



Aidan Griffin, Site Acquisition Consultant
c/o New Cingular Wireless, PCS LLC (AT&T)
Centerline Communications, LLC
750 W Center St., Suite 301
West Bridgewater, MA 02379
Mobile: (617) 838-6796
agriffin@clinellc.com

October 10, 2019

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

**RE: Notice of Exempt Modification // Site Number: CT1123
719 George Washington Turnpike, Burlington, CT 06013 (Site Name: Burlington-
George Wash)
N 41.766820° // W -72.961510°**

Dear Ms. Bachman:

New Cingular Wireless, PCS, LLC ("AT&T") currently maintains nine (9) antennas at the 170-foot level of the existing 179-foot monopole tower at 719 George Washington Turnpike, Burlington, CT 06013. The tower is owned by the town of Burlington. The property is also owned by the town of Burlington. AT&T now intends to swap out and replace six (6) antennas while also adding three (3) antennas for its LTE upgrade. These antennas would be installed at the same 170-foot level of the tower. AT&T also intends to swap out three (3) RRU radios and install nine (9) new RRU (radios), add two (2) Surge Arrestors with associated four (4) DC lines and two (2) fiber lines along existing runs.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 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 letter is being sent to Theodore Shafer, the First Selectman for the town of Burlington, to Larry Farrell who is the town of Burlington Building Department Official, and Gerald Burns who is the town of Burlington Zoning Enforcement Officer.

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

Attached to accommodate this filing are construction drawings dated 07/03/2019 by Hudson Design Group LLC, a structural analysis dated 10/01/2019 by Hudson Design Group LLC, a mount analysis dated 04/01/2019 by Hudson Design Group, LLC and an Emissions Analysis Report dated 07/11/2019 by Centerline Communications, LLC.

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require the extension of the site boundary.
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 replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading as shown in the attached structural analysis by Hudson Design Group LLC, dated 10/01/2019, and the mount analysis by Hudson Design Group, LLC, dated 04/01/2019.

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

Sincerely,



Aidan Griffin, Site Acquisition Consultant
c/o New Cingular Wireless, PCS LLC (AT&T)
Centerline Communications, LLC
750 W Center St., Suite 301
West Bridgewater, MA 02379
Mobile: (617) 838-6796
agriffin@clinellc.com

Attachments: Property Card, Structural Analysis, Mount Analysis, Emissions Analysis, Construction Drawings, Original Zoning Approval

cc: Theodore Shafer, First Selectman, Town of Burlington- as elected official, property owner, and tower owner
Larry Farrell, Building Official, Town of Burlington Building Department
Gerald Burns, Zoning Enforcement Officer, Town of Burlington, Zoning Enforcement



Town of Burlington, CT

Property Listing Report

Map Block Lot

4-08-73-1

Building # 1

Section # 1

Account

00037000

Property Information

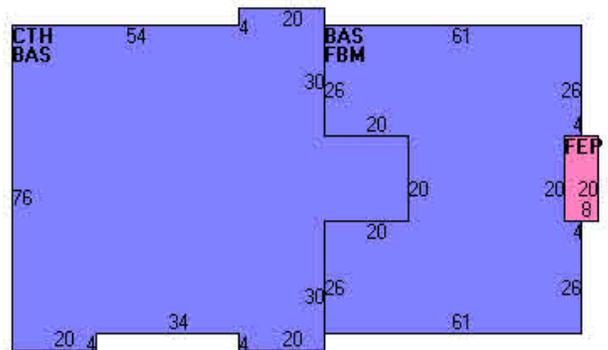
Property Location	719 GEO WASHINGTON TPKE
Owner	BURLINGTON TOWN OF
Co-Owner	
Mailing Address	200 SPIELMAN HWY BURLINGTON CT 06013
Land Use	9032 Mun Fire
Land Class	E
Zoning Code	CB
Census Tract	

Street Index	4500
Acreage	1.88
Utilities	Well,Septic
Lot Setting/Desc	Rural Level
Additional Info	

Photo



Sketch



Primary Construction Details

Year Built	1987
Stories	1
Building Style	Fire Station
Building Use	Ind/Com
Building Condition	VG
Occupancy	1
Extra Fixtures	
Bath Style	
Kitchen Style	
AC Type	
Heating Type	Hot Water
Heating Fuel	Oil

Bedrooms	
Full Bathrooms	0
Half Bathrooms	
Total Rooms	
Roof Style	Wood Truss
Roof Cover	Asphalt
Interior Floors 1	Concrete
Interior Floors 2	Vinyl
Exterior Walls	Vinyl Siding
Exterior Walls 2	Brick Veneer
Interior Walls	Drywall
Interior Walls 2	

(*Industrial / Commercial Details)

Building Desc.	Mun Fire
Building Grade	Average +20
Heat / AC	HEAT/AC SPLIT
Frame Type	MASONRY
Baths / Plumbing	AVERAGE
Ceiling / Wall	SUS-CEIL/MN WL
Rooms / Prtns	AVERAGE
Wall Height	14
First Floor Use	9032

(Revised)
STRUCTURAL ANALYSIS REPORT

For

CT1123

BURLINGTON - GEORGE WASH

BURLINGTON - GEORGE WASHINGTON TURNPIKE
BURLINGTON, CT 06013

Antennas Mounted to the Monopole



Prepared for:



Dated: October 1, 2019 (Rev 2)

Dated: June 18, 2019 (Rev 1)

Dated: May 10, 2019

Prepared by:



HUDSON
Design Group LLC

45 Beechwood Drive
North Andover, MA 01845
(P) 978.557.5553 (F) 978.336.5586
www.hudsondesigngroupllc.com



HUDSON
Design Group LLC

SCOPE OF WORK:

Hudson Design Group LLC (HDG) has been authorized by AT&T to conduct a structural evaluation of the 179' monopole supporting the proposed AT&T antennas located at elevation 170' above the ground level.

This report represents this office's findings, conclusions and recommendations pertaining to the support of AT&T's existing and proposed antennas listed below.

Record drawings of the existing monopole were not available for our use. The previous structural analysis report prepared by Nexius, dated August 15, 2017, was available and obtained for our use.

CONCLUSION SUMMARY:

Based on our evaluation, we have determined that the existing monopole and foundation are in conformance with the ANSI/TIA-222-G Standard for the loading considered under the criteria listed in this report. The monopole structure is rated at 83.2% - (Base Plate Controlling).



APPURTENANCES CONFIGURATION:

Tenant	Appurtenances	Elev.	Mount
	(3) 20' Omni	191'	Low Profile Platform
	(3) AIR 21 B2A B4P Antennas	179'	Low Profile Platform
	(3) AIR 21 B4A B2P Antennas	179'	Low Profile Platform
	(3) LNX-6515DS-VTM Antennas	179'	Low Profile Platform
AT&T	(3) 7770 Antennas	170'	Low Profile Platform w/Handrail
AT&T	(6) LGP 21400 TMA	170'	Low Profile Platform w/Handrail
AT&T	(1) DC6-48-60-18-8F	170'	Ring Mount
AT&T	(3) HPA65R-BU8A Antennas	170'	Low Profile Platform w/Handrail
AT&T	(6) 800 10966 Antennas	170'	Low Profile Platform w/Handrail
AT&T	(3) B25 4415	170'	Low Profile Platform w/Handrail
AT&T	(3) B2/B66A 8843	170'	Low Profile Platform w/Handrail
AT&T	(3) B5/B12 4449	170'	Low Profile Platform w/Handrail
AT&T	(2) DC6-48-60-18-8F	170'	Ring Mount
	(2) APL 866513 Antennas	160'	Low Profile Platform
	(4) APL868013 Antennas	160'	Low Profile Platform
	(6) JAHH-65B-R3B Antennas	160'	Low Profile Platform
	(3) RRH2x60-700	160'	Low Profile Platform
	(3) B66A RRH 4X45	160'	Low Profile Platform
	(3) 4T4R B5 RRH	160'	Low Profile Platform
	(2) RC2DC-3315-PF-48	160'	Low Profile Platform
	20' Dipole	138.5'	Side Mount Standoff
	8' Omni	132.5'	Side Mount Standoff
	3' Yagi	132.5'	Side Mount Standoff
	10' Dipole	112.5'	Side Mount Standoff

**Proposed AT&T Appurtenances shown in Bold.*

AT&T EXISTING/PROPOSED COAX CABLES:

Tenant	Coax Cables	Elev.	Mount
AT&T	(12) 1 5/8" Cables	170'	Inside Monopole
AT&T	(1) Fiber Cable	170'	Inside Monopole
AT&T	(2) DC Power Cables	170'	Inside Monopole
AT&T	(1) Fiber Cable	170'	Inside Monopole
AT&T	(4) DC Power Cables	170'	Inside Monopole

**Proposed AT&T Coax Cables shown in Bold.*



ANALYSIS RESULTS SUMMARY:

Component	Max. Stress Ratio	Elev. of Component (ft)	Pass/Fail	Comments
Pole Section-L1	81.8 %	139.5 – 179	PASS	
Pole Section-L2	60.3 %	93.4 – 139.5	PASS	
Pole Section-L3	71.8 %	46.31 – 93.4	PASS	
Pole Section-L4	80.0 %	0 – 46.31	PASS	
Base Plate	83.2 %	0	PASS	Controlling
Foundation	62.1 %	-	PASS	



HUDSON
Design Group LLC

DESIGN CRITERIA:

1. EIA/TIA-222-G Structural Standards for Steel Antenna Towers and Antenna Supporting Structures
2. 2018 Connecticut State Building Code
 - City/Town: Burlington
 - County: Hartford
 - Wind Load: 93 mph
 - Structural Class: II
 - Exposure Category: B
 - Topographic Category: 1
 - Ice Thickness: 1.0 inch
3. Approximate height above grade to proposed antennas: 170'

ASSUMPTIONS:

1. The appurtenances configuration is as stated in this report. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer's requirements.
2. The monopole and foundation are properly constructed and maintained. All structural members and their connections are assumed to be in good condition and are free from defects with no deterioration to its member capacities.
3. The support mounts and platforms are not analyzed and are considered adequate to support the loading. The analysis is limited to the primary support structure itself.
4. All prior structural modification, if any, are assumed to be as per the data supplied (if available), and installed properly.

SUPPORT RECOMMENDATIONS:

HDG recommends that the proposed antennas and RRHs be mounted on the existing steel platform supported by the monopole; the proposed surge arrestors be mounted on the existing pipe mast.

Reference HDG's latest Construction Drawings for all component and connection requirements (attached).



HUDSON
Design Group LLC



Photo 1: Photo illustrating the monopole with Appurtenances shown.



HUDSON
Design Group LLC

CALCULATIONS

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Omni 2"x20'	191	B2/B66A 8843	170
Omni 2"x20'	191	B5/B12 4449	170
Omni 2"x20'	191	B5/B12 4449	170
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	179	B5/B12 4449	170
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	179	DC6-48-60-18-8F	170
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	179	DC6-48-60-18-8F	170
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	179	PIROD 13' Platform w/handrail (ATI - Proposed)	168
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	179	APL866513 w/Mount Pipe (VERIZON)	160
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	179	APL866513 w/Mount Pipe	160
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	179	APL868013 w/Mount Pipe	160
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	179	APL868013 w/Mount Pipe	160
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	179	APL868013 w/Mount Pipe	160
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	179	APL868013 w/Mount Pipe	160
LNx-6515DS-VTM w/ Mount Pipe	179	PIROD 13' Low Profile Platform	160
LNx-6515DS-VTM w/ Mount Pipe	179	JAHH-65B-R3B w/ Mount Pipe	160
LNx-6515DS-VTM w/ Mount Pipe	179	JAHH-65B-R3B w/ Mount Pipe	160
PIROD 13' Low Profile Platform (T-Mobile)	177	JAHH-65B-R3B w/ Mount Pipe	160
Valmont Light Duty Tri-Bracket (1) (ATI - Existing)	170	JAHH-65B-R3B w/ Mount Pipe	160
Powerwave 7770 w/mount pipe	170	JAHH-65B-R3B w/ Mount Pipe	160
Powerwave 7770 w/mount pipe	170	RRH2x60-700	160
Powerwave 7770 w/mount pipe	170	RRH2x60-700	160
(2) Powerwave TMA LGP21401	170	RRH2x60-700	160
(2) Powerwave TMA LGP21401	170	B66A RRH 4X45	160
(2) Powerwave TMA LGP21401	170	B66A RRH 4X45	160
DC6-48-60-18-8F	170	B66A RRH 4X45	160
HPA65R-BU8A w/mount pipe	170	4T4R B5 RRH	160
HPA65R-BU8A w/mount pipe	170	4T4R B5 RRH	160
HPA65R-BU8A w/mount pipe	170	RC2DC-3315-PF-48	160
(2) 800 10966 w/ Mount Pipe	170	RC2DC-3315-PF-48	160
(2) 800 10966 w/ Mount Pipe	170	20'-4 Bay Dipole	138.5
(2) 800 10966 w/ Mount Pipe	170	3' Side Mount Standoff	138.5
B25 4415	170	3' Side Mount Standoff	132.5
B25 4415	170	3' Yagi antenna	132.5
B25 4415	170	Omni 2"x8'	132.5
B2/B66A 8843	170	3' Side Mount Standoff	112.5
B2/B66A 8843	170	10' Dipole	112.5

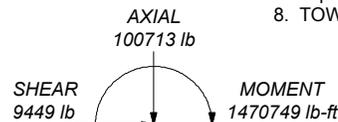
MATERIAL STRENGTH

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

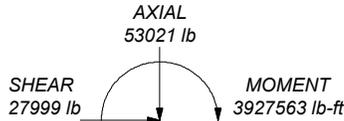
TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-G Standard.
3. Tower designed for a 93.0 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 50.0 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60.0 mph wind.
6. Tower Structure Class II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 81.8%

ALL REACTIONS ARE FACTORED

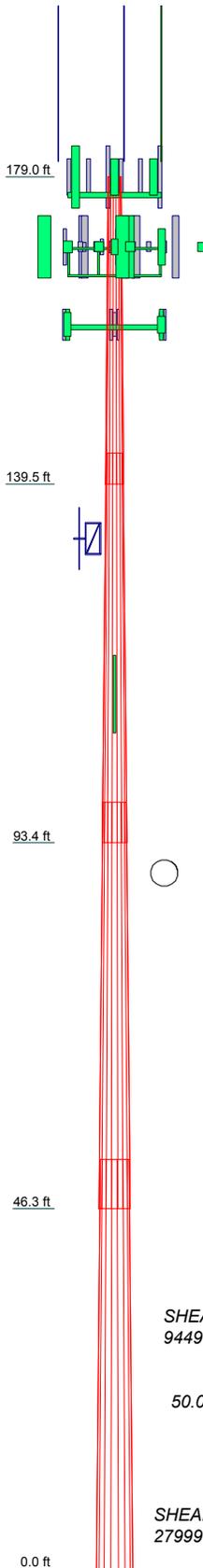


TORQUE 783 lb-ft
50.0 mph WIND - 1.0000 in ICE



TORQUE 1847 lb-ft
REACTIONS - 93.0 mph WIND

Section	1	2	3	4	
Length (ft)	39.50	50.10	52.29	52.70	
Number of Sides	18	18	18	18	
Thickness (in)	0.1875	0.3750	0.3750	0.3750	
Socket Length (ft)	4.00	5.20	6.39	6.39	
Top Dia (in)	19.5000	26.8061	35.6737	44.9739	
Bot Dia (in)	28.0455	37.5377	47.1230	56.2500	
Grade		A572-65			
Weight (lb)	1886.6	6451.9	8688.1	10722.8	27749.4



Hudson Design Group LLC
 45 Beechwood Drive
 North Andover, MA 01845
 Phone: (978) 557-5553
 FAX: (978) 336-5586

Job:	CT1123		
Project:	179 ft Monopole		
Client:	AT&T	Drawn by:	kw
Code:	TIA-222-G	Date:	10/01/19
Path:	C:\Users\kwan\Documents\HUDSON DESIGN GROUP\AA\CT1123.mxd rev. MP (AT&T - Central)\CT1123.mxd rev. CT1123.mxd rev.1		
		App'd:	
		Scale:	NTS
		Dwg No.	E-1

tnxTower Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (978) 557-5553 FAX: (978) 336-5586	Job CT1123	Page 1 of 9
	Project 179 ft Monopole	Date 11:16:46 10/01/19
	Client AT&T	Designed by kw

Tower Input Data

The tower is a monopole.

This tower is designed using the TIA-222-G standard.

The following design criteria apply:

Tower is located in Hartford County, Connecticut.

Basic wind speed of 93.0 mph.

Structure Class II.

Exposure Category B.

Topographic Category 1.

Crest Height 0.00 ft.

Nominal ice thickness of 1.0000 in.

Ice thickness is considered to increase with height.

Ice density of 56.0 pcf.

A wind speed of 50.0 mph is used in combination with ice.

Temperature drop of 50.0 °F.

Deflections calculated using a wind speed of 60.0 mph.

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

Pressures are calculated at each section.

Stress ratio used in pole design is 1.

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

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	179.00-139.50	39.50	4.00	18	19.5000	28.0455	0.1875	0.7500	A572-65 (65 ksi)
L2	139.50-93.40	50.10	5.20	18	26.8051	37.5377	0.3750	1.5000	A572-65 (65 ksi)
L3	93.40-46.31	52.29	6.39	18	35.6737	47.1230	0.3750	1.5000	A572-65 (65 ksi)
L4	46.31-0.00	52.70		18	44.9739	56.2500	0.3750	1.5000	A572-65 (65 ksi)

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	C _A A _A ft ² /ft	Weight plf
1 5/8	A	No	No	Inside Pole	179.00 - 3.00	3	No Ice	1.04
							1/2" Ice	1.04
							1" Ice	1.04
1 5/8	A	No	No	Inside Pole	138.50 - 3.00	1	No Ice	1.04
							1/2" Ice	1.04
							1" Ice	1.04
1 5/8	A	No	No	Inside Pole	132.50 - 3.00	1	No Ice	1.04

tnxTower Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (978) 557-5553 FAX: (978) 336-5586	Job	CT1123	Page	2 of 9
	Project	179 ft Monopole	Date	11:16:46 10/01/19
	Client	AT&T	Designed by	kw

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C _{AA} ft ² /ft	Weight plf
							1/2" Ice	0.00	1.04
							1" Ice	0.00	1.04
1/2	A	No	No	Inside Pole	128.50 - 3.00	1	No Ice	0.00	0.25
							1/2" Ice	0.00	0.25
							1" Ice	0.00	0.25
1 5/8	A	No	No	Inside Pole	113.00 - 3.00	1	No Ice	0.00	1.04
							1/2" Ice	0.00	1.04
							1" Ice	0.00	1.04

1 5/8	B	No	No	Inside Pole	179.00 - 3.00	6	No Ice	0.00	1.04
							1/2" Ice	0.00	1.04
							1" Ice	0.00	1.04
HB114-U6S12-120-L1	B	No	No	Inside Pole	179.00 - 3.00	1	No Ice	0.00	1.70
							1/2" Ice	0.00	1.70
							1" Ice	0.00	1.70

1 5/8 (AT&T - Existing)	A	No	No	Inside Pole	170.00 - 3.00	12	No Ice	0.00	1.04
							1/2" Ice	0.00	1.04
							1" Ice	0.00	1.04
FB-L98B-002	A	No	No	Inside Pole	170.00 - 3.00	1	No Ice	0.00	0.25
							1/2" Ice	0.00	0.25
							1" Ice	0.00	0.25
WR-VG122ST-BRD A	A	No	No	Inside Pole	170.00 - 3.00	2	No Ice	0.00	0.25
							1/2" Ice	0.00	0.25
							1" Ice	0.00	0.25

FB-L98B-002 (AT&T - Proposed)	A	No	No	Inside Pole	170.00 - 3.00	1	No Ice	0.00	0.25
							1/2" Ice	0.00	0.25
							1" Ice	0.00	0.25
WR-VG122ST-BRD A	A	No	No	Inside Pole	170.00 - 3.00	4	No Ice	0.00	0.25
							1/2" Ice	0.00	0.25
							1" Ice	0.00	0.25

1 5/8	C	No	No	Inside Pole	160.00 - 3.00	12	No Ice	0.00	1.04
							1/2" Ice	0.00	1.04
							1" Ice	0.00	1.04
1 5/8 Fiber Cable	C	No	No	Inside Pole	160.00 - 3.00	2	No Ice	0.00	1.04
							1/2" Ice	0.00	1.04
							1" Ice	0.00	1.04

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _{AA} Front ft ²	C _{AA} Side ft ²	Weight lb
Omni 2"x20'	A	From Face	4.00	0.0000	191.00	No Ice 4.00	4.00	50.00
			-6.00			1/2" Ice 6.03	6.03	80.77
			0.00			1" Ice 8.07	8.07	124.12
Omni 2"x20'	B	From Face	4.00	0.0000	191.00	No Ice 4.00	4.00	50.00
			-6.00			1/2" Ice 6.03	6.03	80.77
			0.00			1" Ice 8.07	8.07	124.12
Omni 2"x20'	C	From Face	4.00	0.0000	191.00	No Ice 4.00	4.00	50.00

tnxTower Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (978) 557-5553 FAX: (978) 336-5586	Job	CT1123	Page	3 of 9
	Project	179 ft Monopole	Date	11:16:46 10/01/19
	Client	AT&T	Designed by	kw

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			Horz	Lateral					
			ft	ft	°	ft	ft ²	ft ²	lb
			-6.00			1/2" Ice	6.03	6.03	80.77
			0.00			1" Ice	8.07	8.07	124.12
20'-4 Bay Dipole	C	From Face	4.00		0.0000	No Ice	4.75	4.75	50.00
			0.00			1/2" Ice	6.25	6.25	80.00
			0.00			1" Ice	7.75	7.75	110.00
3' Side Mount Standoff	C	From Face	2.00		0.0000	No Ice	1.50	1.50	45.00
			0.00			1/2" Ice	2.20	2.20	70.00
			0.00			1" Ice	2.90	2.90	95.00
Omni 2"x8'	A	From Face	4.00		0.0000	No Ice	1.60	1.60	35.00
			0.00			1/2" Ice	2.42	2.42	47.45
			0.00			1" Ice	3.24	3.24	65.14
3' Yagi antenna	A	From Face	4.00		0.0000	No Ice	0.60	0.30	10.00
			0.00			1/2" Ice	0.81	0.41	36.35
			0.00			1" Ice	1.04	0.54	66.52
3' Side Mount Standoff	A	From Face	2.00		0.0000	No Ice	1.50	1.50	45.00
			0.00			1/2" Ice	2.20	2.20	70.00
			0.00			1" Ice	2.90	2.90	95.00
10' Dipole	C	From Face	4.00		0.0000	No Ice	4.00	4.00	25.00
			0.00			1/2" Ice	4.97	4.97	53.13
			0.00			1" Ice	5.57	5.57	87.92
3' Side Mount Standoff	C	From Face	2.00		0.0000	No Ice	1.50	1.50	45.00
			0.00			1/2" Ice	2.20	2.20	70.00
			0.00			1" Ice	2.90	2.90	95.00

PiROD 13' Low Profile Platform (T-Mobile)	A	None			0.0000	No Ice	15.70	15.70	1300.00
						1/2" Ice	20.10	20.10	1765.00
						1" Ice	24.50	24.50	2230.00
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	A	From Face	3.00		0.0000	No Ice	6.37	5.78	129.90
			-5.00			1/2" Ice	6.85	6.63	187.69
			0.00			1" Ice	7.30	7.35	252.28
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	B	From Face	3.00		0.0000	No Ice	6.37	5.78	129.90
			-5.00			1/2" Ice	6.85	6.63	187.69
			0.00			1" Ice	7.30	7.35	252.28
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	C	From Face	3.00		0.0000	No Ice	6.37	5.78	129.90
			-5.00			1/2" Ice	6.85	6.63	187.69
			0.00			1" Ice	7.30	7.35	252.28
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	A	From Face	3.00		0.0000	No Ice	6.37	5.78	129.90
			0.00			1/2" Ice	6.85	6.63	187.69
			0.00			1" Ice	7.30	7.35	252.28
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	B	From Face	3.00		0.0000	No Ice	6.37	5.78	129.90
			0.00			1/2" Ice	6.85	6.63	187.69
			0.00			1" Ice	7.30	7.35	252.28
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	C	From Face	3.00		0.0000	No Ice	6.37	5.78	129.90
			0.00			1/2" Ice	6.85	6.63	187.69
			0.00			1" Ice	7.30	7.35	252.28
LNX-6515DS-VTM w/ Mount Pipe	A	From Face	3.00		0.0000	No Ice	11.67	9.83	83.15
			5.00			1/2" Ice	12.39	11.35	172.72
			0.00			1" Ice	13.12	12.90	272.25
LNX-6515DS-VTM w/ Mount Pipe	B	From Face	3.00		0.0000	No Ice	11.67	9.83	83.15
			5.00			1/2" Ice	12.39	11.35	172.72
			0.00			1" Ice	13.12	12.90	272.25
LNX-6515DS-VTM w/ Mount Pipe	C	From Face	3.00		0.0000	No Ice	11.67	9.83	83.15
			5.00			1/2" Ice	12.39	11.35	172.72
			0.00			1" Ice	13.12	12.90	272.25

Valmont Light Duty Tri-Bracket (1)	C	None			0.0000	No Ice	1.76	1.76	54.00
						1/2" Ice	2.08	2.08	70.00

tnxTower Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (978) 557-5553 FAX: (978) 336-5586	Job	CT1123	Page	4 of 9
	Project	179 ft Monopole	Date	11:16:46 10/01/19
	Client	AT&T	Designed by	kw

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight
			Horz	Vert					
			ft	ft	°	ft	ft ²	ft ²	lb
(AT&T - Existing)									
Powerwave 7770 w/mount pipe	A	From Face	3.00		0.0000	170.00	1" Ice 2.40	2.40	86.00
			-6.00				No Ice 5.65	4.10	57.25
			0.00				1/2" Ice 6.03	4.75	103.17
			0.00				1" Ice 6.42	5.42	155.38
Powerwave 7770 w/mount pipe	B	From Face	3.00		0.0000	170.00	No Ice 5.65	4.10	57.25
			-6.00				1/2" Ice 6.03	4.75	103.17
			0.00				1" Ice 6.42	5.42	155.38
Powerwave 7770 w/mount pipe	C	From Face	3.00		0.0000	170.00	No Ice 5.65	4.10	57.25
			-6.00				1/2" Ice 6.03	4.75	103.17
			0.00				1" Ice 6.42	5.42	155.38
(2) Powerwave TMA LGP21401	A	From Face	3.00		0.0000	170.00	No Ice 1.05	0.38	14.10
			-6.00				1/2" Ice 1.18	0.47	21.29
			0.00				1" Ice 1.32	0.57	30.37
(2) Powerwave TMA LGP21401	B	From Face	3.00		0.0000	170.00	No Ice 1.05	0.38	14.10
			-6.00				1/2" Ice 1.18	0.47	21.29
			0.00				1" Ice 1.32	0.57	30.37
(2) Powerwave TMA LGP21401	C	From Face	3.00		0.0000	170.00	No Ice 1.05	0.38	14.10
			-6.00				1/2" Ice 1.18	0.47	21.29
			0.00				1" Ice 1.32	0.57	30.37
DC6-48-60-18-8F	A	From Face	1.00		0.0000	170.00	No Ice 0.79	0.79	20.00
			0.00				1/2" Ice 1.27	1.27	35.12
			0.00				1" Ice 1.45	1.45	52.57

PIROD 13' Platform w/handrail	A	None			0.0000	168.00	No Ice 31.30	31.30	1822.00
							1/2" Ice 40.20	40.20	2452.00
(AT&T - Proposed)							1" Ice 49.10	49.10	3082.00
HPA65R-BU8A w/mount pipe	A	From Face	3.00		0.0000	170.00	No Ice 11.52	10.63	109.41
			-2.00				1/2" Ice 12.24	12.16	204.04
			0.00				1" Ice 12.94	13.50	309.78
HPA65R-BU8A w/mount pipe	B	From Face	3.00		0.0000	170.00	No Ice 11.52	10.63	109.41
			-2.00				1/2" Ice 12.24	12.16	204.04
			0.00				1" Ice 12.94	13.50	309.78
HPA65R-BU8A w/mount pipe	C	From Face	3.00		0.0000	170.00	No Ice 11.52	10.63	109.41
			-2.00				1/2" Ice 12.24	12.16	204.04
			0.00				1" Ice 12.94	13.50	309.78
(2) 800 10966 w/ Mount Pipe	A	From Face	3.00		0.0000	170.00	No Ice 17.60	9.64	158.55
			4.00				1/2" Ice 18.33	11.15	274.43
			0.00				1" Ice 19.07	12.70	400.76
(2) 800 10966 w/ Mount Pipe	B	From Face	3.00		0.0000	170.00	No Ice 17.60	9.64	158.55
			4.00				1/2" Ice 18.33	11.15	274.43
			0.00				1" Ice 19.07	12.70	400.76
(2) 800 10966 w/ Mount Pipe	C	From Face	3.00		0.0000	170.00	No Ice 17.60	9.64	158.55
			4.00				1/2" Ice 18.33	11.15	274.43
			0.00				1" Ice 19.07	12.70	400.76
B25 4415	A	From Face	3.00		0.0000	170.00	No Ice 1.65	0.93	60.00
			-2.00				1/2" Ice 1.81	1.05	74.37
			0.00				1" Ice 1.98	1.19	91.23
B25 4415	B	From Face	3.00		0.0000	170.00	No Ice 1.65	0.93	60.00
			-2.00				1/2" Ice 1.81	1.05	74.37
			0.00				1" Ice 1.98	1.19	91.23
B25 4415	C	From Face	3.00		0.0000	170.00	No Ice 1.65	0.93	60.00
			-2.00				1/2" Ice 1.81	1.05	74.37
			0.00				1" Ice 1.98	1.19	91.23
B2/B66A 8843	A	From Face	3.00		0.0000	170.00	No Ice 1.65	0.93	40.00
			2.00				1/2" Ice 1.81	1.05	54.37
			0.00				1" Ice 1.98	1.19	71.23
B2/B66A 8843	B	From Face	3.00		0.0000	170.00	No Ice 1.65	0.93	40.00

tnxTower Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (978) 557-5553 FAX: (978) 336-5586	Job	CT1123	Page	5 of 9
	Project	179 ft Monopole	Date	11:16:46 10/01/19
	Client	AT&T	Designed by	kw

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			Horz	Vert					
			ft	ft	°	ft	ft ²	ft ²	lb
			2.00			1/2" Ice	1.81	1.05	54.37
			0.00			1" Ice	1.98	1.19	71.23
B2/B66A 8843	C	From Face	3.00		0.0000	No Ice	1.65	0.93	40.00
			2.00			1/2" Ice	1.81	1.05	54.37
			0.00			1" Ice	1.98	1.19	71.23
B5/B12 4449	A	From Face	3.00		0.0000	No Ice	1.97	1.40	71.00
			6.00			1/2" Ice	2.15	1.56	89.48
			0.00			1" Ice	2.33	1.72	110.77
B5/B12 4449	B	From Face	3.00		0.0000	No Ice	1.97	1.40	71.00
			6.00			1/2" Ice	2.15	1.56	89.48
			0.00			1" Ice	2.33	1.72	110.77
B5/B12 4449	C	From Face	3.00		0.0000	No Ice	1.97	1.40	71.00
			6.00			1/2" Ice	2.15	1.56	89.48
			0.00			1" Ice	2.33	1.72	110.77
DC6-48-60-18-8F	B	From Face	1.00		0.0000	No Ice	0.79	0.79	20.00
			0.00			1/2" Ice	1.27	1.27	35.12
			0.00			1" Ice	1.45	1.45	52.57
DC6-48-60-18-8F	C	From Face	1.00		0.0000	No Ice	0.79	0.79	20.00
			0.00			1/2" Ice	1.27	1.27	35.12
			0.00			1" Ice	1.45	1.45	52.57

APL866513 w/Mount Pipe (VERIZON)	A	From Face	3.00		0.0000	No Ice	4.76	5.28	41.25
			6.00			1/2" Ice	5.39	6.31	91.03
			0.00			1" Ice	5.89	7.06	147.11
APL866513 w/Mount Pipe	A	From Face	3.00		0.0000	No Ice	4.76	5.28	41.25
			-6.00			1/2" Ice	5.39	6.31	91.03
			0.00			1" Ice	5.89	7.06	147.11
APL868013 w/Mount Pipe	B	From Face	3.00		0.0000	No Ice	3.58	5.28	31.87
			6.00			1/2" Ice	4.20	6.31	75.74
			0.00			1" Ice	4.70	7.06	125.70
APL868013 w/Mount Pipe	B	From Face	3.00		0.0000	No Ice	3.58	5.28	31.87
			-6.00			1/2" Ice	4.20	6.31	75.74
			0.00			1" Ice	4.70	7.06	125.70
APL868013 w/Mount Pipe	C	From Face	3.00		0.0000	No Ice	3.58	5.28	31.87
			6.00			1/2" Ice	4.20	6.31	75.74
			0.00			1" Ice	4.70	7.06	125.70
APL868013 w/Mount Pipe	C	From Face	3.00		0.0000	No Ice	3.58	5.28	31.87
			-6.00			1/2" Ice	4.20	6.31	75.74
			0.00			1" Ice	4.70	7.06	125.70
PiROD 13' Low Profile Platform	A	None			0.0000	No Ice	15.70	15.70	1300.00
						1/2" Ice	20.10	20.10	1765.00
						1" Ice	24.50	24.50	2230.00
JAHH-65B-R3B w/ Mount Pipe	A	From Face	3.00		0.0000	No Ice	9.35	7.65	88.85
			2.00			1/2" Ice	9.92	8.83	165.42
			0.00			1" Ice	10.46	9.73	250.16
JAHH-65B-R3B w/ Mount Pipe	A	From Face	3.00		0.0000	No Ice	9.35	7.65	88.85
			-2.00			1/2" Ice	9.92	8.83	165.42
			0.00			1" Ice	10.46	9.73	250.16
JAHH-65B-R3B w/ Mount Pipe	B	From Face	3.00		0.0000	No Ice	9.35	7.65	88.85
			2.00			1/2" Ice	9.92	8.83	165.42
			0.00			1" Ice	10.46	9.73	250.16
JAHH-65B-R3B w/ Mount Pipe	B	From Face	3.00		0.0000	No Ice	9.35	7.65	88.85
			-2.00			1/2" Ice	9.92	8.83	165.42
			0.00			1" Ice	10.46	9.73	250.16
JAHH-65B-R3B w/ Mount Pipe	C	From Face	3.00		0.0000	No Ice	9.35	7.65	88.85
			2.00			1/2" Ice	9.92	8.83	165.42
			0.00			1" Ice	10.46	9.73	250.16

tnxTower Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (978) 557-5553 FAX: (978) 336-5586	Job	CT1123	Page	6 of 9
	Project	179 ft Monopole	Date	11:16:46 10/01/19
	Client	AT&T	Designed by	kw

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight
			Horz	Lateral					
			ft	ft	°	ft	ft ²	ft ²	lb
JAHH-65B-R3B w/ Mount Pipe	C	From Face	3.00	0.0000	160.00	No Ice	9.35	7.65	88.85
			-2.00			1/2" Ice	9.92	8.83	165.42
			0.00			1" Ice	10.46	9.73	250.16
RRH2x60-700	A	From Face	2.50	0.0000	160.00	No Ice	3.50	1.82	60.00
			6.00			1/2" Ice	3.76	2.05	82.72
			0.00			1" Ice	4.03	2.29	109.06
RRH2x60-700	B	From Face	2.50	0.0000	160.00	No Ice	3.50	1.82	60.00
			6.00			1/2" Ice	3.76	2.05	82.72
			0.00			1" Ice	4.03	2.29	109.06
RRH2x60-700	C	From Face	2.50	0.0000	160.00	No Ice	3.50	1.82	60.00
			6.00			1/2" Ice	3.76	2.05	82.72
			0.00			1" Ice	4.03	2.29	109.06
B66A RRH 4X45	A	From Face	2.50	0.0000	160.00	No Ice	2.66	1.59	64.00
			-6.00			1/2" Ice	2.88	1.77	84.35
			0.00			1" Ice	3.10	1.96	107.85
B66A RRH 4X45	B	From Face	2.50	0.0000	160.00	No Ice	2.66	1.59	64.00
			-6.00			1/2" Ice	2.88	1.77	84.35
			0.00			1" Ice	3.10	1.96	107.85
B66A RRH 4X45	C	From Face	2.50	0.0000	160.00	No Ice	2.66	1.59	64.00
			-6.00			1/2" Ice	2.88	1.77	84.35
			0.00			1" Ice	3.10	1.96	107.85
4T4R B5 RRH	A	From Face	2.50	0.0000	160.00	No Ice	2.43	0.79	55.00
			-6.00			1/2" Ice	2.63	0.91	71.54
			0.00			1" Ice	2.83	1.05	90.83
4T4R B5 RRH	B	From Face	2.50	0.0000	160.00	No Ice	2.43	0.79	55.00
			-6.00			1/2" Ice	2.63	0.91	71.54
			0.00			1" Ice	2.83	1.05	90.83
4T4R B5 RRH	C	From Face	2.50	0.0000	160.00	No Ice	2.43	0.79	55.00
			-6.00			1/2" Ice	2.63	0.91	71.54
			0.00			1" Ice	2.83	1.05	90.83
RC2DC-3315-PF-48	A	From Face	2.00	0.0000	160.00	No Ice	4.59	2.52	32.00
			-6.00			1/2" Ice	4.86	2.73	67.82
			0.00			1" Ice	5.14	2.95	107.61
RC2DC-3315-PF-48	B	From Face	2.00	0.0000	160.00	No Ice	4.59	2.52	32.00
			-6.00			1/2" Ice	4.86	2.73	67.82
			0.00			1" Ice	5.14	2.95	107.61

