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

July 25, 2019

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

RE: Notice of Exempt Modification // Site Number: CT5395
41 Depot Street, East Windsor, CT 06088 (Site Name: EAST WINDSOR CENTRAL) N 41.918481 // W -72.541660

Dear Ms. Bachman:

New Cingular Wireless, PCS, LLC ("AT&T") currently maintains nine (6) antennas at the 122-foot level of the existing 127-foot water tank at 41 Depot Street, East Windsor, CT 06088. The water tank is owned by Connecticut Water Company. The property is also owned by the Connecticut Water Company. AT&T now intends to remove (3) existing antennas, relocate (3) existing antennas, and install (9) new antennas for its LTE upgrade. These antennas would be installed at the same 122-foot level of the tower. AT&T also intends to remove and replace three (3) RRUs (radios), installing six (6) new RRUS, adding three (3) Surge Arrestor with associated six (6) DC and one (3) fiber cables 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 Robert Maynard, the First Selectman on the Board of Selectman for the town of East Windsor, Donnel Dillon who is the contact for the tower/ground owner Connecticut Water Company, and to Rand Stanley the Town of East Windsor Building/Zoning official.

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 07/24/2019 by Hudson Design Group LLC, a structural analysis dated 03/26/2019 by Hudson Design Group LLC, the property card for 41 Depot St., and an Emissions Analysis Report dated 07/22/2019 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 03/26/2019.

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: Structural Analysis, Property Card, Emissions Analysis, Construction Drawings

cc: Robert Maynard, First Selectman, Town of East Windsor- as elected official
Donnel Dillon, Connecticut Water Company - as tower & property owner
Rand Stanley Building/Zoning Official for the Town of East Windsor

STRUCTURAL ANALYSIS REPORT

For

CT5395 (LTE 2C/3C/4C)

EAST WINDSOR CENTRAL

41 Depot Street
East Windsor, CT 06088

Antennas Mounted to Water Tank Façade

Prepared for:

CENTERLINE COMMUNICATIONS

at&t

Dated: March 26, 2019

Prepared by:

HUDSON Design Group LLC

STATE OF CONNECTICUT
DANIEL HAMM
24178
LICENSED
PROFESSIONAL ENGINEER

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SCOPE OF WORK:

Hudson Design Group LLC (HDG) has been authorized by AT&T to conduct a structural evaluation of the structure supporting the proposed equipment located in the areas depicted in the latest HDG construction drawings.

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

An on-site visual survey of the above site was conducted on December 5, 2017.

The following documents were used for our reference:

- Previous Construction Drawings prepared by SEA Consultants Inc. and Eastern Inc. dated April 17, 2012.
- Previous HDG Structural Analysis dated April 17, 2012.

CONCLUSION SUMMARY:

Based on our evaluation, we have determined that the existing/proposed connection **IS CAPABLE** of supporting the proposed equipment loading.

Controlling Component	Description	Stress Ratio	Pass/Fail
Stud Welds	5/16-18 Stud	64%	**PASS**

Based on our evaluation, we have determined that the existing/proposed mounts **ARE CAPABLE** of supporting the proposed equipment loading.

	Member	Controlling Load Case	Stress Ratio	Pass/Fail
Antenna Mount	4	LC9	32%	**PASS**

A condition assessment on the existing water tank was not part of the scope of work.

*Reference documents attached.

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APPURTENANCE CONFIGURATION:

Appurtenances	Dimensions	Weight	**Elevation	Mount
(3) 800-10121 Antennas	54.5"x10.3"x5.9"	47 lbs	122'	Antenna Mount
(6) LGP21401 TMA's	14.4"x9.0"x2.7"	19 lbs	122'	Antenna Mount
(3) HPA65R-BU8A Antennas	96.0"x11.7"x7.6"	54 lbs	122'	Antenna Mount
(6) 800-10966 Antennas	96.0"x20.0"x6.9"	115 lbs	122'	Antenna Mount
(3) 4415 B25 RRH's	16.5"x13.4"x5.9"	46 lbs	122'	Antenna Mount
(3) B2/B66A 8843 RRH's	14.9"x13.2"x10.9"	72 lbs	122'	Antenna Mount
(3) B5/B12 4449 RRH's	14.9"x13.2"x10.4"	73 lbs	122'	Antenna Mount
(3) Squid Surge Arrestor	24.0"x9.7"Φ	33 lbs	122'	Antenna Mount

** Proposed equipment shown in bold.*
*** Elevation to antenna centerline.*

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DESIGN CRITERIA:

International Building Code 2015 with 2018 Connecticut State Building Code, and ASCE 7-10 (Minimum Design Loads for Buildings and Other Structures).		
Wind		
Reference Wind Speed:	135 mph	(2018 CTSBC Appendix N)
Exposure Category:	B	(ASCE 7-10 Chapter 26)
Risk Category:	IV	(ASCE 7-10 Table 1.5-1)
Snow		
Ground Snow, P_g:	35	(2018 CTSBC Appendix N)
Importance Factor (I_s):	1.2	(ASCE 7-10 Table 1.5-2)
Exposure Factor (C_e):	1.0	(Partially Exposed, Table 7-2)
Thermal Factor (C_t):	1.0	(ASCE 7-10 Table 7-3)
Flat Roof Snow Load:	29.4 psf	(ASCE 7-10 Equation 7.3-1)
Min. Flat Roof Snow Load:	30 psf	
EIA/TIA-222-H Structural Standards for Steel Antenna Towers and Antenna Supporting Structures		
Wind		
City/Town:	East Windsor	
County:	Hartford	
Wind Load:	130 mph	(TIA-222-H Figure B-2)
Structure Class:	IV	(TIA-222-H Table 2-1)
Importance Factor (I_w):	1.00	(TIA-222-H Table 2-3)
Ice		
Design Ice Thickness (t_i):	1.50 in	(TIA-222-H Figure B-9)
Structure Class:	IV	(TIA-222-H Table 2-1)
Importance Factor (I_i):	1.25	(TIA-222-H Table 2-3)
Factored Thickness of Radial Ice (t_{iz}):	2.14 in	(TIA-222-H Sec. 2.6.10)

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ANTENNA / RRH SUPPORT RECOMMENDATIONS:

The new antennas and RRH's are proposed to be mounted on new and existing pipe masts installed on new and existing stand-off mounts secured to the water tank façade by way of capacity discharge (CD) stud welds.

Limitations and Assumptions:

1. Reference the latest HDG construction drawings for all the equipment locations details.

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 requirements.

4. HDG is not responsible for any modifications completed prior to and hereafter which HDG was not directly involved.

5. If field conditions differ from what is assumed in this report, then the engineer of record is to be notified as soon as possible.

6. A condition assessment on the existing water tank was not part of the scope of work.

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FIELD PHOTOS:

Photo 1: Sample photo illustrating the existing Alpha sector antennas.

Photo 2: Sample photo illustrating the existing Beta sector antennas.

FIELD PHOTOS (CONT.):

Photo 3: Sample photo illustrating the existing Gamma sector antennas.

Photo 4: Sample photo illustrating the existing equipment cabinets.

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Wind and Ice
Calculations

Date: 3/26/2019
Project Name: EAST WINDSOR CENTRAL
Project No.: CT5395
Designed By: JN **Checked By:** MSC

HUDSON Design Group LLC

2.6.5.2 Velocity Pressure Coeff:

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

		z=	122 (ft)
		z_g=	1200 (ft)
K_z=	**1.046**	α=	7.0

Kzmin ≤ Kz ≤ 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

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

$K_h = e^{(f*z/H)}$

K_{zt}=	**#DIV/0!**	K_h=	#DIV/0!
		K_c=	0 (from Table 2-4)
(If Category 1 then K_{zt}=1.0)		K_t=	0 (from Table 2-5)
		f=	0 (from Table 2-5)
Category=	1	z=	122
		z_s=	120 (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=	1.00 (from 2.6.8)

2.6.10 Design Ice Thickness

Max Ice Thickness =		t_i =	1.50 in
Importance Factor =		I=	1.25 (from Table 2-3)
		K_{iz} =	1.14 (from Sec. 2.6.10)

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

t_{iz} = 2.14 in

Date: 3/26/2019
Project Name: EAST WINDSOR CENTRAL
Project No.: CT5395
Designed By: JN Checked By: MSC

HUDSON Design Group LLC

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=	127	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	**Gh=**	**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=	1.046	(from 2.6.5.2)
		K_{zt}=	1.0	(from 2.6.6.2.1)
		K_s=	1.0	(from 2.6.7)
q_z=	**46.16**	K_e=	1.00	(from 2.6.8)
$q_{z\,(ice)}$=	**6.33**	K_d=	0.95	(from Table 2-2)
$q_{z\,(30)}$=	**2.28**	V_{max}=	135	mph (Ultimate Wind Speed)
		$V_{max\,(ice)}$=	50	mph
		V_{30}=	30	mph

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: 3/26/2019
Project Name: EAST WINDSOR CENTRAL
Project No.: CT5395
Designed By: JN Checked By: MSC

HUDSON Design Group LLC

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 = **2.14 in** **Angle = 0 (deg)** **Equivalent Angle = 180 (deg)**

Appurtenances	Height	Width	Depth	Flat Area	Aspect Ratio	Ca	Force (lbs)	Force (lbs) (w/ Ice)
800-10121 Antenna	54.5	10.3	5.9	3.90	5.29	1.32	238	50
HPA65R-BU8A Antenna	96.0	11.7	7.6	7.80	8.21	1.44	519	101
800-10966 Antenna	96.0	20.0	6.9	13.33	4.80	1.30	801	139
4415 B25 RRH	16.5	13.4	5.9	1.54	1.23	1.20	85	19
4415 B25 RRH (Shielded)	16.5	1.7	5.9	0.19	9.71	1.49	13	8
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.20	76	18
B2/B66A 8843 RRH (Shielded)	14.9	0.0	10.9	0.00	0.00	1.20	0	0
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.13	1.20	76	18
B5/B12 4449 RRH (Shielded)	14.9	0.0	10.4	0.00	0.00	1.20	0	0
LGP21401 TMA	14.4	2.7	9.0	0.27	5.33	1.33	17	8
Surge Arrestor	24.0	9.7	9.7	1.62	2.47	0.70	52	12

Date: 3/26/2019
Project Name: EAST WINDSOR CENTRAL
Project No.: CT5395
Designed By: JN Checked By: MSC

HUDSON Design Group LLC

WIND LOADS

Angle =	90	(deg)	Ice Thickness =	2.14	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)
800-10121 Antenna	54.5	10.3	5.9	3.90	2.23	5.29	9.24	1.32	1.47	238	152	152
HPA65R-BU8A Antenna	96.0	11.7	7.6	7.80	5.07	8.21	12.63	1.44	1.59	519	371	371
800-10966 Antenna	96.0	20.0	6.9	13.33	4.60	4.80	13.91	1.30	1.63	801	346	346
4415 B25 RRH	16.5	13.4	5.9	1.54	0.68	1.23	2.80	1.20	1.21	85	38	38
4415 B25 RRH (Shielded)	16.5	1.7	5.9	0.19	0.68	9.71	2.80	1.49	1.21	13	38	38
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	76	62	62
B2/B66A 8843 RRH (Shielded)	14.9	0.0	10.9	0.00	1.13	0.00	1.37	1.20	1.20	0	62	62
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	76	60	60
B5/B12 4449 RRH (Shielded)	14.9	0.0	10.4	0.00	1.08	0.00	1.43	1.20	1.20	0	60	60
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	17	50	50

