.625	1871.625	1....	H1-1b
22	MP3	PIPE_2.0	.036	13.5	8	.022	54		3	20866.7...	32130	1871.625	1871.625	1....	H1-1b
23	M29	L3X3X3	.020	18.23	29	.014	36.4...	y	29	25906.2...	35316	1320.097	2676.532	1....	H2-1
24	M6	PIPE_4.0X	.009	28.7...	12	.027	53		4	122170....	130410	14516.25	14516.25	1....	H1-1b