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Pole	Max. Vert	36	100712.86	9443.44	10.45
	Max. H _x	20	53021.06	27971.18	48.04
	Max. H _z	2	53021.06	48.04	27915.70
	Max. M _x	2	3912729.69	48.04	27915.70
	Max. M _z	8	3921698.31	-27971.18	-48.04
	Max. Torsion	23	1846.58	24247.77	13999.46
	Min. Vert	13	39765.79	-14027.19	-24199.72
	Min. H _x	8	53021.06	-27971.18	-48.04
	Min. H _z	14	53021.06	-48.04	-27915.70
	Min. M _x	14	-3913681.88	-48.04	-27915.70
	Min. M _z	20	-3923260.54	27971.18	48.04

tnxTower Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (978) 557-5553 FAX: (978) 336-5586	Job	CT1123	Page	7 of 9
	Project	179 ft Monopole	Date	11:16:46 10/01/19
	Client	AT&T	Designed by	kw

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
	Min. Torsion	11	-1846.66	-24247.77	-13999.46

Tower Mast Reaction Summary

Load Combination	Vertical lb	Shear _x lb	Shear _z lb	Overturning Moment, M _x lb-ft	Overturning Moment, M _z lb-ft	Torque lb-ft
Dead Only	44184.21	0.00	0.00	365.37	585.25	0.00
1.2 Dead+1.6 Wind 0 deg - No Ice	53021.06	-48.04	-27915.70	-3912729.69	8867.10	-524.14
0.9 Dead+1.6 Wind 0 deg - No Ice	39765.79	-48.04	-27915.70	-3842537.72	8504.20	-516.16
1.2 Dead+1.6 Wind 30 deg - No Ice	53021.05	13943.98	-24151.68	-3384458.87	-1953494.07	454.50
0.9 Dead+1.6 Wind 30 deg - No Ice	39765.79	13943.98	-24151.68	-3323752.34	-1918589.81	466.73
1.2 Dead+1.6 Wind 60 deg - No Ice	53021.05	24199.72	-13916.24	-1949151.83	-3392191.27	1311.09
0.9 Dead+1.6 Wind 60 deg - No Ice	39765.79	24199.72	-13916.24	-1914239.07	-3331429.16	1324.47
1.2 Dead+1.6 Wind 90 deg - No Ice	53021.06	27971.18	48.04	8531.05	-3921698.31	1818.84
0.9 Dead+1.6 Wind 90 deg - No Ice	39765.79	27971.17	48.04	8262.43	-3851424.54	1829.53
1.2 Dead+1.6 Wind 120 deg - No Ice	53021.05	24247.77	13999.46	1964015.80	-3400221.61	1841.52
0.9 Dead+1.6 Wind 120 deg - No Ice	39765.79	24247.77	13999.46	1928605.33	-3339309.46	1846.66
1.2 Dead+1.6 Wind 150 deg - No Ice	53021.05	14027.19	24199.72	3393400.11	-1967477.83	1370.76
0.9 Dead+1.6 Wind 150 deg - No Ice	39765.79	14027.19	24199.72	3332299.34	-1932311.54	1369.08
1.2 Dead+1.6 Wind 180 deg - No Ice	53021.06	48.04	27915.70	3913681.88	-7303.81	530.57
0.9 Dead+1.6 Wind 180 deg - No Ice	39765.79	48.04	27915.70	3843234.16	-7368.32	522.41
1.2 Dead+1.6 Wind 210 deg - No Ice	53021.05	-13943.98	24151.68	3385395.63	1955083.44	-454.28
0.9 Dead+1.6 Wind 210 deg - No Ice	39765.79	-13943.98	24151.68	3324437.82	1919744.61	-466.65
1.2 Dead+1.6 Wind 240 deg - No Ice	53021.05	-24199.72	13916.24	1950058.16	3393780.11	-1317.57
0.9 Dead+1.6 Wind 240 deg - No Ice	39765.79	-24199.72	13916.24	1914902.61	3332583.78	-1330.69
1.2 Dead+1.6 Wind 270 deg - No Ice	53021.06	-27971.18	-48.04	-7639.63	3923260.54	-1825.14
0.9 Dead+1.6 Wind 270 deg - No Ice	39765.79	-27971.17	-48.04	-7609.86	3852560.07	-1835.71
1.2 Dead+1.6 Wind 300 deg - No Ice	53021.05	-24247.77	-13999.46	-1963109.04	3401757.75	-1841.29
0.9 Dead+1.6 Wind 300 deg - No Ice	39765.79	-24247.77	-13999.46	-1927941.84	3340426.07	-1846.58
1.2 Dead+1.6 Wind 330 deg - No Ice	53021.05	-14027.19	-24199.72	-3392462.92	1969014.48	-1364.47
0.9 Dead+1.6 Wind 330 deg - No Ice	39765.79	-14027.19	-24199.72	-3331613.90	1933428.32	-1362.86

tnxTower Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (978) 557-5553 FAX: (978) 336-5586	Job	CT1123	Page	8 of 9
	Project	179 ft Monopole	Date	11:16:46 10/01/19
	Client	AT&T	Designed by	kw

Load Combination	Vertical lb	Shear _x lb	Shear _z lb	Overturning Moment, M _x lb-ft	Overturning Moment, M _z lb-ft	Torque lb-ft
1.2 Dead+1.0 Ice+1.0 Temp	100712.86	-0.07	0.01	1539.51	5000.26	0.45
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	100712.86	-10.46	-9431.37	-1461607.55	7225.92	-331.20
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	100712.86	4712.45	-8162.21	-1264725.48	-725848.59	68.79
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	100712.86	8172.67	-4706.42	-728383.74	-1263027.22	450.40
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	100712.86	9443.44	10.46	3562.97	-1460225.50	711.89
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	100712.86	8183.12	4724.53	734991.03	-1264998.40	782.95
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	100712.86	4730.56	8172.67	1269912.51	-729256.29	644.29
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	100712.86	10.45	9431.37	1464845.34	3305.57	332.90
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	100712.86	-4712.46	8162.21	1267951.96	736394.05	-67.80
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	100712.86	-8172.67	4706.42	731593.89	1273568.58	-450.33
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	100712.86	-9443.44	-10.45	-357.61	1470748.74	-711.72
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	100712.86	-8183.12	-4724.53	-731774.03	1275511.38	-781.92
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	100712.86	-4730.56	-8172.67	-1266679.16	739773.36	-642.64
Dead+Wind 0 deg - Service	44184.21	-11.18	-6497.72	-902154.07	2513.32	-123.60
Dead+Wind 30 deg - Service	44184.21	3245.63	-5621.59	-780318.59	-450096.50	109.48
Dead+Wind 60 deg - Service	44184.21	5632.78	-3239.17	-449273.64	-781929.56	313.23
Dead+Wind 90 deg - Service	44184.21	6510.63	11.18	2259.91	-904053.93	433.18
Dead+Wind 120 deg - Service	44184.21	5643.96	3258.54	453294.09	-783794.06	437.18
Dead+Wind 150 deg - Service	44184.21	3265.00	5632.78	782975.22	-453326.18	324.05
Dead+Wind 180 deg - Service	44184.21	11.18	6497.72	902948.04	-1215.21	123.97
Dead+Wind 210 deg - Service	44184.21	-3245.63	5621.59	781111.90	451395.83	-109.45
Dead+Wind 240 deg - Service	44184.21	-5632.78	3239.17	450065.59	783228.87	-313.54
Dead+Wind 270 deg - Service	44184.21	-6510.64	-11.18	-1468.63	905351.99	-433.49
Dead+Wind 300 deg - Service	44184.21	-5643.96	-3258.54	-452502.14	785091.00	-437.15
Dead+Wind 330 deg - Service	44184.21	-3265.00	-5632.78	-782181.90	454623.14	-323.68

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	179 - 139.5	38.3389	49	2.0496	0.0020
L2	143.5 - 93.4	24.0700	49	1.6560	0.0020
L3	98.6 - 46.31	11.0097	49	1.0957	0.0011
L4	52.7 - 0	3.0627	49	0.5418	0.0004

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
-----------------	--------------	-----------------	------------------	-----------	------------	---------------------------

tnxTower Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (978) 557-5553 FAX: (978) 336-5586	Job	CT1123	Page	9 of 9
	Project	179 ft Monopole	Date	11:16:46 10/01/19
	Client	AT&T	Designed by	kw

Elevation	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
191.00	Omni 2"x20'	49	38.3389	2.0496	0.0020	24318
179.00	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	49	38.3389	2.0496	0.0020	24318
177.00	PiROD 13' Low Profile Platform	49	37.4936	2.0281	0.0020	24318
170.00	Valmont Light Duty Tri-Bracket (1)	49	34.5465	1.9526	0.0021	13510
168.00	PiROD 13' Platform w/handrail	49	33.7110	1.9310	0.0021	11053
160.00	APL866513 w/Mount Pipe	49	30.4205	1.8434	0.0021	6399
138.50	20'-4 Bay Dipole	49	22.3113	1.5966	0.0020	3563
132.50	Omni 2"x8'	49	20.3118	1.5237	0.0019	3746
112.50	10' Dipole	49	14.4470	1.2727	0.0014	4524

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail	
L1	179 - 139.5	Pole	TP28.0455x19.5x0.1875	1	-11931.70	1062100.00	81.8	Pass	
L2	139.5 - 93.4	Pole	TP37.5377x26.8051x0.375	2	-22005.60	3187780.00	60.3	Pass	
L3	93.4 - 46.31	Pole	TP47.123x35.6737x0.375	3	-35088.40	3800330.00	71.8	Pass	
L4	46.31 - 0	Pole	TP56.25x44.9739x0.375	4	-52995.50	4334660.00	80.0	Pass	
							Summary		
							Pole (L1)	81.8	Pass
							RATING =	81.8	Pass

Stiffened or Unstiffened, UngROUTed, Circular Base Plate - Any Rod Material

TIA Rev G Assumption: Clear space between bottom of leveling nut and top of concrete **not** exceeding (1)*(Rod Diameter)

Site Data

BU#: 0
Site Name: CT1123
App #: 0
Pole Manufacturer: <i>Other</i>

Reactions		
Mu:	3928	ft-kips
Axial, Pu:	53	kips
Shear, Vu:	28	kips
Eta Factor, η	0.5	TIA G (Fig. 4-4)

Anchor Rod Data

Qty:	18	
Diam:	2.25	in
Rod Material:	A615-J	
Strength (Fu):	100	ksi
Yield (Fy):	75	ksi
Bolt Circle:	65	in

If No stiffeners, Criteria: **AISC LRFD** <-Only Applicable to Unstiffened Cases

Anchor Rod Results

Max Rod (Cu+ Vu/η): 167.2 Kips
 Allowable Axial, φ*Fu*Anet: 260.0 Kips
 Anchor Rod Stress Ratio: 64.3% **Pass**

Rigid
AISC LRFD
φ*Tn

Plate Data

Diam:	71	in
Thick:	2	in
Grade:	60	ksi
Single-Rod B-eff:	9.92	in

Base Plate Results

Base Plate Stress: 44.9 ksi
 Allowable Plate Stress: 54.0 ksi
 Base Plate Stress Ratio: 83.2% **Pass**

Flexural Check

Rigid
AISC LRFD
φ*Fy
Y.L. Length: 32.57

Stiffener Data (Welding at both sides)

Config:	0	*
Weld Type:		
Groove Depth:		in **
Groove Angle:		degrees
Fillet H. Weld:		in
Fillet V. Weld:		in
Width:		in
Height:		in
Thick:		in
Notch:		in
Grade:		ksi
Weld str.:		ksi

n/a

Stiffener Results

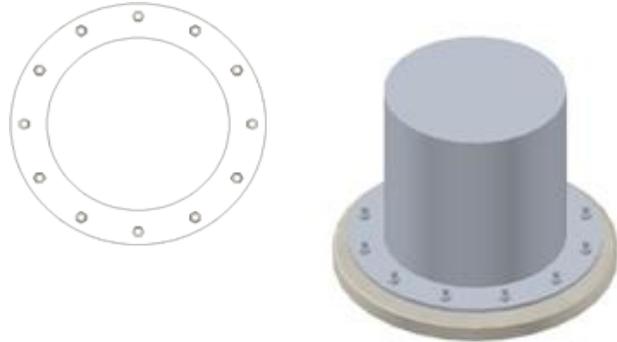
Horizontal Weld : n/a
 Vertical Weld: n/a
 Plate Flex+Shear, fb/Fb+(fv/Fv)^2: n/a
 Plate Tension+Shear, ft/Ft+(fv/Fv)^2: n/a
 Plate Comp. (AISC Bracket): n/a

Pole Results

Pole Punching Shear Check: n/a

Pole Data

Diam:	56.25	in
Thick:	0.375	in
Grade:	65	ksi
# of Sides:	18	"0" IF Round
Fu	80	ksi
Reinf. Fillet Weld	0	"0" if None



* 0 = none, 1 = every bolt, 2 = every 2 bolts, 3 = 2 per bolt

** Note: for complete joint penetration groove welds the groove depth must be exactly 1/2 the stiffener thickness for calculation purposes

BU: _____
 Site Name: CT1123
 App Number: _____
 Work Order: _____

Monopole Drilled Pier

Input

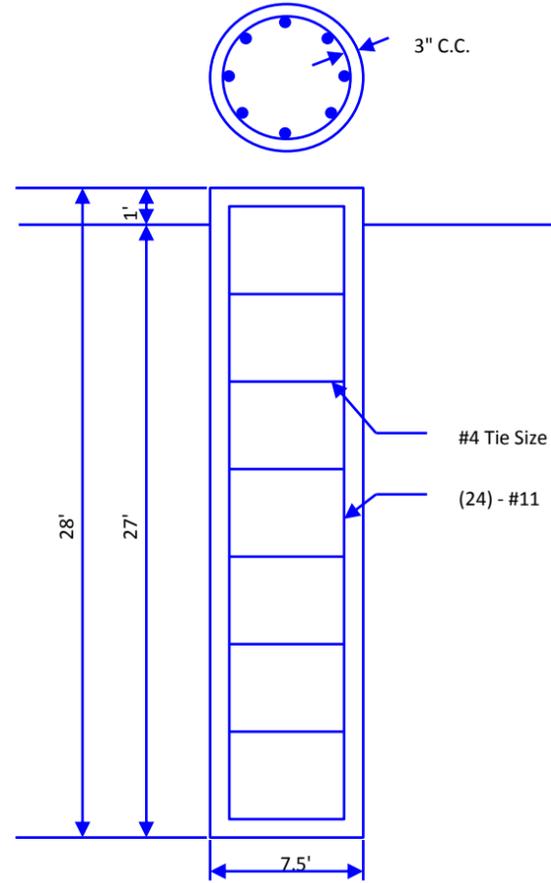
Criteria
 TIA Revision: G
 ACI 318 Revision: 2005
 Seismic Category: B

Forces
 Compression: 53 kips
 Shear: 28 kips
 Moment: 3928 k-ft
 Swelling Force: 0 kips

Foundation Dimensions
 Pier Diameter: 7.5 ft
 Ext. above grade: 1 ft
 Depth below grade: 27 ft

Material Properties
 Number of Rebar: 24
 Rebar Size: 11
 Tie Size: 4
 Rebar tensile strength: 60 ksi
 Concrete Strength: 4000 psi
 Ultimate Concrete Strain: 0.003 in/in
 Clear Cover to Ties: 3 in

Soil Profile: Profile 1



Layer	Thickness (ft)	From (ft)	To (ft)	Unit Weight (pcf)	Cohesion (psf)	Friction Angle (deg)	Ultimate Uplift Skin Friction (ksf)	Ultimate Comp. Skin Friction (ksf)	Ultimate Bearing Capacity (ksf)	SPT 'N' Counts
1	3.33	0	3.33	130	0	0	0	0		0
2	23.67	3.33	27	130		34			3	

Analysis Results

Soil Lateral Capacity
 Depth to Zero Shear: 5.58 ft
 Max Moment, Mu: 4089.78 k-ft
 Soil Safety Factor: 4.23
 Safety Factor Req'd: 1.33
RATING: 31.4%

Soil Axial Capacity
 Skin Friction (k): 333.73 kips
 End Bearing (k): 99.40 kips
 Comp. Capacity (k), φCn: 433.13 kips
 Comp. (k), Cu: 53.00 kips
RATING: 12.2%

Concrete/Steel Check
 Mu (from soil analysis): 4089.78 k-ft
 φMn: 6585.25 k-ft
RATING: 62.1%

rho provided: 0.59
 rho required: 0.33 OK

Rebar Spacing: 9.27
 Spacing required: 22.56 OK

Dev. Length required: 21.17
 Dev. Length provided: 53.51 OK

Overall Foundation Rating: 62.1%

April 1, 2019



Centerline Communications
750 West Center Street, Suite #301
West Bridgewater, MA 02379

RE: Site Number: CT1123 (LTE 2C/3C/4C)
 FA Number: 10042310
 PACE Number: MRCTB037961
 PT Number: 2051AOMC80
 Site Name: BURLINGTON-GEORGE WASH
 Site Address: Burlington – George Washington Turnpike
 Burlington, CT 06013

To Whom It May Concern:

Hudson Design Group LLC (HDG) has been authorized by Centerline Communications to perform a mount analysis on the existing AT&T antenna/RRH mount to determine its capability of supporting the following additional loading:

- (3) 7770 Antennas (55.0"x11.0"x5.0" – Wt. = 35 lbs. /each)
- (6) LGP21401 TMA's (14.4"x9.0"x2.7" – Wt. = 19 lbs. /each)
- (1) Squid Surge Arrestor (24.0"x9.7" ϕ – Wt. = 33 lbs.) (Tower Mounted)
- **(3) HPA65R-BU8A Antennas (96.0"x11.7"x7.6" – Wt. = 54 lbs. /each)**
- **(6) 800-10966 Antennas (96.0"x20.0"x6.9" – Wt. = 115 lbs. /each)**
- **(3) 4415 B25 RRH's (16.5"x13.4"x5.9" – Wt. = 46 lbs. /each)**
- **(3) B2/B66A 8843 RRH's (14.9"x13.2"x10.9" – Wt. = 72 lbs. /each)**
- **(3) B5/B12 4449 RRH's (14.9"x13.2"x10.4" – Wt. = 73 lbs. /each)**
- **(2) Squid Surge Arrestors (24.0"x9.7" ϕ – Wt. = 33 lbs. /each) (Tower Mounted)**

**Proposed equipment shown in bold.*

No original structural design documents or fabrication drawings were available for the existing mount. HDG's subconsultant, ProVertic LLC, conducted a survey climb and mapping of the existing AT&T antenna mount on March 27, 2019.

Mount Analysis Methods:

- This analysis was conducted in accordance with EIA/TIA-222-H, Structural Standards for Steel Antenna Towers and Antenna Supporting Structures, the International Building Code 2015 with 2018 Connecticut State Building Code, and AT&T Mount Technical Directive – R12.
- HDG considers this mount to be asymmetrical and has applied wind loads in 30 degree increments all around the mount. Per TIA-222-H and Appendix N of the Connecticut State Building Code, the max basic wind speed for this site is equal to 120 mph with a max basic wind speed with ice of 50 mph and a max ice thickness of 1.5 in. An escalated ice thickness of 1.77 in was used for this analysis.
- HDG considers this site to be exposure category B; tower is located in an urban/suburban or wooded area with numerous closely spaced obstructions.
- HDG considers this site to be topographic category 1; tower is located on flat terrain or the bottom of a hill or ridge.
- The mount has been analyzed with load combinations consisting of 250 lbs. live load using a service wind speed of 30 mph wind on the worst case antenna. Analysis performed on each antenna pipe to determine worst case location; worst case location was antenna position 4.
- The mount has been analyzed with load combinations consisting of a 250 lbs. live load in a worst case location on the mount.
- The existing mount is secured to the existing monopole with a ring mount. The connection is considered OK by visual inspection.

Based on our evaluation, we have determined that the existing mount **IS NOT CAPABLE** of supporting the proposed installation. HDG recommends the following modifications:

- **Install new handrail kit, SitePro1 P/N HRK12-3HD (or approved equal).**
- **Remove existing pipe masts and install new 2-1/2" std. (2.88" O.D.) pipe masts secured to the existing mount (typ. of 3 per sector, total of 9).**
- **Install new platform reinforcement kit, SitePro1 P/N PRK-1245 (or approved equal).**

	Component	Controlling Load Case	Stress Ratio	Pass/Fail
Existing (LTE 2C/3C/4C) Mount Rating	36	LC1	172%	FAIL
Modified (LTE 2C/3C/4C) Mount Rating	28	LC2	83%	PASS

Reference Documents:

- Mount mapping report prepared by ProVertic LLC.

This determination was based on the following limitations and assumptions:

1. HDG is not responsible for any modifications completed prior to and hereafter which HDG was not directly involved.
2. All structural members and their connections are assumed to be in good condition and are free from defects with no deterioration to its member capacities.
3. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer's requirements.
4. The existing mount has been adequately secured to the tower structure per the mount manufacturer's specifications.
5. All components pertaining to AT&T's mounts must be tightened and re-plumbed prior to the installation of new appurtenances.
6. HDG performed a localized analysis on the mount itself and not on the supporting tower structure.

Please feel free to contact our office should you have any questions.

Respectfully Submitted,
Hudson Design Group LLC

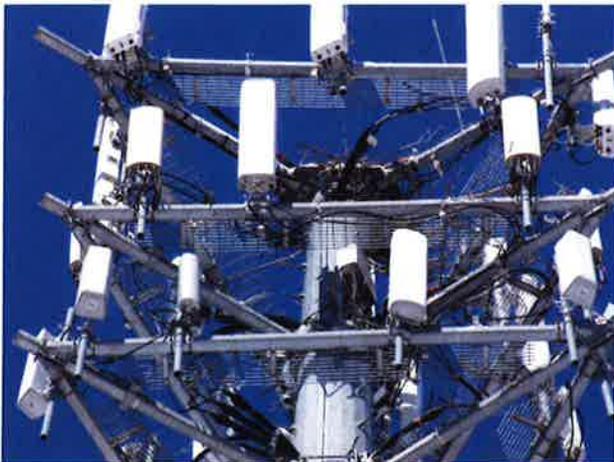


Michael Cabral
Structural Dept. Head



Daniel P. Hamm, PE
Principal

FIELD PHOTOS:







HUDSON
Design Group LLC

Wind & Ice Calculations

Date: 4/1/2019
 Project Name: BURLINGTON-GEORGE WASH
 Project No.: CT1123
 Designed By: BD Checked By: MSC



2.6.5.2 Velocity Pressure Coeff:

$$K_z = 2.01 (z/z_g)^{2/\alpha}$$

$K_z =$ **1.150** $z =$ 170 (ft)
 $z_g =$ 1200 (ft)
 $\alpha =$ 7.0

$K_{zmin} \leq K_z \leq 2.01$

Table 2-4

Exposure	Z _g	α	K _{zmin}	K _c
B	1200 ft	7.0	0.70	0.9
C	900 ft	9.5	0.85	1.0
D	700 ft	11.5	1.03	1.1

2.6.6.2 Topographic Factor:

Table 2-5

Topo. Category	K _t	f
2	0.43	1.25
3	0.53	2.0
4	0.72	1.5

$$K_{zt} = [1 + (K_c K_t / K_r)]^2$$

$$K_r = e^{-(z/H)}$$

$K_{zt} =$ **#DIV/0!**

$K_r =$ **#DIV/0!**

$K_c =$ 0.9 (from Table 2-4)

$K_t =$ (from Table 2-5)

$f =$ (from Table 2-5)

$z =$ 170

$z_s =$ 776 (Mean elevation of base of structure above sea level)

$H =$ 0 (Ht. of the crest above surrounding terrain)

$K_{zt} =$ 1.00 (from 2.6.6.2.1)

$K_e =$ 0.97 (from 2.6.8)

(If Category 1 then K_{zt} = 1.0)

Category = 1

2.6.10 Design Ice Thickness

Max Ice Thickness =

$t_i =$ 1.50 in

Importance Factor =

$I =$ 1.0 (from Table 2-3)

$K_{iz} =$ 1.18 (from Sec. 2.6.10)

$$t_{iz} = t_i * I * K_{iz} * (K_{zt})^{0.35}$$

$t_{iz} =$ 1.77 in

Date: 4/1/2019
 Project Name: BURLINGTON-GEORGE WASH
 Project No.: CT1123
 Designed By: BD Checked By: MSC



2.6.9 Gust Effect Factor

2.6.9.1 Self Supporting Lattice Structures

$G_h = 1.0$ Latticed Structures > 600 ft

$G_h = 0.85$ Latticed Structures 450 ft or less

$G_h = 0.85 + 0.15 [h/150 - 3.0]$

h= ht. of structure

h= 179

$G_h = 0.85$

2.6.9.2 Guyed Masts

$G_h = 0.85$

2.6.9.3 Pole Structures

$G_h = 1.1$

2.6.9 Appurtenances

$G_h = 1.0$

2.6.9.4 Structures Supported on Other Structures

(Cantilivered tubular or latticed spines, pole, structures on buildings (ht. : width ratio > 5)

$G_h = 1.35$

$G_h = 1.00$

2.6.11.2 Design Wind Force on Appurtenances

$F = q_z * G_h * (EPA)_A$

$q_z = 0.00256 * K_z * K_{zt} * K_s * K_e * K_d * V_{max}^2$

$K_z = 1.150$ (from 2.6.5.2)

$K_{zt} = 1.0$ (from 2.6.6.2.1)

$K_s = 1.0$ (from 2.6.7)

$K_e = 0.97$ (from 2.6.8)

$K_d = 0.95$ (from Table 2-2)

$V_{max} = 120$ mph (Ultimate Wind Speed)

$V_{max(ice)} = 50$ mph

$V_{30} = 30$ mph

$q_z = 39.16$

$q_z(ice) = 6.80$

$q_z(30) = 2.45$

Table 2-2

Structure Type	Wind Direction Probability Factor, Kd
Latticed structures with triangular, square or rectangular cross sections	0.85
Tubular pole structures, latticed structures with other cross sections, appurtenances	0.95
Tubular pole structures supporting antennas enclosed within a cylindrical shroud	1.00

Date: 4/1/2019
 Project Name: BURLINGTON-GEORGE WASH
 Project No.: CT1123
 Designed By: BD Checked By: MSC



Determine Ca:

Table 2-9

Force Coefficients (Ca) for Appurtenances				
Member Type		Aspect Ratio ≤ 2.5	Aspect Ratio = 7	Aspect Ratio ≥ 25
		Ca	Ca	Ca
Flat		1.2	1.4	2.0
Square/Rectangular HSS		$1.2 - 2.8(r_s) ≥ 0.85$	$1.4 - 4.0(r_s) ≥ 0.90$	$2.0 - 6.0(r_s) ≥ 1.25$
Round	C < 39 (Subcritical)	0.7	0.8	1.2
	39 ≤ C ≤ 78 (Transitional)	$4.14/(C^{0.485})$	$3.66/(C^{0.415})$	$46.8/(C^{1.0})$
	C > 78 (Supercritical)	0.5	0.6	0.6

Aspect Ratio is the overall length/width ratio in the plane normal to the wind direction.
 (Aspect ratio is independent of the spacing between support points of a linear appurtenance.)

Note: Linear interpolation may be used for aspect ratios other than those shown.

Ice Thickness = **1.77 in** Angle = **0 (deg)** Equivalent Angle = **180 (deg)**

Appurtenances	Height	Width	Depth	Flat Area	Aspect Ratio	Ca	Force (lbs)	Force (lbs) (w/ Ice)	Force (lbs) (30 mph)
7770 Antenna	55.0	11.0	5.0	4.20	5.00	1.31	216	53	13
HPA65R-BU8A Antenna	96.0	11.7	7.6	7.80	8.21	1.44	440	103	27
800-10966 Antenna	96.0	20.0	6.9	13.33	4.80	1.30	680	144	42
4415 B25 RRH	16.5	13.4	5.9	1.54	1.23	1.20	72	19	5
4415 B25 RRH (Shielded)	16.5	1.7	5.9	0.19	9.71	1.49	11	7	1
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.20	64	17	4
B2/B66A 8843 RRH (Shielded)	14.9	0.0	10.9	0.00	0.00	1.20	0	0	0
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.13	1.20	64	17	4
B5/B12 4449 RRH (Shielded)	14.9	0.0	10.4	0.00	0.00	1.20	0	0	0
LGP21401 TMA	14.4	2.7	9.0	0.27	5.33	1.33	14	7	1
Surge Arrestor	24.0	9.7	9.7	1.62	2.47	0.70	44	12	3
2" Pipe	2.9	12.0		0.24	0.24	1.20	11	6	1
HSS 4x4	4.0	12.0		0.33	0.33	1.25	16	7	1

Date: 4/1/2019
 Project Name: BURLINGTON-GEORGE WASH
 Project No.: CT1123
 Designed By: BD Checked By: MSC



WIND LOADS

Angle = 30 (deg)

Ice Thickness = 1.77 in.

Equivalent Angle = 210 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Aspect Ratio	Aspect Ratio	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	216	115	190
HPA65R-BU8A Antenna	96.0	11.7	7.6	7.80	5.07	8.21	12.63	1.44	1.59	440	315	409
800-10966 Antenna	96.0	20.0	6.9	13.33	4.60	4.80	13.91	1.30	1.63	680	294	583
4415 B25 RRH	16.5	13.4	5.9	1.54	0.68	1.23	2.80	1.20	1.21	72	32	62
4415 B25 RRH (Shielded)	16.5	6.7	5.9	0.77	0.68	2.46	2.80	1.20	1.21	36	32	35
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	64	53	61
B2/B66A 8843 RRH (Shielded)	14.9	6.6	10.9	0.68	1.13	2.26	1.37	1.20	1.20	32	53	37
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	64	51	61
B5/B12 4449 RRH (Shielded)	14.9	6.6	10.4	0.68	1.08	2.26	1.43	1.20	1.20	32	51	37
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	14	42	21

WIND LOADS WITH ICE:

7770 Antenna	58.5	14.5	8.5	5.91	3.47	4.03	6.86	1.27	1.39	51	33	46
HPA65R-BU8A Antenna	99.5	15.2	11.1	10.53	7.70	6.53	8.94	1.38	1.46	99	77	93
800-10966 Antenna	99.5	23.5	10.4	16.27	7.21	4.23	9.54	1.28	1.48	141	73	124
4415 B25 RRH	20.0	16.9	9.4	2.36	1.31	1.18	2.12	1.20	1.20	19	11	17
4415 B25 RRH (Shielded)	20.0	8.5	9.4	1.18	1.31	2.37	2.12	1.20	1.20	10	11	10
B2/B66A 8843 RRH	18.4	16.7	14.4	2.14	1.85	1.10	1.28	1.20	1.20	17	15	17
B2/B66A 8843 RRH (Shielded)	18.4	8.4	14.4	1.07	1.85	2.20	1.28	1.20	1.20	9	15	10
B5/B12 4449 RRH	18.4	16.7	13.9	2.14	1.78	1.10	1.32	1.20	1.20	17	15	17
B5/B12 4449 RRH (Shielded)	18.4	8.4	13.9	1.07	1.78	2.20	1.32	1.20	1.20	9	15	10
LGP21401 TMA	17.9	6.2	12.5	0.78	1.56	2.88	1.43	1.22	1.20	6	13	8

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	13	7	12
HPA65R-BU8A Antenna	96.0	11.7	7.6	7.80	5.07	8.21	12.63	1.44	1.59	27	20	26
800-10966 Antenna	96.0	20.0	6.9	13.33	4.60	4.80	13.91	1.30	1.63	42	18	36
4415 B25 RRH	16.5	13.4	5.9	1.54	0.68	1.23	2.80	1.20	1.21	5	2	4
4415 B25 RRH (Shielded)	16.5	6.7	5.9	0.77	0.68	2.46	2.80	1.20	1.21	2	2	2
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	4	3	4
B2/B66A 8843 RRH (Shielded)	14.9	6.6	10.9	0.68	1.13	2.26	1.37	1.20	1.20	2	3	2
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	4	3	4
B5/B12 4449 RRH (Shielded)	14.9	6.6	10.4	0.68	1.08	2.26	1.43	1.20	1.20	2	3	2
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	3	1

Date: 4/1/2019
 Project Name: BURLINGTON-GEORGE WASH
 Project No.: CT1123
 Designed By: BD Checked By: MSC



WIND LOADS

Angle = 60 (deg)

Ice Thickness = 1.77 in.