WIND LOADS WITH ICE:

800-10121 Antenna	58.8	14.6	10.2	5.95	4.15	4.03	5.78	1.27	1.35	48	35	35
HPA65R-BU8A Antenna	100.3	16.0	11.9	11.12	8.27	6.28	8.44	1.37	1.45	96	76	76
800-10966 Antenna	100.3	24.3	11.2	16.90	7.78	4.13	8.97	1.27	1.47	136	72	72
4415 B25 RRH	20.8	17.7	10.2	2.55	1.47	1.18	2.04	1.20	1.20	19	11	11
4415 B25 RRH (Shielded)	20.8	6.0	10.2	0.86	1.47	3.48	2.04	1.24	1.20	7	11	11
B2/B66A 8843 RRH	19.2	17.5	15.2	2.33	2.02	1.10	1.26	1.20	1.20	18	15	15
B2/B66A 8843 RRH (Shielded)	19.2	4.3	15.2	0.57	2.02	4.49	1.26	1.29	1.20	5	15	15
B5/B12 4449 RRH	19.2	17.5	14.7	2.33	1.95	1.10	1.31	1.20	1.20	18	15	15
B5/B12 4449 RRH (Shielded)	19.2	4.3	14.7	0.57	1.95	4.49	1.31	1.29	1.20	5	15	15
LGP21401 TMA	18.7	7.0	13.3	0.90	1.72	2.68	1.41	1.21	1.20	7	13	13

Date: 3/26/2019
Project Name: EAST WINDSOR CENTRAL
Project No.: CT5395
Designed By: JN **Checked By:** MSC

HUDSON Design Group LLC

ICE WEIGHT CALCULATIONS

Thickness of ice: 2.14 in.
Density of ice: 56 pcf

800-10121 Antenna

Weight of ice based on total radial SF area:

Height (in):	54.5	
Width (in):	10.3	
Depth (in):	5.9	
Total weight of ice on object:		166 lbs
Weight of object:	47.0 lbs	
Combined weight of ice and object:		213 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:		337 lbs
Weight of object:	54.0 lbs	
Combined weight of ice and object:		391 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:		487 lbs
Weight of object:	115.0 lbs	
Combined weight of ice and object:		602 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:		60 lbs
Weight of object:	46.0 lbs	
Combined weight of ice and object:		106 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:		63 lbs
Weight of object:	72.0 lbs	
Combined weight of ice and object:		135 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:		62 lbs
Weight of object:	73.0 lbs	
Combined weight of ice and object:		135 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:		36 lbs
Weight of object:	19.0 lbs	
Combined weight of ice and object:		55 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:		62 lbs
Weight of object:	33 lbs	
Combined weight of ice and object:		95 lbs

HSS 3x3

Weight of ice based on total radial SF area:

Height (in):	3	
Width (in):	3	
Per foot weight of ice on object:		17 plf

L 3x3 Angles

Weight of ice based on total radial SF area:

Height (in):	3	
Width (in):	3	
Per foot weight of ice on object:		17 plf

3" Pipe

Per foot weight of ice:

diameter (in):	3.5	
Per foot weight of ice on object:		15 plf

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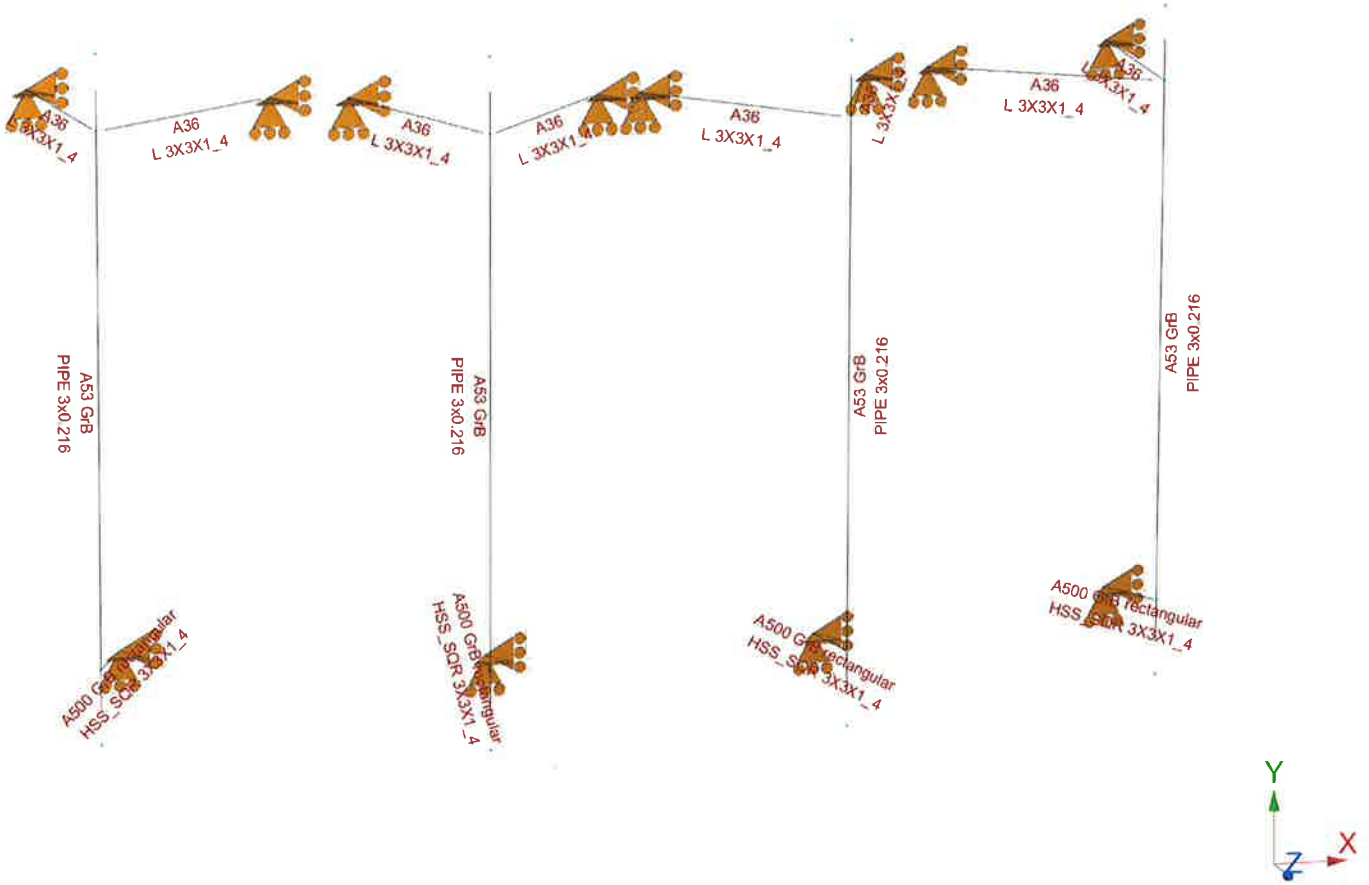
Antenna Mount Calculations


Y
X
Z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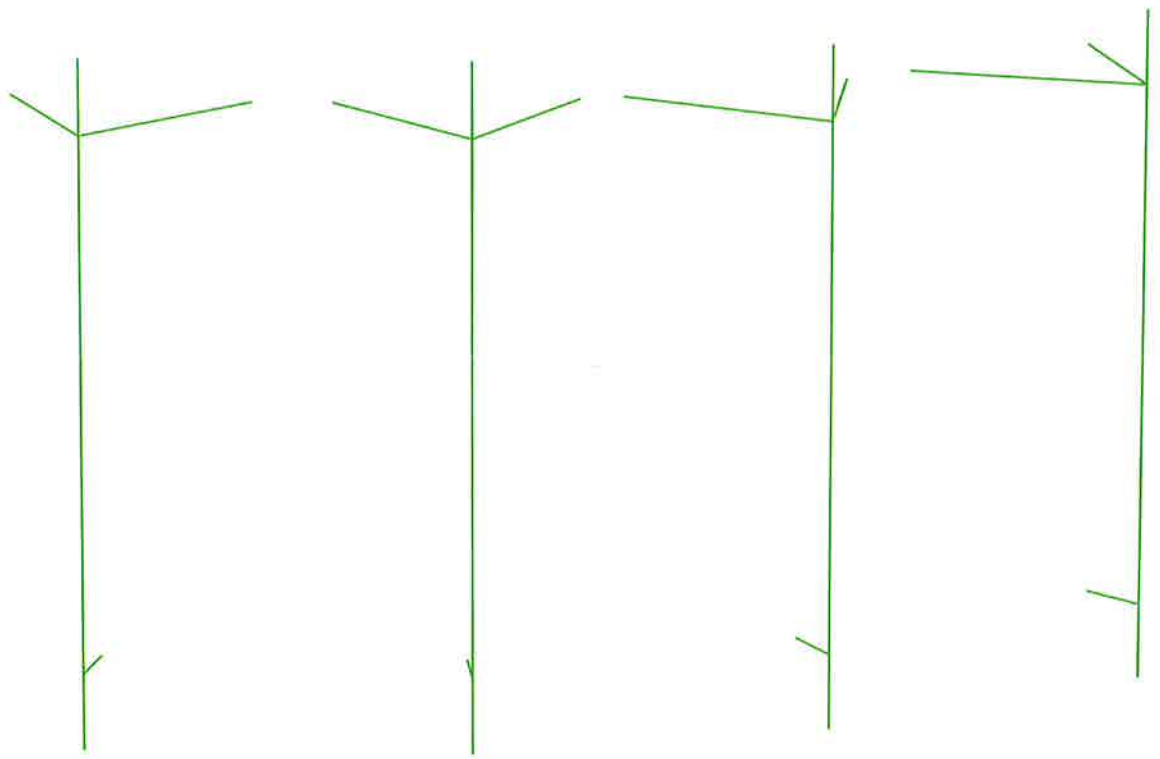
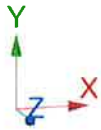
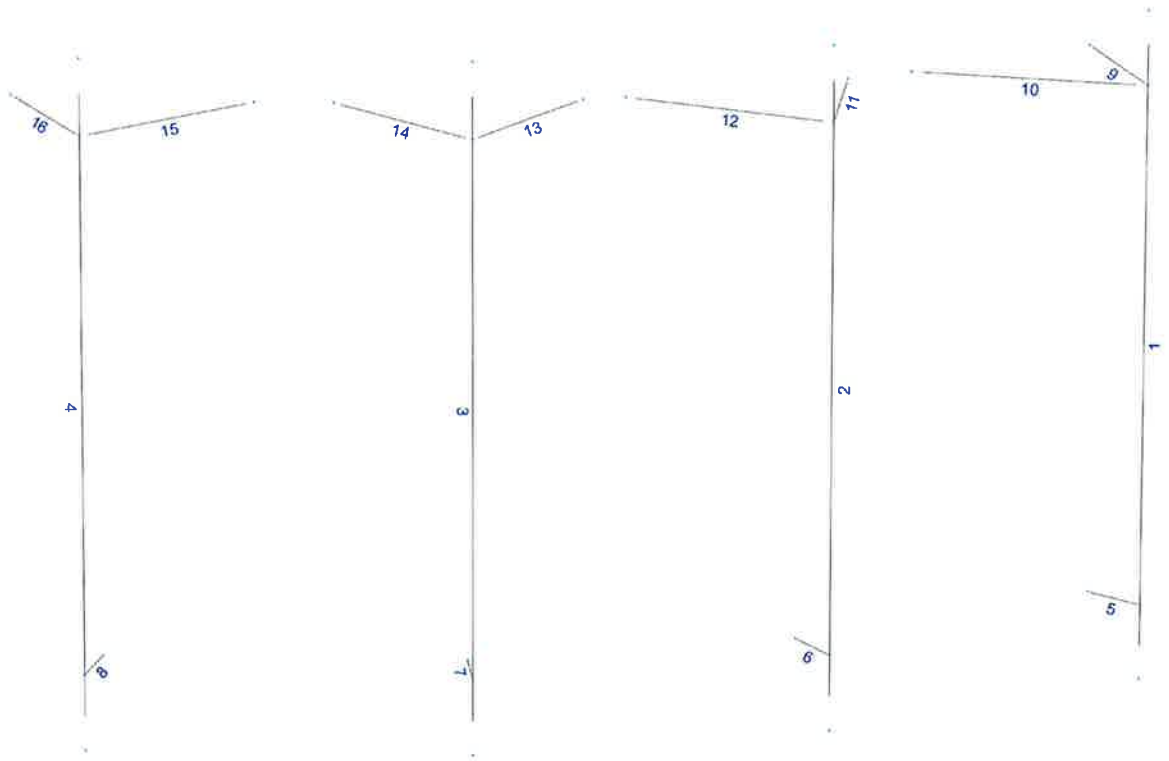
A53 GrB
PIPE 3x0.216
A500 GrB Rectangular
HSS_SQR 3X3X1_4
Y
X
Z