Equivalent Angle = 240 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	216	115	140
HPA65R-BU8A Antenna	96.0	11.7	7.6	7.80	5.07	8.21	12.63	1.44	1.59	440	315	346
800-10966 Antenna	96.0	20.0	6.9	13.33	4.60	4.80	13.91	1.30	1.63	680	294	390
4415 B25 RRH	16.5	13.4	5.9	1.54	0.68	1.23	2.80	1.20	1.21	72	32	42
4415 B25 RRH (Shielded)	16.5	10.1	5.9	1.15	0.68	1.64	2.80	1.20	1.21	54	32	38
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	64	59	56
B2/B66A 8843 RRH (Shielded)	14.9	9.9	10.9	1.02	1.13	1.51	1.37	1.20	1.20	48	53	52
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	64	51	54
B5/B12 4449 RRH (Shielded)	14.9	9.9	10.4	1.02	1.08	1.51	1.43	1.20	1.20	48	51	50
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	14	42	35

WIND LOADS WITH ICE:

7770 Antenna	58.5	14.5	8.5	5.91	3.47	4.03	6.86	1.27	1.39	51	33	37
HPA65R-BU8A Antenna	99.5	15.2	11.1	10.53	7.70	6.53	8.94	1.38	1.46	99	77	82
800-10966 Antenna	99.5	23.5	10.4	16.27	7.21	4.23	9.54	1.28	1.48	141	73	90
4415 B25 RRH	20.0	16.9	9.4	2.36	1.31	1.18	2.12	1.20	1.20	19	11	13
4415 B25 RRH (Shielded)	20.0	12.7	9.4	1.77	1.31	1.58	2.12	1.20	1.20	14	11	12
B2/B66A 8843 RRH	18.4	16.7	14.4	2.14	1.85	1.10	1.28	1.20	1.20	17	15	16
B2/B66A 8843 RRH (Shielded)	18.4	12.6	14.4	1.61	1.85	1.47	1.28	1.20	1.20	13	15	15
B5/B12 4449 RRH	18.4	16.7	13.9	2.14	1.78	1.10	1.32	1.20	1.20	17	15	15
B5/B12 4449 RRH (Shielded)	18.4	12.6	13.9	1.61	1.78	1.47	1.32	1.20	1.20	13	15	14
LGP21401 TMA	17.9	6.2	12.5	0.78	1.56	2.88	1.43	1.22	1.20	6	13	11

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	13	7	9
HPA65R-BU8A Antenna	96.0	11.7	7.6	7.80	5.07	8.21	12.63	1.44	1.59	27	20	22
800-10966 Antenna	96.0	20.0	6.9	13.33	4.60	4.80	13.91	1.30	1.63	42	18	24
4415 B25 RRH	16.5	13.4	5.9	1.54	0.68	1.23	2.80	1.20	1.21	5	2	3
4415 B25 RRH (Shielded)	16.5	10.1	5.9	1.15	0.68	1.64	2.80	1.20	1.21	3	2	2
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	4	3	3
B2/B66A 8843 RRH (Shielded)	14.9	9.9	10.9	1.02	1.13	1.51	1.37	1.20	1.20	3	3	3
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	4	3	3
B5/B12 4449 RRH (Shielded)	14.9	9.9	10.4	1.02	1.08	1.51	1.43	1.20	1.20	3	3	3
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	3	2

Date: 4/1/2019
 Project Name: BURLINGTON-GEORGE WASH
 Project No.: CT1123
 Designed By: BD Checked By: MSC



WIND LOADS

Angle = 90 (deg) Ice Thickness = 1.77 in. Equivalent Angle = 270 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	216	115	115
HPA65R-BU8A Antenna	96.0	11.7	7.6	7.80	5.07	8.21	12.63	1.44	1.59	440	315	315
800-10966 Antenna	96.0	20.0	6.9	13.33	4.60	4.80	13.91	1.30	1.63	680	294	294
4415 B25 RRH	16.5	13.4	5.9	1.54	0.68	1.23	2.80	1.20	1.21	72	32	32
4415 B25 RRH (Shielded)	16.5	1.7	5.9	0.19	0.68	0.00	2.80	1.20	1.21	9	32	32
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	64	53	53
B2/B66A 8843 RRH (Shielded)	14.9	0.0	10.9	0.00	1.13	0.00	1.37	1.20	1.20	0	53	53
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	64	51	51
B5/B12 4449 RRH (Shielded)	14.9	0.0	10.4	0.00	1.08	0.00	1.43	1.20	1.20	0	51	51
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	14	42	42

WIND LOADS WITH ICE:

7770 Antenna	58.5	14.5	8.5	5.91	3.47	4.03	6.86	1.27	1.39	51	33	33
HPA65R-BU8A Antenna	99.5	15.2	11.1	10.53	7.70	6.53	8.94	1.38	1.46	99	77	77
800-10966 Antenna	99.5	23.5	10.4	16.27	7.21	4.23	9.54	1.28	1.48	141	73	73
4415 B25 RRH	20.0	16.9	9.4	2.36	1.31	1.18	2.12	1.20	1.20	19	11	11
4415 B25 RRH (Shielded)	20.0	5.2	9.4	0.73	1.31	3.83	2.12	1.26	1.20	6	11	11
B2/B66A 8843 RRH	18.4	16.7	14.4	2.14	1.85	1.10	1.28	1.20	1.20	17	15	15
B2/B66A 8843 RRH (Shielded)	18.4	3.5	14.4	0.45	1.85	5.22	1.28	1.32	1.20	4	15	15
B5/B12 4449 RRH	18.4	16.7	13.9	2.14	1.78	1.10	1.32	1.20	1.20	17	15	15
B5/B12 4449 RRH (Shielded)	18.4	3.5	13.9	0.45	1.78	5.22	1.32	1.32	1.20	4	15	15
LGP21401 TMA	17.9	6.2	12.5	0.78	1.56	2.88	1.43	1.22	1.20	6	13	13

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	13	7	7
HPA65R-BU8A Antenna	96.0	11.7	7.6	7.80	5.07	8.21	12.63	1.44	1.59	27	20	20
800-10966 Antenna	96.0	20.0	6.9	13.33	4.60	4.80	13.91	1.30	1.63	42	18	18
4415 B25 RRH	16.5	13.4	5.9	1.54	0.68	1.23	2.80	1.20	1.21	5	2	2
4415 B25 RRH (Shielded)	16.5	1.7	5.9	0.19	0.68	0.00	2.80	1.20	1.21	1	2	2
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	4	3	3
B2/B66A 8843 RRH (Shielded)	14.9	0.0	10.9	0.00	1.13	0.00	1.37	1.20	1.20	0	3	3
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	4	3	3
B5/B12 4449 RRH (Shielded)	14.9	0.0	10.4	0.00	1.08	0.00	1.43	1.20	1.20	0	3	3
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	3	3

Date: 4/1/2019
 Project Name: BURLINGTON-GEORGE WASH
 Project No.: CT1123
 Designed By: BD Checked By: MSC



WIND LOADS

Angle = 120 (deg) Ice Thickness = 1.77 in. Equivalent Angle = 300 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	216	115	140
HPA65R-BU8A Antenna	96.0	11.7	7.6	7.80	5.07	8.21	12.63	1.44	1.59	440	315	346
800-10966 Antenna	96.0	20.0	6.9	13.33	4.60	4.80	13.91	1.30	1.63	680	294	390
4415 B25 RRH	16.5	13.4	5.9	1.54	0.68	1.23	2.80	1.20	1.21	72	32	42
4415 B25 RRH (Shielded)	16.5	10.1	5.9	1.15	0.68	1.64	2.80	1.20	1.21	54	32	38
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	64	53	56
B2/B66A 8843 RRH (Shielded)	14.9	9.9	10.9	1.02	1.13	1.51	1.37	1.20	1.20	48	53	52
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	64	51	54
B5/B12 4449 RRH (Shielded)	14.9	9.9	10.4	1.02	1.08	1.51	1.43	1.20	1.20	48	51	50
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	14	42	35

WIND LOADS WITH ICE:

7770 Antenna	58.5	14.5	8.5	5.91	3.47	4.03	6.86	1.27	1.39	51	33	37
HPA65R-BU8A Antenna	99.5	15.2	11.1	10.53	7.70	6.53	8.94	1.38	1.46	99	77	82
800-10966 Antenna	99.5	23.5	10.4	16.27	7.21	4.23	9.54	1.28	1.48	141	73	90
4415 B25 RRH	20.0	16.9	9.4	2.36	1.31	1.18	2.12	1.20	1.20	19	11	13
4415 B25 RRH (Shielded)	20.0	12.7	9.4	1.77	1.31	1.58	2.12	1.20	1.20	14	11	12
B2/B66A 8843 RRH	18.4	16.7	14.4	2.14	1.85	1.10	1.28	1.20	1.20	17	15	16
B2/B66A 8843 RRH (Shielded)	18.4	12.6	14.4	1.61	1.85	1.47	1.28	1.20	1.20	13	15	15
B5/B12 4449 RRH	18.4	16.7	13.9	2.14	1.78	1.10	1.32	1.20	1.20	17	15	15
B5/B12 4449 RRH (Shielded)	18.4	12.6	13.9	1.61	1.78	1.47	1.32	1.20	1.20	13	15	14
LGP21401 TMA	17.9	6.2	12.5	0.78	1.56	2.88	1.43	1.22	1.20	6	13	11

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	13	7	9
HPA65R-BU8A Antenna	96.0	11.7	7.6	7.80	5.07	8.21	12.63	1.44	1.59	27	20	22
800-10966 Antenna	96.0	20.0	6.9	13.33	4.60	4.80	13.91	1.30	1.63	42	18	24
4415 B25 RRH	16.5	13.4	5.9	1.54	0.68	1.23	2.80	1.20	1.21	5	2	3
4415 B25 RRH (Shielded)	16.5	10.1	5.9	1.15	0.68	1.64	2.80	1.20	1.21	3	2	2
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	4	3	3
B2/B66A 8843 RRH (Shielded)	14.9	9.9	10.9	1.02	1.13	1.51	1.37	1.20	1.20	3	3	3
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	4	3	3
B5/B12 4449 RRH (Shielded)	14.9	9.9	10.4	1.02	1.08	1.51	1.43	1.20	1.20	3	3	3
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	3	2

Date: 4/1/2019
 Project Name: BURLINGTON-GEORGE WASH
 Project No.: CT1123
 Designed By: BD Checked By: MSC



WIND LOADS

Angle = 150 (deg)

Ice Thickness = 1.77 in.

Equivalent Angle = 330 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	216	115	190
HPA65R-BU8A Antenna	96.0	11.7	7.6	7.80	5.07	8.21	12.63	1.44	1.59	440	315	409
800-10966 Antenna	96.0	20.0	6.9	13.33	4.60	4.80	13.91	1.30	1.63	680	294	583
4415 B25 RRH	16.5	13.4	5.9	1.54	0.68	1.23	2.80	1.20	1.21	72	32	62
4415 B25 RRH (Shielded)	16.5	6.7	5.9	0.77	0.68	2.46	2.80	1.20	1.21	36	32	35
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	64	53	61
B2/B66A 8843 RRH (Shielded)	14.9	6.6	10.9	0.68	1.13	2.26	1.37	1.20	1.20	32	53	37
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	64	51	61
B5/B12 4449 RRH (Shielded)	14.9	6.6	10.4	0.68	1.08	2.26	1.43	1.20	1.20	32	51	37
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	14	42	21

WIND LOADS WITH ICE:

7770 Antenna	58.5	14.5	8.5	5.91	3.47	4.03	6.86	1.27	1.39	51	33	46
HPA65R-BU8A Antenna	99.5	15.2	11.1	10.53	7.70	6.53	8.94	1.38	1.46	99	77	93
800-10966 Antenna	99.5	23.5	10.4	16.27	7.21	4.23	9.54	1.28	1.48	141	73	124
4415 B25 RRH	20.0	16.9	9.4	2.36	1.31	1.18	2.12	1.20	1.20	19	11	17
4415 B25 RRH (Shielded)	20.0	8.5	9.4	1.18	1.31	2.37	2.12	1.20	1.20	10	11	10
B2/B66A 8843 RRH	18.4	16.7	14.4	2.14	1.85	1.10	1.28	1.20	1.20	17	15	17
B2/B66A 8843 RRH (Shielded)	18.4	8.4	14.4	1.07	1.85	2.20	1.28	1.20	1.20	9	15	10
B5/B12 4449 RRH	18.4	16.7	13.9	2.14	1.78	1.10	1.32	1.20	1.20	17	15	17
B5/B12 4449 RRH (Shielded)	18.4	8.4	13.9	1.07	1.78	2.20	1.32	1.20	1.20	9	15	10
LGP21401 TMA	17.9	6.2	12.5	0.78	1.56	2.88	1.43	1.22	1.20	6	13	8

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	13	7	12
HPA65R-BU8A Antenna	96.0	11.7	7.6	7.80	5.07	8.21	12.63	1.44	1.59	27	20	26
800-10966 Antenna	96.0	20.0	6.9	13.33	4.60	4.80	13.91	1.30	1.63	42	18	36
4415 B25 RRH	16.5	13.4	5.9	1.54	0.68	1.23	2.80	1.20	1.21	5	2	4
4415 B25 RRH (Shielded)	16.5	6.7	5.9	0.77	0.68	2.46	2.80	1.20	1.21	2	2	2
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	4	3	4
B2/B66A 8843 RRH (Shielded)	14.9	6.6	10.9	0.68	1.13	2.26	1.37	1.20	1.20	2	3	2
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	4	3	4
B5/B12 4449 RRH (Shielded)	14.9	6.6	10.4	0.68	1.08	2.26	1.43	1.20	1.20	2	3	2
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	3	1

Date: 4/1/2019
 Project Name: BURLINGTON-GEORGE WASH
 Project No.: CT1123
 Designed By: BD Checked By: MSC



HUDSON
 Design Group LLC

ICE WEIGHT CALCULATIONS

Thickness of ice: 1.77 in.
 Density of ice: 56 pcf

7770 Antenna

Weight of ice based on total radial SF area:
 Height (in): 55.0
 Width (in): 11.0
 Depth (in): 5.0
 Total weight of ice on object: 137 lbs
 Weight of object: 35.0 lbs
Combined weight of ice and object: 172 lbs

HPA65R-BU8A Antenna

Weight of ice based on total radial SF area:
 Height (in): 96.0
 Width (in): 11.7
 Depth (in): 7.6
 Total weight of ice on object: 272 lbs
 Weight of object: 54.0 lbs
Combined weight of ice and object: 326 lbs

800-10966 Antenna

Weight of ice based on total radial SF area:
 Height (in): 96.0
 Width (in): 20.0
 Depth (in): 6.9
 Total weight of ice on object: 397 lbs
 Weight of object: 115.0 lbs
Combined weight of ice and object: 512 lbs

4415 B25 RRH

Weight of ice based on total radial SF area:
 Height (in): 16.5
 Width (in): 13.4
 Depth (in): 5.9
 Total weight of ice on object: 49 lbs
 Weight of object: 46.0 lbs
Combined weight of ice and object: 95 lbs

B2/B66A 8843 RRH

Weight of ice based on total radial SF area:
 Height (in): 14.9
 Width (in): 13.2
 Depth (in): 10.9
 Total weight of ice on object: 51 lbs
 Weight of object: 72.0 lbs
Combined weight of ice and object: 123 lbs

B5/B12 4449 RRH

Weight of ice based on total radial SF area:
 Height (in): 14.9
 Width (in): 13.2
 Depth (in): 10.4
 Total weight of ice on object: 50 lbs
 Weight of object: 73.0 lbs
Combined weight of ice and object: 123 lbs

LGP21401 TMA

Weight of ice based on total radial SF area:
 Height (in): 14.4
 Width (in): 2.7
 Depth (in): 9.0
 Total weight of ice on object: 29 lbs
 Weight of object: 19.0 lbs
Combined weight of ice and object: 48 lbs

Squid Surge Arrestor

Weight of ice based on total radial SF area:
 Depth (in): 24.0
 Diameter(in): 9.7
 Total weight of ice on object: 50 lbs
 Weight of object: 33 lbs
Combined weight of ice and object: 83 lbs

2" pipe

Per foot weight of ice:
 diameter (in): 2.38
Per foot weight of ice on object: 9 plf

HSS 4x4

Weight of ice based on total radial SF area:
 Height (in): 4
 Width (in): 4
Per foot weight of ice on object: 16 plf



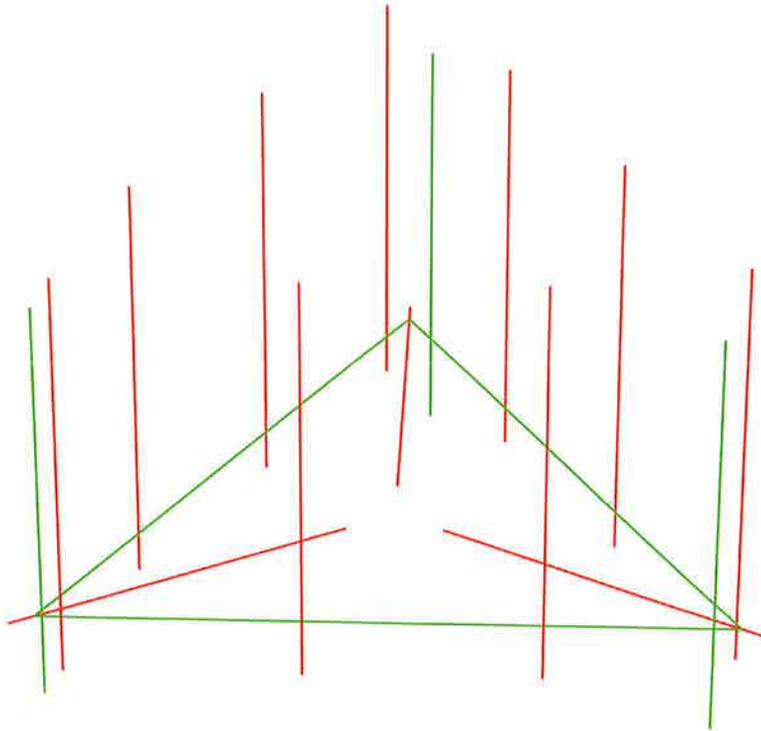
HUDSON
Design Group LLC

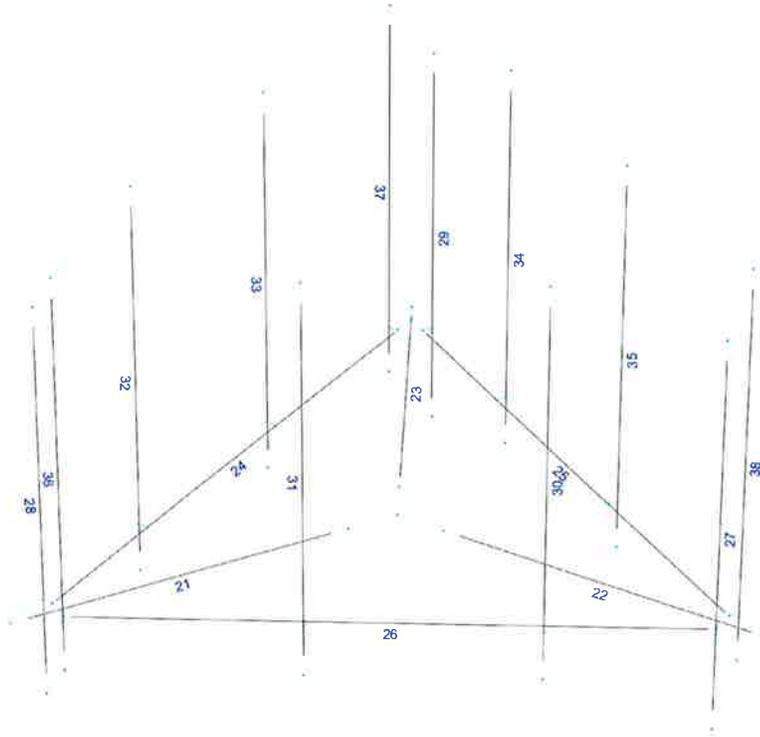
**Mount Calculations
(Existing Conditions)**



Design status

-  Not designed
-  Error on design
-  Design O.K.
-  With warnings





Load data

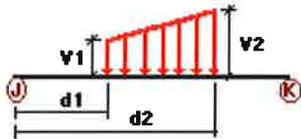
GLOSSARY

Comb : Indicates if load condition is a load combination

Load Conditions

Condition	Description	Comb.	Category
DL	Dead Load	No	DL
W0	Wind Load 0/60/120 deg	No	WIND
W30	Wind Load 30/90/150 deg	No	WIND
Di	Ice Load	No	LL
Wi0	Ice Wind Load 0/60/120 deg	No	WIND
Wi30	Ice Wind Load 30/90/150 deg	No	WIND
WL0	WL 30 mph 0/60/120 deg	No	WIND
WL30	WL 30 mph 30/90/150 deg	No	WIND
LL1	250 lb Live Load Center of Mount	No	LL
LL2	250 lb Live Load End of Mount	No	LL
LLa1	250 lb Live Load Antenna 1	No	LL
LLa2	250 lb Live Load Antenna 2	No	LL
LLa3	250 lb Live Load Antenna 3	No	LL
LLa4	250 lb Live Load Antenna 4	No	LL

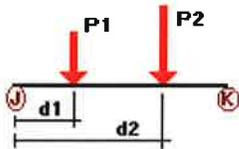
Distributed force on members



Condition	Member	Dir1	Val1 [Kip/ft]	Val2 [Kip/ft]	Dist1 [ft]	%	Dist2 [ft]	%
DL	24	Y	-0.01	-0.01	0.00	Yes	100.00	Yes
	25	Y	-0.01	-0.01	0.00	Yes	100.00	Yes
	26	Y	-0.01	-0.01	0.00	Yes	100.00	Yes
W0	21	Z	-0.016	-0.016	0.00	Yes	100.00	Yes
	22	Z	-0.016	-0.016	0.00	Yes	100.00	Yes
	24	Z	-0.016	-0.016	0.00	Yes	100.00	Yes
	25	Z	-0.016	-0.016	0.00	Yes	100.00	Yes
	26	Z	-0.016	-0.016	0.00	Yes	100.00	Yes
	28	Z	-0.011	-0.011	0.00	Yes	100.00	Yes
	29	Z	-0.011	-0.011	0.00	Yes	100.00	Yes
	32	Z	-0.011	-0.011	0.00	Yes	100.00	Yes
	33	Z	-0.011	-0.011	0.00	Yes	100.00	Yes
	34	Z	-0.011	-0.011	0.00	Yes	100.00	Yes
	35	Z	-0.011	-0.011	0.00	Yes	100.00	Yes
37	Z	-0.011	-0.011	0.00	Yes	100.00	Yes	

W30	38	Z	-0.011	-0.011	0.00	Yes	100.00	Yes
	21	X	-0.016	-0.016	0.00	Yes	100.00	Yes
	22	X	-0.016	-0.016	0.00	Yes	100.00	Yes
	23	X	-0.016	-0.016	0.00	Yes	100.00	Yes
	24	X	-0.016	-0.016	0.00	Yes	100.00	Yes
	25	X	-0.016	-0.016	0.00	Yes	100.00	Yes
	27	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	28	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	29	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	30	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	31	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	32	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	33	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	34	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	35	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	36	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	37	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	Di	38	X	-0.011	-0.011	0.00	Yes	100.00
21		Y	-0.016	-0.016	0.00	Yes	100.00	Yes
22		Y	-0.016	-0.016	0.00	Yes	100.00	Yes
23		Y	-0.016	-0.016	0.00	Yes	100.00	Yes
24		Y	-0.016	-0.016	0.00	Yes	100.00	Yes
25		Y	-0.016	-0.016	0.00	Yes	100.00	Yes
26		Y	-0.016	-0.016	0.00	Yes	100.00	Yes
27		Y	-0.009	-0.009	0.00	Yes	100.00	Yes
28		Y	-0.009	-0.009	0.00	Yes	100.00	Yes
29		Y	-0.009	-0.009	0.00	Yes	100.00	Yes
30		Y	-0.009	-0.009	0.00	Yes	100.00	Yes
31		Y	-0.009	-0.009	0.00	Yes	100.00	Yes
32		Y	-0.009	-0.009	0.00	Yes	100.00	Yes
33		Y	-0.009	-0.009	0.00	Yes	100.00	Yes
34		Y	-0.009	-0.009	0.00	Yes	100.00	Yes
35		Y	-0.009	-0.009	0.00	Yes	100.00	Yes
36		Y	-0.009	-0.009	0.00	Yes	100.00	Yes
37		Y	-0.009	-0.009	0.00	Yes	100.00	Yes
38	Y	-0.009	-0.009	0.00	Yes	100.00	Yes	

Concentrated forces on members



Condition	Member	Dir1	Value1 [Kip]	Dist1 [ft]	%
DL	27	y	-0.018	0.50	No
		y	-0.018	5.08	No
		y	-0.038	4.00	No
	28	y	-0.018	0.50	No
		y	-0.018	5.08	No
		y	-0.038	4.00	No
	29	y	-0.018	0.50	No
		y	-0.018	5.08	No
		y	-0.038	4.00	No

	30	y	-0.027	0.50	No
		y	-0.027	7.50	No
		y	-0.046	5.50	No
	31	y	-0.058	0.50	No
		y	-0.058	7.50	No
		y	-0.072	5.50	No
	32	y	-0.027	0.50	No
		y	-0.027	7.50	No
		y	-0.046	5.50	No
	33	y	-0.058	0.50	No
		y	-0.058	7.50	No
		y	-0.072	5.50	No
	34	y	-0.027	0.50	No
		y	-0.027	7.50	No
		y	-0.046	5.50	No
	35	y	-0.058	0.50	No
		y	-0.058	7.50	No
		y	-0.072	5.50	No
	36	y	-0.058	0.50	No
		y	-0.058	7.50	No
		y	-0.073	5.50	No
	37	y	-0.058	0.50	No
		y	-0.058	7.50	No
		y	-0.073	5.50	No
	38	y	-0.058	0.50	No
		y	-0.058	7.50	No
		y	-0.073	5.50	No
W0	27	z	-0.108	0.50	No
		z	-0.108	5.08	No
	28	z	-0.07	0.50	No
		z	-0.07	5.08	No
	29	z	-0.07	0.50	No
		z	-0.07	5.08	No
	30	z	-0.22	0.50	No
		z	-0.22	7.50	No
		z	-0.011	5.50	No
	31	z	-0.195	0.50	No
		z	-0.34	7.50	No
	32	z	-0.173	0.50	No
		z	-0.173	7.50	No
		z	-0.038	5.50	No
	33	z	-0.195	0.50	No
		z	-0.195	7.50	No
	34	z	-0.173	0.50	No
		z	-0.173	7.50	No
		z	-0.038	5.50	No
	35	z	-0.195	0.50	No
		z	-0.195	7.50	No
	36	z	-0.34	0.50	No
		z	-0.34	7.50	No
	37	z	-0.058	0.50	No
		z	-0.195	7.50	No
	38	z	-0.195	0.50	No
		z	-0.195	7.50	No
W30	27	x	-0.058	0.50	No
		x	-0.058	5.08	No
		x	-0.042	4.00	No
	28	x	-0.095	0.50	No
		x	-0.095	5.08	No
		x	-0.021	4.00	No

	29	x	-0.095	0.50	No
		x	-0.095	5.08	No
		x	-0.021	4.00	No
	30	x	-0.158	0.50	No
		x	-0.158	7.50	No
		x	-0.032	5.50	No
	31	x	-0.147	0.50	No
		x	-0.147	7.50	No
		x	-0.053	5.50	No
	32	x	-0.205	0.50	No
		x	-0.205	7.50	No
		x	-0.035	5.50	No
	33	x	-0.292	0.50	No
		x	-0.292	7.50	No
		x	-0.037	5.50	No
	34	x	-0.205	0.50	No
		x	-0.205	7.50	No
		x	-0.035	5.50	No
	35	x	-0.292	0.50	No
		x	-0.292	7.50	No
		x	-0.037	5.50	No
	36	x	-0.147	0.50	No
		x	-0.147	7.50	No
		x	-0.051	5.50	No
	37	x	-0.292	0.50	No
		x	-0.292	7.50	No
		x	-0.037	5.50	No
	38	x	-0.292	0.50	No
		x	-0.292	7.50	No
		x	-0.037	5.50	No
Di	27	y	-0.069	0.50	No
		y	-0.069	5.08	No
		y	-0.058	4.00	No
	28	y	-0.069	0.50	No
		y	-0.069	5.08	No
		y	-0.058	4.00	No
	29	y	-0.069	0.50	No
		y	-0.069	5.08	No
		y	-0.058	4.00	No
	30	y	-0.136	0.50	No
		y	-0.136	7.50	No
		y	-0.049	5.50	No
	31	y	-0.199	0.50	No
		y	-0.199	7.50	No
		y	-0.051	5.50	No
	32	y	-0.136	0.50	No
		y	-0.136	7.50	No
		y	-0.049	5.50	No
	33	y	-0.199	0.50	No
		y	-0.199	7.50	No
		y	-0.051	5.50	No
	34	y	-0.136	0.50	No
		y	-0.136	7.50	No
		y	-0.049	5.50	No
	35	y	-0.199	0.50	No
		y	-0.199	7.50	No
		y	-0.051	5.50	No
	36	y	-0.199	0.50	No
		y	-0.199	7.50	No
		y	-0.05	5.50	No

	37	y	-0.199	0.50	No
		y	-0.199	7.50	No
		y	-0.05	5.50	No
	38	y	-0.199	0.50	No
		y	-0.199	7.50	No
		y	-0.05	5.50	No
Wi0	27	z	-0.027	0.50	No
		z	-0.027	5.08	No
	28	z	-0.019	0.50	No
		z	-0.019	5.08	No
	29	z	-0.019	0.50	No
		z	-0.019	5.08	No
	30	z	-0.052	0.50	No
		z	-0.052	7.50	No
		z	-0.007	5.50	No
	31	z	-0.072	0.50	No
		z	-0.072	7.50	No
	32	z	-0.041	0.50	No
		z	-0.041	7.50	No
		z	-0.012	5.50	No
	33	z	-0.045	0.50	No
		z	-0.045	7.50	No
	34	z	-0.041	0.50	No
		z	-0.041	7.50	No
		z	-0.012	5.50	No
	35	z	-0.045	0.50	No
		z	-0.045	7.50	No
	36	z	-0.072	0.50	No
		z	-0.072	7.50	No
	37	z	-0.045	0.50	No
		z	-0.045	7.50	No
	38	z	-0.045	0.50	No
		z	-0.045	7.50	No
Wi30	27	x	-0.017	0.50	No
		x	-0.017	5.08	No
		x	-0.013	4.00	No
	28	x	-0.023	0.50	No
		x	-0.023	5.08	No
		x	-0.008	4.00	No
	29	x	-0.023	0.50	No
		x	-0.023	5.08	No
		x	-0.008	4.00	No
	30	x	-0.039	0.50	No
		x	-0.039	7.50	No
		x	-0.011	5.50	No
	31	x	-0.037	0.50	No
		x	-0.037	7.50	No
		x	-0.015	5.50	No
	32	x	-0.047	0.50	No
		x	-0.047	7.50	No
		x	-0.01	5.50	No
	33	x	-0.062	0.50	No
		x	-0.062	7.50	No
		x	-0.01	5.50	No
	34	x	-0.047	0.50	No
		x	-0.047	7.50	No
		x	-0.01	5.50	No
	35	x	-0.062	0.50	No
		x	-0.062	7.50	No
		x	-0.01	5.50	No

	36	x	-0.037	0.50	No
		x	-0.037	7.50	No
		x	-0.015	5.50	No
	37	x	-0.062	0.50	No
		x	-0.062	7.50	No
		x	-0.01	5.50	No
	38	x	-0.062	0.50	No
		x	-0.062	7.50	No
		x	-0.01	5.50	No
WLO	27	z	-0.007	0.50	No
		z	-0.007	5.08	No
	28	z	-0.005	0.50	No
		z	-0.005	5.08	No
	29	z	-0.005	0.50	No
		z	-0.005	5.08	No
	30	z	-0.014	0.50	No
		z	-0.014	7.50	No
		z	-0.001	5.50	No
	31	z	-0.021	0.50	No
		z	-0.021	7.50	No
	32	z	-0.011	0.50	No
		z	-0.011	7.50	No
		z	-0.002	5.50	No
	33	z	-0.012	0.50	No
		z	-0.012	7.50	No
	34	z	-0.011	0.50	No
		z	-0.011	7.50	No
		z	-0.002	5.50	No
	35	z	-0.012	0.50	No
		z	-0.012	7.50	No
	36	z	-0.021	0.50	No
		z	-0.021	7.50	No
	37	z	-0.012	0.50	No
		z	-0.012	7.50	No
	38	z	-0.012	0.50	No
		z	-0.012	7.50	No
WL30	27	x	-0.004	0.50	No
		x	-0.004	5.08	No
		x	-0.003	4.00	No
	28	x	-0.006	0.50	No
		x	-0.006	5.08	No
		x	-0.001	4.00	No
	29	x	-0.006	0.50	No
		x	-0.006	5.08	No
		x	-0.001	4.00	No
	30	x	-0.01	0.50	No
		x	-0.01	7.50	No
		x	-0.002	5.50	No
	31	x	-0.009	0.50	No
		x	-0.009	7.50	No
		x	-0.003	5.50	No
	32	x	-0.013	0.50	No
		x	-0.013	7.50	No
		x	-0.002	5.50	No
	33	x	-0.018	0.50	No
		x	-0.018	7.50	No
		x	-0.002	5.50	No
	34	x	-0.013	0.50	No
		x	-0.013	7.50	No
		x	-0.002	5.50	No

	35	x	-0.018	0.50	No
		x	-0.018	7.50	No
		x	-0.002	5.50	No
	36	x	-0.009	0.50	No
		x	-0.009	7.50	No
		x	-0.003	5.50	No
	37	x	-0.018	0.50	No
		x	-0.018	7.50	No
		x	-0.002	5.50	No
	38	x	-0.018	0.50	No
		x	-0.018	7.50	No
		x	-0.002	5.50	No
LL1	26	y	-0.25	50.00	Yes
LL2	26	y	-0.25	0.00	No
LLa1	27	y	-0.25	50.00	Yes
LLa2	30	y	-0.25	50.00	Yes
LLa3	31	y	-0.25	50.00	Yes
LLa4	36	y	-0.25	50.00	Yes

Self weight multipliers for load conditions

Condition	Description	Self weight multiplier			
		Comb.	MultX	MultY	MultZ
DL	Dead Load	No	0.00	-1.00	0.00
W0	Wind Load 0/60/120 deg	No	0.00	0.00	0.00
W30	Wind Load 30/90/150 deg	No	0.00	0.00	0.00
Di	Ice Load	No	0.00	0.00	0.00
Wi0	Ice Wind Load 0/60/120 deg	No	0.00	0.00	0.00
Wi30	Ice Wind Load 30/90/150 deg	No	0.00	0.00	0.00
WL0	WL 30 mph 0/60/120 deg	No	0.00	0.00	0.00
WL30	WL 30 mph 30/90/150 deg	No	0.00	0.00	0.00
LL1	250 lb Live Load Center of Mount	No	0.00	0.00	0.00
LL2	250 lb Live Load End of Mount	No	0.00	0.00	0.00
LLa1	250 lb Live Load Antenna 1	No	0.00	0.00	0.00
LLa2	250 lb Live Load Antenna 2	No	0.00	0.00	0.00
LLa3	250 lb Live Load Antenna 3	No	0.00	0.00	0.00
LLa4	250 lb Live Load Antenna 4	No	0.00	0.00	0.00

Earthquake (Dynamic analysis only)

Condition	a/g	Ang. [Deg]	Damp. [%]
DL	0.00	0.00	0.00
W0	0.00	0.00	0.00
W30	0.00	0.00	0.00
Di	0.00	0.00	0.00
Wi0	0.00	0.00	0.00
Wi30	0.00	0.00	0.00
WL0	0.00	0.00	0.00
WL30	0.00	0.00	0.00
LL1	0.00	0.00	0.00

LL2	0.00	0.00	0.00
LLa1	0.00	0.00	0.00
LLa2	0.00	0.00	0.00
LLa3	0.00	0.00	0.00
LLa4	0.00	0.00	0.00

Steel Code Check

Report: Summary - Group by member

Load conditions to be included in design :

- LC1=1.2DL+W0
- LC2=1.2DL+W30
- LC3=1.2DL-W0
- LC4=1.2DL-W30
- LC5=0.9DL+W0
- LC6=0.9DL+W30
- LC7=0.9DL-W0
- LC8=0.9DL-W30
- LC9=1.2DL+Di+Wi0
- LC10=1.2DL+Di+Wi30
- LC11=1.2DL+Di-Wi0
- LC12=1.2DL+Di-Wi30
- LC13=1.2DL
- LC15=1.2DL+1.5LL1
- LC16=1.2DL+1.5LL2
- LC17=1.2DL+W0+1.5LLa1
- LC18=1.2DL+W30+1.5LLa1
- LC19=1.2DL-W0+1.5LLa1
- LC20=1.2DL-W30+1.5LLa1
- LC21=1.2DL+W0+1.5LLa2
- LC22=1.2DL+W30+1.5LLa2
- LC23=1.2DL-W0+1.5LLa2
- LC24=1.2DL-W30+1.5LLa2
- LC25=1.2DL+W0+1.5LLa3
- LC26=1.2DL+W30+1.5LLa3
- LC27=1.2DL-W0+1.5LLa3
- LC28=1.2DL-W30+1.5LLa3
- LC29=1.2DL+W0+1.5LLa4
- LC30=1.2DL+W30+1.5LLa4
- LC31=1.2DL-W0+1.5LLa4
- LC32=1.2DL-W30+1.5LLa4

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
	HSS_SQR 4X4X1_4	21	LC10 at 100.00%	1.23	N.G.	Eq. H1-1b
		22	LC12 at 100.00%	1.23	N.G.	Eq. H1-1b
		23	LC9 at 0.00%	1.25	N.G.	Eq. H1-1b
		24	LC4 at 100.00%	0.62	OK	Eq. H3-6
		25	LC4 at 100.00%	0.67	OK	Eq. H3-6
		26	LC4 at 0.00%	0.57	OK	Eq. H1-1b
	PIPE 2x0.154	27	LC1 at 71.88%	0.52	OK	Eq. H1-1b
		28	LC2 at 71.88%	0.63	OK	Eq. H1-1b
		29	LC2 at 71.88%	0.63	OK	Eq. H1-1b
		30	LC1 at 84.38%	1.12	N.G.	Eq. H1-1b
		31	LC2 at 84.38%	1.00	N.G.	Eq. H1-1b
		32	LC2 at 84.38%	1.27	N.G.	Eq. H1-1b
		33	LC2 at 84.38%	1.71	N.G.	Eq. H1-1b
		34	LC2 at 84.38%	1.27	N.G.	Eq. H1-1b
		35	LC2 at 84.38%	1.71	N.G.	Eq. H1-1b
		36	LC1 at 84.38%	1.72	N.G.	Eq. H1-1b
		37	LC2 at 84.38%	1.71	N.G.	Eq. H1-1b

Geometry data

GLOSSARY

Cb22, Cb33	: Moment gradient coefficients
Cm22, Cm33	: Coefficients applied to bending term in interaction formula
d0	: Tapered member section depth at J end of member
DJX	: Rigid end offset distance measured from J node in axis X
DJY	: Rigid end offset distance measured from J node in axis Y
DJZ	: Rigid end offset distance measured from J node in axis Z
DKX	: Rigid end offset distance measured from K node in axis X
DKY	: Rigid end offset distance measured from K node in axis Y
DKZ	: Rigid end offset distance measured from K node in axis Z
dL	: Tapered member section depth at K end of member
Ig factor	: Inertia reduction factor (Effective Inertia/Gross Inertia) for reinforced concrete members
K22	: Effective length factor about axis 2
K33	: Effective length factor about axis 3
L22	: Member length for calculation of axial capacity
L33	: Member length for calculation of axial capacity
LB pos	: Lateral unbraced length of the compression flange in the positive side of local axis 2
LB neg	: Lateral unbraced length of the compression flange in the negative side of local axis 2
RX	: Rotation about X
RY	: Rotation about Y
RZ	: Rotation about Z
TO	: 1 = Tension only member 0 = Normal member
TX	: Translation in X
TY	: Translation in Y
TZ	: Translation in Z

Nodes

Node	X [ft]	Y [ft]	Z [ft]	Rigid Floor
1	0.00	0.00	0.00	0
4	6.2691	0.00	3.6205	0
5	-0.0009	0.00	-7.2395	0
7	-0.866	0.00	0.50	0
9	0.00	0.00	-1.00	0
11	0.866	0.00	0.50	0
12	6.7018	0.00	3.8699	0
13	-0.0005	0.00	-7.7389	0
14	0.2491	0.00	-6.8065	0
15	6.0191	0.00	3.1875	0
16	3.8841	0.00	-0.5105	0
17	1.7591	0.00	-4.1911	0
18	0.4224	0.00	-6.9065	0
19	1.9324	0.00	-4.2911	0
20	4.0574	0.00	-0.6105	0
21	6.1924	0.00	3.0875	0
49	-6.2691	0.00	3.6205	0
50	-6.7018	0.00	3.8699	0
51	-6.0191	0.00	3.1875	0
52	-0.2491	0.00	-6.8065	0
53	-2.3841	0.00	-3.1085	0
54	-4.5091	0.00	0.5721	0

55	-6.1924	0.00	3.0875	0
56	-4.6824	0.00	0.4721	0
57	-2.5574	0.00	-3.2085	0
58	-0.4224	0.00	-6.9065	0
60	5.77	0.00	3.619	0
61	-5.77	0.00	3.619	0
62	-1.50	0.00	3.619	0
63	2.75	0.00	3.619	0
64	5.77	0.00	3.819	0
65	2.75	0.00	3.819	0
66	-1.50	0.00	3.819	0
67	-5.77	0.00	3.819	0
68	5.77	-2.00	3.819	0
69	-6.1924	-2.00	3.0875	0
70	0.4224	-2.00	-6.9065	0
71	5.77	6.00	3.819	0
72	-6.1924	6.00	3.0875	0
73	0.4224	6.00	-6.9065	0
74	2.75	-1.00	3.819	0
75	-1.50	-1.00	3.819	0
76	-4.6824	-1.00	0.4721	0
77	-2.5574	-1.00	-3.2085	0
78	1.9324	-1.00	-4.2911	0
79	4.0574	-1.00	-0.6105	0
80	2.75	7.00	3.819	0
81	-1.50	7.00	3.819	0
82	-4.6824	7.00	0.4721	0
83	-2.5574	7.00	-3.2085	0
84	1.9324	7.00	-4.2911	0
85	4.0574	7.00	-0.6105	0
86	-5.77	-1.00	3.819	0
87	-0.4224	-1.00	-6.9065	0
88	6.1924	-1.00	3.0875	0
89	-5.77	7.00	3.819	0
90	-0.4224	7.00	-6.9065	0
91	6.1924	7.00	3.0875	0

Restraints

Node	TX	TY	TZ	RX	RY	RZ
7	1	1	1	1	1	1
9	1	1	1	1	1	1
11	1	1	1	1	1	1

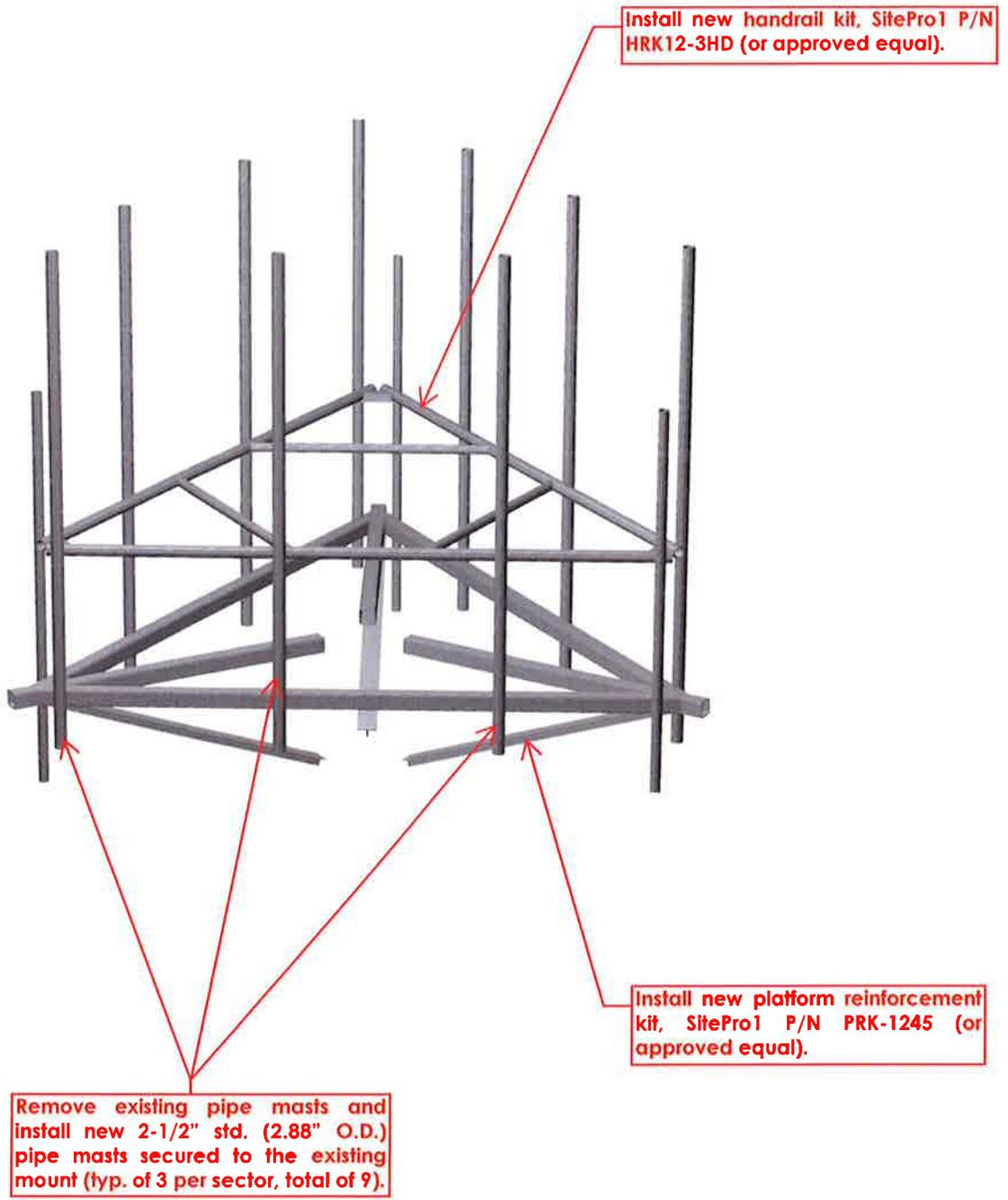
Members

Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	Ig factor
21	50	7		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
22	12	11		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
23	9	13		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
24	49	5		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
25	5	4		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
26	4	49		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
27	71	68		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
28	72	69		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
29	73	70		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
30	80	74		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
31	81	75		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
32	82	76		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
33	83	77		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
34	84	78		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
35	85	79		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
36	89	86		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
37	90	87		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
38	91	88		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00



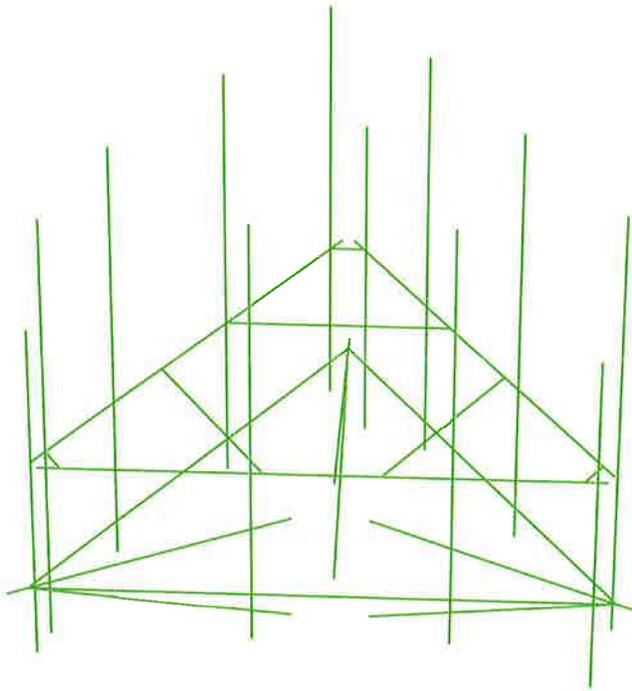
HUDSON
Design Group LLC

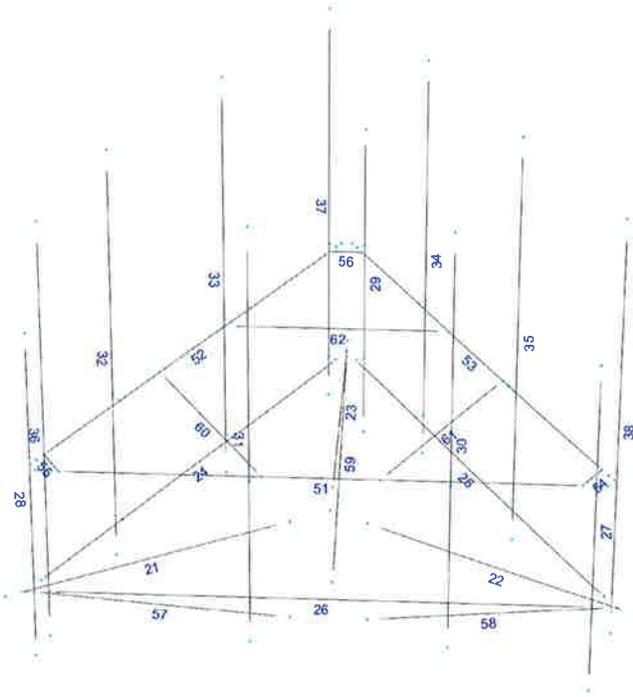
**Mount Calculations
(Modified Conditions)**



Design status

-  Not designed
-  Error on design
-  Design O.K.
-  With warnings







Current Date: 4/1/2019 4:09 PM

Units system: English

File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT1123\CT1123 (LTE 2C-3C-4C) (MOD.).etx\

Steel Code Check

Report: Summary - Group by member

Load conditions to be included in design :

- LC1=1.2DL+W0
- LC2=1.2DL+W30
- LC3=1.2DL-W0
- LC4=1.2DL-W30
- LC5=0.9DL+W0
- LC6=0.9DL+W30
- LC7=0.9DL-W0
- LC8=0.9DL-W30
- LC9=1.2DL+Di+Wi0
- LC10=1.2DL+Di+Wi30
- LC11=1.2DL+Di-Wi0
- LC12=1.2DL+Di-Wi30
- LC13=1.2DL
- LC15=1.2DL+1.5LL1
- LC16=1.2DL+1.5LL2
- LC17=1.2DL+W0+1.5LLa1
- LC18=1.2DL+W30+1.5LLa1
- LC19=1.2DL-W0+1.5LLa1
- LC20=1.2DL-W30+1.5LLa1
- LC21=1.2DL+W0+1.5LLa2
- LC22=1.2DL+W30+1.5LLa2
- LC23=1.2DL-W0+1.5LLa2
- LC24=1.2DL-W30+1.5LLa2
- LC25=1.2DL+W0+1.5LLa3
- LC26=1.2DL+W30+1.5LLa3
- LC27=1.2DL-W0+1.5LLa3
- LC28=1.2DL-W30+1.5LLa3
- LC29=1.2DL+W0+1.5LLa4
- LC30=1.2DL+W30+1.5LLa4
- LC31=1.2DL-W0+1.5LLa4
- LC32=1.2DL-W30+1.5LLa4

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
	HSS_SQR 4X4X1_4	21	LC11 at 9.38%	0.23	OK	Eq. H1-1b
		22	LC11 at 9.38%	0.22	OK	Eq. H1-1b
		23	LC12 at 90.63%	0.23	OK	Eq. H1-1b
		24	LC10 at 0.00%	0.19	OK	Eq. H1-1b
		25	LC9 at 0.00%	0.19	OK	Eq. H1-1b
		26	LC12 at 0.00%	0.18	OK	Eq. H1-1b
	L 2-1_2X2-1_2X3_8	54	LC4 at 0.00%	0.74	OK	Sec. F1
		55	LC3 at 0.00%	0.77	OK	Sec. F1
		56	LC2 at 100.00%	0.74	OK	Sec. F1
	PIPE 2-1_2x0.203	30	LC4 at 89.58%	0.61	OK	Eq. H1-1b
		31	LC2 at 89.58%	0.74	OK	Eq. H1-1b
		32	LC2 at 89.58%	0.62	OK	Eq. H1-1b
		33	LC1 at 89.58%	0.66	OK	Eq. H1-1b
		34	LC1 at 89.58%	0.64	OK	Eq. H1-1b
		35	LC3 at 89.58%	0.58	OK	Eq. H1-1b

	36	LC2 at 89.58%	0.63	OK	Eq. H1-1b
	37	LC1 at 89.58%	0.58	OK	Eq. H1-1b
	38	LC4 at 89.58%	0.68	OK	Eq. H1-1b
	51	LC4 at 40.00%	0.64	OK	Eq. H1-1b
	52	LC4 at 96.53%	0.56	OK	Eq. H3-6
	53	LC4 at 97.92%	0.64	OK	Eq. H3-6
<hr/>					
PIPE 2x0.154	27	LC4 at 72.92%	0.75	OK	Eq. H1-1b
	28	LC2 at 72.92%	0.83	OK	Eq. H1-1b
	29	LC1 at 72.92%	0.63	OK	Eq. H1-1b
	60	LC3 at 0.00%	0.36	OK	Eq. H1-1b
	61	LC3 at 0.00%	0.39	OK	Eq. H1-1b
	62	LC2 at 100.00%	0.57	OK	Eq. H1-1b
<hr/>					
T2L 2-1_2X2-1_2X3_16	57	LC10 at 0.00%	0.61	OK	Eq. H2-1
	58	LC12 at 0.00%	0.61	OK	Eq. H2-1
	59	LC9 at 0.00%	0.61	OK	Eq. H2-1

Geometry data

GLOSSARY

Cb22, Cb33	: Moment gradient coefficients
Cm22, Cm33	: Coefficients applied to bending term in interaction formula
d0	: Tapered member section depth at J end of member
DJX	: Rigid end offset distance measured from J node in axis X
DJY	: Rigid end offset distance measured from J node in axis Y
DJZ	: Rigid end offset distance measured from J node in axis Z
DKX	: Rigid end offset distance measured from K node in axis X
DKY	: Rigid end offset distance measured from K node in axis Y
DKZ	: Rigid end offset distance measured from K node in axis Z
dL	: Tapered member section depth at K end of member
Ig factor	: Inertia reduction factor (Effective Inertia/Gross Inertia) for reinforced concrete members
K22	: Effective length factor about axis 2
K33	: Effective length factor about axis 3
L22	: Member length for calculation of axial capacity
L33	: Member length for calculation of axial capacity
LB pos	: Lateral unbraced length of the compression flange in the positive side of local axis 2
LB neg	: Lateral unbraced length of the compression flange in the negative side of local axis 2
RX	: Rotation about X
RY	: Rotation about Y
RZ	: Rotation about Z
TO	: 1 = Tension only member 0 = Normal member
TX	: Translation in X
TY	: Translation in Y
TZ	: Translation in Z

Nodes

Node	X [ft]	Y [ft]	Z [ft]	Rigid Floor
1	0.00	0.00	0.00	0
4	6.2691	0.00	3.6205	0
5	-0.0009	0.00	-7.2395	0
7	-0.866	0.00	0.50	0
9	0.00	0.00	-1.00	0
11	0.866	0.00	0.50	0
12	6.7018	0.00	3.8699	0
13	-0.0005	0.00	-7.7389	0
14	0.2491	0.00	-6.8065	0
15	6.0191	0.00	3.1875	0
16	3.8841	0.00	-0.5105	0
17	1.7591	0.00	-4.1911	0
18	0.4224	0.00	-6.9065	0
19	1.9324	0.00	-4.2911	0
20	4.0574	0.00	-0.6105	0
21	6.1924	0.00	3.0875	0
49	-6.2691	0.00	3.6205	0
50	-6.7018	0.00	3.8699	0
51	-6.0191	0.00	3.1875	0
52	-0.2491	0.00	-6.8065	0
53	-2.3841	0.00	-3.1085	0

54	-4.5091	0.00	0.5721	0
55	-6.1924	0.00	3.0875	0
56	-4.6824	0.00	0.4721	0
57	-2.5574	0.00	-3.2085	0
58	-0.4224	0.00	-6.9065	0
60	5.77	0.00	3.619	0
61	-5.77	0.00	3.619	0
62	-1.50	0.00	3.619	0
63	2.75	0.00	3.619	0
64	5.77	0.00	3.819	0
65	2.75	0.00	3.819	0
66	-1.50	0.00	3.819	0
67	-5.77	0.00	3.819	0
68	5.77	-2.00	3.819	0
69	-6.1924	-2.00	3.0875	0
70	0.4224	-2.00	-6.9065	0
71	5.77	6.00	3.819	0
72	-6.1924	6.00	3.0875	0
73	0.4224	6.00	-6.9065	0
74	2.75	-1.00	3.819	0
75	-1.50	-1.00	3.819	0
76	-4.6824	-1.00	0.4721	0
77	-2.5574	-1.00	-3.2085	0
78	1.9324	-1.00	-4.2911	0
79	4.0574	-1.00	-0.6105	0
80	2.75	9.00	3.819	0
81	-1.50	9.00	3.819	0
82	-4.6824	9.00	0.4721	0
83	-2.5574	9.00	-3.2085	0
84	1.9324	9.00	-4.2911	0
85	4.0574	9.00	-0.6105	0
86	-5.77	-1.00	3.819	0
87	-0.4224	-1.00	-6.9065	0
88	6.1924	-1.00	3.0875	0
89	-5.77	9.00	3.819	0
90	-0.4224	9.00	-6.9065	0
91	6.1924	9.00	3.0875	0
92	5.77	3.00	3.619	0
93	5.77	3.00	3.819	0
94	2.75	3.00	3.619	0
95	2.75	3.00	3.819	0
96	-1.50	3.00	3.619	0
97	-1.50	3.00	3.819	0
98	-5.77	3.00	3.619	0
99	-5.77	3.00	3.819	0
100	-6.0191	3.00	3.1875	0
101	-6.1924	3.00	3.0875	0
102	-4.5091	3.00	0.5721	0
103	-4.6824	3.00	0.4721	0
104	-2.3841	3.00	-3.1085	0
105	-2.5574	3.00	-3.2085	0
106	-0.2491	3.00	-6.8065	0
107	-0.4224	3.00	-6.9065	0
108	0.2491	3.00	-6.8065	0
109	0.4224	3.00	-6.9065	0
110	1.7591	3.00	-4.1911	0
111	1.9324	3.00	-4.2911	0
112	3.8841	3.00	-0.5105	0
113	4.0574	3.00	-0.6105	0
114	6.0191	3.00	3.1875	0

115	6.1924	3.00	3.0875	0
117	0.1354	3.00	-7.0064	0
118	6.1354	3.00	3.3859	0
119	5.8854	3.00	2.9529	0
120	0.3854	3.00	-6.5734	0
129	-6.1354	3.00	3.3859	0
130	-5.8854	3.00	2.9529	0
131	-0.3854	3.00	-6.5734	0
132	-0.1354	3.00	-7.0064	0
133	6.00	3.00	3.6205	0
134	5.50	3.00	3.6205	0
135	-5.50	3.00	3.6205	0
136	-6.00	3.00	3.6205	0
137	-0.866	-2.50	0.50	0
138	0.00	-2.50	-1.00	0
139	0.866	-2.50	0.50	0
140	0.00	3.00	3.6205	0
151	2.5104	3.00	-2.8928	0
152	3.7604	3.00	-0.7277	0
157	-3.7604	3.00	-0.7277	0
158	-2.5104	3.00	-2.8928	0
159	1.25	3.00	3.6205	0
160	-1.25	3.00	3.6205	0

Restraints

Node	TX	TY	TZ	RX	RY	RZ
7	1	1	1	1	1	1
9	1	1	1	1	1	1
11	1	1	1	1	1	1
137	1	1	1	1	1	1
138	1	1	1	1	1	1
139	1	1	1	1	1	1

Members

Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	Ig factor
21	50	7		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
22	12	11		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
23	9	13		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
24	49	5		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
25	5	4		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
26	4	49		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
27	71	68		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
28	72	69		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
29	73	70		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
30	80	74		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
31	81	75		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
32	82	76		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
33	83	77		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00

34	84	78	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
35	85	79	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
36	89	86	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
37	90	87	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
38	91	88	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
51	136	133	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
52	129	132	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
53	117	118	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
54	119	134	L 2-1_2X2-1_2X3_8	A36	0.00	0.00	0.00
55	135	130	L 2-1_2X2-1_2X3_8	A36	0.00	0.00	0.00
56	120	131	L 2-1_2X2-1_2X3_8	A36	0.00	0.00	0.00
57	137	49	T2L 2-1_2X2-1_2X3_16	A36	0.00	0.00	0.00
58	139	4	T2L 2-1_2X2-1_2X3_16	A36	0.00	0.00	0.00
59	138	5	T2L 2-1_2X2-1_2X3_16	A36	0.00	0.00	0.00
60	160	157	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
61	159	152	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
62	151	158	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00

Orientation of local axes

Member	Rotation [Deg]	Axis23	NX	NY	NZ
54	180.00	0	0.00	0.00	0.00
55	180.00	0	0.00	0.00	0.00
56	90.00	0	0.00	0.00	0.00



Radio Frequency Emissions Analysis Report

AT&T Existing Facility

Site ID: CT1123

Burlington- George Wash
Burlington- George Washington Turnpike

Burlington, CT 06013

July 11, 2019

Centerline Communications Project Number: 950012-223

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	9.67 %



June 11, 2019

AT&T Mobility – New England
Attn: John Benedetto, RF Manager
550 Cochituate Road
Suite 550 – 13&14
Framingham, MA 06040

Emissions Analysis for Site: **CT1123 – Burlington- George Wash**

Centerline Communications, LLC (“Centerline”) was directed to analyze the proposed AT&T facility located at **Burlington-George Washington Turnpike in Burlington, Connecticut** for the purpose of determining whether the emissions from the Proposed AT&T Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

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

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

Population exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The general population exposure limits for the 700 and 850 MHz Bands are approximately $467 \mu\text{W}/\text{cm}^2$ and $567 \mu\text{W}/\text{cm}^2$ respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 2300 MHz (WCS) bands is $1000 \mu\text{W}/\text{cm}^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.



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

Additional details can be found in FCC OET 65.



CALCULATIONS

Calculations were performed for the proposed AT&T Wireless antenna facility located at **Burlington-George Washington Turnpike in Burlington, Connecticut**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since AT&T is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. All power values expressed and analyzed are maximum power levels expected to be used on all radios.

All emissions values for additional carriers were taken from the Connecticut Siting Council (CSC) active MPE database. Values in this database are provided by the individual carriers themselves

For each sector the following channel counts, frequency bands and power levels were utilized as shown in *Table 1*:

Technology	Frequency Band	Channel Count	Transmit Power per Channel (W)
UMTS	850 MHz	2	30
5G	850 MHz	2	25
LTE	850 MHz	2	40
LTE	700 MHz	2	40
LTE	2100 MHz (AWS)	4	30
LTE	1900 MHz (PCS)	4	40

Table 1: Channel Data Table



The following antennas listed in Table 2 were used in the modeling for transmission in the 700 MHz, 850 MHz, 1900 MHz (PCS), and 2100 MHz (AWS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
A	1	Powerwave 7770	170
A	2	CCI HPA-65R-BU8A	170
A	3	Kathrein 800-10966	170
A	4	Kathrein 800-10966	170
B	1	Powerwave 7770	170
B	2	CCI HPA-65R-BU8A	170
B	3	Kathrein 800-10966	170
B	4	Kathrein 800-10966	170
C	1	Powerwave 7770	170
C	2	CCI HPA-65R-BU8A	170
C	3	Kathrein 800-10966	170
C	4	Kathrein 800-10966	170

Table 2: Antenna Data

All calculations were done with respect to uncontrolled / general population threshold limits.



RESULTS

Per the calculations completed for the proposed AT&T configurations *Table 3* shows resulting emissions power levels and percentages of the FCC's allowable general population limit.

Antenna ID	Antenna Make / Model	Frequency Bands	Antenna Gain (dBd)	Channel Count	Total TX	ERP (W)	MPE %
Antenna A1	Powerwave 7770	850 MHz	11.5 dBd	2	60	847.52	0.19
Antenna A2	CCI HPA-65R-BU8A	1900 MHz / 1900 MHz	15.35 dBd / 15.35 dBd	8	320	10,968.57	1.36
Antenna A3	Kathrein 800-10966	1900 MHz	15.75 dBd	4	160	6,013.40	0.75
Antenna A4	Kathrein 800-10966	700 MHz / 850 MHz / 2100MHz / 850 MHz	13.45 dBd / 14.15 dBd / 15.95 dBd / 14.15 dBd	10	330	9,873.28	1.80
Sector A Composite MPE%							4.10
Antenna B1	Powerwave 7770	850 MHz	11.5 dBd	2	60	847.52	0.19
Antenna B2	CCI HPA-65R-BU8A	1900 MHz / 1900 MHz	15.35 dBd / 15.35 dBd	8	320	10,968.57	1.36
Antenna B3	Kathrein 800-10966	1900 MHz	15.75 dBd	4	160	6,013.40	0.75
Antenna B4	Kathrein 800-10966	700 MHz / 850 MHz / 2100MHz / 850 MHz	13.45 dBd / 14.15 dBd / 15.95 dBd / 14.15 dBd	10	330	9,873.28	1.80
Sector B Composite MPE%							4.10
Antenna C1	Powerwave 7770	850 MHz	11.5 dBd	2	60	847.52	0.19
Antenna C2	CCI HPA-65R-BU8A	1900 MHz / 1900 MHz	15.35 dBd / 15.35 dBd	8	320	10,968.57	1.36
Antenna C3	Kathrein 800-10966	1900 MHz	15.75 dBd	4	160	6,013.40	0.75
Antenna C4	Kathrein 800-10966	700 MHz / 850 MHz / 2100MHz / 850 MHz	13.45 dBd / 14.15 dBd / 15.95 dBd / 14.15 dBd	10	330	9,873.28	1.80
Sector C Composite MPE%							4.10

Table 3: AT&T Emissions Levels



The Following table (*table 4*) shows all additional carriers on site and their MPE% as recorded in the CSC active MPE database for this facility along with the newly calculated maximum AT&T MPE contributions per this report. FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. For this site, all three sectors have the same configuration yielding the same results on all three sectors. *Table 5* below shows a summary for each AT&T Sector as well as the composite MPE value for the site.

Site Composite MPE%	
Carrier	MPE%
AT&T – Max Per Sector Value	4.10 %
Verizon	3.63%
T-Mobile	1.12%
Public Safety	0.82%
Site Total MPE %:	9.67 %

Table 4: All Carrier MPE Contributions

AT&T Sector A Total:	4.10 %
AT&T Sector B Total:	4.10 %
AT&T Sector C Total:	4.10 %
Site Total:	9.67 %

Table 5: Site MPE Summary



FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. *Table 6* below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated AT&T sector(s). For this site, all three sectors have the same configuration yielding the same results on all three sectors.

AT&T _ Frequency Band / Technology Max Power Values (Per Sector)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density (i.tW/cm ²)	Frequency (MHz)	Allowable MPE (i.tW/cm ²)	Calculated % MPE
AT&T 850 MHz UMTS	2	423.76	170.0	1.05	850 MHz UMTS	567	0.19%
AT&T 1900 MHz LTE	4	1371.07	170.0	6.82	1900 MHz LTE	1000	0.68%
AT&T 1900 MHz LTE	4	1371.07	170.0	6.82	1900 MHz LTE	1000	0.68%
AT&T 1900 MHz LTE	4	1503.35	170.0	7.48	1900 MHz LTE	1000	0.75%
AT&T 700 MHz LTE	2	885.24	170.0	2.20	700 MHz LTE	467	0.47%
AT&T 850 MHz LTE	2	1040.06	170.0	2.59	850 MHz LTE	567	0.46%
AT&T 2100 MHz LTE AWS	4	1180.65	170.0	5.87	2100 MHz LTE AWS	1000	0.59%
AT&T 850 MHz 5G	2	650.04	170.0	1.62	850 MHz 5G	567	0.29%
						Total:	4.10%

Table 6: AT&T Maximum Sector MPE Power Values



Summary

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

The anticipated maximum composite contributions from the AT&T facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

AT&T Sector	Power Density Value (%)
Sector A:	4.10 %
Sector B:	4.10 %
Sector C:	4.10 %
AT&T Maximum Total (per sector):	4.10 %
Site Total:	9.67 %
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **9.67 %** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

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

A handwritten signature in black ink that reads 'Ryan B. McManus'.

Ryan McManus
Senior RF EME Compliance Manager
Centerline Communications, LLC
95 Ryan Drive, Suite 1
Raynham, MA 02767

PROJECT INFORMATION

SCOPE OF WORK: ITEMS TO BE MOUNTED ON THE EXISTING MONOPOLE:

- NEW AT&T ANTENNAS: (800-10966) (TYP. OF 2 PER SECTOR, TOTAL OF 6).
- NEW AT&T ANTENNAS: (HPA-65R-BU8A) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T RRUS: B5/B12 4449 (700) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T RRUS: B2/B66A 8843 (PCS) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T RRUS: 4415 B25 (PCS) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T (1) DC ONLY SURGE ARRESTOR WITH (2) DC POWER AND (1) DC/FIBER SURGE ARRESTOR WITH (2) DC POWER AND (1) FIBER RUN

ITEMS TO BE MOUNTED AT EQUIPMENT LOCATION:

- SWAP BB WITH 6630, ADD XMU
- ADD 2ND 6630 FOR 5G RBS
- ADD HOMERUN RET TO UMTS ANTENNA
- NEW AT&T COMBINERS, SURGE ARRESTORS (TOTAL OF 8).

ITEMS TO REMAIN:

- (3) ANTENNAS, (6) TMAS, (1) SURGE ARRESTOR W/ (2) DC POWER & (1) FIBER, AND (12) 1-5/8" COAX CABLES.

SITE ADDRESS: BURLINGTON-GEORGE WASHINGTON TPKE
BURLINGTON, CT 06013

LATITUDE: 41.766820 N, 41° 46' 0.54" N
LONGITUDE: 72.961510 W, 72° 57' 41.43" W
TYPE OF SITE: MONOPOLE/ INDOOR EQUIPMENT
STRUCTURE HEIGHT: 179'±
RAD CENTER: 170'±
CURRENT USE: TELECOMMUNICATIONS FACILITY
PROPOSED USE: TELECOMMUNICATIONS FACILITY



SITE NUMBER: CT1123

SITE NAME: BURLINGTON-GEORGE WASH

FA CODE:10042310

**PACE ID: MRCTB037961, MRCTB037939, MRCTB038079,
MRCTB0038071**

PROJECT: LTE 2C/3C/4C/4TX4RX 2019 UPGRADE

DRAWING INDEX

SHEET NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	B
GN-1	GENERAL NOTES	B
A-1	COMPOUND AND EQUIPMENT PLAN	B
A-2	ANTENNA LAYOUTS & ELEVATION	B
A-3	DETAILS	B
SN-1	STRUCTURAL NOTES	B
S-1	MOUNT MOD	B
S-2	BASEPLATE MOD	B
S-3	MOUNT MODIFICATION DESIGN	B
S-4	STRUCTURAL DETAILS	B
RF-1	RF PLUMBING DIAGRAM	B
G-1	GROUNDING DETAILS	B

VICINITY MAP

DIRECTIONS TO SITE:

GET ONTO I-91 S TOWARD NEW HAVEN. MERGE ONTO CT-9 N VIA EXIT 22N TOWARD NEW BRITAIN 6.6 MILES. MERGE ONTO CT-72 W VIA EXIT 28 ON THE LEFT TOWARD BRISTOL. MERGE ONTO CT-72 W VIA EXIT 33 TOWARD BRISTOL. TAKE THE CT-177/N. WASHINGTON ST EXIT, EXIT 1. TURN RIGHT ONTO N WASHINGTON ST/CT-177. CONTINUE TO FOLLOW CT-177 FOR 4.9 MILES. TURN LEFT ONTO BURLINGTON RD. BURLINGTON RD BECOMES GEORGE WASHINGTON TURNPIKE. TURN RIGHT ONTO CASE RD. TURN LEFT ONTO PUNCH BROOK RD. TURN RIGHT ONTO GEORGE WASHINGTON TURNPIKE. END AT 719 GEORGE WASHINGTON TURNPIKE.



GENERAL NOTES

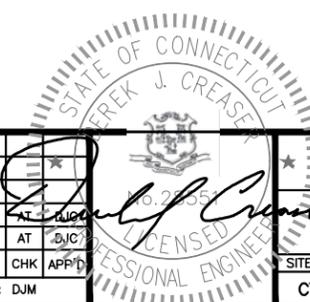
1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF AT&T. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.
2. THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE AT&T MOBILITY REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.
4. CONSTRUCTION DRAWINGS ARE VALID FOR SIX MONTHS AFTER ENGINEER OF RECORD'S STAMPED AND SIGNED SUBMITTAL DATE LISTED HEREIN.