Design status

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



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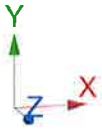

Y
X
Z

Bentley Hewlett-Packard Company

Current Date: 3/26/2019 3:14 PM
Units system: English
File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT5395\LTE 2C-3C-4C\CT5395 (LTE 2C-3C-4C).etz\

Load data

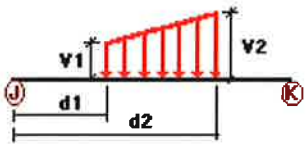
GLOSSARY

Comb : Indicates if load condition is a load combination

Load Conditions

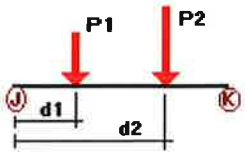
Condition	Description	Comb.	Category
DL	Dead Load	No	DL
Wf	Wind Load (FRONT)	No	WIND
Ws	Wind Load (SIDE)	No	WIND
Wif	Wind with Ice (FRONT)	No	WIND
Wis	Wind with Ice (SIDE)	No	WIND
Di	Ice Load	No	LL

Distributed force on members



Condition	Member	Dir1	Val1 [Kip/ft]	Val2 [Kip/ft]	Dist1 [ft]	%	Dist2 [ft]	%
Di	1	y	-0.015	0.00	0.00	No	0.00	No
	2	y	-0.015	0.00	0.00	No	0.00	No
	3	y	-0.015	0.00	0.00	No	0.00	No
	4	y	-0.015	0.00	0.00	No	0.00	No
	5	y	-0.017	0.00	0.00	No	0.00	No
	6	y	-0.017	0.00	0.00	No	0.00	No
	7	y	-0.017	0.00	0.00	No	0.00	No
	8	y	-0.017	0.00	0.00	No	0.00	No
	9	y	-0.017	0.00	0.00	No	0.00	No
	10	y	-0.017	0.00	0.00	No	0.00	No
	11	y	-0.017	0.00	0.00	No	0.00	No
	12	y	-0.017	0.00	0.00	No	0.00	No
	13	y	-0.017	0.00	0.00	No	0.00	No
	14	y	-0.017	0.00	0.00	No	0.00	No
	15	y	-0.017	0.00	0.00	No	0.00	No
	16	y	-0.017	0.00	0.00	No	0.00	No

Concentrated forces on members



Condition	Member	Dir1	Value1 [Kip]	Dist1 [ft]	%
DL	1	y	-0.024	2.25	No
		y	-0.024	6.75	No
		y	-0.038	4.50	No
	2	y	-0.027	0.50	No
		y	-0.027	8.50	No
		y	-0.046	4.50	No
		y	-0.033	7.00	No
	3	y	-0.058	0.50	No
		y	-0.058	8.50	No
		y	-0.072	4.50	No
	4	y	-0.058	0.50	No
		y	-0.058	8.50	No
		y	-0.073	4.50	No
Wf	1	z	-0.12	2.25	No
		z	-0.12	6.75	No
	2	z	-0.26	0.50	No
		z	-0.26	8.50	No
		z	-0.013	4.50	No
		z	-0.052	7.00	No
	3	z	-0.401	0.50	No
		z	-0.401	8.50	No
	4	z	-0.401	0.50	No
		z	-0.401	8.50	No
Ws	1	x	-0.076	2.25	No
		x	-0.076	6.75	No
		x	-0.05	4.50	No
	2	x	-0.186	0.50	No
		x	-0.186	8.50	No
		x	-0.038	4.50	No
		x	-0.052	7.00	No
	3	x	-0.174	0.50	No
		x	-0.174	8.50	No
		x	-0.062	4.50	No
	4	x	-0.174	0.50	No
		x	-0.174	8.50	No
		x	-0.06	4.50	No
Wif	1	z	-0.025	2.25	No
		z	-0.025	6.75	No
	2	z	-0.051	0.50	No
		z	-0.051	8.50	No
		z	-0.008	4.50	No
		z	-0.012	7.00	No
	3	z	-0.07	0.50	No
		z	-0.07	8.50	No
	4	z	-0.07	0.50	No
		z	-0.07	8.50	No
Wis	1	x	-0.018	2.25	No
		x	-0.018	6.75	No
		x	-0.013	4.50	No
	2	x	-0.038	0.50	No
		x	-0.038	8.50	No
		x	-0.011	4.50	No
		x	-0.012	7.00	No
	3	x	-0.037	0.50	No

		x	-0.037	8.50	No
		x	-0.015	4.50	No
	4	x	-0.037	0.50	No
		x	-0.037	8.50	No
		x	-0.015	4.50	No
Di	1	y	-0.083	2.25	No
		y	-0.083	6.75	No
		y	-0.072	4.50	No
	2	y	-0.169	0.50	No
		y	-0.169	8.50	No
		y	-0.06	4.50	No
		y	-0.062	7.00	No
	3	y	-0.244	0.50	No
		y	-0.244	8.50	No
		y	-0.063	4.50	No
	4	y	-0.244	0.50	No
		y	-0.244	8.50	No
		y	-0.062	4.50	No

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
Wf	Wind Load (FRONT)	No	0.00	0.00	0.00
Ws	Wind Load (SIDE)	No	0.00	0.00	0.00
Wif	Wind with Ice (FRONT)	No	0.00	0.00	0.00
Wis	Wind with Ice (SIDE)	No	0.00	0.00	0.00
Di	Ice Load	No	0.00	0.00	0.00

Earthquake (Dynamic analysis only)

Condition	a/g	Ang. [Deg]	Damp. [%]
DL	0.00	0.00	0.00
Wf	0.00	0.00	0.00
Ws	0.00	0.00	0.00
Wif	0.00	0.00	0.00
Wis	0.00	0.00	0.00
Di	0.00	0.00	0.00

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Current Date: 3/26/2019 3:14 PM
Units system: English
File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT5395\LTE 2C-3C-4C\CT5395 (LTE 2C-3C-4C).etz\

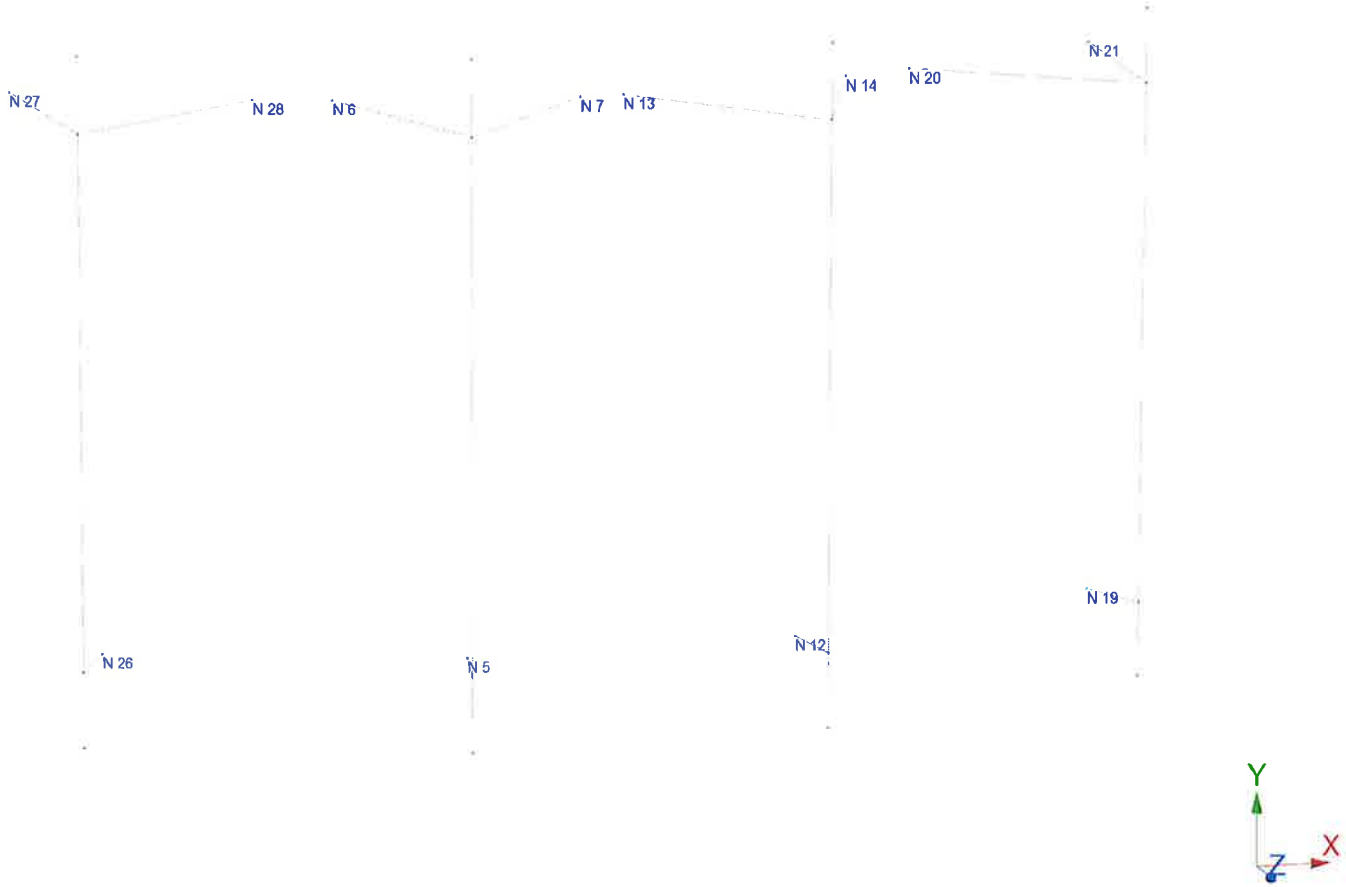
Steel Code Check

Report: Summary - Group by member

Load conditions to be included in design :