72 HOURS

CALL BEFORE YOU DIG

CALL TOLL FREE 1-800-922-4455
OR CALL 811

UNDERGROUND SERVICE ALERT



 45 BEECHWOOD DRIVE NORTH ANDOVER, MA 01845 TEL: (978) 557-5553 FAX: (978) 336-5586	 750 WEST CENTER STREET., SUITE #301 WEST BRIDGEWATER, MA 02379	SITE NUMBER: CT1123 SITE NAME: BURLINGTON-GEORGE WASH BURLINGTON-GEORGE WASHINGTON TPKE BURLINGTON, CT 06013 HARTFORD COUNTY	 550 COCHITUATE ROAD FRAMINGHAM, MA 01701	NO. 07/03/19 DATE ISSUED FOR CONSTRUCTION BY MR AT	NO. 03/21/19 DATE ISSUED FOR REVIEW BY DJM AT	REVISIONS BY DJM AT	DESIGNED BY: AT DRAWN BY: DJM	AT&T TITLE SHEET (LTE 2C/3C/4C/4TX4RX)
				SCALE: AS SHOWN	SITE NUMBER: CT1123	DRAWING NUMBER: T-1	REV: B	

GROUNDING NOTES

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
2. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
4. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
5. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS 2 AWG STRANDED COPPER FOR OUTDOOR BTS.
6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO GROUND BAR.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
11. METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWS COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
12. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE OF 1/2 IN. OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BARE TINNED COPPER GROUND WIRE, PER NEC 250.50

GENERAL NOTES

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

14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCHUP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.
16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T SITES."
17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.
20. APPLICABLE BUILDING CODES:
 SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

BUILDING CODE: IBC 2015 WITH 2018 CT STATE BUILDING CODE AMENDMENTS
 ELECTRICAL CODE: 2017 NATIONAL ELECTRICAL CODE (NFPA 70-2017)

SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION, ASD, FOURTEENTH EDITION;

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-G, STRUCTURAL STANDARDS FOR STEEL

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

ABBREVIATIONS					
AGL	ABOVE GRADE LEVEL	EQ	EQUAL	REQ	REQUIRED
AWG	AMERICAN WIRE GAUGE	GC	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
BBU	BATTERY BACKUP UNIT	GRC	GALVANIZED RIGID CONDUIT	TBD	TO BE DETERMINED
BTCW	BARE TINNED SOLID COPPER WIRE	MGB	MASTER GROUND BAR	TBR	TO BE REMOVED
BGR	BURIED GROUND RING	MIN	MINIMUM	TBRR	TO BE REMOVED AND REPLACED
BTS	BASE TRANSCEIVER STATION	P	PROPOSED	TYP	TYPICAL
E	EXISTING	NTS	NOT TO SCALE	UG	UNDER GROUND
EGB	EQUIPMENT GROUND BAR	RAD	RADIATION CENTER LINE (ANTENNA)	VIF	VERIFY IN FIELD
EGR	EQUIPMENT GROUND RING	REF	REFERENCE		

45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

750 WEST CENTER STREET., SUITE #301
WEST BRIDGEWATER, MA 02379

SITE NUMBER: CT1123
SITE NAME: BURLINGTON-GEORGE WASH
 BURLINGTON-GEORGE WASHINGTON TPKE
 BURLINGTON, CT 06013
 HARTFORD COUNTY

550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

NO.	DATE	REVISIONS	BY	CHK	APP'D
B	07/03/19	ISSUED FOR CONSTRUCTION	MR	AT	[Signature]
A	03/21/19	ISSUED FOR REVIEW	DJM	AT	[Signature]
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: DJM		



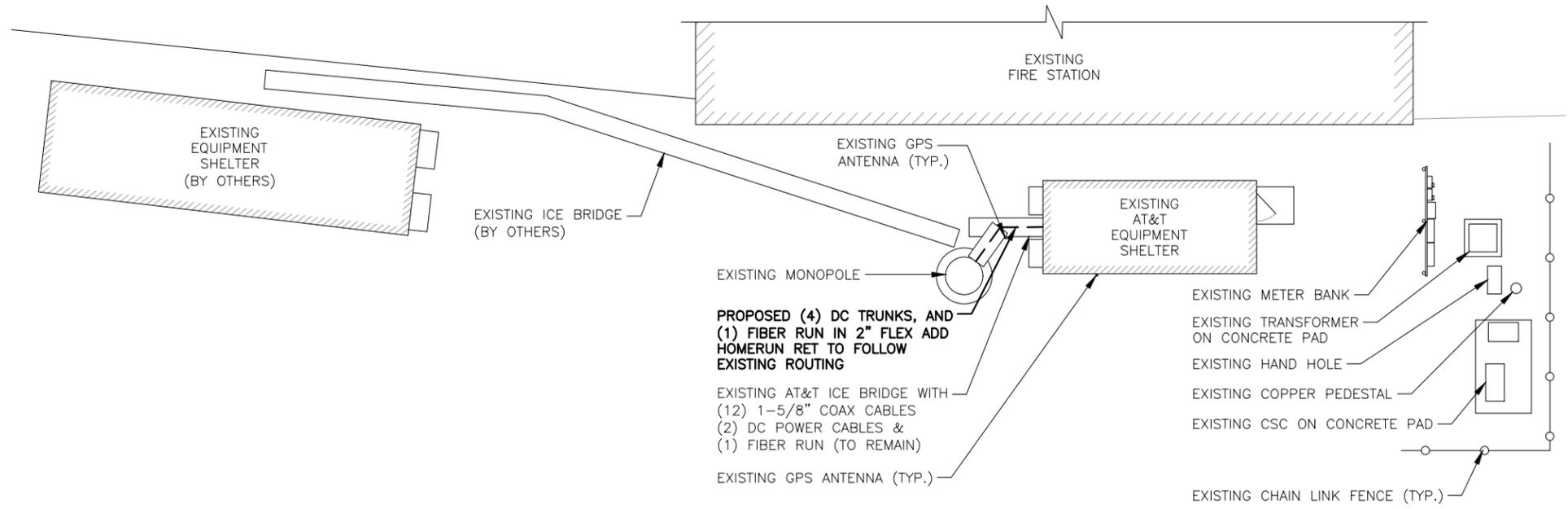
AT&T
 GENERAL NOTES
 (LTE 2C/3C/4C/4TX4RX)

SITE NUMBER	DRAWING NUMBER	REV
CT1123	GN-1	B

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

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC. DATED: APRIL 9, 2019

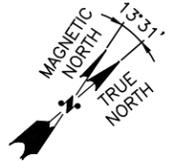
NOTE:
REFER TO STRUCTURAL ANALYSIS BY: HUDSON DESIGN GROUP, LLC, DATED: JULY 18, 2019,(REV.1) FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.



PROPOSED (4) DC TRUNKS, AND (1) FIBER RUN IN 2" FLEX ADD HOMERUN RET TO FOLLOW EXISTING ROUTING

EXISTING AT&T ICE BRIDGE WITH (12) 1-5/8" COAX CABLES (2) DC POWER CABLES & (1) FIBER RUN (TO REMAIN)

EXISTING GPS ANTENNA (TYP.)



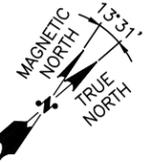
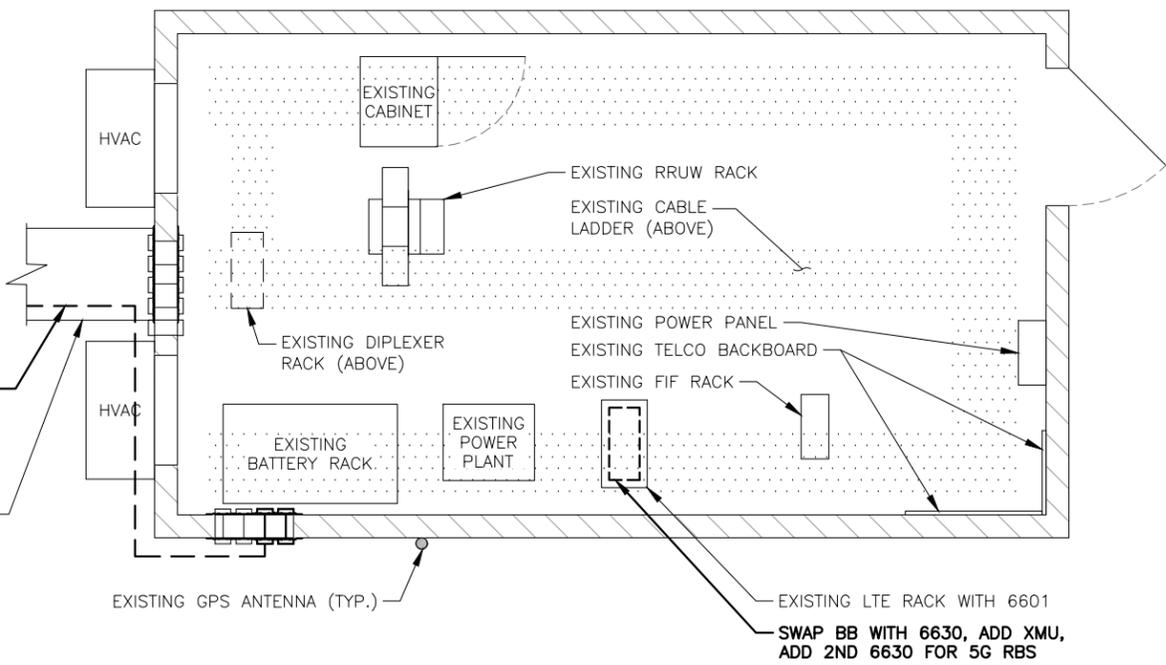
COMPOUND PLAN
22x34 SCALE: 1/8"=1'-0"
11x17 SCALE: 1/16"=1'-0"

1
A-1



PROPOSED (4) DC TRUNKS, AND (1) FIBER RUN IN 2" FLEX ADD HOMERUN RET TO FOLLOW EXISTING ROUTING THROUGH (2) PROPOSED CABLE PORTS

EXISTING AT&T ICE BRIDGE WITH (12) 1-5/8" COAX CABLES (2) DC POWER CABLES & (1) FIBER RUN (TO REMAIN)



EQUIPMENT PLAN
22x34 SCALE: 1/2"=1'-0"
11x17 SCALE: 1/4"=1'-0"

2
A-1



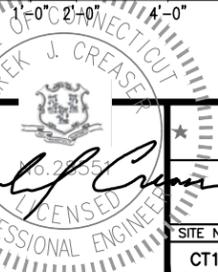
HG HUDSON Design Group LLC
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

CENTERLINE COMMUNICATIONS
750 WEST CENTER STREET., SUITE #301
WEST BRIDGEWATER, MA 02379

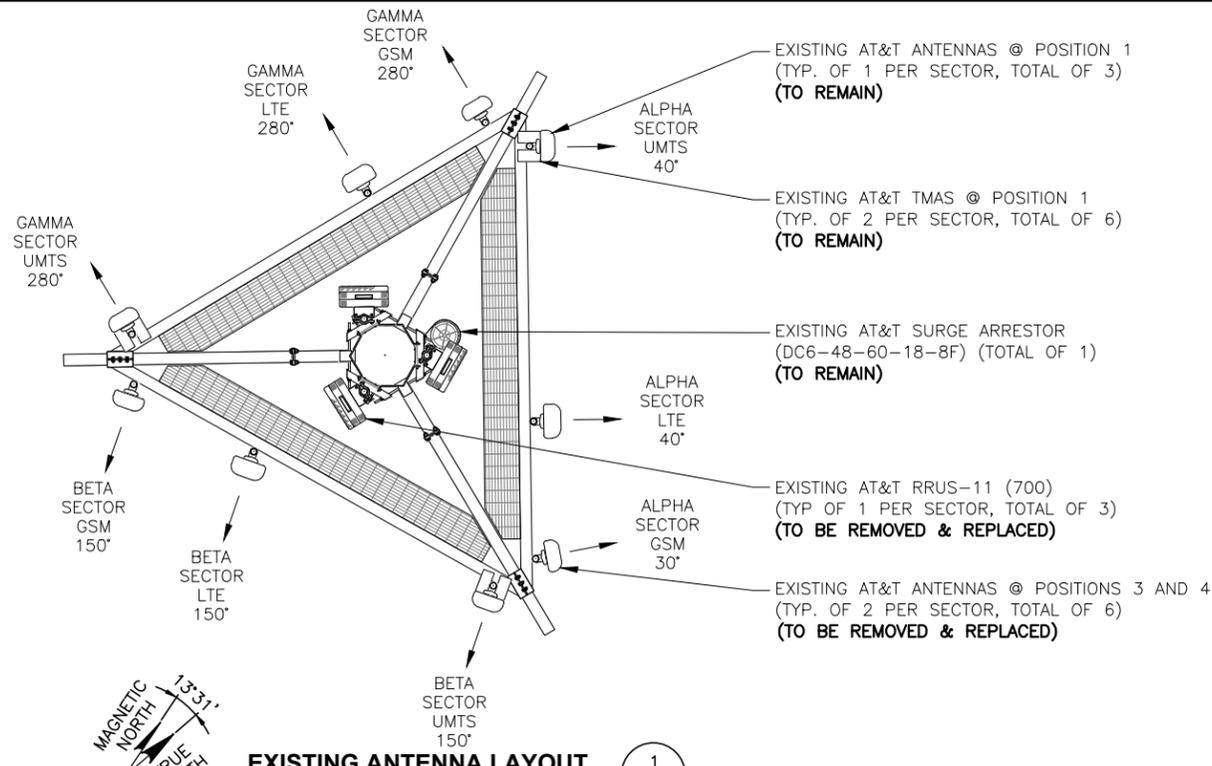
SITE NUMBER: CT1123
SITE NAME: BURLINGTON-GEORGE WASH
BURLINGTON-GEORGE WASHINGTON TPKE
BURLINGTON, CT 06013
HARTFORD COUNTY

at&t
550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

B	07/03/19	ISSUED FOR CONSTRUCTION	MR	AT	CHK
A	03/21/19	ISSUED FOR REVIEW	DJM	AT	CHK
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: DJM		

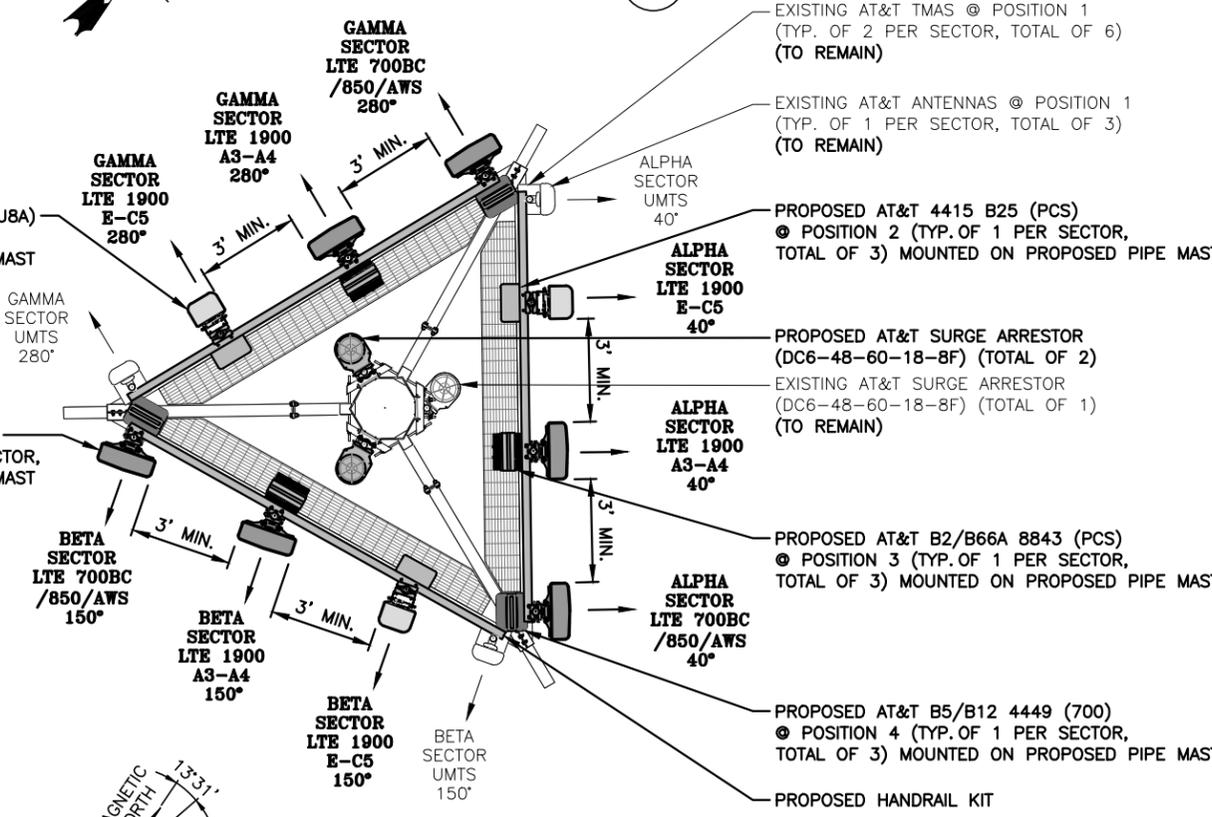


AT&T
COMPOUND & EQUIPMENT PLANS
(LTE 2C/3C/4C/4TX4RX)
SITE NUMBER: CT1123
DRAWING NUMBER: A-1
REV: B



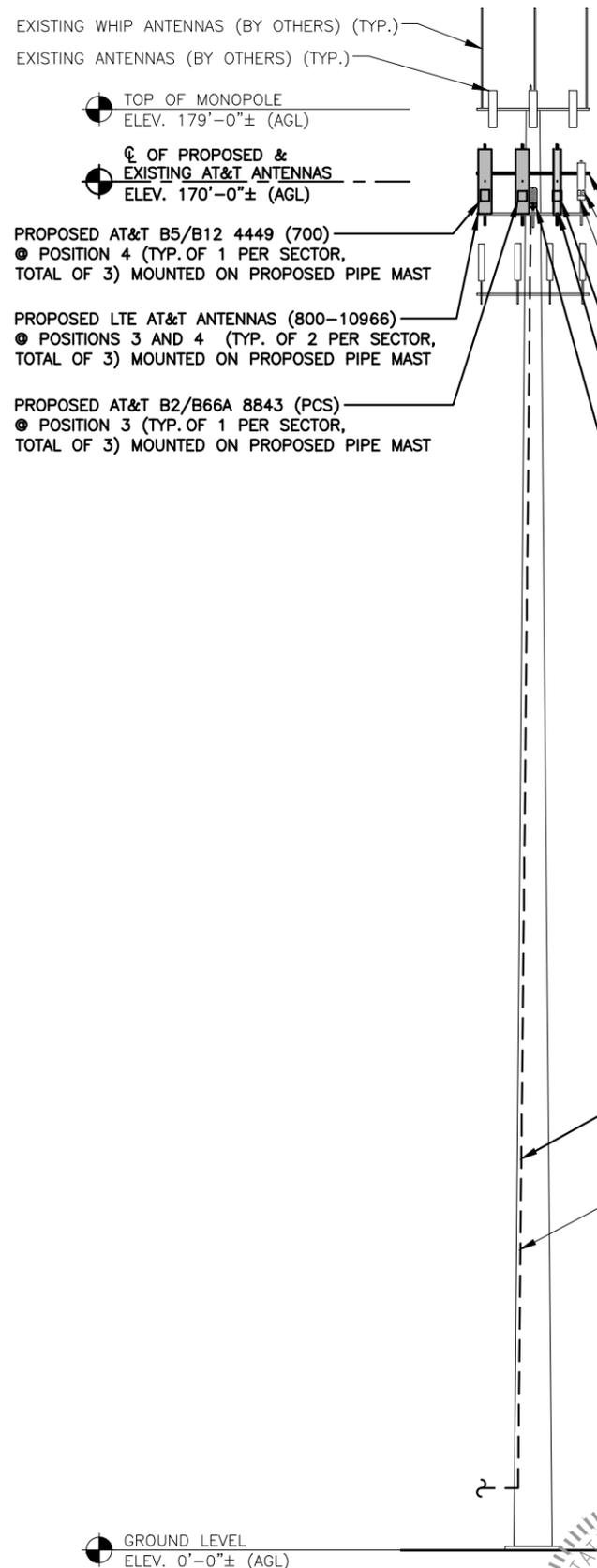
EXISTING ANTENNA LAYOUT
SCALE: N.T.S.

1
A-2



PROPOSED ANTENNA LAYOUT
SCALE: N.T.S.

2
A-2



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

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC. DATED: APRIL 9, 2019

NOTE:
REFER TO STRUCTURAL ANALYSIS BY: HUDSON DESIGN GROUP, LLC. DATED: JULY 18, 2019, (REV.1) FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

NOTE:
GROUND EQUIPMENT NOT SHOWN FOR CLARITY

ELEVATION
22x34 SCALE: 3/32"=1'-0" A-2
11x17 SCALE: 3/64"=1'-0"

3
A-2

NOTE:
EXISTING PIPE MOUNT TO BE MOVED IN POSITION 2 AS NEEDED TO ACCOMMODATE A MINIMUM SEPARATION OF 3'-0" BETWEEN ANTENNA POSITIONS 1 & 2.

HGD HUDSON Design Group LLC
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

CENTERLINE COMMUNICATIONS
750 WEST CENTER STREET., SUITE #301
WEST BRIDGEWATER, MA 02379

SITE NUMBER: CT1123
SITE NAME: BURLINGTON-GEORGE WASH
BURLINGTON-GEORGE WASHINGTON TPKE
BURLINGTON, CT 06013
HARTFORD COUNTY

at&t
550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

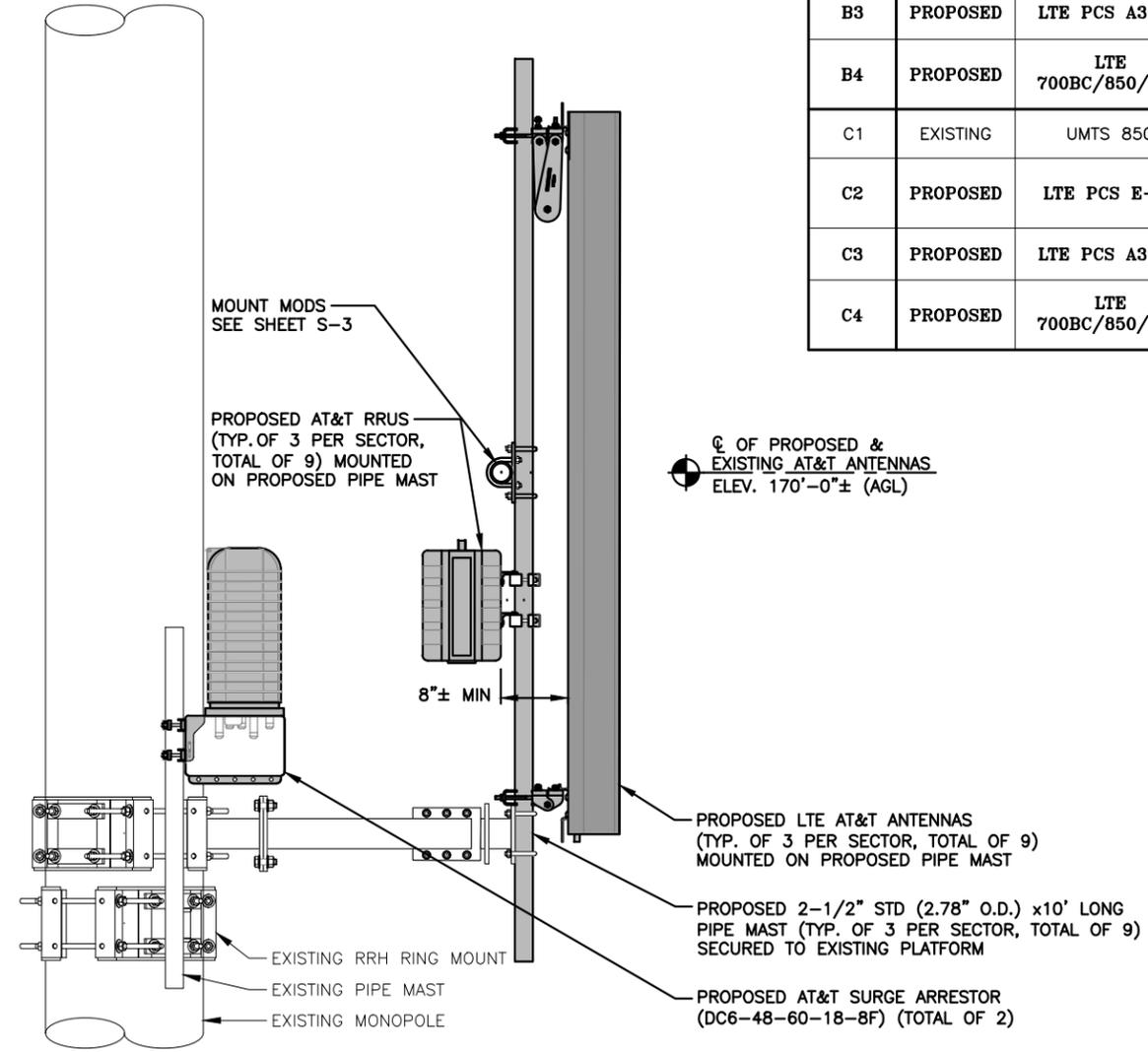
STATE OF CONNECTICUT
PROFESSIONAL ENGINEER
Derek J. Creaser
No. 2355
07/03/19 ISSUED FOR CONSTRUCTION
03/21/19 ISSUED FOR REVIEW
NO. DATE REVISIONS BY CHK APP'D
SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: DJM

AT&T
ANTENNA LAYOUTS & ELEVATION
(LTE 2C/3C/4C/4TX4RX)
SITE NUMBER: CT1123
DRAWING NUMBER: A-2
REV: B

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

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC. DATED: APRIL 9, 2019

NOTE:
REFER TO STRUCTURAL ANALYSIS BY: HUDSON DESIGN GROUP, LLC, DATED: JULY 18, 2019, (REV.1) FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.



PROPOSED LTE ANTENNA, RRH AND SURGE ARRESTOR MOUNTING DETAIL

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

2
A-3

ANTENNA SCHEDULE											
SECTOR	EXISTING/PROPOSED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA CL HEIGHT	AZIMUTH	TMA/DIPLEXER	RRU	SIZE (INCHES) (L x W x D)	FEEDER	RAYCAP
A1	EXISTING	UMTS 850	7770	55x11x5	±170'	40	(2)(E) LGP 21401	-	-	(2)1-5/8 COAX	--
A2	PROPOSED	LTE PCS E-C5	HPA-65R-BU8A	96x11.7x7.6	±170'	40	-	(1)(P) 4415 B25 (PCS)	18.5x13.4x5.9	-	(E) (1) RAYCAP DC6-48-60-18-8F
A3	PROPOSED	LTE PCS A3-A4	800-10966	96x20x6.9	±170'	40	-	(1)(P) B2/B66A 8843 (PCS)	14.9x13.2x10.9	(2) DC POWER (1) FIBER	
A4	PROPOSED	LTE 700BC/850/AWS	800-10966	96x20x6.9	±170'	40	-	(1)(P) B5/B12 4449 (700)	14.9x13.2x10.9	-	
B1	EXISTING	UMTS 850	7770	55x11x5	±170'	150	(2)(E) LGP 21401	-	-	(2)1-5/8 COAX	
B2	PROPOSED	LTE PCS E-C5	HPA-65R-BU8A	96x11.7x7.6	±170'	150	-	(1)(P) 4415 B25 (PCS)	18.5x13.4x5.9	-	(P) (1) RAYCAP DC6-48-60-18-8F
B3	PROPOSED	LTE PCS A3-A4	800-10966	96x20x6.9	±170'	150	-	(1)(P) B2/B66A 8843 (PCS)	14.9x13.2x10.9	(2) DC POWER (1) FIBER	
B4	PROPOSED	LTE 700BC/850/AWS	800-10966	96x20x6.9	±170'	150	-	(1)(P) B5/B12 4449 (700)	14.9x13.2x10.9	-	
C1	EXISTING	UMTS 850	7770	55x11x5	±170'	280	(2)(E) LGP 21401	-	-	(2)1-5/8 COAX	
C2	PROPOSED	LTE PCS E-C5	HPA-65R-BU8A	96x11.7x7.6	±170'	280	-	(1)(P) 4415 B25 (PCS)	18.5x13.4x5.9	(2) DC POWER	(P) (1) RAYCAP DC6-48-60-18-8F DC ONLY
C3	PROPOSED	LTE PCS A3-A4	800-10966	96x20x6.9	±170'	280	-	(1)(P) B2/B66A 8843 (PCS)	14.9x13.2x10.9	-	
C4	PROPOSED	LTE 700BC/850/AWS	800-10966	96x20x6.9	±170'	280	-	(1)(P) B5/B12 4449 (700)	14.9x13.2x10.9	-	

FINAL ANTENNA SCHEDULE
SCALE: N.T.S

1
A-3

RRU CHART				
QUANTITY	MODEL	L	W	D
3(P)	4415 B25 (PCS)	16.5"	13.4"	5.9"
3(P)	B2/B66A 8843 (PCS)	14.9"	13.2"	10.9"
3(P)	B5/B12 4449 (700)	14.9"	13.2"	10.4"

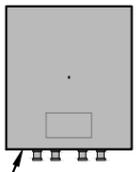
NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS

NOTE:
SEE RFDS FOR RRH FREQUENCY AND MODEL NUMBER

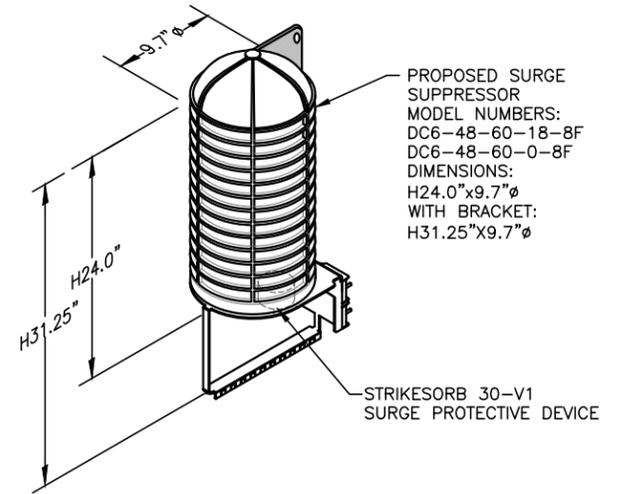
PROPOSED RRU REFER TO THE FINAL RFDS AND CHART FOR QUANTITY, MODEL AND DIMENSIONS

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

PROPOSED RRUS DETAIL
SCALE: N.T.S



3
A-3



NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

DC SURGE SUPPRESSOR DETAIL
SCALE: N.T.S

4
A-3

STRUCTURAL NOTES:

1. DESIGN REQUIREMENTS ARE PER STATE BUILDING CODE AND APPLICABLE SUPPLEMENTS, INTERNATIONAL BUILDING CODE, EIA/TIA-222-G STRUCTURAL STANDARDS FOR STEEL ANTENNA, TOWERS AND ANTENNA SUPPORTING STRUCTURES.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND ENGINEER OF RECORD.
3. DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
4. STRUCTURAL STEEL SHALL CONFORM TO ASTM A992 (Fy=50 ksi), MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE INDICATED.
5. STEEL PIPE SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE B, OR ASTM A53 PIPE STEEL BLACK AND HOT-DIPPED ZINC-COATED WELDED AND SEAMLESS TYPE E OR S, GRADE B. PIPE SIZES INDICATED ARE NOMINAL. ACTUAL OUTSIDE DIAMETER IS LARGER.
6. STRUCTURAL CONNECTION BOLTS SHALL BE HIGH STRENGTH BOLTS (BEARING TYPE) AND CONFORM TO ASTM A325 TYPE-X "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS AND PLAIN HARDENED WASHERS". ALL BOLTS SHALL BE 3/4" DIA UON.
7. ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED.
8. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
9. FIELD WELDS, DRILL HOLES, SAW CUTS AND ALL DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED WITH AN ORGANIC ZINC REPAIR PAINT COMPLYING WITH REQUIREMENTS OF ASTM A780. GALVANIZING REPAIR PAINT SHALL HAVE 65 PERCENT ZINC BY WEIGHT, ZIRP BY DUNCAN GALVANIZING, GALVA BRIGHT PREMIUM BY CROWN OR EQUAL. THICKNESS OF APPLIED GALVANIZING REPAIR PAINT SHALL BE NOT LESS THAN 4 COATS (ALLOW TIME TO DRY BETWEEN COATS) WITH A RESULTING COATING THICKNESS REQUIRED BY ASTM A123 OR A153 AS APPLICABLE.
10. CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS, AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND D.I. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "STEEL CONSTRUCTION MANUAL". 14TH EDITION.
1. INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON-CONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE CONSTRUCTION MANAGER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE CONSTRUCTION MANAGER APPROVAL.
2. UNISTRUT SHALL BE FORMED STEEL CHANNEL STRUT FRAMING AS MANUFACTURED BY UNISTRUT CORP., WAYNE, MI OR EQUAL. STRUT MEMBERS SHALL BE 1 5/8"x1 5/8"x12GA, UNLESS OTHERWISE NOTED, AND SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
3. EPOXY ANCHOR ASSEMBLY SHALL CONSIST OF STAINLESS STEEL ANCHOR ROD WITH NUTS & WASHERS. AN INTERNALLY THREADED INSERT, A SCREEN TUBE AND A EPOXY ADHESIVE. THE ANCHORING SYSTEM SHALL BE THE HILTI-HIT HY-270 AND OR HY-200 SYSTEMS (AS SPECIFIED IN DWG.) OR ENGINEERS APPROVED EQUAL.
4. EXPANSION BOLTS SHALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 4, CLASS I, HILTI KWIK BOLT III OR APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
5. LUMBER SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION AND THE NATIONAL FOREST PRODUCTS ASSOCIATION'S NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. ALL LUMBER SHALL BE PRESSURE TREATED AND SHALL BE STRUCTURAL GRADE NO. 2 OR BETTER.
6. WHERE ROOF PENETRATIONS ARE REQUIRED, THE CONTRACTOR SHALL CONTACT AND COORDINATE RELATED WORK WITH THE BUILDING OWNER AND THE EXISTING ROOF INSTALLER. WORK SHALL BE PERFORMED IN SUCH A MANNER AS TO NOT VOID THE EXISTING ROOF WARRANTY. ROOF SHALL BE WATERTIGHT.
7. ALL FIBERGLASS MEMBERS USED ARE AS MANUFACTURED BY STRONGWELL COMPANY OF BRISTOL, VA 24203. ALL DESIGN CRITERIA FOR THESE MEMBERS IS BASED ON INFORMATION PROVIDED IN THE DESIGN MANUAL. ALL REQUIREMENTS PUBLISHED IN SAID MANUAL MUST BE STRICTLY ADHERED TO.
8. NO MATERIALS TO BE ORDERED AND NO WORK TO BE COMPLETED UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED IN WRITING.
9. SUBCONTRACTOR SHALL FIREPROOF ALL STEEL TO PRE-EXISTING CONDITIONS.

SPECIAL INSPECTIONS (REFERENCE IBC CHAPTER 17):

GENERAL: WHERE APPLICATION IS MADE FOR CONSTRUCTION, THE OWNER OR THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED IN THE INSPECTION CHECKLIST ABOVE.

THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND ENGINEERS OF RECORD INVOLVED IN THE DESIGN OF THE PROJECT ARE PERMITTED TO ACT AS THE APPROVED AGENCY AND THEIR PERSONNEL ARE PERMITTED TO ACT AS THE SPECIAL INSPECTOR FOR THE WORK DESIGNED BY THEM, PROVIDED THOSE PERSONNEL MEET THE QUALIFICATION REQUIREMENTS.

STATEMENT OF SPECIAL INSPECTIONS: THE APPLICANT SHALL SUBMIT A STATEMENT OF SPECIAL INSPECTIONS PREPARED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE IN ACCORDANCE WITH SECTION 107.1 AS A CONDITION FOR ISSUANCE. THIS STATEMENT SHALL BE IN ACCORDANCE WITH SECTION 1705.

REPORT REQUIREMENT: SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS SHALL BE SUBMITTED.

SPECIAL INSPECTION CHECKLIST	
BEFORE CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
N/A	ENGINEER OF RECORD APPROVED SHOP DRAWINGS ¹
N/A	MATERIAL SPECIFICATIONS REPORT ²
N/A	FABRICATOR NDE INSPECTION
N/A	PACKING SLIPS ³
ADDITIONAL TESTING AND INSPECTIONS:	
DURING CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	STEEL INSPECTIONS
N/A	HIGH STRENGTH BOLT INSPECTIONS
N/A	HIGH WIND ZONE INSPECTIONS ⁴
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH, SLUMP TESTS AND PLACEMENT
N/A	POST INSTALLED ANCHOR VERIFICATION ⁵
N/A	GROUT VERIFICATION
REQUIRED	CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
REQUIRED	ON SITE COLD GALVANIZING VERIFICATION
N/A	GUY WIRE TENSION REPORT
ADDITIONAL TESTING AND INSPECTIONS:	
AFTER CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	MODIFICATION INSPECTOR REDLINE OR RECORD DRAWINGS ⁶
N/A	POST INSTALLED ANCHOR PULL-OUT TESTING
REQUIRED	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTES:

1. REQUIRED FOR ANY NEW SHOP FABRICATED FRP OR STEEL.
2. PROVIDED BY MANUFACTURER, REQUIRED IF HIGH STRENGTH BOLTS OR STEEL.
3. PROVIDED BY GENERAL CONTRACTOR; PROOF OF MATERIALS.
4. HIGH WIND ZONE INSPECTION CATB 120MPH OR CAT C,D 110MPH INSPECT FRAMING OF WALLS, ANCHORING, FASTENING SCHEDULE.
5. ADHESIVE FOR REBAR AND ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. DESIGN ADHESIVE BOND STRENGTH HAS BEEN BASED ON ACI 355.4 TEMPERATURE CATEGORY B WITH INSTALLATIONS INTO DRY HOLES DRILLED USING A CARBIDE BIT INTO CRACKED CONCRETE THAT HAS CURED FOR AT LEAST 21 DAYS. ADHESIVE ANCHORS REQUIRING CERTIFIED INSTALLATIONS SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER PER ACI 318-11 D.9.2.2. INSTALLATIONS REQUIRING CERTIFIED INSTALLERS SHALL BE INSPECTED PER ACI 318-11 D.8.2.4.
6. AS REQUIRED; FOR ANY FIELD CHANGES TO THE ITEMS IN THIS TABLE.