LC1=1.2DL+Wf
LC2=1.2DL+Ws
LC3=1.2DL-Wf
LC4=1.2DL-Ws
LC5=0.9DL+Wf
LC6=0.9DL+Ws
LC7=0.9DL-Wf
LC8=0.9DL-Ws
LC9=1.2DL+Wf+Wif+Di
LC10=1.2DL+Ws+Wis+Di
LC11=1.2DL-Wf-Wif+Di
LC12=1.2DL-Ws-Wis+Di
LC13=1.2DL
LC14=0.9DL

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
	HSS_SQR 3X3X1_4	**5**	LC10 at 0.00%	0.10	OK	Eq. H1-1b
		6	LC12 at 0.00%	0.17	OK	Eq. H1-1b
		7	LC10 at 0.00%	0.19	OK	Eq. H1-1b
		8	LC11 at 0.00%	**0.19**	**OK**	Eq. H1-1b
	L 3X3X1_4	**9**	LC11 at 100.00%	0.16	OK	Sec. F1
		10	LC12 at 0.00%	0.15	OK	Eq. H2-1
		11	LC12 at 100.00%	0.22	OK	Sec. F1
		12	LC10 at 0.00%	0.23	OK	Sec. F1
		13	LC9 at 100.00%	0.26	OK	Sec. F1
		14	LC9 at 0.00%	0.29	OK	Sec. F1
		15	LC9 at 100.00%	0.22	OK	Sec. F1
		16	LC9 at 0.00%	**0.31**	**OK**	Sec. F1
	PIPE 3x0.216	**1**	LC9 at 87.50%	0.17	OK	Eq. H1-1b
		2	LC9 at 87.50%	0.23	OK	Eq. H1-1b
		3	LC9 at 87.50%	0.28	OK	Eq. H1-1b
		4	LC9 at 87.50%	**0.32**	**OK**	Eq. H1-1b


N 27
N 28
N 6
N 7
N 13
N 14
N 20
N 21
N 19
N 12
N 5
N 26
Y
X
Z

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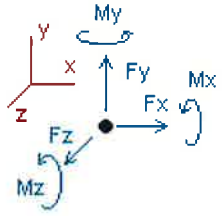
Analysis result

Reactions



Direction of positive forces and moments

	Forces [Kip]			Moments [Kip*ft]		
Node	**FX**	**FY**	**FZ**	**MX**	**MY**	**MZ**
Condition **LC1=1.2DL+Wf**						
5	-0.01055	0.22063	0.47533	0.00000	0.00000	0.00000
6	0.04318	0.06999	0.25158	0.00000	0.00000	0.00000
7	-0.03263	0.05912	0.07509	0.00000	0.00000	0.00000
12	0.00804	0.19673	0.36518	0.00000	0.00000	0.00000
13	0.02248	0.04032	0.04737	0.00000	0.00000	0.00000
14	-0.03052	0.04669	0.17245	0.00000	0.00000	0.00000
19	0.01331	0.21633	0.14351	0.00000	0.00000	0.00000
20	-0.00989	0.01009	-0.01723	0.00000	0.00000	0.00000
21	-0.00342	0.00092	0.11373	0.00000	0.00000	0.00000
26	-0.02568	0.22677	0.47059	0.00000	0.00000	0.00000
27	-0.02845	0.07531	0.36215	0.00000	0.00000	0.00000
28	0.05412	0.04887	-0.03073	0.00000	0.00000	0.00000
SUM	0.00000	1.21177	2.42900	0.00000	0.00000	0.00000
Condition **LC2=1.2DL+Ws**						
5	0.19868	0.28663	0.05770	0.00000	0.00000	0.00000
6	0.02178	0.03973	0.19482	0.00000	0.00000	0.00000
7	0.18954	0.02338	-0.25252	0.00000	0.00000	0.00000
12	0.26243	0.22613	0.04552	0.00000	0.00000	0.00000
13	0.12634	0.03906	0.23061	0.00000	0.00000	0.00000
14	0.07323	0.01855	-0.27614	0.00000	0.00000	0.00000
19	0.11027	0.19684	0.03096	0.00000	0.00000	0.00000
20	0.09013	0.00517	0.08531	0.00000	0.00000	0.00000
21	0.00160	0.02533	-0.11627	0.00000	0.00000	0.00000
26	0.18298	0.29056	0.05351	0.00000	0.00000	0.00000
27	-0.03025	0.03787	0.14391	0.00000	0.00000	0.00000
28	0.25528	0.02252	-0.19743	0.00000	0.00000	0.00000
SUM	1.48200	1.21177	0.00000	0.00000	0.00000	0.00000

Condition	**LC3=1.2DL-Wf**					
5	-0.00974	0.34892	-0.36030	0.00000	0.00000	0.00000
6	-0.10055	-0.00502	-0.32100	0.00000	0.00000	0.00000
7	0.11029	0.00584	-0.12070	0.00000	0.00000	0.00000
12	0.00810	0.26006	-0.27364	0.00000	0.00000	0.00000
13	-0.08477	0.01502	-0.08358	0.00000	0.00000	0.00000
14	0.07667	0.00866	-0.22778	0.00000	0.00000	0.00000
19	0.01737	0.14401	-0.07770	0.00000	0.00000	0.00000
20	-0.04492	0.03708	0.00274	0.00000	0.00000	0.00000
21	0.02755	0.04625	-0.16503	0.00000	0.00000	0.00000
26	-0.02387	0.34483	-0.36434	0.00000	0.00000	0.00000
27	-0.00914	-0.01017	-0.44435	0.00000	0.00000	0.00000
28	0.03301	0.01627	0.00669	0.00000	0.00000	0.00000
SUM	0.00000	1.21177	-2.42900	0.00000	0.00000	0.00000
Condition	**LC4=1.2DL-Ws**					
5	-0.21896	0.28292	0.05733	0.00000	0.00000	0.00000
6	-0.07916	0.02524	-0.26424	0.00000	0.00000	0.00000
7	-0.11188	0.04158	0.20691	0.00000	0.00000	0.00000
12	-0.24629	0.23066	0.04602	0.00000	0.00000	0.00000
13	-0.18863	0.01628	-0.26683	0.00000	0.00000	0.00000
14	-0.02708	0.03680	0.22081	0.00000	0.00000	0.00000
19	-0.07959	0.16350	0.03484	0.00000	0.00000	0.00000
20	-0.14494	0.04200	-0.09980	0.00000	0.00000	0.00000
21	0.02253	0.02183	0.06497	0.00000	0.00000	0.00000
26	-0.23252	0.28105	0.05274	0.00000	0.00000	0.00000
27	-0.00733	0.02727	-0.22612	0.00000	0.00000	0.00000
28	-0.16814	0.04262	0.17338	0.00000	0.00000	0.00000
SUM	-1.48200	1.21177	0.00000	0.00000	0.00000	0.00000
Condition	**LC5=0.9DL+Wf**					
5	-0.00801	0.14944	0.46095	0.00000	0.00000	0.00000
6	0.05035	0.06187	0.26026	0.00000	0.00000	0.00000
7	-0.04234	0.05100	0.08079	0.00000	0.00000	0.00000
12	0.00602	0.13963	0.35374	0.00000	0.00000	0.00000
13	0.03026	0.03341	0.05189	0.00000	0.00000	0.00000
14	-0.03629	0.03977	0.17937	0.00000	0.00000	0.00000
19	0.00947	0.17129	0.13528	0.00000	0.00000	0.00000
20	-0.00304	0.00419	-0.01542	0.00000	0.00000	0.00000
21	-0.00644	-0.00498	0.12014	0.00000	0.00000	0.00000
26	-0.01948	0.15532	0.45731	0.00000	0.00000	0.00000
27	-0.02375	0.06716	0.37242	0.00000	0.00000	0.00000
28	0.04323	0.04072	-0.02773	0.00000	0.00000	0.00000
SUM	0.00000	0.90883	2.42900	0.00000	0.00000	0.00000
Condition	**LC6=0.9DL+Ws**					
5	0.20121	0.21544	0.04332	0.00000	0.00000	0.00000
6	0.02896	0.03160	0.20350	0.00000	0.00000	0.00000
7	0.17983	0.01526	-0.24682	0.00000	0.00000	0.00000
12	0.26042	0.16903	0.03408	0.00000	0.00000	0.00000
13	0.13413	0.03215	0.23514	0.00000	0.00000	0.00000
14	0.06746	0.01163	-0.26922	0.00000	0.00000	0.00000
19	0.10644	0.15180	0.02274	0.00000	0.00000	0.00000
20	0.09698	-0.00073	0.08712	0.00000	0.00000	0.00000
21	-0.00142	0.01944	-0.10986	0.00000	0.00000	0.00000
26	0.18917	0.21911	0.04023	0.00000	0.00000	0.00000
27	-0.02555	0.02972	0.15419	0.00000	0.00000	0.00000