NOTES:

1. ALL CONNECTIONS TO BE SHOP WELDED & FIELD BOLTED USING 3/4"Ø A325-X BOLTS, UNLESS OTHERWISE NOTIFIED.
2. SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED BEFORE ORDERING MATERIAL.
3. SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED PRIOR TO STEEL FABRICATION.
4. VERIFICATION OF EXISTING ROOF CONSTRUCTION IS REQUIRED PRIOR TO THE INSTALLATION OF THE ROOF PLATFORM. ENGINEER OF RECORD IS TO APPROVE EXISTING CONDITIONS IN ORDER TO MOVE FORWARD.
5. CENTERLINE OF PROPOSED STEEL PLATFORM SUPPORT COLUMNS TO BE CENTRALLY LOCATED OVER THE EXISTING BUILDING COLUMNS.
6. EXISTING BRICK MASONRY COLUMNS/BEARING TO BE REPAIRED/REPLACED AT ALL PROPOSED PLATFORM SUPPORT POINTS. ENGINEER OF RECORD TO REVIEW AND APPROVE.

45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

750 WEST CENTER STREET., SUITE #301
WEST BRIDGEWATER, MA 02379

SITE NUMBER: CT1123
SITE NAME: BURLINGTON-GEORGE WASH

BURLINGTON-GEORGE WASHINGTON TPKE
BURLINGTON, CT 06013
HARTFORD COUNTY

550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

NO.	DATE	REVISIONS	BY	CHK	APP'D
B	07/03/19	ISSUED FOR CONSTRUCTION	MR	AT	[Signature]
A	03/21/19	ISSUED FOR REVIEW	DJM	AT	[Signature]

SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: DJM



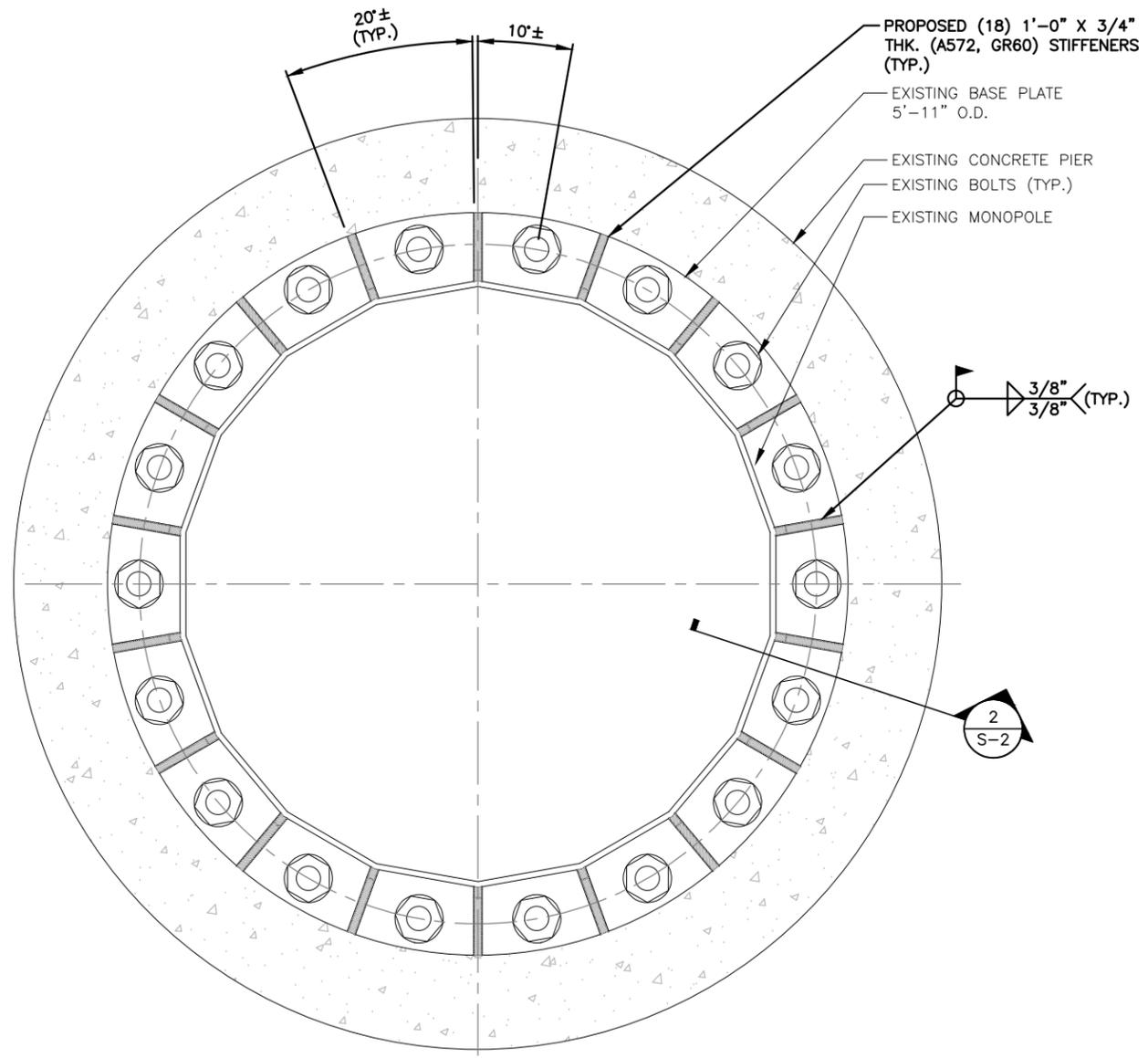
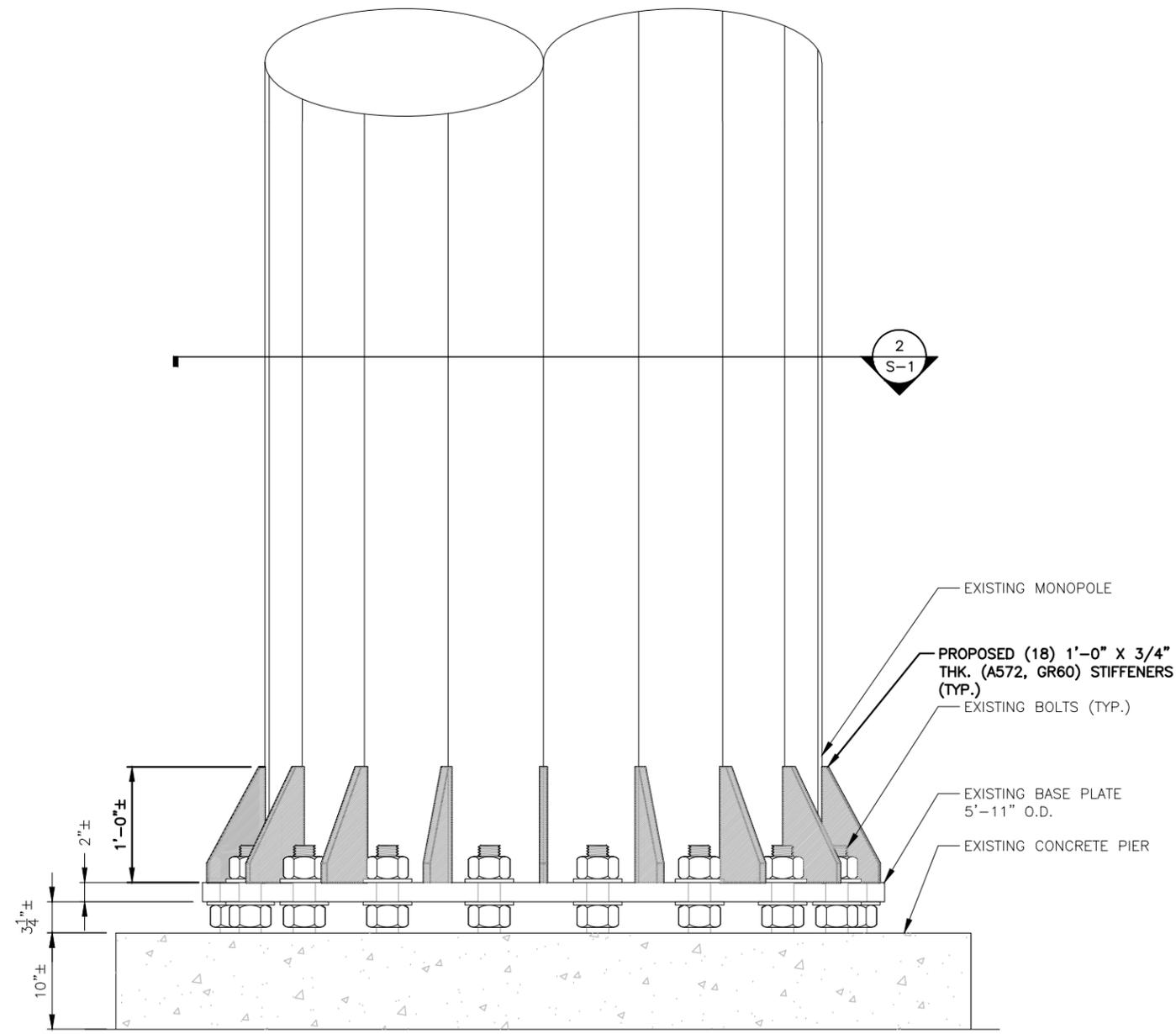
AT&T

STRUCTURAL NOTES
(LTE 2C/3C/4C/4TX4RX)

SITE NUMBER	DRAWING NUMBER	REV
CT1123	SN-1	B

NOTE:
 REFER TO STRUCTURAL ANALYSIS
 BY: HUDSON DESIGN GROUP, LLC,
 DATED: JULY 18, 2019, (REV.1)
 FOR THE CAPACITY OF THE
 EXISTING STRUCTURES TO SUPPORT
 THE PROPOSED EQUIPMENT.

NOTE:
 AN ANALYSIS FOR THE CAPACITY OF
 THE EXISTING ANTENNA MOUNT TO
 SUPPORT THE PROPOSED LOADING
 HAS BEEN COMPLETED BY:
 HUDSON DESIGN GROUP, LLC.
 DATED: APRIL 9, 2019



PROPOSED GUSSET PLATE ELEVATION 1 S-1
 22x34 SCALE: 1-1/2"=1'-0"
 11x17 SCALE: 3/4"=1'-0"

PROPOSED GUSSET PLATE PLAN 2 S-1
 22x34 SCALE: 1-1/2"=1'-0"
 11x17 SCALE: 3/4"=1'-0"

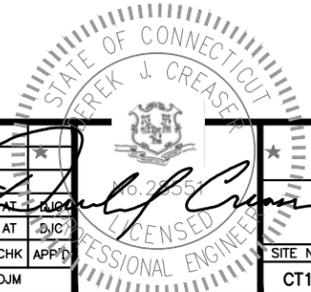
HGD HUDSON
 Design Group LLC
 45 BEECHWOOD DRIVE
 NORTH ANDOVER, MA 01845
 TEL: (978) 557-5553
 FAX: (978) 336-5586

CENTERLINE
 COMMUNICATIONS
 750 WEST CENTER STREET., SUITE #301
 WEST BRIDGEWATER, MA 02379

SITE NUMBER: CT1123
 SITE NAME: BURLINGTON-GEORGE WASH
 BURLINGTON-GEORGE WASHINGTON TPKE
 BURLINGTON, CT 06013
 HARTFORD COUNTY

at&t
 550 COCHITUATE ROAD
 FRAMINGHAM, MA 01701

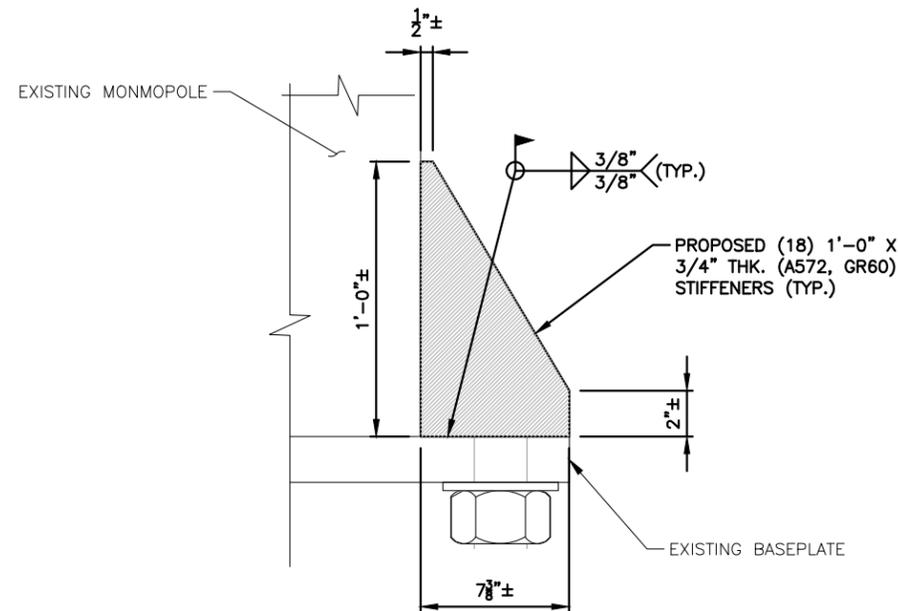
NO.	DATE	REVISIONS	BY	CHK	APP'D
B	07/03/19	ISSUED FOR CONSTRUCTION	MR	AT	DJM
A	03/21/19	ISSUED FOR REVIEW	DJM	AT	DJM
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: DJM		



AT&T
 MOUNT MOD
 (LTE 2C/3C/4C/4TX4RX)
 SITE NUMBER: CT1123
 DRAWING NUMBER: S-1
 REV: B

NOTE:
 REFER TO STRUCTURAL ANALYSIS
 BY: HUDSON DESIGN GROUP, LLC,
 DATED: JULY 18, 2019,(REV.1)
 FOR THE CAPACITY OF THE
 EXISTING STRUCTURES TO SUPPORT
 THE PROPOSED EQUIPMENT.

NOTE:
 AN ANALYSIS FOR THE CAPACITY OF
 THE EXISTING **ANTENNA MOUNT** TO
 SUPPORT THE PROPOSED LOADING
 HAS BEEN COMPLETED BY:
 HUDSON DESIGN GROUP, LLC.
 DATED: APRIL 9, 2019



PROPOSED GUSSET PLATE
 22x34 SCALE: 3"=1'-0"
 11x17 SCALE: 1-1/2"=1'-0"

1
S-2



HG HUDSON
Design Group LLC
 45 BEECHWOOD DRIVE
 NORTH ANDOVER, MA 01845
 TEL: (978) 557-5553
 FAX: (978) 336-5586



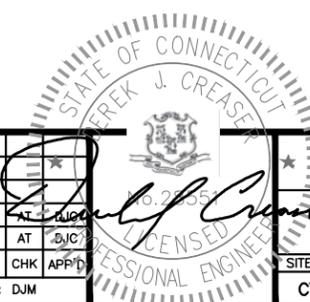
750 WEST CENTER STREET., SUITE #301
 WEST BRIDGEWATER, MA 02379

SITE NUMBER: CT1123
SITE NAME: BURLINGTON-GEORGE WASH
 BURLINGTON-GEORGE WASHINGTON TPKE
 BURLINGTON, CT 06013
 HARTFORD COUNTY

at&t
 550 COCHITUATE ROAD
 FRAMINGHAM, MA 01701

NO.	DATE	REVISIONS	BY	CHK	APP'D
B	07/03/19	ISSUED FOR CONSTRUCTION	MR	AT	[Signature]
A	03/21/19	ISSUED FOR REVIEW	DJM	AT	[Signature]

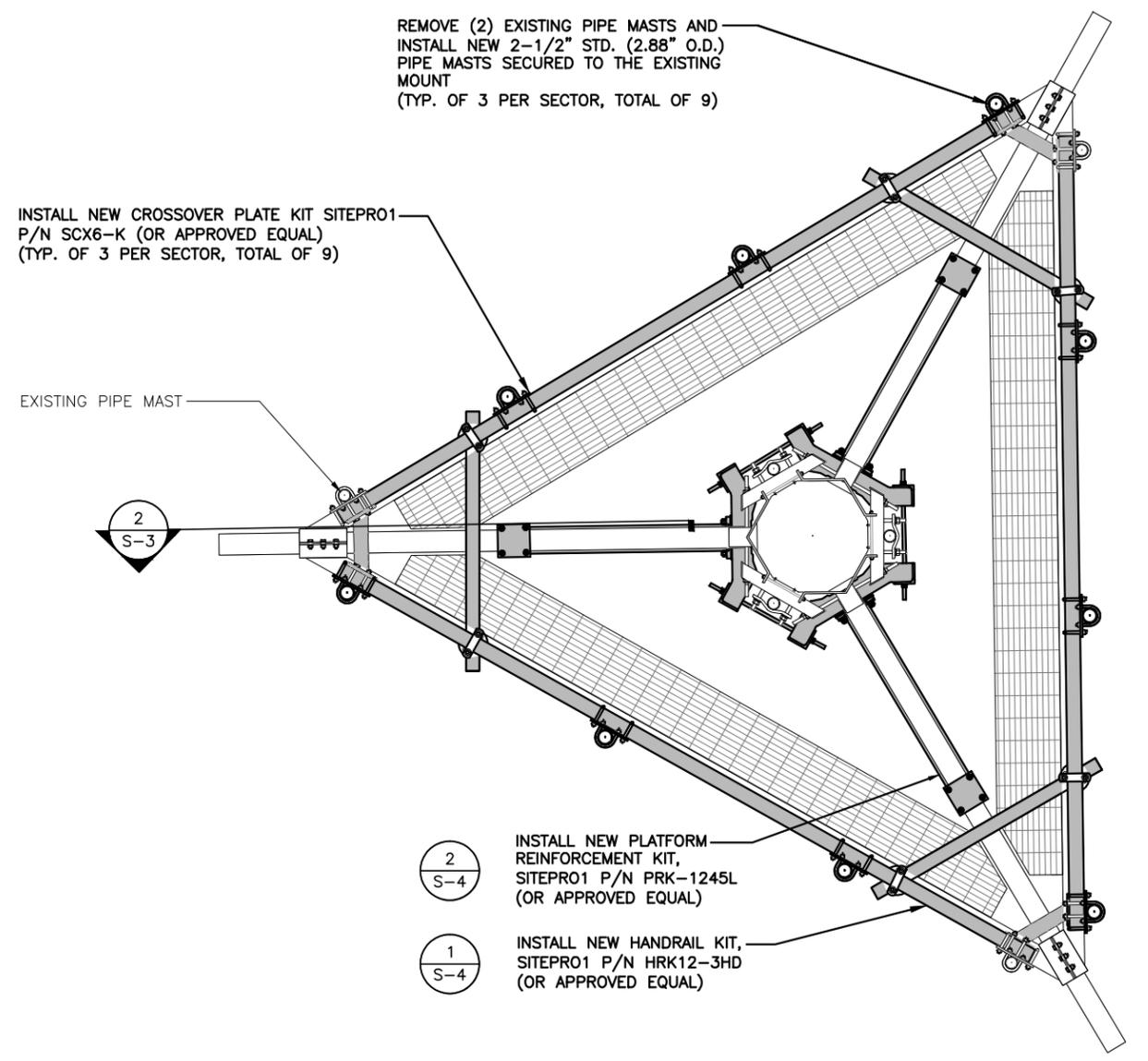
SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: DJM



AT&T
 BASEPLATE MOD
 (LTE 2C/3C/4C/4TX4RX)
 SITE NUMBER: CT1123 DRAWING NUMBER: S-2 REV: B

NOTE:
 REFER TO STRUCTURAL ANALYSIS
 BY: HUDSON DESIGN GROUP, LLC,
 DATED: JULY 18, 2019,(REV.1)
 FOR THE CAPACITY OF THE
 EXISTING STRUCTURES TO SUPPORT
 THE PROPOSED EQUIPMENT.

NOTE:
 AN ANALYSIS FOR THE CAPACITY OF
 THE EXISTING **ANTENNA MOUNT**
 TO SUPPORT THE PROPOSED LOADING
 HAS BEEN COMPLETED BY:
 HUDSON DESIGN GROUP, LLC.
 DATED: APRIL 9, 2019



INSTALL NEW CROSSOVER PLATE KIT SITEPRO1
 P/N SCX6-K (OR APPROVED EQUAL)
 (TYP. OF 3 PER SECTOR, TOTAL OF 9)

REMOVE (2) EXISTING PIPE MASTS AND
 INSTALL NEW 2-1/2" STD. (2.88" O.D.)
 PIPE MASTS SECURED TO THE EXISTING
 MOUNT
 (TYP. OF 3 PER SECTOR, TOTAL OF 9)

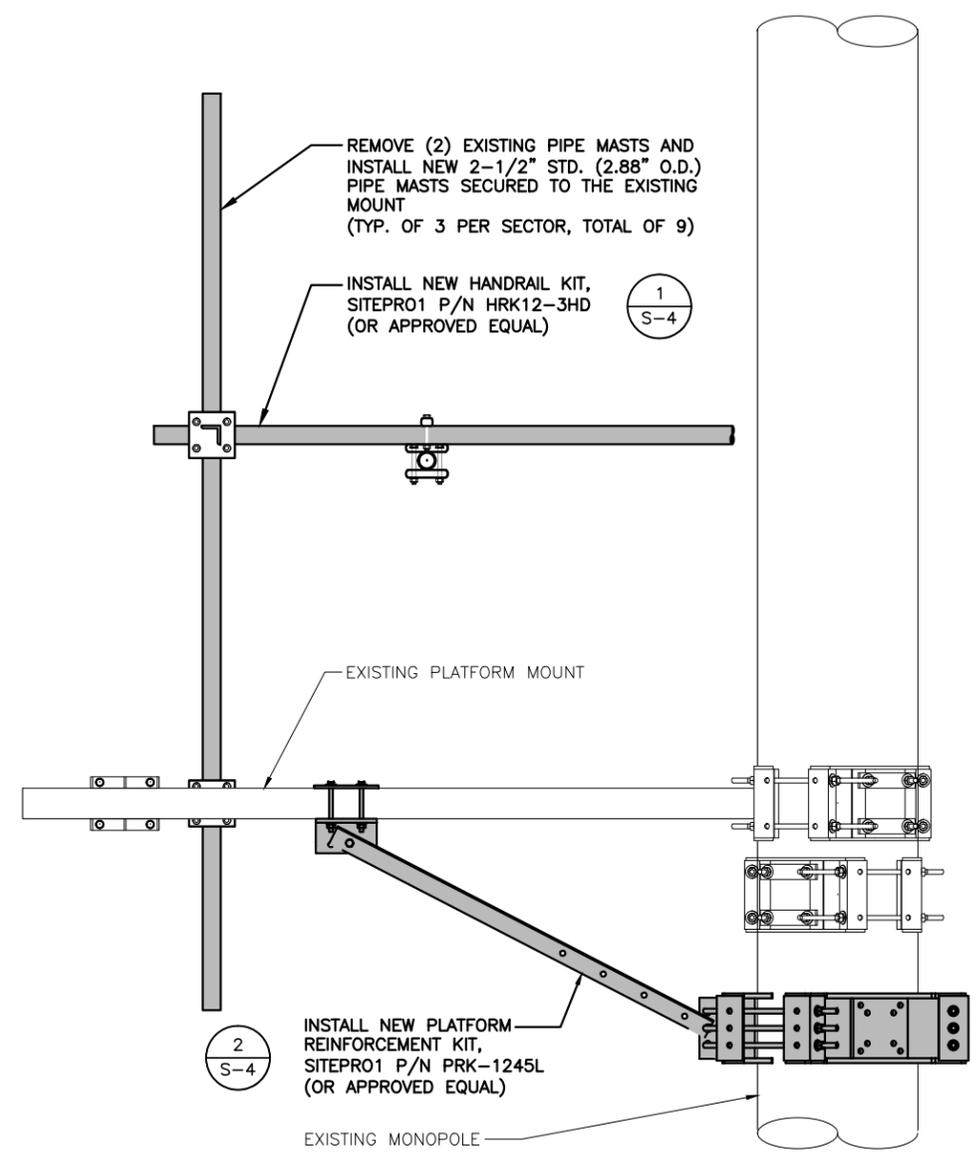
EXISTING PIPE MAST

2
S-3

2
S-4
INSTALL NEW PLATFORM
 REINFORCEMENT KIT,
 SITEPRO1 P/N PRK-1245L
 (OR APPROVED EQUAL)

1
S-4
INSTALL NEW HANDRAIL KIT,
 SITEPRO1 P/N HRK12-3HD
 (OR APPROVED EQUAL)

PROPOSED MOUNT MODIFICATIONS PLAN 1
 22x34 SCALE: 3/4"=1'-0"
 11x17 SCALE: 3/8"=1'-0" S-3



REMOVE (2) EXISTING PIPE MASTS AND
 INSTALL NEW 2-1/2" STD. (2.88" O.D.)
 PIPE MASTS SECURED TO THE EXISTING
 MOUNT
 (TYP. OF 3 PER SECTOR, TOTAL OF 9)

INSTALL NEW HANDRAIL KIT,
 SITEPRO1 P/N HRK12-3HD
 (OR APPROVED EQUAL)

1
S-4

EXISTING PLATFORM MOUNT

2
S-4
INSTALL NEW PLATFORM
 REINFORCEMENT KIT,
 SITEPRO1 P/N PRK-1245L
 (OR APPROVED EQUAL)

EXISTING MONOPOLE

PROPOSED MOUNT MODIFICATIONS ELEVATION 2
 22x34 SCALE: 1"=1'-0"
 11x17 SCALE: 1/2"=1'-0" S-3



HDG HUDSON Design Group LLC
 45 BEECHWOOD DRIVE
 NORTH ANDOVER, MA 01845
 TEL: (978) 557-5553
 FAX: (978) 336-5586

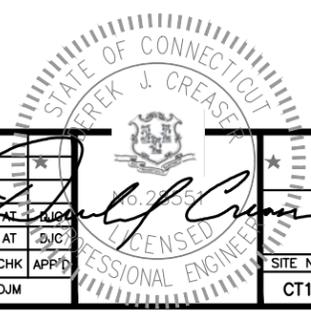
CENTERLINE COMMUNICATIONS
 750 WEST CENTER STREET., SUITE #301
 WEST BRIDGEWATER, MA 02379

SITE NUMBER: CT1123
SITE NAME: BURLINGTON-GEORGE WASH
 BURLINGTON-GEORGE WASHINGTON TPKE
 BURLINGTON, CT 06013
 HARTFORD COUNTY

at&t
 550 COCHITUATE ROAD
 FRAMINGHAM, MA 01701

NO.	DATE	REVISIONS	BY	CHK	APP'D
B	07/03/19	ISSUED FOR CONSTRUCTION	MR	AT	[Signature]
A	03/21/19	ISSUED FOR REVIEW	DJM	AT	[Signature]

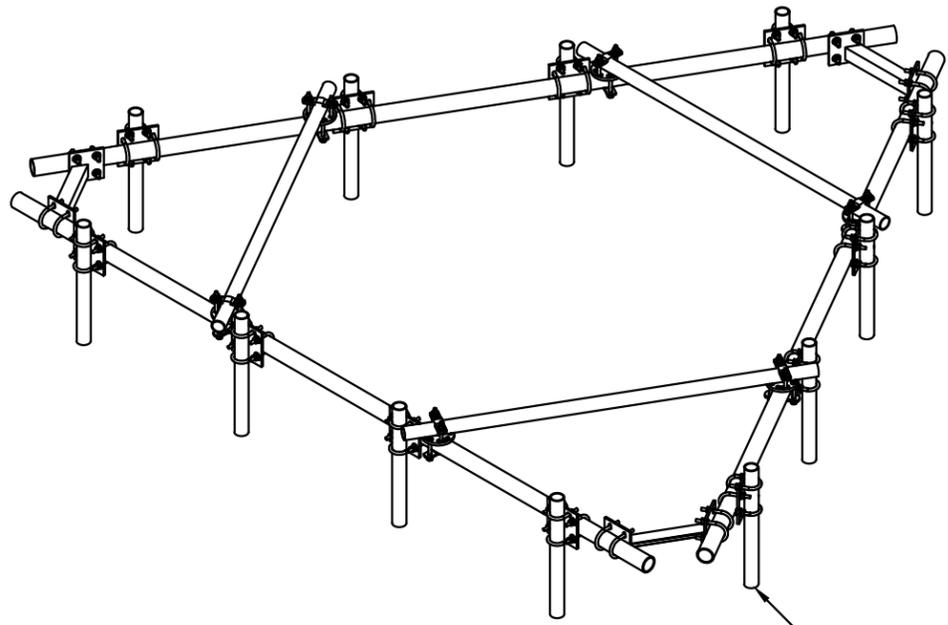
SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: DJM



AT&T
MOUNT MODIFICATION DESIGN
 (LTE 2C/3C/4C/4TX4RX)
 SITE NUMBER: CT1123
 DRAWING NUMBER: S-3
 REV: B

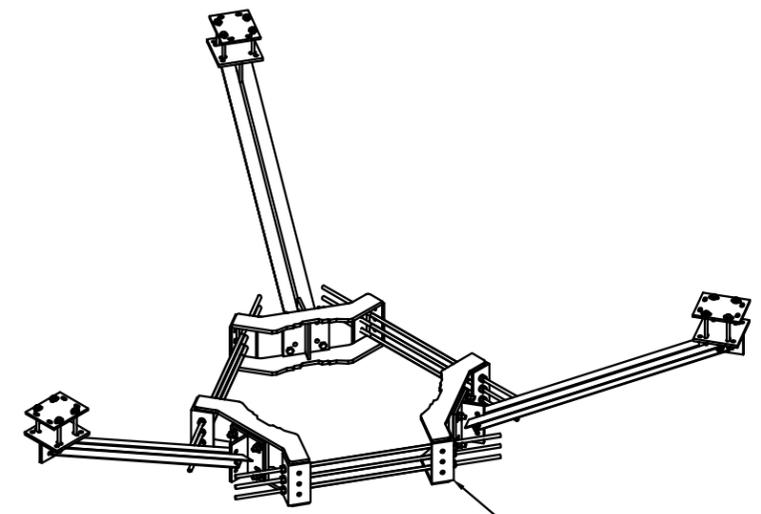
NOTE:
 REFER TO STRUCTURAL ANALYSIS
 BY: HUDSON DESIGN GROUP, LLC,
 DATED: JULY 18, 2019,(REV.1)
 FOR THE CAPACITY OF THE
 EXISTING STRUCTURES TO SUPPORT
 THE PROPOSED EQUIPMENT.

NOTE:
 AN ANALYSIS FOR THE CAPACITY OF
 THE EXISTING **ANTENNA MOUNT**
 TO SUPPORT THE PROPOSED LOADING
 HAS BEEN COMPLETED BY:
 HUDSON DESIGN GROUP, LLC.
 DATED: APRIL 9, 2019



INSTALL NEW HANDRAIL KIT,
 SITEPRO1 P/N HRK12-3HD
 (OR APPROVED EQUAL)

PROPOSED HANDRAIL KIT ①
 SCALE: N.T.S



INSTALL NEW PLATFORM
 REINFORCEMENT KIT,
 SITEPRO1 P/N PRK-1245L
 (OR APPROVED EQUAL)

PROPOSED PLATFORM REINFORCEMENT ②
 SCALE: N.T.S

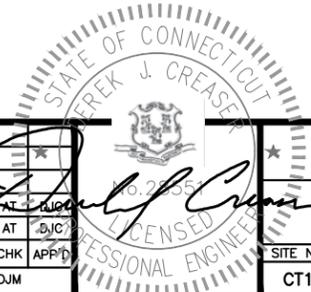
HG HUDSON
Design Group LLC
 45 BEECHWOOD DRIVE
 NORTH ANDOVER, MA 01845
 TEL: (978) 557-5553
 FAX: (978) 336-5586

CENTERLINE
 COMMUNICATIONS
 750 WEST CENTER STREET., SUITE #301
 WEST BRIDGEWATER, MA 02379

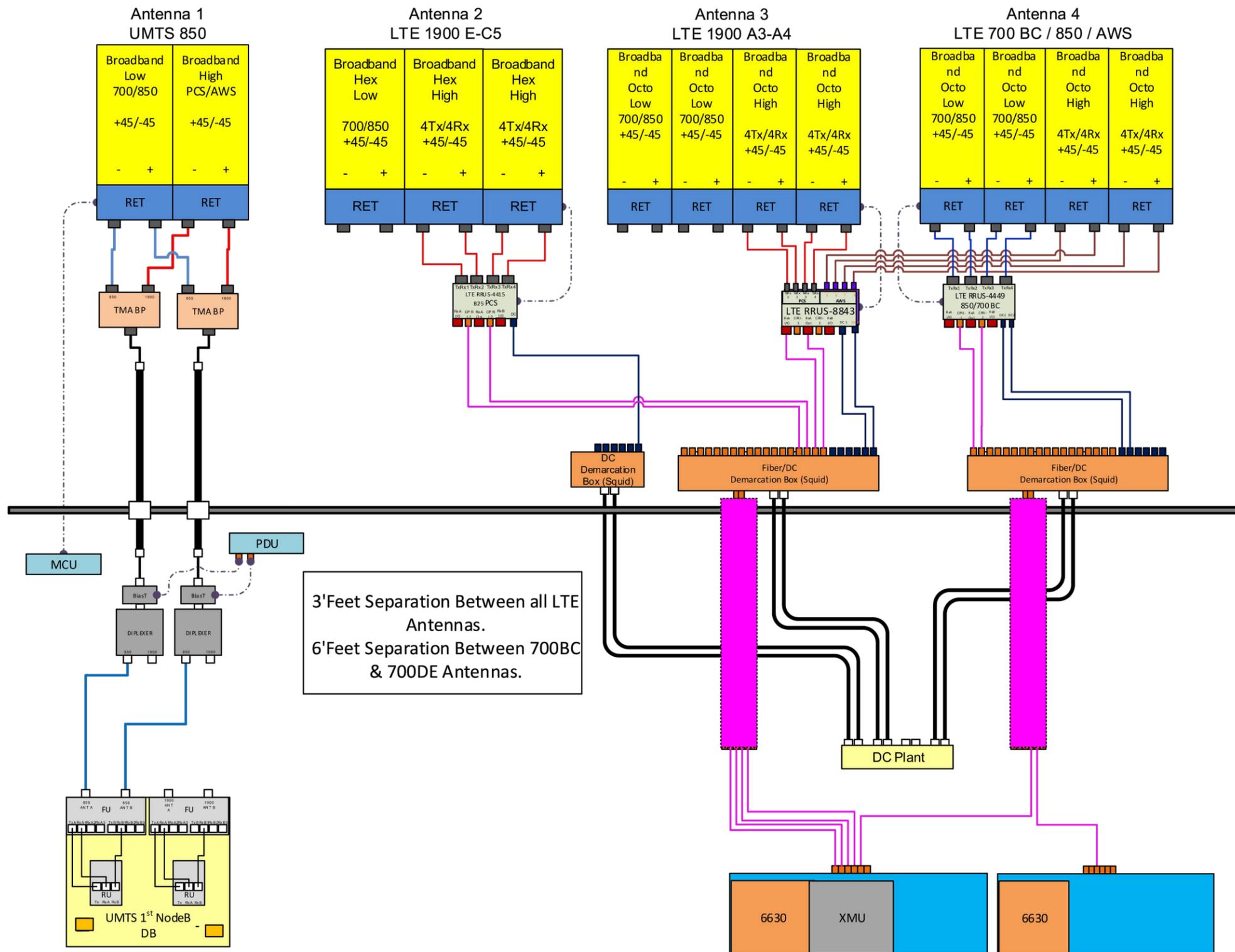
SITE NUMBER: CT1123
SITE NAME: BURLINGTON-GEORGE WASH
 BURLINGTON-GEORGE WASHINGTON TPKE
 BURLINGTON, CT 06013
 HARTFORD COUNTY

at&t
 550 COCHITUATE ROAD
 FRAMINGHAM, MA 01701

NO.	DATE	ISSUED FOR REVIEW	BY	CHK	APP'D
A	03/21/19	ISSUED FOR REVIEW	DJM	AT	DJG
B	07/03/19	ISSUED FOR CONSTRUCTION	MR	AT	DJG
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: DJM		



AT&T
 STRUCTURAL DETAILS
 (LTE 2C/3C/4C/4TX4RX)
 SITE NUMBER: CT1123
 DRAWING NUMBER: S-4
 REV: B



3' Feet Separation Between all LTE Antennas.
6' Feet Separation Between 700BC & 700DE Antennas.

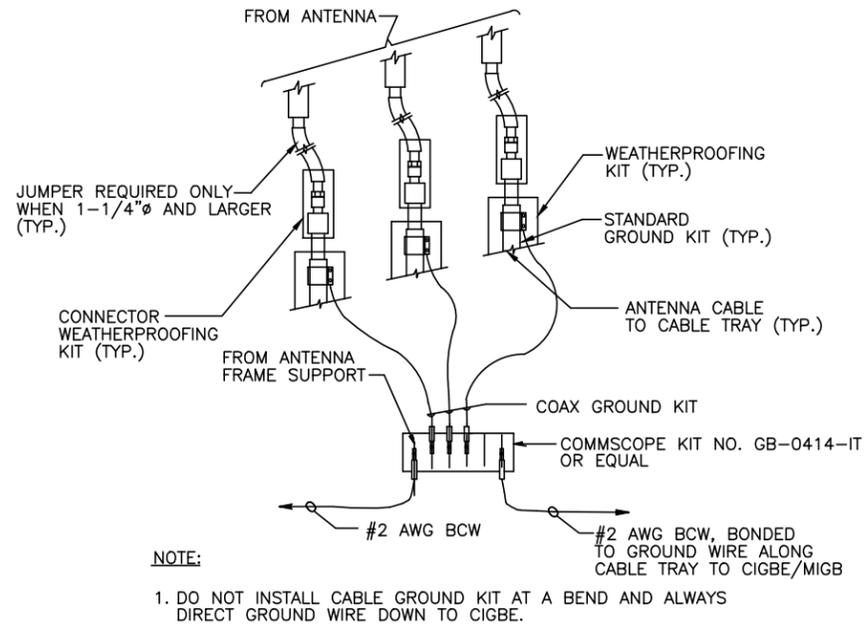
NOTE:
1. CONTRACTOR TO CONFIRM ALL PARTS.
2. INSTALL ALL EQUIPMENT TO MANUFACTURER'S RECOMMENDATIONS

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

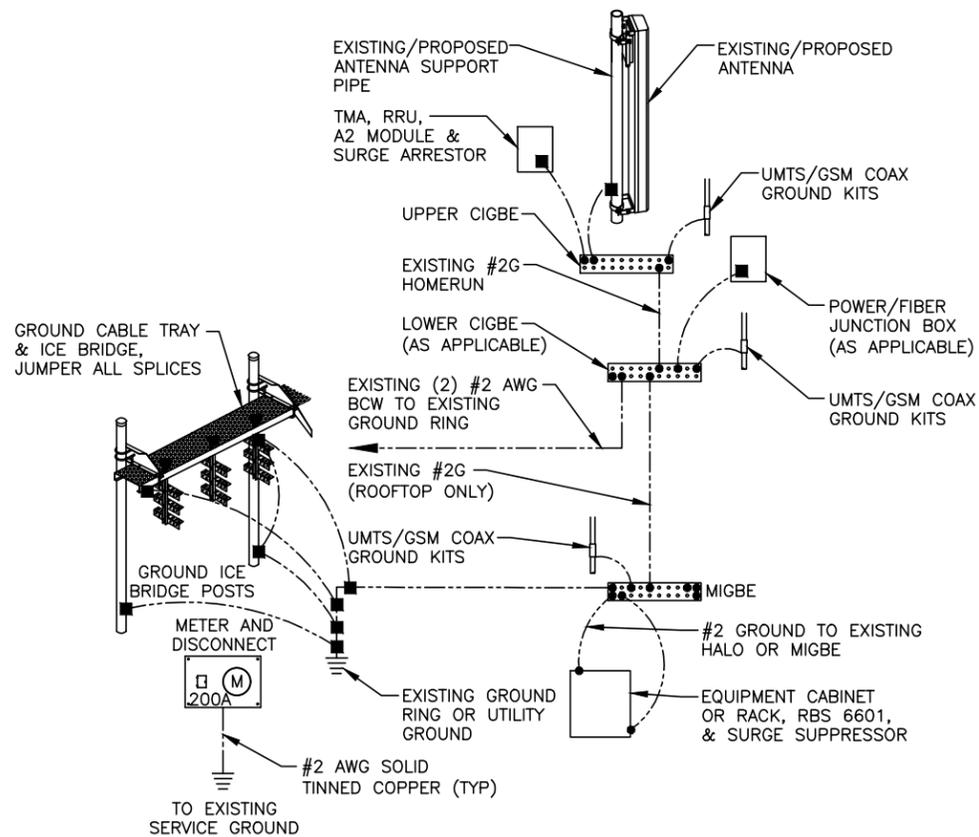
RF PLUMBING DIAGRAM 1
SCALE: N.T.S. RF-1

NO.	DATE	REVISIONS	BY	CHK	APP'D
B	07/03/19	ISSUED FOR CONSTRUCTION	MR	AT	DJM
A	03/21/19	ISSUED FOR REVIEW	DJM	AT	DJM
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: DJM		

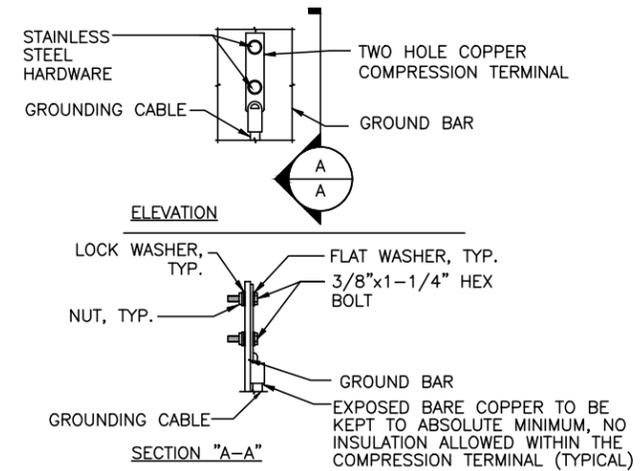




GROUND WIRE TO GROUND BAR CONNECTION DETAIL 1
SCALE: N.T.S. G-1



GROUNDING RISER DIAGRAM 2
SCALE: N.T.S. G-1



- NOTES:
- "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
 - OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATION.
 - CADWELDED DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB

TYPICAL GROUND BAR CONNECTION DETAIL 3
SCALE: N.T.S. G-1

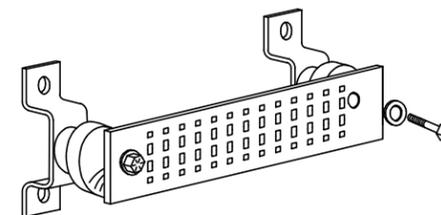
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" - SURGE PRODUCERS

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

SECTION "A" - SURGE ABSORBERS

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



GROUND BAR - DETAIL 4
SCALE: N.T.S. G-1

B		07/03/19	ISSUED FOR CONSTRUCTION	MR	AT	CHK	APP'D		AT&T		
A		03/21/19	ISSUED FOR REVIEW	DJM	AT	CHK	APP'D		GROUNDING DETAILS (LTE 2C/3C/4C/4TX4RX)		
NO.	DATE	REVISIONS		BY	CHK	APP'D	SITE NUMBER		DRAWING NUMBER	REV	
SCALE: AS SHOWN							DESIGNED BY: AT	DRAWN BY: DJM	CT1123	G-1	B

BUCK & BUCK, LLC
E N G I N E E R S

98 WADSWORTH STREET, HARTFORD, CONNECTICUT 06106
TELEPHONE 860-527-2677
FAX 860-527-7100

JAMES A. THOMPSON
LAWRENCE F. BUCK
WILLIAM B. ASTON
DOUGLAS E. ELLIS
GREGORY B. HUNT

HENRY WOLCOTT BUCK
1831-1965
ROBINSON D. BUCK
1935-1959
ROBINSON W. BUCK

Comm. 9538-198

August 9, 2005

Planning and Zoning Commission
Town of Burlington
200 Spielman Highway
Burlington, CT 06013

Re: Cingular Wireless
719 George Washington Turnpike

RECEIVED
BURLINGTON PZC
DATE AUG 10 2005
BY *[Signature]*

Commissioners:

The Equipment Shelter Building of the subject application is proposed to be fairly close to one of the public water supply wells of the Burlington Senior Housing Water Supply System. Said water supply system is under the jurisdiction of the Connecticut Department of Health and the Connecticut Department of Utility Control.

I have sent a copy of the applicant's plans to the Department of Health for their review and comments (see attached letter) and I request that any action on this matter by the Commission be subject to conditions set by the Department of Health.

Sincerely yours,

[Signature]
James A. Thompson

JAT/lh/-213b

Attachment

cc: Theodore Scheidel (fax)
Charles Kirchofer (fax)
Atty. Bauer (fax)
Atty. Vollano
Tim Burk

CUDDY & FEDER LLP
 90 MAPLE AVENUE
 WHITE PLAINS, NEW YORK 10601-5196

WILLIAM V. CUDDY
 1971-2000

NEIL J. ALEXANDER (also CT)
 THOMAS R. BEIRNE (also DC)
 STEPHANIE BORTNYK (also NJ)
 JOSEPH P. CARLUCCI
 LUCIA CHIOGCHIO (also CT)
 ROBERT DISIENA
 KENNETH J. DUBROFF
 ROBERT FEDER
 CHRISTOPHER B. FISHER (also CT)
 ANTHONY B. GIOFFRE III (also CT)
 KAREN G. GRANIK
 JOSHUA J. GRAUER
 KENNETH F. JURIST
 MICHAEL L. KATZ (also NJ)
 JOSHUA E. KIMERLING (also CT)
 DANIEL F. LEARY (also CT)
 BARRY E. LONG

(914) 781-1300
 FACSIMILE (914) 761-5372/6405
 www.cuddyfeder.com

500 FIFTH AVENUE
 NEW YORK, NEW YORK 10110
 (212) 944-2841
 FACSIMILE (212) 944-2843

WESTAGE BUSINESS CENTER
 300 WESTAGE BUSINESS CENTER, SUITE 380
 FISHKILL, NEW YORK 12524
 (845) 898-2229
 FACSIMILE (845) 898-3672

NORWALK, CONNECTICUT

EON S. NICHOLS (also CT)
 WILLIAM S. NULL
 DAWN M. PORTNEY
 ELISABETH N. RADDOW
 NEIL T. RIMSKY
 RUTH E. ROTH
 ANDREW P. SCHRIEVER (also MA)
 JENNIFER L. VAN TUYL
 CHAUNCEY L. WALKER (also CA)

Of Counsel
 ANDREW A. GLICKSON (also CT)
 ROBERT L. OSAR (also TX)
 MARYANN M. PALERMO
 ROBERT C. SCHNEIDER

July 19, 2005

By Federal Express

Chairman Michael Vollono and
 Members of the Planning and Zoning Commission
 Town of Burlington
 Burlington Town Hall
 200 Spielman Highway
 Burlington, Connecticut 06013

RECEIVED
 BURLINGTON PZC
 DATE AUG 10 2005
 BY

Re: New Cingular Wireless PCS, LLC
 Site Plan Application
 Premises: Burlington Fire Department, 719 George Washington Turnpike
 Town of Burlington (Site #1123)
 Tax Id: Map 4, Block 8, Lot 73-1

Dear Chairman Vollono and Members of the Planning and Zoning Commission:

This letter is respectfully submitted on behalf of New Cingular Wireless PCS, LLC ("Cingular") in connection with the above referenced application to replace an existing 140' lattice communications tower at the Burlington Fire Department, located at 719 George Washington Turnpike (the "Premises"), with a new approximately 180' monopole.

The Premises

The Premises consists of an approximately 93,000 square-foot parcel of property owned by the Town of Burlington. The Premises is classified in the CB, Central Business Zoning District and is improved with the Burlington Fire House, an approximately 140' communications lattice tower, an associated communications equipment shelter and parking area.

RECEIVED
 JUL 25 2005

CUDDY & FEDER LLP

New Cingular Wireless PCS, LLC
July 19, 2005
Page 2

Cingular's Proposed Facility

Cingular proposes to replace the existing 140' communications lattice tower located adjacent to the southern corner of the fire house building with a new approximately 180' monopole. The new monopole will be located approximately 180 feet southwest of the existing lattice tower. Pursuant to Cingular's agreement with the Town, once the proposed improvements have been made by Cingular, the Town will own the new monopole. Cingular will relocate the fire department antennas to the top of the new monopole. The Verizon Wireless antennas that are currently on the lattice tower will be relocated by Cingular to an antenna centerline height of approximately 160' on the new monopole. Cingular will install six (6) panel antennas on the new monopole at a centerline height of approximately 170'.

Cingular's proposal also includes the installation of an approximately 11'-6" x 20' equipment shelter for the unmanned electronic equipment cabinets needed to operate its facility. The existing cable bridge that connects the lattice tower with the existing equipment shelter will be relocated from the east side of the existing equipment shelter to the west side, away from the eastern property line, thereby decreasing its visibility. A cable tray from the new monopole to the proposed equipment shelter for Cingular's Facility will also be installed.

The improvements are detailed on the Site Plan and drawings accompanying this application, prepared by Dewberry-Goodkind, Inc. (the "Site Plan"). It is respectfully submitted that, as demonstrated by the Site Plan and other materials submitted herewith, Cingular's proposed Facility will benefit the Town and the improve Burlington Fire Department's emergency communications system while having a *de minimus* impact on the surrounding neighborhood.

Cingular's FCC License

Cingular is licensed by the Federal Communications Commissions ("FCC") to provide wireless telephone services throughout the State of Connecticut including Hartford County. Cingular's FCC License requires it to complete the construction and build-out of its wireless network in its federally licensed service areas, which includes the Town of Burlington.

There is a public need for wireless telecommunication services. Indeed, the FCC's granting of a license constitutes a finding that the public interest will be served by Cingular's services. Cingular's deployment of its wireless infrastructure is also consistent with the public policy of the United States "to make available so far as possible, to all people of the United States ... a rapid, efficient, nationwide and worldwide wire and radio communication service with adequate facilities at reasonable charges, for the purpose of national defense, for the purpose of promoting safety of life and property through the use of wire and radio communication" 47 U.S.C. § 151. Moreover, as an outgrowth of the federal Wireless

CUDDY & FEDER LLP

New Cingular Wireless PCS, LLC
July 19, 2005
Page 3

Communications and Public Safety Act of 1999 (the "911 Act"), the FCC has mandated wireless carriers to provide enhanced 911 service.

Cingular currently has a significant gap in service coverage in this area of the Town, particularly in the area surrounding Spielman Highway (Route 4) near its intersection with Milford Street and the immediately adjacent local roads and areas in the vicinity of the Premises. (See Radio Frequency Engineering Statement and attachments submitted herewith as Exhibit B). The proposed Facility will allow Cingular to provide service to its customers living in and traveling through this area of the Town, thereby complying with its FCC license requirements as well as other FCC rules and regulations governing wireless facilities. Moreover, by replacing the Town-owned lattice tower, Cingular can fulfill its FCC licensing obligations while benefiting the Town and improving Fire Department's emergency communications system.

Conformance with the Town of Burlington Site Plan Requirements

As noted above, Cingular is proposing to replace the existing Town-owned lattice tower with a new monopole to be owned by the Town. As such, the proposed Town-owned communications facility falls under the exemptions provided in Section IX.F.2.a of the Burlington Zoning Regulations. Cingular respectfully submits that its application and supporting materials demonstrate compliance with the requirements for Site Development Plan approval and it is also respectfully submitted that approval of the proposed public utility Facility is consistent with the procedural and substantive requirements set forth in Section 704 of the Telecommunications Act of 1996.

Unlike the siting of a new monopole where none had existed before, the proposed replacement monopole at the site of an existing tower will have a minimal visual impact to the surrounding area. Further, the relocation of the existing cable bridge to the other side of the existing equipment building will completely screen the cable bridge from surrounding areas. Cingular respectfully submits that the proposed replacement Facility will have no significant visual impact and will not adversely affect the existing character of the surrounding area.

Annexed hereto as Exhibit B is a Radio Frequency ("RF") Engineering Report prepared by John Blevins, Senior RF Specialist, which demonstrates the need for the proposed Facility and illustrates through signal propagation maps Cingular's existing coverage in this area of the Town and the proposed coverage from the replacement Facility.

Further, the Power Density Calculation included in Exhibit C demonstrates that the cumulative radio frequency energy associated with the proposed Facility will comply with all applicable emissions standards promulgated by Federal law. As indicated in the attached report, the calculations considered the Town of Burlington Fire Department antennas, the Verizon Wireless antennas and the proposed Cingular antennas.

CUDDY & FEDER LLP

New Cingular Wireless PCS, LLC
July 19, 2005
Page 4

It is also noteworthy that Cingular's proposed Facility will not generate additional traffic because it is unmanned and only requires monthly maintenance visits by a service technician that generally last for an hour. The existing access drive and parking lot on the Premises are adequate to accommodate these infrequent visits. In addition to these maintenance visits, the Facility will be monitored by Cingular 24 hours a day, 7 days a week from a remote location. Therefore, the Facility will have no impact on pedestrian or vehicular traffic.

It is also noteworthy that the proposed Facility will not produce any discernable smoke, gas, odors, heat, vibrations or noise. No water or sewage disposal will be associated with the facility. Further, the proposed Facility will not result in additional storm water runoff, nor does it require any lighting improvements. No commercial signs are proposed by Cingular.

Based on the materials submitted herewith, Cingular respectfully submits that the proposed replacement Facility will be unobtrusive and will have a minimal impact, if any, on the existing character of the surrounding neighborhood. Further, it is respectfully submitted that by providing the safety of enhanced wireless communications and providing an improved facility for the Burlington Fire Department's emergency communications equipment, the proposed replacement Facility will benefit the public health, safety, and general welfare of the Burlington community.

Materials Submitted in Support of Cingular's Site Plan Application

In support of its site plan application, Cingular respectfully submits five (5) copies of this cover letter bound to the following exhibits:

- (A) Completed Town of Burlington Site Plan Application Form and List of Abutters.
- (B) Radio Frequency Engineering Report prepared by John Blevins, Senior RF Specialist, with the following sub-exhibits:
 - Exhibit (1): Copy of Cingular's FCC licenses;
 - Exhibit (2): Signal Propagation Map depicting Cingular's current coverage in the Town without the proposed Facility; and
 - Exhibit (3): Signal Propagation Map depicting Cingular's coverage in the Town from the proposed Facility with coverage from surrounding sites.
- (C) Power Density Calculation concluding that the cumulative radio frequency energy associated with the Facility will comply with all emissions standards promulgated by Federal law.

CUDDY & FEDER LLP

New Cingular Wireless PCS, LLC
July 19, 2005
Page 5

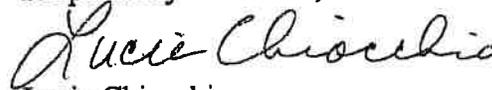
(D) Reference to Section 704 of the Telecommunications Act of 1996.

Also find enclosed five (5) sets of signed, sealed site plans prepared by Dewberry-Goodkind, Inc., consisting of sheets T-1, S-1, and Z-1 through Z-4, dated July 7, 2005 and five (5) sets of signed, sealed drawings detailing the proposed equipment shelter.

Additionally, we have attached a check made payable to the Town of Burlington in the amount of \$230.00, constituting the site plan application filing fees.

We look forward to appearing before the Planning and Zoning Commission and respectfully request that this application be placed on the next available agenda. Thank you for your consideration of the enclosed.

Respectfully submitted,


Lucia Chiocchio

Enclosures

cc: Charles W. Bauer, Esq., Town Attorney (w/o attachments)
Charles H. Kirchofer, Burlington Building Official (w/o attachments)
Tim Burks, Cingular
John Blevins, Cingular (w/o attachments)
Chris Daddi, Dewberry-Goodkind, Inc. (w/o attachments)



Town of Burlington

VIA FACSIMILE NO. (860) 584-2192

Selectman's Office
860.673.6789

Accounting Office
860.675.4960

Town Clerk
860.673.2108

Assessor
860.673.3901

Tax Collector
860.673.0717

Building Inspector
860.673.1000

Highway Department
860.673.2439

Parks + Recreation
860.673.7361
fax 860.675.5038

Town Fax
860.675.9312

**Bristol Press
Classified Department
99 Main Street
Bristol, Connecticut 06010**

To Whom It May Concern:

Please publish the following legal notice two times upon receipt, once on Saturday, August 13, 2005 and again on Saturday August 20, 2005. Thank you.

NOTICE OF PUBLIC HEARING

The Burlington Planning & Zoning Commission will be conducting the following Public Hearing on Wednesday, August 24, 2005, commencing at 7:30 p.m. in the Boards and Commissions Room of the Burlington Town Hall:

App. No. 1870/Cingular Wireless – Application for Special Permit – Replacement of existing communications tower, 719 George Washington Turnpike, submitted by Cingular Wireless.

Any interested persons may appear and be heard.

The Burlington Planning and Zoning Commission dated this 11th day of August 2005, by Michael Vollono, Chairman.

**Cc: Town Clerk
File No. 1870**



Town of Burlington

RECEIVED
BURLINGTON PZC
AUG 24 2005
DATE BY

Theodore C. Scheidel
First Selectman

TO: Michael Vollono, Chairman,
Planning & Zoning Commission

FROM: Theodore C. Scheidel, Jr., First Selectman

DATE: August 9, 2005

RE: New Cingular Wireless PCS, LLC
Application – Replacement Tower – Fire Station Property

Mary Ann Schwarzmann
James A. Chard
Robert R. Sheriffs
Theodore C. Shafer
Board of Selectmen

Please find below a Statement of Consensus of the Board of Selectmen arrived at on August 8, 2005 concerning the above-referenced application.

The Board strongly recommends that the Planning & Zoning Commission give favorable consideration to this matter as it continues an existing critical use of the Property for municipal purposes, exchanges an old, weaker tower structure with a newer, safer and longer lasting tower of forty additional feet, surmounted by new municipal fire, police and highway antennas at no cost to the Town. This exchange will have a positive effect on the emergency radio reception in Burlington. Also attached is a suggested "Report" for your consideration.

TCS/ejp
Attachment

200 Spielman Highway
Burlington, Connecticut
06013-1735
tel 860.673.6789
fax 860.673.8607

BUCK & BUCK, LLC

E N G I N E E R S

98 WADSWORTH STREET, HARTFORD, CONNECTICUT 06106
TELEPHONE 860-527-2677
FAX 860-527-7100

JAMES A. THOMPSON
LAWRENCE F. BUCK
WILLIAM B. ASTON
DOUGLAS E. ELLIS
GREGORY B. HUNT

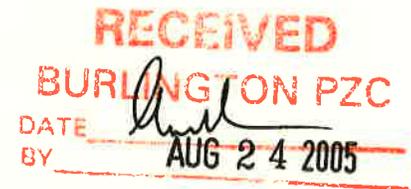
HENRY WOLCOTT BUCK
1931-1965
ROBINSON D. BUCK
1935-1959
ROBINSON W. BUCK

Comm. 9538-198

August 9, 2005

Planning and Zoning Commission
Town of Burlington
200 Spielman Highway
Burlington, CT 06013

Re: Cingular Wireless
719 George Washington Turnpike



Commissioners:

The Equipment Shelter Building of the subject application is proposed to be fairly close to one of the public water supply wells of the Burlington Senior Housing Water Supply System. Said water supply system is under the jurisdiction of the Connecticut Department of Health and the Connecticut Department of Utility Control.

I have sent a copy of the applicant's plans to the Department of Health for their review and comments (see attached letter) and I request that any action on this matter by the Commission be subject to conditions set by the Department of Health.

Sincerely yours,

A handwritten signature in blue ink, appearing to read "J. Thompson". Below the signature, the name "James A. Thompson" is printed in a black, sans-serif font.

JAT/lh/-213b

Attachment

cc: Theodore Scheidel (fax)
Charles Kirchofer (fax)
Atty. Bauer (fax)
Atty. Vollano
Tim Burk

BUCK & BUCK, LLC
ENGINEERS

98 WADSWORTH STREET, HARTFORD, CONNECTICUT 06106
TELEPHONE 860-527-2677
FAX 860-527-7100

JAMES A. THOMPSON
LAWRENCE P. BUCK
WILLIAM B. ASTON
DOUGLAS E. ELLIS
GREGORY B. HUNT

HENRY WOLCOTT BUCK
1931-1968
ROBINSON D. BUCK
1935-1959
ROBINSON W. BUCK

Comm. 9538-210

August 24, 2005

Planning & Zoning Commission
Town of Burlington
200 Spielman Highway
Burlington, CT 06013

RECEIVED
BURLINGTON, CT
AUG 24 2005
DATE _____
BY _____

Re: Cingular Wireless PCS, LLC
Burlington Fire Dept., 719 George Washington Turnpike

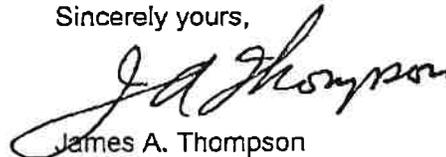
Commissioners:

I have reviewed the subject application and offer the following:

1. According to Burlington Zoning Regulations, Section IX F items 2a.i and 2a.ii, the requirements of Section IX F Telecommunications do not in my judgement apply to this application.
2. According to Regulation Section X A.3.j., only the FACILITY SITE PLAN is required to be submitted to the Zoning Enforcement Officer for review.
3. The Site Plan review is as follows:
 - a. The site drainage is unaffected by the proposed change in the tower location or the addition of an equipment shelter.
 - b. The existing "Ice Bridge" is removed from the side yard.
 - c. The relocation of the antenna tower southward 95 feet has no effect on the site.
 - d. The siting of the electronic equipment shelter 24 feet from the Senior Housing Water Supply Well #4 may be a concern. The matter has been referred to the State Health Department for their review and approval.
 - e. Adequate erosion controls have been proposed.

I recommend that this Site Plan Modification be approved subject to conditions set by the State Department of Health.

Sincerely yours,


James A. Thompson

JAT/lh210d

CC: T. Schiedel
C. Kirchofer
Atty. Bauer
Atty. Vollano
Tim Burks



Town of Burlington



Theodore C. Scheidel
First Selectman

**REPORT OF THE PLANNING & ZONING COMMISSION
TOWN OF BURLINGTON
PURSUANT TO SECTION 8-24
OF THE CONNECTICUT GENERAL STATUTES**

Mary Ann Schwarzmann
James A. Chard
Robert R. Sheriffs
Theodore C. Shafer
Board of Selectmen

The Planning & Zoning Commission has received from the Board of Selectmen a Statement of Consensus informing it of a proposed replacement of a municipal telecommunications tower and municipal antennas for police, fire, and public works on municipal property (Burlington Fire Station) by New Cingular Wireless PCS and a proposed lease agreement between New Cingular Wireless PCS, LLC and the Town for the lease of space on the replacement tower and a portion of ground at the property.

The Planning & Zoning Commission has held a hearing and believes the replacement tower and lease agreement will benefit the municipal public safety communications system of the Town, will improve cellular phone service for residents and is in the Town's best interest.

Accordingly, the Secretary is hereby authorized to transmit a favorable Report to the Board of Selectmen regarding the proposed replacement tower and lease agreement between the Town and New Cingular Wireless PCS, LLC.

Signed this day of , 2005

Burlington Planning & Zoning
Commission

200 Spielman Highway
Burlington, Connecticut
06013-1735
tel 860.673.6789
fax 860.673.8607

By its

BOARD OF SELECTMEN
STATEMENT OF CONSENSUS
AUGUST 8, 2005

RECEIVED
BURLINGTON PZC
DATE AUG 10 2005
BY [Signature]

WHEREAS, the Town of Burlington ("Town") owns certain property located at 719 George Washington Turnpike also known as Lot No. 73-1 on Assessor's Map 4-8 (the "Property"); and

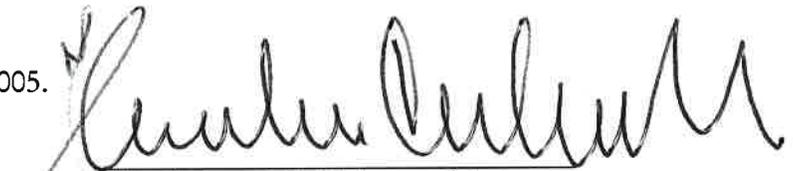
WHEREAS, the Property is currently used for municipal purposes, is the site of the Burlington Fire Department headquarters which maintains a communications tower and associated municipal antennas and equipment with Verizon Wireless as a tenant; and

WHEREAS, New Cingular Wireless PCS, LLC, a telecommunications company licensed to provide cellular telephone service throughout most of Connecticut, including the Town of Burlington, is desirous of replacing the existing municipal communications tower by: constructing for (and at no cost to) the Town a 180 ft. monopole tower adjacent to the existing tower site; installing new equipment and antennas thereon for the Town's police, fire and public works; moving Verizon Wireless's antennas to the replacement tower; installing its own antenna; dismantling the lattice tower (leaving it for the Volunteer Fire Department); and, entering into a lease with the Town for utilization of a portion of the replacement tower and a portion of the Property to establish a cellular telecommunications facility; and

WHEREAS, the installation of a replacement tower at the Property will fulfill the Town's needs including additional space for rental of antenna space for other communications company equipment, will enhance the public safety through improved emergency service communications and will improve cellular telephone service to the residents of the Town, all of which constitutes a continuing use of the Property for municipal purposes deemed in the best interest of the community of the Town of Burlington; and

IT IS A UNANIMOUS CONSENSUS, That the Board of Selectmen approves the proposed application by New Cingular Wireless PCS, LLC to replace the existing municipal lattice tower with a monopole on the same Property with new municipal antennas and equipment and the lease agreement for rental of space on the municipal tower for New Cingular's antennas. The First Selectman may sign said lease agreement on behalf of the Town, as approved by the Town attorney, provided, however, that the Board of Selectmen receive a favorable report from the Burlington Planning and Zoning Commission pursuant to Section 8-24 of the Connecticut General Statutes and Department of Public Health permits necessary for this activity.

Dated this 9th day of August, 2005.


Theodore C. Scheidel, First Selectman



received
8-25-05 cmc

Town of Burlington

Selectman's Office
860.673.6789

Accounting Office
860.675.4960

Town Clerk
860.673.2108

Assessor
860.673.3901

Tax Collector
860.673.0717

Building Inspector
860.673.1000

Highway Department
860.673.2439

Parks + Recreation
860.673.7361
fax 860.675.5038

Town Fax
860.675.9312

VIA FACSIMILE NO. (860) 584-2192

Bristol Press
Classified Department
99 Main Street
Bristol, CT 06010

To Whom It May Concern:

Please publish the following legal notice once upon receipt. Thank you.

NOTICE OF VOTES/NOTICE OF DECISIONS

The Burlington Planning & Zoning Commission made the following decisions at the meeting of August 25, 2005:

A motion was made by Alden and seconded by Dumais to approve Application No. 1870, for Modification of Site Plan submitted by The Town of Burlington subject to the following conditions:

That the Applicant secure all necessary permits from the Department of Health; and

That a risk assessment of the property be performed by the Town or its insurer to determine if any fencing around the Tower or the Site is required.

IN FAVOR, Vollono, Alden, Dumais, Halpin, Fanning, Perkins and van Noordennen. ABSTAINED – None. OPPOSED – None.

A motion was made by Alden and seconded by Dumais to approve Application No. 1870 for Modification of Site Plan submitted by the Town of Burlington pursuant to Connecticut General Statutes Section 8-24.

IN FAVOR, Vollono, Alden, Fanning, Dumais, Perkins, Halpin and van Noordennen. ABSTAINED – None. OPPOSED – None.

The Burlington Planning and Zoning Commission, by Michael Vollono, Chairman, dated this 25th day of August, 2005.

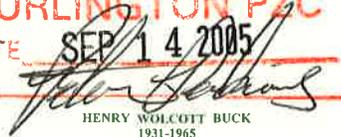
Cc: Town Clerk
File No. 1870

200 Spielman Highway
Burlington, Connecticut
06013-1735

BUCK & BUCK, LLC
ENGINEERS

98 WADSWORTH STREET, HARTFORD, CONNECTICUT 06105
TELEPHONE 860-527-2677
FAX 860-527-7100

JAMES A. THOMPSON
LAWRENCE F. BUCK
WILLIAM B. ASTON
DOUGLAS E. ELLIS
GREGORY B. HUNT

RECEIVED
BURLINGTON PZC
SEP 14 2005
BY 
HENRY WOLCOTT BUCK
1931-1965
ROBINSON D. BUCK
1935-1959
ROBINSON W. BUCK

Comm. 9538-210

August 24, 2005

Planning & Zoning Commission
Town of Burlington
200 Spielman Highway
Burlington, CT 06013

Re: Cingular Wireless PCS, LLC
Burlington Fire Dept., 719 George Washington Turnpike

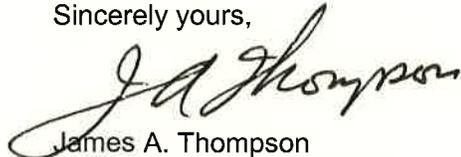
Commissioners:

I have reviewed the subject application and offer the following:

1. According to Burlington Zoning Regulations, Section IX F items 2a.i and 2a.ii, the requirements of Section IX F Telecommunications do not in my judgement apply to this application.
2. According to Regulation Section X A.3.j., only the FACILITY SITE PLAN is required to be submitted to the Zoning Enforcement Officer for review.
3. The Site Plan review is as follows:
 - a. The site drainage is unaffected by the proposed change in the tower location or the addition of an equipment shelter.
 - b. The existing "Ice Bridge" is removed from the side yard.
 - c. The relocation of the antenna tower southward 95 feet has no effect on the site.
 - d. The siting of the electronic equipment shelter 24 feet from the Senior Housing Water Supply Well #4 may be a concern. The matter has been referred to the State Health Department for their review and approval.
 - e. Adequate erosion controls have been proposed.

I recommend that this Site Plan Modification be approved subject to conditions set by the State Department of Health.

Sincerely yours,


James A. Thompson

JAT/lh210d

CC: T. Schiedel
C. Kirchofer
Atty. Bauer
Atty. Vollano
Tim Burks



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@po.state.ct.us

www.ct.gov/csc

RECEIVED
BURLINGTON PZC
DATE SEP 14 2005
BY [Signature]

August 26, 2005

Christopher B. Fisher, Esq.
Cuddy & Feder LLP
90 Maple Avenue
White Plains, NY 10601-5196

RE: DOCKET NO. 268 - New Cingular Wireless PCS, LLC Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility in the Town of Burlington, Connecticut.

Dear Attorney Fisher:

On August 24, 2005 the Connecticut Siting Council (Council) considered your request for an extension of construction time in this docket, dated August 9, 2005, and granted a six-month extension of time until February 18, 2006, to complete the construction of this project. This extension is granted with the understanding that the Council will be notified should the applicant decide not to proceed with construction.

The Council also approved the transfer of the Certificate of Environmental Compatibility and Public Need (Certificate) from AT&T Wireless PCS, LLC to New Cingular Wireless PCS, LLC. This approval of transfer is consistent with State law and conditioned on the consent of New Cingular Wireless PCS, LLC to comply with all the terms, limitations, and conditions contained in said Certificate issued on February 18, 2004.

Thank you for your attention and cooperation.

Very truly yours,

[Handwritten signature of Pamela B. Katz]

Pamela B. Katz, P.E.
Chairman

PBK/laf

- c: Parties and Intervenors
Robert L. Marconi, Assistant Attorney General
Honorable Theodore C. Scheidel, Jr., First Selectman, Town of Burlington
Robert J. Coates, Planning and Zoning Chairman, Town of Burlington

LIST OF PARTIES AND INTERVENORS
SERVICE LIST

Status Granted	Status Holder (name, address & phone number)	Representative (name, address & phone number)
Applicant	AT&T Wireless PCS, LLC	<p>Christopher B. Fisher, Esq. Cuddy & Feder LLP 90 Maple Avenue White Plains, New York 10601 (914) 761-1300 Fax (914) 761-6405</p> <p>Johnny Salmon AT&T Wireless PCS, LLC 210 Pomeroy Avenue Meriden, CT 06450</p> <p>Jennifer Young Gaudet Site Acquisitions, Inc. 345 Taylor Street Talcottville, CT 06066</p>
Party	Town of Burlington	<p>Honorable Theodore C. Scheidel First Selectman Burlington Town Hall 200 Spielman Highway Burlington, CT 06013-1735 (860) 673-6789 (860) 673-8607 - fax</p>
Intervenor	<p>Carole Etzel Peter Etzel 84 Daniel Trace Burlington, CT 06013 (860) 675-8051 (860) 675-7121 fax etzalc@aol.com</p>	
Intervenor	Daniel Trace and Barnes Hill Residents	<p>Wayne Rigney Debra Rigney 52 Daniel Trace Burlington, CT 06013 (860) 675-5852 (860) 675-7778 – fax rigneys@comcast.net</p>

**LIST OF PARTIES AND INTERVENORS
SERVICE LIST**

Status Granted	Status Holder (name, address & phone number)	Representative (name, address & phone number)
Intervenor	Sprint Spectrum L.P. d/b/a Sprint PCS	Thomas J. Regan, Esq. Brown Rudnick Berlack Israels LLP 185 Asylum Street, CityPlace I Hartford, CT 06103-3402 (860) 509-6522 (860) 509-6501 fax tregan@brbilaw.com



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@po.state.ct.us

www.ct.gov/csc

September 15, 2005

The Honorable Theodore C. Scheidel, Jr.
First Selectman
Town of Burlington
200 Spielman Highway
Burlington, CT 06013



RE: **TS-CING-020-050913** - New Cingular Wireless PCS, LLC request for an order to approve tower sharing at an approved telecommunications facility located at 719 George Washington Turnpike, Burlington, Connecticut.