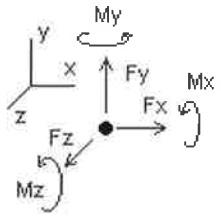
28	0.24438	0.01438	-0.19442	0.00000	0.00000	0.00000
SUM	1.48200	0.90883	0.00000	0.00000	0.00000	0.00000
Condition **LC7=0.9DL-Wf**						
5	-0.00720	0.27773	-0.37468	0.00000	0.00000	0.00000
6	-0.09338	-0.01314	-0.31232	0.00000	0.00000	0.00000
7	0.10058	-0.00228	-0.11500	0.00000	0.00000	0.00000
12	0.00608	0.20296	-0.28508	0.00000	0.00000	0.00000
13	-0.07698	0.00810	-0.07905	0.00000	0.00000	0.00000
14	0.07090	0.00174	-0.22087	0.00000	0.00000	0.00000
19	0.01354	0.09897	-0.08593	0.00000	0.00000	0.00000
20	-0.03807	0.03118	0.00455	0.00000	0.00000	0.00000
21	0.02453	0.04035	-0.15862	0.00000	0.00000	0.00000
26	-0.01768	0.27338	-0.37762	0.00000	0.00000	0.00000
27	-0.00444	-0.01831	-0.43407	0.00000	0.00000	0.00000
28	0.02212	0.00813	0.00969	0.00000	0.00000	0.00000
SUM	0.00000	0.90883	-2.42900	0.00000	0.00000	0.00000
Condition **LC8=0.9DL-Ws**						
5	-0.21643	0.21173	0.04295	0.00000	0.00000	0.00000
6	-0.07199	0.01712	-0.25556	0.00000	0.00000	0.00000
7	-0.12159	0.03346	0.21261	0.00000	0.00000	0.00000
12	-0.24831	0.17356	0.03458	0.00000	0.00000	0.00000
13	-0.18084	0.00936	-0.26230	0.00000	0.00000	0.00000
14	-0.03285	0.02988	0.22772	0.00000	0.00000	0.00000
19	-0.08342	0.11846	0.02661	0.00000	0.00000	0.00000
20	-0.13809	0.03611	-0.09799	0.00000	0.00000	0.00000
21	0.01951	0.01594	0.07138	0.00000	0.00000	0.00000
26	-0.22633	0.20960	0.03946	0.00000	0.00000	0.00000
27	-0.00263	0.01913	-0.21584	0.00000	0.00000	0.00000
28	-0.17904	0.03448	0.17639	0.00000	0.00000	0.00000
SUM	-1.48200	0.90883	0.00000	0.00000	0.00000	0.00000
Condition **LC9=1.2DL+Wf+Wif+Di**						
5	-0.02969	0.74770	0.65644	0.00000	0.00000	0.00000
6	0.00054	0.14665	0.23605	0.00000	0.00000	0.00000
7	0.02915	0.13389	0.04950	0.00000	0.00000	0.00000
12	0.02422	0.65280	0.52365	0.00000	0.00000	0.00000
13	-0.02922	0.10550	0.02476	0.00000	0.00000	0.00000
14	0.00500	0.11294	0.15859	0.00000	0.00000	0.00000
19	0.03543	0.49465	0.21489	0.00000	0.00000	0.00000
20	-0.04809	0.05464	-0.02922	0.00000	0.00000	0.00000
21	0.01266	0.04356	0.10433	0.00000	0.00000	0.00000
26	-0.07218	0.75388	0.64286	0.00000	0.00000	0.00000
27	-0.06643	0.15281	0.35511	0.00000	0.00000	0.00000
28	0.13861	0.12175	-0.05597	0.00000	0.00000	0.00000
SUM	0.00000	3.52077	2.88100	0.00000	0.00000	0.00000

Condition **LC10=1.2DL+Ws+Wis+Di**						
5	0.22484	0.82521	0.16593	0.00000	0.00000	0.00000
6	-0.02245	0.11127	0.17918	0.00000	0.00000	0.00000
7	0.29661	0.09176	-0.34511	0.00000	0.00000	0.00000
12	0.33328	0.68639	0.13744	0.00000	0.00000	0.00000
13	0.09643	0.10449	0.24764	0.00000	0.00000	0.00000
14	0.13129	0.08036	-0.38509	0.00000	0.00000	0.00000
19	0.15582	0.47171	0.07883	0.00000	0.00000	0.00000
20	0.07681	0.04801	0.09785	0.00000	0.00000	0.00000
21	0.01836	0.07313	-0.17668	0.00000	0.00000	0.00000
26	0.18182	0.82872	0.15302	0.00000	0.00000	0.00000
27	-0.06912	0.10900	0.10683	0.00000	0.00000	0.00000
28	0.38430	0.09073	-0.25985	0.00000	0.00000	0.00000
SUM	1.80800	3.52077	0.00000	0.00000	0.00000	0.00000
Condition **LC11=1.2DL-Wf-Wif+Di**						
5	-0.02874	0.89839	-0.32505	0.00000	0.00000	0.00000
6	-0.16828	0.05855	-0.43648	0.00000	0.00000	0.00000
7	0.19703	0.07131	-0.18047	0.00000	0.00000	0.00000
12	0.02437	0.72507	-0.24812	0.00000	0.00000	0.00000
13	-0.16040	0.07681	-0.13338	0.00000	0.00000	0.00000
14	0.13603	0.06937	-0.32551	0.00000	0.00000	0.00000
19	0.04034	0.40726	-0.05240	0.00000	0.00000	0.00000
20	-0.09042	0.08725	-0.00509	0.00000	0.00000	0.00000
21	0.05008	0.09833	-0.23250	0.00000	0.00000	0.00000
26	-0.07006	0.89255	-0.33782	0.00000	0.00000	0.00000
27	-0.04375	0.05242	-0.59217	0.00000	0.00000	0.00000
28	0.11381	0.08347	-0.01201	0.00000	0.00000	0.00000
SUM	0.00000	3.52077	-2.88100	0.00000	0.00000	0.00000
Condition **LC12=1.2DL-Ws-Wis+Di**						
5	-0.28327	0.82089	0.16546	0.00000	0.00000	0.00000
6	-0.14530	0.09392	-0.37961	0.00000	0.00000	0.00000
7	-0.07043	0.11343	0.21414	0.00000	0.00000	0.00000
12	-0.28469	0.69147	0.13809	0.00000	0.00000	0.00000
13	-0.28604	0.07782	-0.35626	0.00000	0.00000	0.00000
14	0.00973	0.10195	0.21817	0.00000	0.00000	0.00000
19	-0.08006	0.43020	0.08365	0.00000	0.00000	0.00000
20	-0.21533	0.09389	-0.13217	0.00000	0.00000	0.00000
21	0.04439	0.06876	0.04851	0.00000	0.00000	0.00000
26	-0.32407	0.81772	0.15202	0.00000	0.00000	0.00000
27	-0.04105	0.09623	-0.34389	0.00000	0.00000	0.00000
28	-0.13188	0.11450	0.19187	0.00000	0.00000	0.00000
SUM	-1.80800	3.52077	0.00000	0.00000	0.00000	0.00000
Condition **LC13=1.2DL**						
5	-0.01014	0.28478	0.05751	0.00000	0.00000	0.00000
6	-0.02869	0.03248	-0.03471	0.00000	0.00000	0.00000
7	0.03883	0.03248	-0.02280	0.00000	0.00000	0.00000
12	0.00807	0.22840	0.04577	0.00000	0.00000	0.00000
13	-0.03114	0.02767	-0.01811	0.00000	0.00000	0.00000
14	0.02307	0.02767	-0.02767	0.00000	0.00000	0.00000
19	0.01534	0.18017	0.03290	0.00000	0.00000	0.00000
20	-0.02741	0.02358	-0.00725	0.00000	0.00000	0.00000
21	0.01206	0.02358	-0.02565	0.00000	0.00000	0.00000
26	-0.02477	0.28580	0.05313	0.00000	0.00000	0.00000
27	-0.01879	0.03257	-0.04110	0.00000	0.00000	0.00000

28	0.04357	0.03257	-0.01202	0.00000	0.00000	0.00000
SUM	0.00000	1.21177	0.00000	0.00000	0.00000	0.00000
Condition **LC14=0.9DL**						
5	-0.00761	0.21358	0.04314	0.00000	0.00000	0.00000
6	-0.02152	0.02436	-0.02603	0.00000	0.00000	0.00000
7	0.02912	0.02436	-0.01710	0.00000	0.00000	0.00000
12	0.00605	0.17130	0.03433	0.00000	0.00000	0.00000
13	-0.02336	0.02075	-0.01358	0.00000	0.00000	0.00000
14	0.01731	0.02075	-0.02075	0.00000	0.00000	0.00000
19	0.01151	0.13513	0.02468	0.00000	0.00000	0.00000
20	-0.02055	0.01769	-0.00544	0.00000	0.00000	0.00000
21	0.00905	0.01769	-0.01924	0.00000	0.00000	0.00000
26	-0.01858	0.21435	0.03984	0.00000	0.00000	0.00000
27	-0.01409	0.02443	-0.03083	0.00000	0.00000	0.00000
28	0.03267	0.02443	-0.00902	0.00000	0.00000	0.00000
SUM	0.00000	0.90883	0.00000	0.00000	0.00000	0.00000

Envelope for nodal reactions

Note.- **Ic** is the controlling load condition



Direction of positive forces and moments

Envelope of nodal reactions for :

LC1=1.2DL+Wf
LC2=1.2DL+Ws
LC3=1.2DL-Wf
LC4=1.2DL-Ws
LC5=0.9DL+Wf
LC6=0.9DL+Ws
LC7=0.9DL-Wf
LC8=0.9DL-Ws
LC9=1.2DL+Wf+Wif+Di
LC10=1.2DL+Ws+Wis+Di
LC11=1.2DL-Wf-Wif+Di
LC12=1.2DL-Ws-Wis+Di
LC13=1.2DL
LC14=0.9DL

Node		Forces						Moments					
		Fx [Kip]	lc	Fy [Kip]	lc	Fz [Kip]	lc	Mx [Kip*ft]	lc	My [Kip*ft]	lc	Mz [Kip*ft]	lc
5	Max	0.225	LC10	0.898	LC11	0.656	LC9	0.00000	LC1	0.00000	LC1	0.00000	LC1
	Min	-0.283	LC12	0.149	LC5	-0.375	LC7	0.00000	LC1	0.00000	LC1	0.00000	LC1
6	Max	0.050	LC5	0.147	LC9	0.260	LC5	0.00000	LC1	0.00000	LC1	0.00000	LC1
	Min	-0.168	LC11	-0.013	LC7	-0.436	LC11	0.00000	LC1	0.00000	LC1	0.00000	LC1
7	Max	0.297	LC10	0.134	LC9	0.214	LC12	0.00000	LC1	0.00000	LC1	0.00000	LC1
	Min	-0.122	LC8	-0.002	LC7	-0.345	LC10	0.00000	LC1	0.00000	LC1	0.00000	LC1
12	Max	0.333	LC10	0.725	LC11	0.524	LC9	0.00000	LC1	0.00000	LC1	0.00000	LC1
	Min	-0.285	LC12	0.140	LC5	-0.285	LC7	0.00000	LC1	0.00000	LC1	0.00000	LC1
13	Max	0.134	LC6	0.106	LC9	0.248	LC10	0.00000	LC1	0.00000	LC1	0.00000	LC1
	Min	-0.286	LC12	0.008	LC7	-0.356	LC12	0.00000	LC1	0.00000	LC1	0.00000	LC1
14	Max	0.136	LC11	0.113	LC9	0.228	LC8	0.00000	LC1	0.00000	LC1	0.00000	LC1
	Min	-0.036	LC5	0.002	LC7	-0.385	LC10	0.00000	LC1	0.00000	LC1	0.00000	LC1
19	Max	0.156	LC10	0.495	LC9	0.215	LC9	0.00000	LC1	0.00000	LC1	0.00000	LC1
	Min	-0.083	LC8	0.099	LC7	-0.086	LC7	0.00000	LC1	0.00000	LC1	0.00000	LC1
20	Max	0.097	LC6	0.094	LC12	0.098	LC10	0.00000	LC1	0.00000	LC1	0.00000	LC1
	Min	-0.215	LC12	-0.001	LC6	-0.132	LC12	0.00000	LC1	0.00000	LC1	0.00000	LC1
21	Max	0.050	LC11	0.098	LC11	0.120	LC5	0.00000	LC1	0.00000	LC1	0.00000	LC1
	Min	-0.006	LC5	-0.005	LC5	-0.233	LC11	0.00000	LC1	0.00000	LC1	0.00000	LC1
26	Max	0.189	LC6	0.893	LC11	0.643	LC9	0.00000	LC1	0.00000	LC1	0.00000	LC1
	Min	-0.324	LC12	0.155	LC5	-0.378	LC7	0.00000	LC1	0.00000	LC1	0.00000	LC1
27	Max	-0.003	LC8	0.153	LC9	0.372	LC5	0.00000	LC1	0.00000	LC1	0.00000	LC1
	Min	-0.069	LC10	-0.018	LC7	-0.592	LC11	0.00000	LC1	0.00000	LC1	0.00000	LC1
28	Max	0.384	LC10	0.122	LC9	0.192	LC12	0.00000	LC1	0.00000	LC1	0.00000	LC1
	Min	-0.179	LC8	0.008	LC7	-0.260	LC10	0.00000	LC1	0.00000	LC1	0.00000	LC1

Date: 3/26/2019
Project Name: EAST WINDSOR CENTRAL
Project No.: CT5395
Designed By: JN **Checked By:** MSC

HUDSON Design Group LLC

CHECK STUD WELD CAPACITY → Brace

Reference: Cox Industries

Stud Material =	Low Carbon Copper Flashed Steel	
Stud Weld Size =	5/16 - 18	
Ultimate Tensile Load =	2900 lbs.	
Maximum Shear Load =	2200 lbs.	
Safety Factor =	4	

Testing Torque	Max. Fastening Torque
11.9 ft. lbs	6.0 ft. lbs

Allowable Tensile Load =

F_{Tall} = 725 lbs.

Allowable Shear Load =

F_{Vall} = 550 lbs.

WIND FORCES

Antennas & RRH F = 592 lbs. (See Bentley Result Analysis)

GRAVITY LOADS

Ice and Equipment 18 lbs. (See Bentley Result Analysis)

No. of Supports = 1
No. of Studs / Support = 2 Min.

Tension Design Load / Stud =

f_t = 296.00 lbs. < 725 lbs. **Therefore, OK !**

Shear Design Load / Stud=

f_v = 9.00 lbs. < 550 lbs. **Therefore, OK !**

CHECK COMBINED TENSION AND SHEAR

f_t / F_T	+	f_v / F_V	≤	1.0			
0.408	+	0.016	=	0.425	<	1.0	**Therefore, OK !**

Date: 3/26/2019
Project Name: EAST WINDSOR CENTRAL
Project No.: CT5395
Designed By: JN **Checked By:** MSC

HUDSON Design Group LLC

CHECK STUD WELD CAPACITY → STAND-OFF

Reference: Cox Industries

Stud Material =	Low Carbon Copper Flashed Steel	
Stud Weld Size =	5/16 - 18	
Ultimate Tensile Load =	2900 lbs.	
Maximum Shear Load =	2200 lbs.	
Safety Factor =	4	

Testing Torque	Max. Fastening Torque
11.9 ft. lbs	6.0 ft. lbs

Allowable Tensile Load =

F_{Tall} = 725 lbs.

Allowable Shear Load =

F_{Vall} = 550 lbs.

WIND FORCES

Antennas & RRH F = 656 lbs. (See Bentley Result Analysis)

GRAVITY LOADS

Ice and Equipment 898 lbs. (See Bentley Result Analysis)

No. of Supports = 1
No. of Studs / Support = 4 Min.

Tension Design Load / Stud =

f_t = 164.00 lbs. < 725 lbs. **Therefore, OK !**

Shear Design Load / Stud=

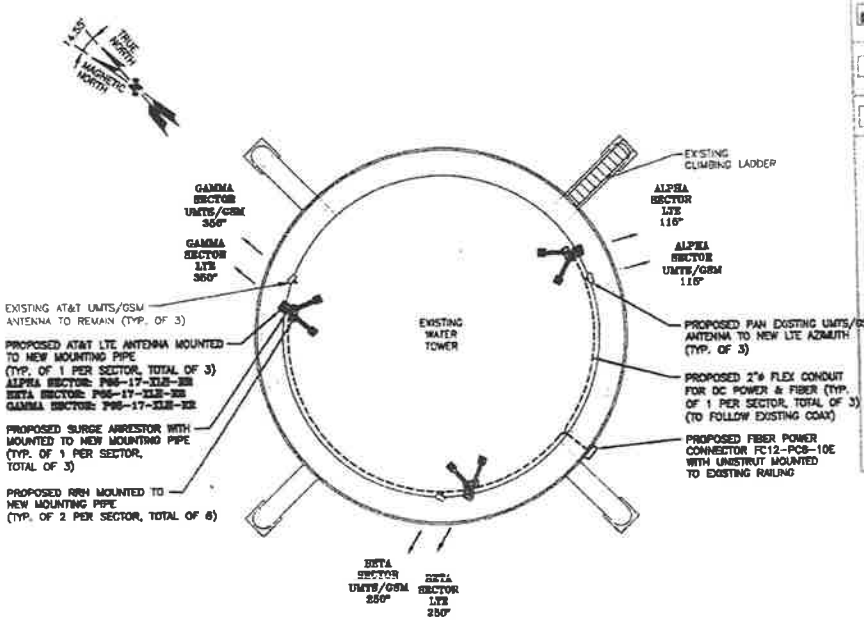
f_v = 224.50 lbs. < 550 lbs. **Therefore, OK !**

CHECK COMBINED TENSION AND SHEAR

f_t / F_T	+	f_v / F_V	≤	1.0			
0.226	+	0.408	=	0.634	<	1.0	**Therefore, OK !**

HUDSON
Design Group LLC

Reference Documents



PROPOSED LTE ANTENNA PLAN

SUBMISSION # 1	JOB # CT5395
☑ 1 Reviewed No exceptions	☐ 4 Rejected
☐ 2 Reviewed Exceptions Noted	☐ 5 Information Only
☐ 3 Revise & Resubmit	☐ Approved

Reviewed only for general conformance with the project requirements indicated in Contract Documents and for consistency with the project design concept. This review does not relieve the Contractor from responsibility, for errors or omissions in designs for which the contractor is responsible for compliance with all requirements of the Contract Documents, and for the safe and successful construction of the work. This review does not consider the means, methods, techniques, sequences, and operations of construction, or safety precautions or programs incidental thereto, which are the sole responsibility of the Contractor.

Hudson Design Group LLC

Date: 11·13·12

Checked By: MSC

Signature:

ATT EAST WINDSOR CENTRAL

CT5395

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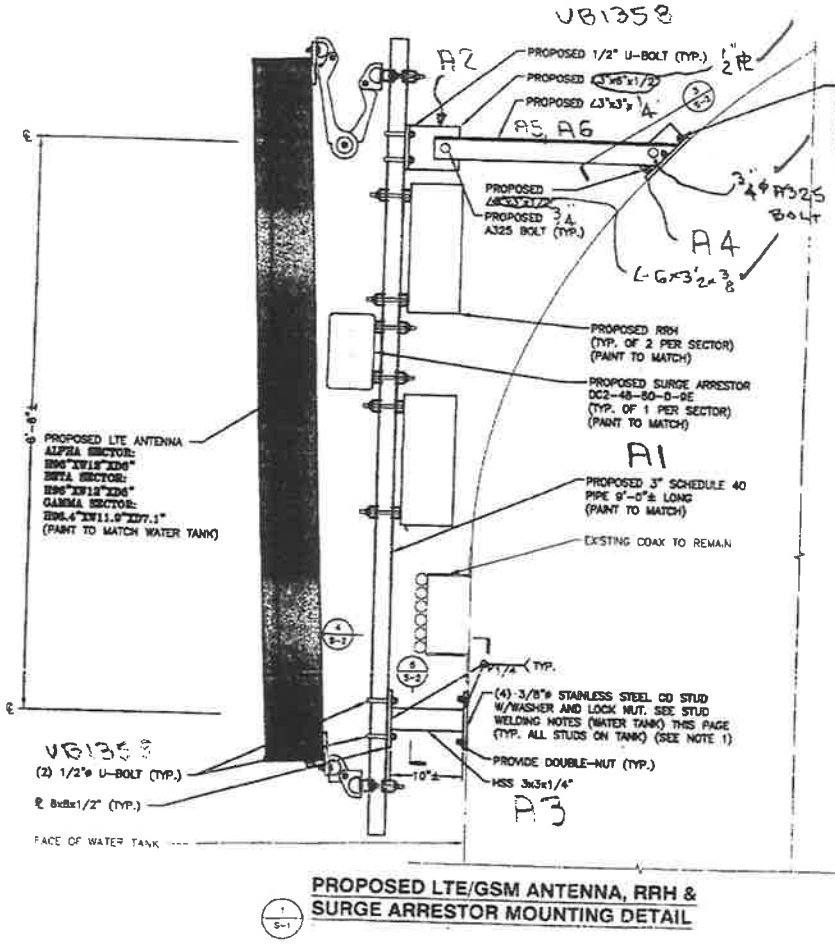

PROPOSED LTE/GSM ANTENNA, RRH & SURGE ARRESTOR MOUNTING DETAIL

SUBMISSION # 1	JOB # CT5395
☑ Reviewed No exceptions	☐ 4 Rejected
☐ 2 Reviewed Exceptions Noted	☐ 5 Information Only
☐ 3 Revise & Resubmit	☐ Approved

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Hudson Design Group LLC

Date: 11-13-12

Checked By: MSC

Signature:

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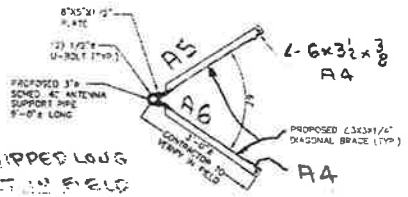
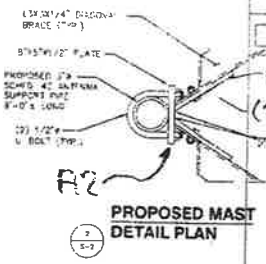