Dear Mr. Scheidel:

The Connecticut Siting Council (Council) received this request for tower sharing, pursuant to Connecticut General Statutes § 16-50aa.

The Council will consider this item at the next meeting scheduled for September 28, 2005, at 1.30 p.m. in Hearing Room One, Ten Franklin Square, New Britain, Connecticut.

If you have any questions or comments regarding this proposal, please call me or inform the council by September 27, 2005.

Thank you for your cooperation and consideration.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/ap

Enclosure: Notice of Tower Sharing

c: Robert J. Coates, Planning and Zoning Chairman, Town of Burlington

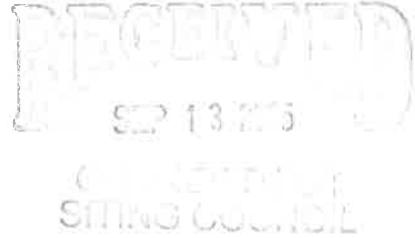


New Cingular Wireless PCS, LLC
500 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 513-7636
Fax: (860) 513-7190

TS-CING-020-050913

September 13, 2005

Ms. Pamela Katz, Chairman, and
Members of the Council
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051



Re: Request by New Cingular Wireless PCS, LLC for an Order Approving Shared Use of an Approved Fire Department Tower Located at 719 George Washington Turnpike, Burlington, Connecticut.

Dear Chairman Katz and Members of the Council:

Pursuant to Connecticut General Statutes (C.G.S.) Section 16-50aa, New Cingular Wireless PCS, LLC ("Cingular") hereby requests an order from the Connecticut Siting Council ("Council") approving the proposed shared use by Cingular of a municipal telecommunications tower to be located at the Burlington Fire Department, 719 George Washington Turnpike, Burlington, Connecticut 06013. A copy of this letter is being sent to the 1st Selectman of the Town of Burlington.

Approved Municipal Tower

The Town of Burlington ("Town") owns and operates a self-supporting lattice communications tower on Town-owned property adjacent to the Fire Department at 719 George Washington Turnpike. The Town Fire Department is in need of a taller tower to remedy gaps in its own emergency communications and sought out someone willing to construct same. The replacement tower will be owned by the Town with Fire Department antennas at the top and remain under local zoning jurisdiction.

In July and August of 2005, a proposal to replace the existing 140 foot lattice tower with a 180 foot monopole approximately 90 feet to the southwest was comprehensively reviewed by the Burlington Board of Selectman and Planning & Zoning Commission ("P&Z"). The replacement monopole would be located adjacent to the firehouse at approximate coordinates of N 41° 45' 59.7" and W 72° 57' 42.7" (NAD 83).

P&Z approved the tower replacement at its regular meeting of August 24, 2005. The written resolution is not yet available. In the event the Council so desires, staff can confirm with the Town which owns the property the existence of a lease with Cingular for the project and the P&Z's recent approval of the replacement Fire Department tower. We will provide a copy of the resolution for Council files once it is available.

Neither the existing lattice tower, nor the replacement monopole, is a "facility" as that term is defined in Section 16-50i of the Connecticut General Statutes for purposes of Council jurisdiction. The lattice tower was constructed in 1997 under jurisdiction of the Burlington P&Z, and it has been continuously owned, utilized, and managed by the Town for emergency communications. Like Verizon in 1997, Cingular seeks approval from the Council before co-locating on the replacement monopole.

Proposed Shared Use of the Replacement Monopole

Pursuant to the P&Z's approval, Town antennas presently mounted on the existing lattice tower will be relocated to the replacement monopole, and the existing lattice tower is to be dismantled and removed from the property. The Town's existing whip antennas will be located at the top of the monopole, and additional Town antennas are to be mounted below the 160 foot level.

The Town will also provide space on the monopole for use by wireless carriers, and it has approved relocating Verizon's antennas from the 119 foot level of the existing lattice tower to the 160 foot level of the new replacement monopole. Through this Request for a Tower Sharing Order, we also ask the Council to acknowledge Verizon's plans to relocate its antennas.

Furthermore, the Town and Cingular have agreed to terms for co-locating on the replacement monopole. Cingular operates under licenses issued by the Federal Communications Commission ("FCC") to provide cellular and PCS mobile telephone service in Hartford County, which includes the area to be served by its proposed installation. Attached to this request are a site location map, a site plan, and the tower profile. As shown on the attached drawings, Cingular proposes to install up to six Powerwave 7770.00 dual band panel antennas, or their equivalent, approximately 55 inches in height at a centerline height of 170 feet above ground level. Cingular also proposes to place an 11½ ft x 20 ft prefabricated concrete equipment shelter at the base of the tower.

Request for an Order Approving Shared Use of the Replacement Monopole

Given that the approved replacement monopole in Burlington will be an uncertificated facility for purposes of the Siting Council, Cingular respectfully requests an order pursuant to Section 16-50aa of the Connecticut General Statutes approving its shared use of the approved tower for the reasons more fully set forth below:

A. **Technical Feasibility.** The approved replacement tower will be structurally sound and capable of supporting the proposed shared use of the Cingular antennas at 170 feet AGL. Likewise, the tower will be built to support the relocated Verizon antennas and the various Town antennas. Cingular will provide a set of tower design drawings to the Council prior to commencement of construction. The proposed shared use of this tower is therefore technically

feasible.

B. **Legal Feasibility.** Under C.G.S §16-50aa, the Council has been authorized to issue an order approving the proposed shared use of an uncertificated tower facility such as the tower located at 719 George Washington Turnpike (C.G.S §16-50aa(c) (1)). Under the authority vested in the Council by C.G.S §16-50aa, an order approving the shared use of the Town's tower would satisfy Cingular's Siting Council obligations and permit it to obtain a building permit for the proposed installation.

C. **Environmental Feasibility.** The proposed shared use of this uncertificated tower facility would have a minimal environmental effect for the following reasons:

1. The proposed installation would have an insignificant incremental visual impact and would not cause any significant change or alteration in the physical or environmental characteristics of the property. The addition of the proposed antennas would not increase the height of the approved monopole tower. Cingular's equipment will be housed in an equipment shelter, and all construction will occur on Town property.

2. The proposed installation would not increase noise levels at the existing facility by six decibels or more.

3. Operation of the additional antennas will not increase the total radio frequency electromagnetic radiation power density, measured at the tower base, to or above the standard adopted by the State of Connecticut and the FCC. The "worst-case" exposure calculation in accordance with FCC OET Bulletin No. 65 (1997) for a point of interest at the base of the tower is as follows:

Company	Centerline Height (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density [†] (mW/cm ²)	Standard Limits (mW/cm ²)	Percent of Limit	
Public Safety *	188	159.225	1	60	0.0006	0.2000	0.31	
Public Safety *	188	154.725	1	75	0.0008	0.2000	0.38	
Public Safety *	188	155.745	1	75	0.0008	0.2000	0.38	
Cingular	170	880-894	6	298	0.0221	0.5867	3.77	
Cingular	170	1930-1935	3	427	0.0159	1.0000	1.59	
Verizon **	160	869	9	200	0.0253	0.5793	4.36	
Verizon **	160	1900	3	200	0.0084	1.0000	0.84	
Public Safety *	144	155.345	1	40	0.0007	0.2000	0.35	
Public Safety *	134	452-458	Receive Only					0.00
Public Safety *	113	33.5	1	100	0.0028	0.2000	1.41	
Public Safety *	106	155-156	6	50	0.0098	0.2000	4.80	
Total							18.19%	

* Power density parameters provided by the Town of Burlington Fire Department.

** Verizon power density parameters (other than height) from EM-VER-008-020-025-108-130-131-050315.

† Please note that the standard power density equation provided by the Council in its memo of January 22, 2001 incorporates a ground reflection factor of 2.56 (i.e., the square of 1.6) as described in FCC OET Bulletin No. 65.

As the table demonstrates, the "worst-case" exposure would be approximately 18 % of the ANSI/IEEE standard, as calculated for mixed frequency sites. Cumulative power density levels resulting from Cingular's proposed use of the tower would thus be well within applicable ANSI/IEEE standards.

4. The proposed installation would not require any water or sanitary facilities, or generate air emissions or discharges to water bodies. After construction is completed (approximately four weeks), the proposed installation would not generate any vehicular traffic other than periodic maintenance visits. The proposed use of the facility would therefore have a minimal environmental effect, and is environmentally feasible.

D. **Economic Feasibility.** Cingular and the Town have negotiated the terms of an agreement to share use of the tower. The proposed facility sharing is therefore economically feasible.

E. **Public Safety Concerns.** As stated above, the approved tower will be structurally capable of supporting Cingular's proposed antennas, and radio frequency emissions fall well below State and Federal safety standards. Cingular is not aware of any other public safety concerns relative to the proposed sharing of the tower. In fact, the provision of new or improved wireless coverage in the area is expected to enhance the safety and welfare of Burlington's residents.

Conclusion

For the reasons discussed above, the proposed shared use of the approved replacement tower at 719 George Washington Turnpike in the Town of Burlington satisfies the criteria stated in C.G.S. §16-50aa and advances the General Assembly's and the Council's goal of preventing the proliferation of communication towers in Connecticut. Cingular therefore respectfully requests that the Council issue an order approving the proposed shared use. Thank you for your attention to this matter.

Please feel free to call Tim Burks at (860) 513-7219 or Christopher Fisher, Esq. at (914) 761-1300 with questions concerning this tower sharing request. Thank you for your consideration in this matter.

Sincerely,

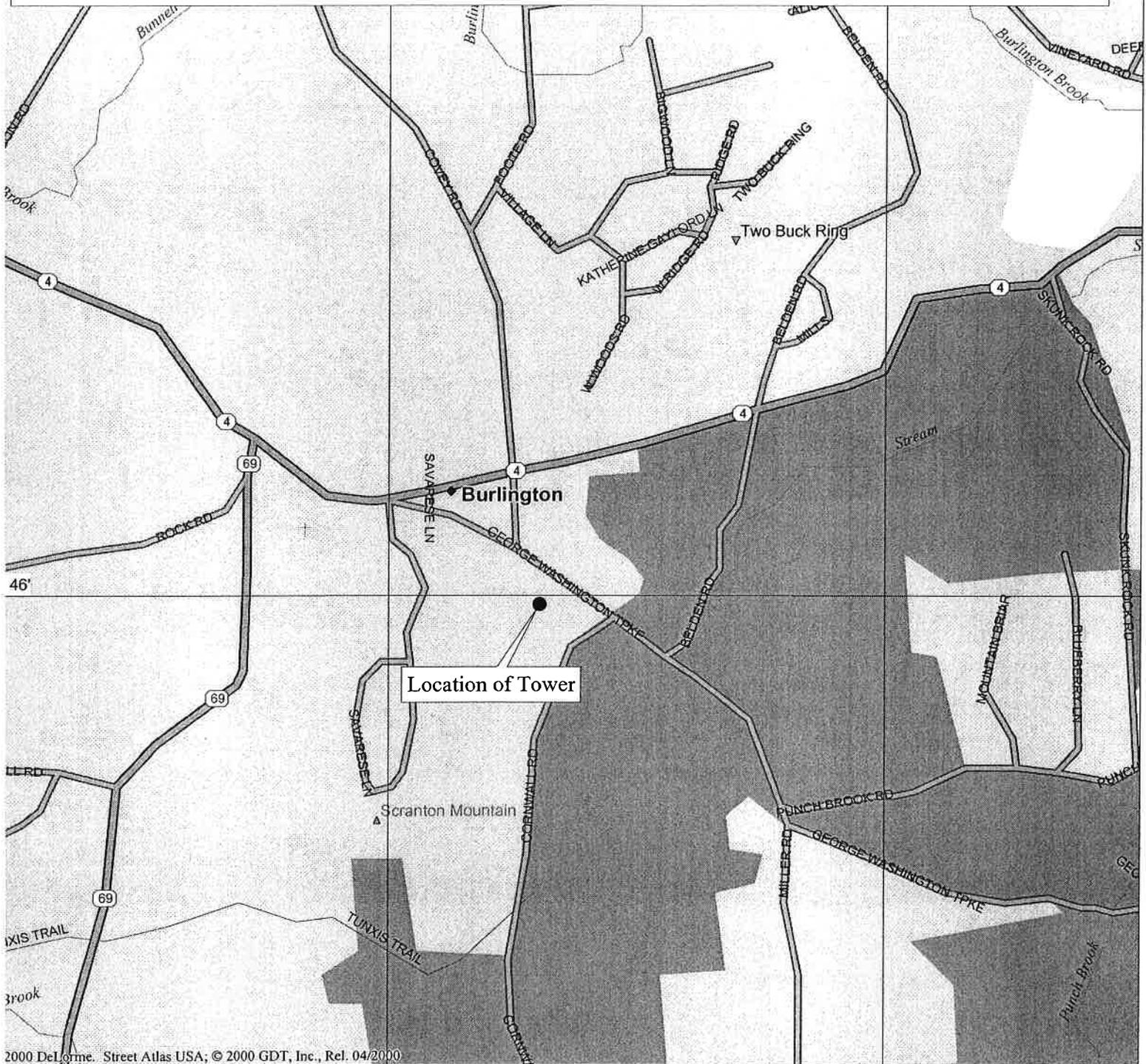


Steven L. Levine
Real Estate Consultant

cc: Honorable Theodore C. Scheidel, Jr., 1st Selectman, Town of Burlington
Michele G. Briggs, Manager of Real Estate
Christopher B. Fisher, Esq.

Enclosures

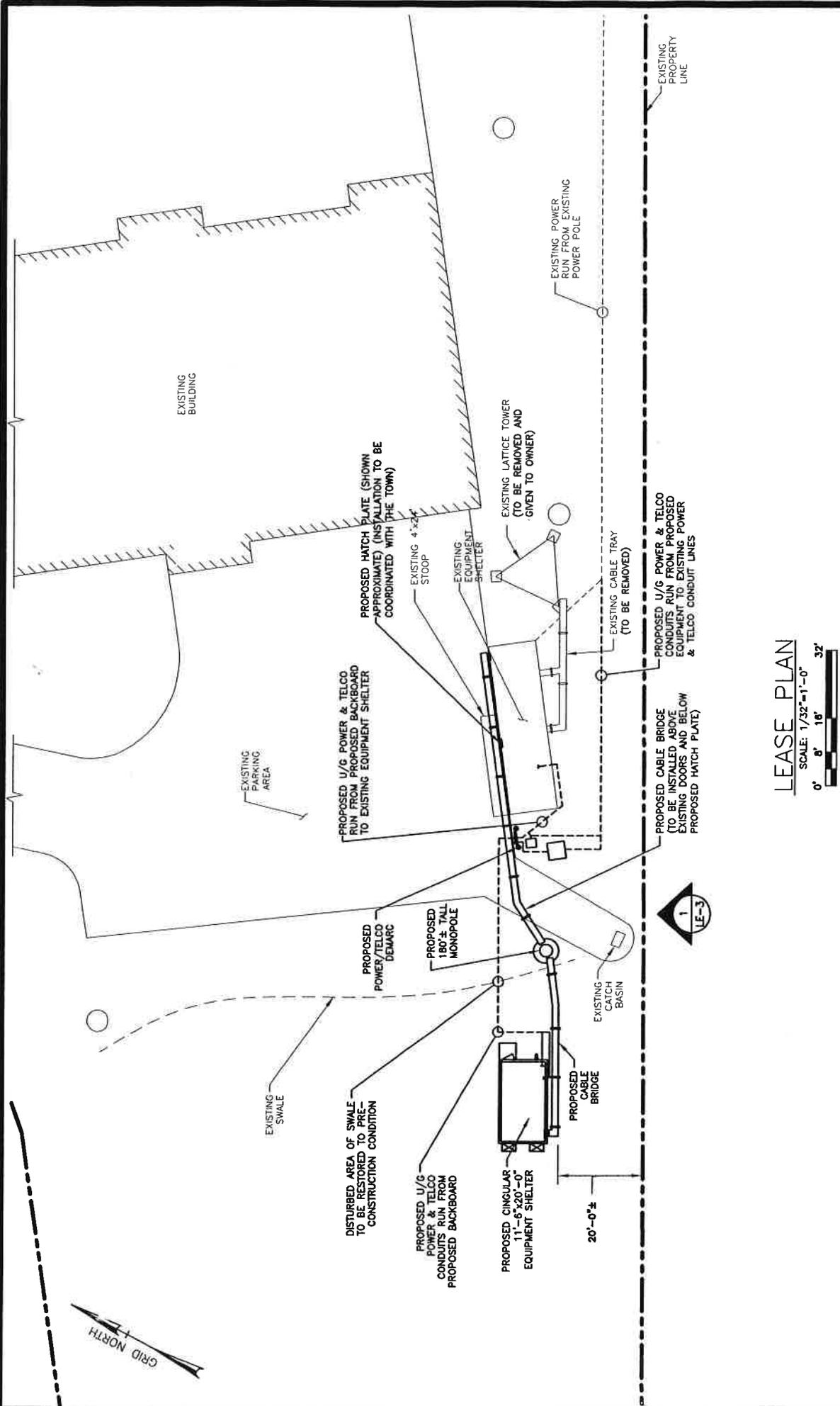
Burlington Fire Department Tower



© 2000 DeLorme. Street Atlas USA; © 2000 GDT, Inc., Rel. 04/2000

Aug 15.00
 Date Sep 06 14:06 2005
 Scale 1:15,625 (at center)
 1000 Feet
 500 Meters

-  Local Road
-  State Route
-  Trail
-  Point of Interest
-  Small Town
-  Summit
-  Geographic Feature
-  Locale
-  Cemetery
-  State Park/Forest
-  Woodland
-  River/Canal



LEASE PLAN

SCALE: 1/32"=1'-0"
 0' 6' 18' 32'

SCALE:

Dewberry-Goodkind, Inc.

A Dewberry Company
 Engineers
 Planners
 Surveyors
 59 Elm Street, Suite 101
 New Haven, CT 06510
 p. (203) 776-2277
 f. (203) 776-2288

NOTES:

1. DRAWING IS SCHEMATIC. FINAL EQUIPMENT LOCATIONS, ANTENNA TYPES, AND ANTENNA HEIGHTS WILL BE FINALIZED UPON COMPLETION OF DESIGN. EXISTING CONDITIONS ARE SHOWN APPROXIMATE.
2. THIS DOCUMENT WAS DEVELOPED TO REFLECT A SPECIFIC SITE AND ITS SITE CONDITIONS AND IS NOT TO BE USED FOR ANOTHER SITE OR WHEN OTHER CONDITIONS PERTAIN. REUSE OF THIS DOCUMENT IS AT THE SOLE RISK OF THE USER.

LEASING PLAN

AS SHOWN

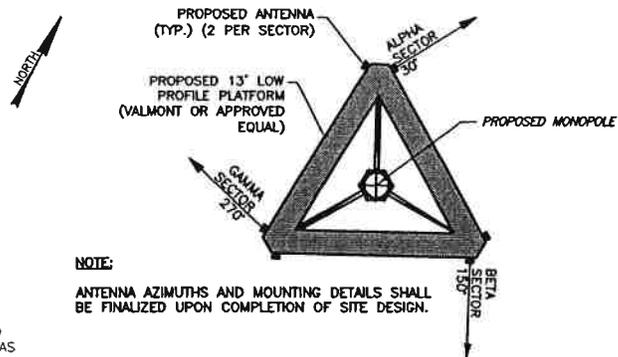
DESIGNED BY:
 CKD

DATE:
 09/02/05

SITE NAME: BURLINGTON FIRE DEPARTMENT
 CELL SITE 1123

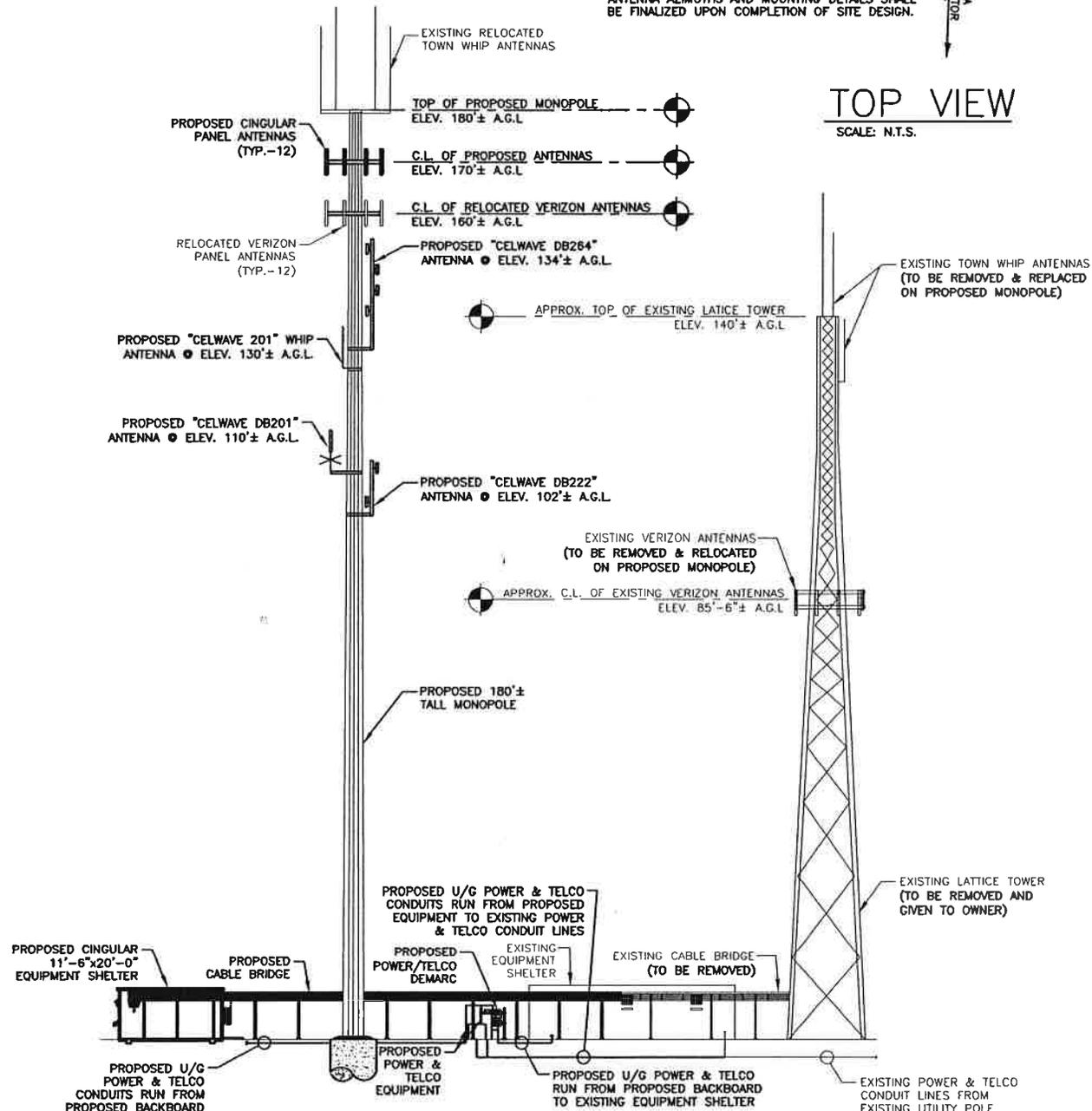


SHEET NO.
LE1

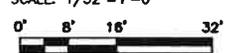


NOTE:
ANTENNA AZIMUTHS AND MOUNTING DETAILS SHALL BE FINALIZED UPON COMPLETION OF SITE DESIGN.

TOP VIEW
SCALE: N.T.S.



ELEVATION
SCALE: 1/32"=1'-0"



Q:\3752\17-Burlington FD\CAD\Ceil\Lease\LE-3.dwg
 Fri, Sep 02 2005 - 10:49:27am
 By: MJS
 Layer: State
 Plot: msmith

Dewberry-Goodkind, Inc.

A Dewberry Company
 59 Elm Street, Suite 101
 New Haven, CT 06510
 p. (203) 776-2277
 f. (203) 776-2288

Engineers
 Planners
 Surveyors

SCALE: AS SHOWN
DESIGNED BY: CKD
DATE: 09/02/05

**LEASING
ELEVATION**

SITE NAME BURLINGTON FIRE DEPARTMENT
 CELL SITE 1123



SHEET NO.
LE3



New Cingular Wireless PCS, LLC
500 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 513-7636
Fax: (860) 513-7190

September 13, 2005

Honorable Theodore C. Scheidel, Jr.
First Selectman, Town of Burlington
Town Hall 200 Spielman Highway
Burlington, Connecticut 06013

Re: Request by New Cingular Wireless PCS, LLC for an Order Approving Shared Use of an Approved Fire Department Tower Located at 719 George Washington Turnpike, Burlington, Connecticut.

Dear Mr. Scheidel:

As you know, New Cingular Wireless PCS, LLC ("Cingular") intends to install cellular antennas and equipment on a replacement monopole tower at the Burlington Fire Department on George Washington Turnpike. The replacement tower was recently approved by the Planning & Zoning Commission, will be owned and operated by the Town of Burlington, and Cingular's lease was reviewed and approved by your Board of Selectman.

As was discussed throughout the Town process, Cingular is now finalizing approvals pursuant to Connecticut General Statutes Section 16-50aa and requesting the Connecticut Siting Council to approve its shared use of this approved municipal tower.

If you have any questions or require any further information on our plans or the Siting Council's procedures, please call me at (860) 513-7636 or Mr. Derek Phelps, Executive Director, Connecticut Siting Council at (860) 827-2935.

Sincerely,

Tim Burks
Real Estate Consultant

Enclosures



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@po.state.ct.us

www.ct.gov/csc

September 29, 2005

Christopher B. Fisher, Esq.
Cuddy & Feder LLP
90 Maple Avenue
White Plains, NY 10601-5196



RE: **DOCKET NO. 268** - New Cingular Wireless PCS, LLC Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility in the Town of Burlington, Connecticut. Revised Development and Management Plan. Exempt Modification.

Dear Attorney Fisher:

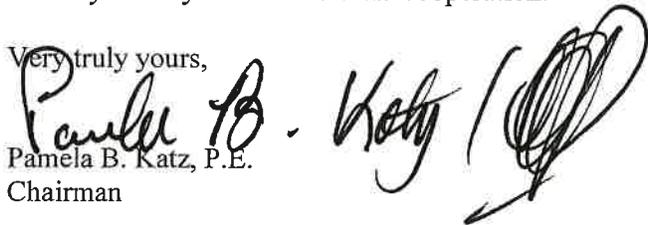
At a public meeting of the Connecticut Siting Council held on September 28, 2005, the Connecticut Siting Council (Council) acknowledged the exempt modification, and considered and approved the revised Development and Management (D&M) Plan submitted for this project on August 26, 2005.

This approval applies only to the revised D&M Plan submitted on August 26, 2005. Any changes to the D&M Plan require advance Council notification and approval.

Please be advised that deviations from this plan are enforceable under the provisions of the Connecticut General Statutes § 16-50u. Enclosed is a copy of the staff report on this D&M Plan, dated September 28, 2005.

Thank you for your attention and cooperation.

Very truly yours,


Pamela B. Katz, P.E.
Chairman

PBK/laf

Enclosure: Staff Report, dated September 28, 2005.

c: Parties and Intervenors

The Honorable Theodore C. Scheidel, Jr., First Selectman, Town of Burlington

Robert J. Coates, Planning and Zoning Chairman, Town of Burlington

DOCKET NO. 268 – AT&T Wireless PCS, LLC d/b/a AT&T } Connecticut
Wireless application for a Certificate of Environmental }
Compatibility and Public Need for the construction, maintenance } Siting
and operation of a telecommunications facility in the Town of }
Burlington, Connecticut. } Council

September 28, 2005

**Development and Management Plan - Revised
Staff Report**

On August 30, 2005, New Cingular submitted a revised D&M plan for the previously approved site at Nepaug and Lyon Roads, Burlington, Connecticut. New Cingular is the successor to AT&T and recently received a transfer of certificate as well as an extension of the time limit by which it must complete the construction of this site.

The revisions to the previously approved D&M plan consist primarily of different antennas that will be installed on the 120-foot monopole and replacing the equipment cabinets on a concrete pad originally proposed by AT&T with a 12-foot by 20-foot equipment shelter to house New Cingular's ground equipment. AT&T's plans showed the installation of three flush mounted antennas. New Cingular plans to install up to 12 antennas on a low profile platform. The revised plans also show the addition of a turnaround just outside the fenced compound.

New Cingular's different antennas would have a different power density than AT&T's original antennas. The antennas New Cingular is proposed to install would generate approximately 18.31% of the maximum permission emission (according to the calculation method used by the Siting Council). AT&T's originally proposed antennas would have generated approximately 14.91% of the MPE. These percentages include the power densities of the Sprint antennas that would also be installed on the monopole.



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@po.state.ct.us

www.ct.gov/csc

September 29, 2005

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

RECEIVED
BURLINGTON PZC
DATE OCT 12 2005
BY [Signature]

RE: TS-CING-020-050913 - New Cingular Wireless PCS, LLC request for an order to approve tower sharing at a telecommunications facility located at 719 George Washington Turnpike, Burlington, Connecticut.

Dear Mr. Levine:

At a public meeting held September 28, 2005, the Connecticut Siting Council (Council) ruled that the shared use of this tower site is technically, legally, environmentally, and economically feasible and meets public safety concerns, and therefore, in compliance with General Statutes § 16-50aa, the Council has ordered the shared use of this facility to avoid the unnecessary proliferation of tower structures. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Any additional change to this facility may require an explicit request to this agency pursuant to General Statutes § 16-50aa or notice pursuant to Regulations of Connecticut State Agencies Section 16-50j-73, as applicable. Such request or notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

This decision applies only to this request for tower sharing and is not applicable to any other request or construction. Please be advised that the validity of this action shall expire one year from the date of this letter.

The proposed shared use is to be implemented as specified in your letter dated September 13, 2005, including the placement of all necessary equipment and shelters within the tower compound.

Thank you for your attention and cooperation.

Very truly yours,

Pamela B. Katz, P.E.
Chairman

PBK/laf

- c: The Honorable Theodore C. Scheidel, Jr., First Selectman, Town of Burlington
Robert J. Coates, Planning and Zoning Chairman, Town of Burlington
Burlington Fire Department
Kenneth C. Baldwin, Esq., Robinson & Cole LLP



UPS CampusShip: View/Print Label

- 1. Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.
- 2. Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.
- 3. GETTING YOUR SHIPMENT TO UPS**
Customers with a Daily Pickup
 Your driver will pickup your shipment(s) as usual.

Customers without a Daily Pickup

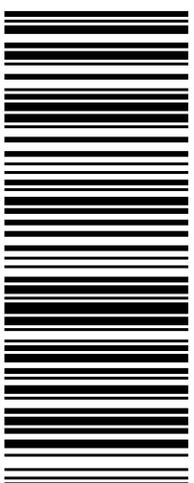
Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.
 Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.
 Hand the package to any UPS driver in your area.

UPS Access Point™
 CVS STORE # 972
 555 WASHINGTON ST
 SOUTH EASTON ,MA 02375

UPS Access Point™
 CVS STORE # 7232
 689 DEPOT ST
 NORTH EASTON ,MA 02356

UPS Access Point™
 TOWN LINE GENERAL STORE
 450 E CENTER ST
 WEST BRIDGEWATER ,MA 02379

FOLD HERE

<p style="text-align: right;">0.0 LBS LTR 1 OF 1</p> <p>SHIP TO: AIDAN GRIFFIN CENTERLINE COMMUNICATIONS 750 W CENTER ST WEST BRIDGEWATER MA 02379</p> <p>THEODORE SHAFER TOWN OF BURLINGTON BOARD OF SELECTMAN 200 SPIELMAN HIGHWAY BURLINGTON CT 06013-1735</p>	<p>CT 067 9-01</p> 	<p>UPS 2ND DAY AIR</p> <p>2</p> <p>TRACKING #: 1Z 9Y4 503 02 2503 5057</p> 	<p style="text-align: center;">BILLING: P/P</p> <div style="text-align: right;">  <small>CS 21.5-41. WNTNVS0 15.0A.07/2019</small> </div>
--	---	---	--

UPS CampusShip: View/Print Label

- 1. Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.
- 2. Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.
- 3. GETTING YOUR SHIPMENT TO UPS**
Customers with a Daily Pickup
 Your driver will pickup your shipment(s) as usual.

Customers without a Daily Pickup

Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.

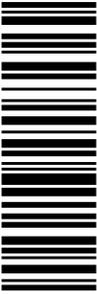
Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages. Hand the package to any UPS driver in your area.

UPS Access Point™
CVS STORE # 972
555 WASHINGTON ST
SOUTH EASTON ,MA 02375

UPS Access Point™
CVS STORE # 7232
689 DEPOT ST
NORTH EASTON ,MA 02356

UPS Access Point™
TOWN LINE GENERAL STORE
450 E CENTER ST
WEST BRIDGEWATER ,MA 02379

FOLD HERE

<p style="text-align: right;">0.0 LBS LTR 1 OF 1</p> <p>SHIP TO: AIDAN GRIFFIN CENTERLINE COMMUNICATIONS 750 W CENTER ST WEST BRIDGEWATER MA 02379</p> <p>LARRY FARRELL TOWN OF BURLINGTON BUILDING DEPARTMENT 200 SPIELMAN HIGHWAY BURLINGTON CT 06013-1735</p>	<p>CT 067 9-01</p> 	<p>UPS 2ND DAY AIR</p> <p>2</p> <p>TRACKING #: 1Z 9Y4 503 02 3061 9667</p>		<p>BILLING: P/P</p>  <p style="font-size: 8px;">CS 21.5-41. WNTNVS0 15.0A.07/2019</p>
---	---	--	---	--

UPS CampusShip: View/Print Label

- 1. Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.
- 2. Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.
- 3. GETTING YOUR SHIPMENT TO UPS**
Customers with a Daily Pickup
 Your driver will pickup your shipment(s) as usual.

Customers without a Daily Pickup

Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.

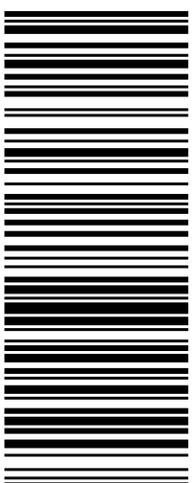
Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages. Hand the package to any UPS driver in your area.

UPS Access Point™
CVS STORE # 972
555 WASHINGTON ST
SOUTH EASTON ,MA 02375

UPS Access Point™
CVS STORE # 7232
689 DEPOT ST
NORTH EASTON ,MA 02356

UPS Access Point™
TOWN LINE GENERAL STORE
450 E CENTER ST
WEST BRIDGEWATER ,MA 02379

FOLD HERE

<p style="text-align: right;">0.0 LBS LTR 1 OF 1</p> <p>SHIP TO: AIDAN GRIFFIN CENTERLINE COMMUNICATIONS 750 W CENTER ST WEST BRIDGEWATER MA 02379</p> <p>GERALD BURNS TOWN OF BURLINGTON ZONING ENFORCEMENT 200 SPIELMAN HIGHWAY BURLINGTON CT 06013-1735</p>	<p>CT 067 9-01</p> 	<p>UPS 2ND DAY AIR</p> <p>2</p> <p>TRACKING #: 1Z 9Y4 503 02 3619 7273</p> 	<p style="text-align: right;">BILLING: P/P</p>  <p style="font-size: small; text-align: right;">CS 21.5-41. WNTNVS0 15.04.07/2019</p>
---	---	---	---