A5 & A6 SHIPPED LOOSE
CUT TO SUIT IN FIELD
& FIELD DRILL ONE
⅞" ø HOLE IN CUT END

PROPOSED ANTENNA MOUNTING PLAN



PROPOSED MAST DETAIL PLAN

SUBMISSION # 1	JOB # CT5395
☑ 1 Reviewed No exceptions	☐ 4 Rejected
☐ 2 Reviewed Exceptions Noted	☐ 5 Information Only
☐ 3 Revise & Resubmit	☐ Approved

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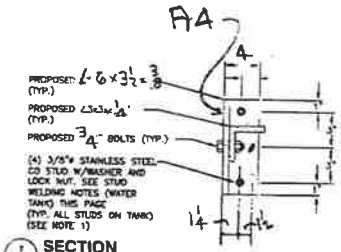
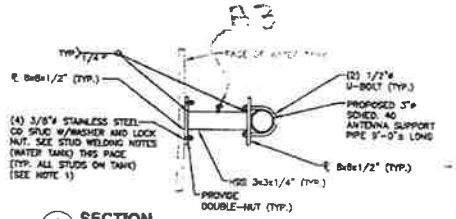
Hudson Design Group LLC

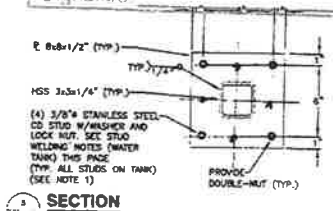
Date: 11.13.12
Checked By: MSC
Signature:



SECTION



SECTION



SECTION

GENERAL NOTES

1.) STEEL ~ ASTM A36
2.) BOLTS ~ ¾ ø A325-N
3.) HOLES ~ ⅞ ø UNO
4.) WELDS ~ E70XX
5.) FINISH ~ GALV
6.) PIPE ~ ASTM A500 GR. TYPE E OR S GRB
7.) TS ~ ASTM A500 GRB

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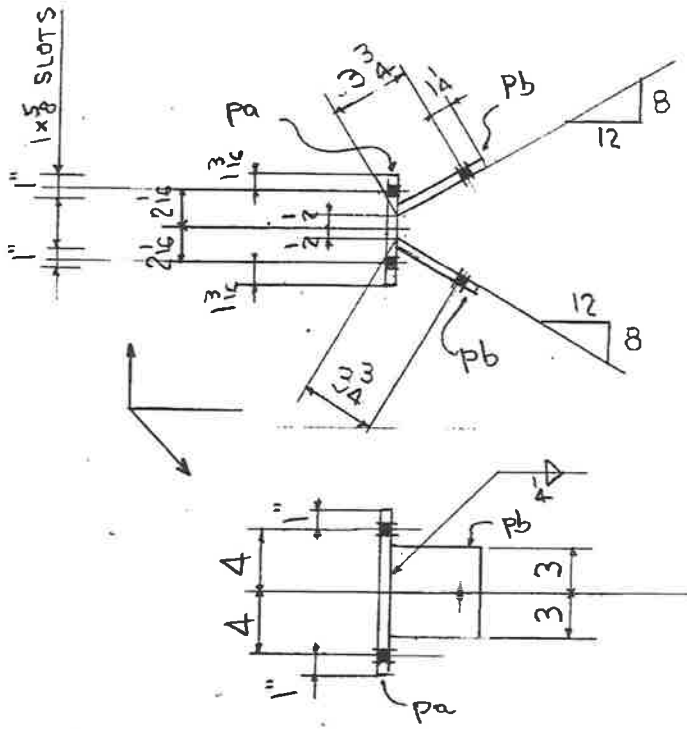
DWG 5 OF



Pa - PL 1/2 x 6 1/2 x 0'-10

Pb - PL 1/2 x 5 x 6

3 REQ'D MK A2

FIELD BOLTS 3/4" Ø A325 N/ NUT & WASH

% ADDED

SUBMISSION # 1 & 2 | JOB # CT5395

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Hudson Design Group LLC

Date: 11-13-12

Checked By: MSC

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DWG A1 11/12

SUBMISSION # 1	JOB # CT5395
☑ 1 Reviewed No exceptions	☐ 4 Rejected
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☐ 3 Revise & Resubmit	☐ Approved

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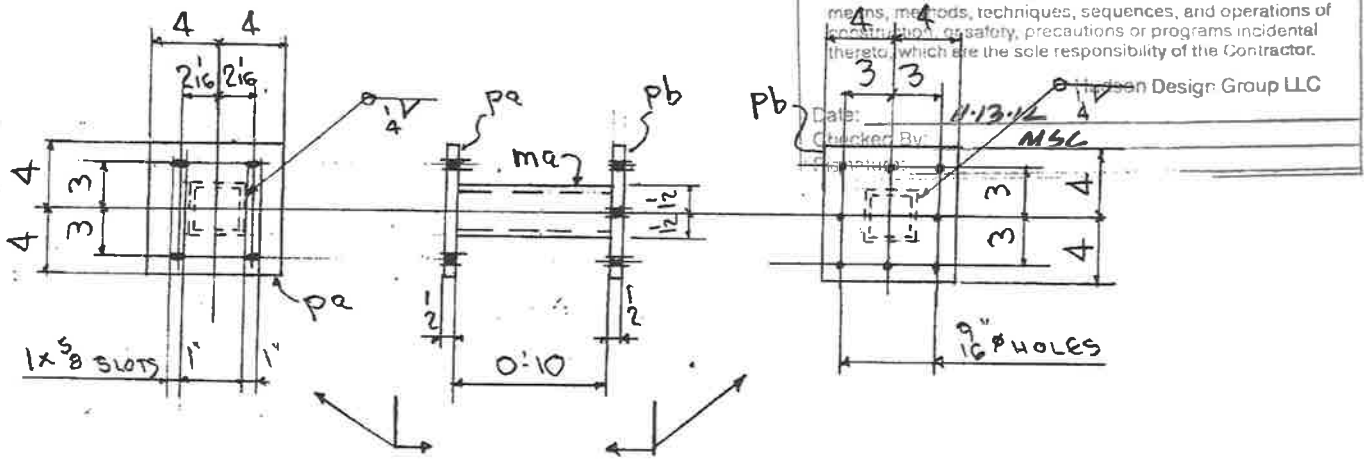
Hudson Design Group LLC

Date: 11.13.12

Checked By: MSC

Approved:



3 REQD MK A3

pa- PL 1/2 x 8 x 8

pb- PL 1/2 x 8 x 8

ma- TS 3x3x1/4x0'-10

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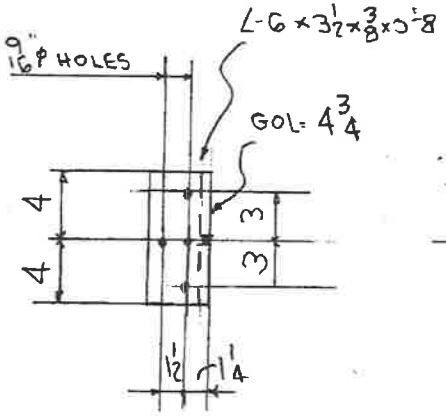
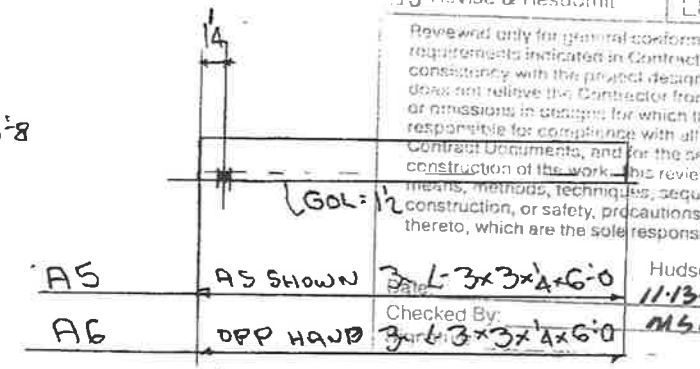
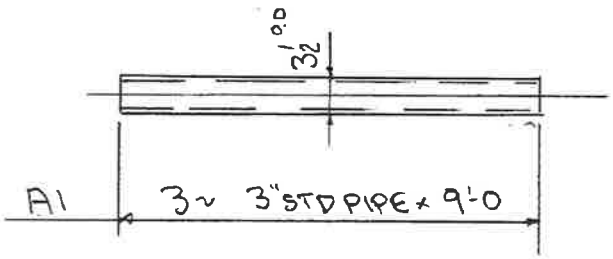
DWG A2 11/12



6~REQD MK A4





½" ϕ U-BOLT

12~REQD MK UB1358

ATT EAST WINDSOR CENTRAL

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DWG A3 11/12

SUBMISSION # 1 JOB # CT5395

☑ 1 Reviewed No exceptions
☐ 2 Reviewed Exceptions Noted
☐ 3 Revise & Resubmit
☐ 4 Rejected
☐ 5 Information Only
☐ Approved

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Hudson Design Group LLC
Date: 11.13.12
Checked By: MSL

s

The Assessor's office is responsible for the maintenance of records on the ownership of properties. Assessments are computed at 70% of the estimated market value of real property at the time of the last revaluation which was 2017.

Information on the Property Records for the Municipality of East Windsor was last updated on 7/2/2019.

Parcel Information

Location:	41 DEPOT ST	Property Use:	Vacant Land	Primary Use:	Commercial Vacant Land
Unique ID:	01178000	Map Block Lot:	098 44 035	Acres:	2.00
490 Acres:	0.00	Zone:	B-1	Volume / Page:	0330/0532
Developers Map / Lot:	& POND S	Census:	4842000		

Value Information

	Appraised Value	Assessed Value
Land	1,716,800	1,201,760
Buildings	0	0
Detached Outbuildings	18,144	12,700
Total	1,734,944	1,214,460

Owner's Information

Owner's Data
CONNECTICUT WATER COMPANY 93 WEST MAIN ST CLINTON, CT 06413-1600

Detached Outbuildings

Type:	Year Built:	Length:	Width:	Area:
Pump House Utility	1990			144
Pump House Utility	1990			144
Pump House Utility	1990			144

Owner History - Sales

Owner Name	Volume	Page	Sale Date	Deed Type	Valid Sale	Sale Price
CONNECTICUT WATER COMPANY	0330	0532	12/19/2008	08 Name Change	No	$0
BROAD BROOK WATER CO	0076	0081	10/22/1959	08 Name Change	No	$0

Information Published With Permission From The Assessor

Radio Frequency Emissions Analysis Report

AT&T Existing Facility

Site ID: CT5395

East Windsor Central
41 Depot Street

East Windsor, CT 06088

July 22, 2019

Centerline Communications Project Number: 950012-236

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**9.05 %**

June 22, 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: **CT5395 – East Windsor Central**

Centerline Communications, LLC ("Centerline") was directed to analyze the proposed AT&T facility located at **41 Depot Street in East Windsor, 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 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu W/cm^2$). The number of $\mu W/cm^2$ 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 ($\mu W/cm^2$). The general population exposure limits for the 700 and 850 MHz Bands are approximately 467 $\mu W/cm^2$ and 567 $\mu W/cm^2$ respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 2300 MHz (WCS) bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

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

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were performed for the proposed AT&T Wireless antenna facility located at **41 Depot Street in East Windsor, 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	4	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	Kathrein 800-10121	122
A	2	CCI HPA-65R-BU8A	122
A	3	Kathrein 800-10966	122
A	4	Kathrein 800-10966	122
B	1	Kathrein 800-10121	122
B	2	CCI HPA-65R-BU8A	122
B	3	Kathrein 800-10966	122
B	4	Kathrein 800-10966	122
C	1	Kathrein 800-10121	122
C	2	CCI HPA-65R-BU8A	122
C	3	Kathrein 800-10966	122
C	4	Kathrein 800-10966	122

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	Kathrein 800-10121	850 MHz / 1900 MHz	11.25 dBd / 14.35 dBd	3	90	1,616.92	0.54
Antenna A2	CCI HPA-65R-BU8A	1900 MHz / 1900 MHz	15.35 dBd / 15.35 dBd	8	320	10,968.57	2.65
Antenna A3	Kathrein 800-10966	1900 MHz	15.75 dBd	4	160	6,013.40	1.45
Antenna A4	Kathrein 800-10966	700 MHz / 850 MHz / 2100MHz / 850 MHz	13.45 dBd / 14.15 dBd / 15.95 dBd / 14.15 dBd	12	410	11,643.76	4.41
						Sector A Composite MPE%	**9.05**
Antenna B1	Kathrein 800-10121	850 MHz / 1900 MHz	11.25 dBd / 14.35 dBd	3	90	1,616.92	0.54
Antenna B2	CCI HPA-65R-BU8A	1900 MHz / 1900 MHz	15.35 dBd / 15.35 dBd	8	320	10,968.57	2.65
Antenna B3	Kathrein 800-10966	1900 MHz	15.75 dBd	4	160	6,013.40	1.45
Antenna B4	Kathrein 800-10966	700 MHz / 850 MHz / 2100MHz / 850 MHz	13.45 dBd / 14.15 dBd / 15.95 dBd / 14.15 dBd	12	410	11,643.76	4.41
						Sector B Composite MPE%	**9.05**
Antenna C1	Kathrein 800-10121	850 MHz / 1900 MHz	11.25 dBd / 14.35 dBd	3	90	1,616.92	0.54
Antenna C2	CCI HPA-65R-BU8A	1900 MHz / 1900 MHz	15.35 dBd / 15.35 dBd	8	320	10,968.57	2.65
Antenna C3	Kathrein 800-10966	1900 MHz	15.75 dBd	4	160	6,013.40	1.45
Antenna C4	Kathrein 800-10966	700 MHz / 850 MHz / 2100MHz / 850 MHz	13.45 dBd / 14.15 dBd / 15.95 dBd / 14.15 dBd	12	410	11,643.76	4.41
						Sector C Composite MPE%	**9.05**

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	**9.05 %**
No Additional Carriers	
Site Total MPE %:	**9.05 %**

Table 4: All Carrier MPE Contributions

AT&T Sector A Total:	9.05 %
AT&T Sector B Total:	9.05 %
AT&T Sector C Total:	9.05 %
Site Total:	9.05 %

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	400.06	122.0	1.93	850 MHz UMTS	567	0.34%
AT&T 1900 MHz UMTS	1	816.81	122.0	1.97	1900 MHz UMTS	1000	0.20%
AT&T 1900 MHz LTE	4	1371.07	122.0	13.25	1900 MHz LTE	1000	1.32%
AT&T 1900 MHz LTE	4	1371.07	122.0	13.25	1900 MHz LTE	1000	1.32%
AT&T 1900 MHz LTE	4	1503.35	122.0	14.53	1900 MHz LTE	1000	1.45%
AT&T 700 MHz LTE	4	885.24	122.0	8.55	700 MHz LTE	467	1.83%
AT&T 850 MHz LTE	2	1040.06	122.0	5.02	850 MHz LTE	567	0.89%
AT&T 2100 MHz LTE AWS	4	1180.65	122.0	11.41	2100 MHz LTE AWS	1000	1.14%
AT&T 850 MHz 5G	2	650.04	122.0	3.14	850 MHz 5G	567	0.55%
						Total:	**9.05%**

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:	9.05 %
Sector B:	9.05 %
Sector C:	9.05 %
AT&T Maximum Total (per sector):	9.05 %
Site Total:	9.05 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **9.05 %** 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.

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 WATER TANK: • 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: 4415 B25 (PCS) (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: B5/B12 4449 (700) (TYP. OF 1 PER SECTOR, TOTAL OF 3). • NEW AT&T SURGE ARRESTOR: DC6-48-60-18-8F (TOTAL OF 3) WITH (2) DC POWER AND (1) FIBER LINE. ITEMS TO BE MOUNTED AT EQUIPMENT LOCATION: • ADD PURCELL CABINET AND SURGE SUPPRESSOR • SWAP BB WITH 6630 • ADD XMU • ADD 2ND 6630 ITEMS TO REMAIN: • (3) ANTENNAS, (6) TMAS AND (6) 1-5/8" COAX CABLES SQUID ALARMING (NOT TO BE DAISY CHAINED). • THE 1ST SQUID INSTALLED WILL BE ALARMED TO THE LOWEST BAND (OR FIRST INSTALLED RRH/RRU ON THE ALPHA SECTOR, IN THE EVENT THE ALARM CABLE CANNOT BE CONNECTED TO ALPHA IT WILL BE ACCEPTABLE TO ALARM TO THE CLOSEST PHYSICAL SECTOR ON AN EXCEPTION BASIS. • 2ND SQUID INSTALLED WILL BE ALARMED TO THE LOWEST BAND (OR FIRST INSTALLED) RRH/RRU ON THE BETA SECTOR. • 3RD SQUID INSTALLED WILL BE ALARMED TO THE LOWEST BAND (OR FIRST INSTALLED) RRH/RRU ON THE GAMMA SECTOR.
SITE ADDRESS:	41 DEPOT STREET EAST WINDSOR, CT 06088
LATITUDE:	41.918481 N, 41° 55' 6.53" N
LONGITUDE:	72.541660 W, 72° 32' 29.98" W
TYPE OF SITE:	WATER TANK/ OUTDOOR EQUIPMENT
STRUCTURE HEIGHT:	127-0"±
℄ OF ANTENNAS:	122'-0"±
CURRENT USE:	TELECOMMUNICATIONS FACILITY
PROPOSED USE:	TELECOMMUNICATIONS FACILITY

DRAWING INDEX

SHEET NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	1
GN-1	GENERAL NOTES	1
A-1	COMPOUND & EQUIPMENT PLANS	1
A-2	ELEVATION	1
A-3	ANTENNA LAYOUTS	1
A-4	DETAILS	1
SN-1	STRUCTURAL NOTES	1
S-1	STRUCTURAL DETAILS	1
S-2	STRUCTURAL DETAILS	1
G-1	GROUNDING DETAILS	1
RF-1	RF PLUMBING DIAGRAM	1

SITE NUMBER: CT5395

SITE NAME: EAST WINDSOR CENTRAL

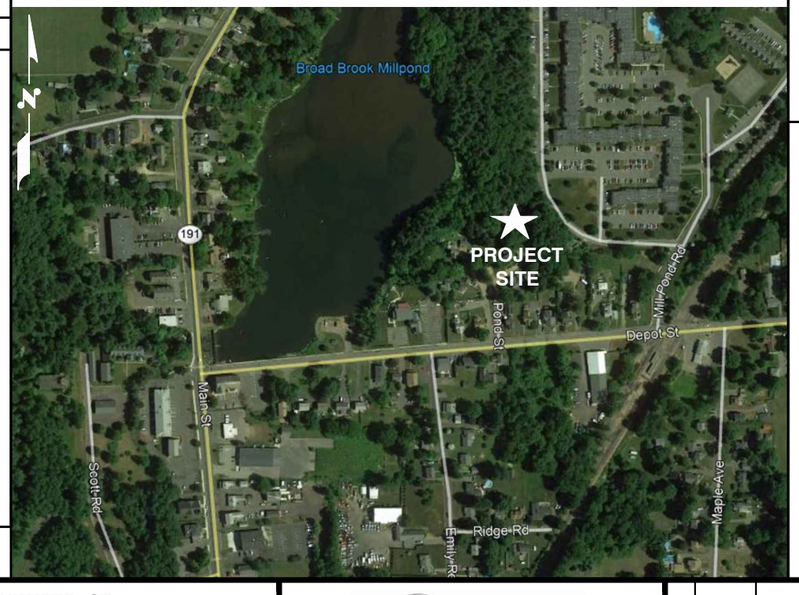
FA CODE:10071023

PACE ID: MRCTB037963, MRCTB037941, MRCTB038087, MRCTB038086

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

VICINITY MAP

DIRECTIONS TO SITE:
EAST WINDSOR CENTRAL I-91 NORTH TO EXIT 45. TAKE A RIGHT ONTO ROUTE 140. STAY ON ROUTE 140 FOR ABOUT FOUR MILES AND THEN TAKE A RIGHT ONTO ROUTE 191 SOUTH. THEN GO ABOUT ONE MILE AND TAKE A LEFT ONTO DEPOT STREET. GO DOWN DEPOT STREET ABOUT 500 FEET AND TAKE A LEFT ONTO POND STREET. POND STREET IS A DIRT/PAVED ROAD THAT IS VERY SMALL AND AND HOUSES ON BOTH SIDES. GO TO END OF POND STREET AND BEAR RIGHT. THE ROAD ENDS AND YOU WILL COME TO THE END OF THE PAVED ROAD AND A GRAVEL ROAD BEGINS. OUR SITE IS RIGHT IN FRONT OF YOU.



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

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OR CALL 811

UNDERGROUND SERVICE ALERT

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: CT5395
SITE NAME: EAST WINDSOR CENTRAL

41 DEPOT STREET
EAST WINDSOR, CT 06088
HARTFORD COUNTY

AT&T
550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	07/24/19	ISSUED FOR CONSTRUCTION	HC	AT	DPH
A	03/19/19	ISSUED FOR REVIEW	DJM	AT	DJC

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

STATE OF CONNECTICUT
DANIEL P. HAMM
No. 24178
LICENSED PROFESSIONAL ENGINEER

AT&T

TITLE SHEET
(LTE 2C/3C/4C/4TX4RX)

SITE NUMBER	DRAWING NUMBER	REV
CT5395	T-1	1

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 AWG 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. TOUCH UP 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		

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

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

SITE NUMBER: CT5395
SITE NAME: EAST WINDSOR CENTRAL

41 DEPOT STREET
EAST WINDSOR, CT 06088
HARTFORD COUNTY

at&t
550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	07/24/19	ISSUED FOR CONSTRUCTION	HC	AT	DPH
A	03/19/19	ISSUED FOR REVIEW	DJM	AT	DJC

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

STATE OF CONNECTICUT · DANIEL J. HAMM · No.24178 · LICENSED PROFESSIONAL ENGINEER

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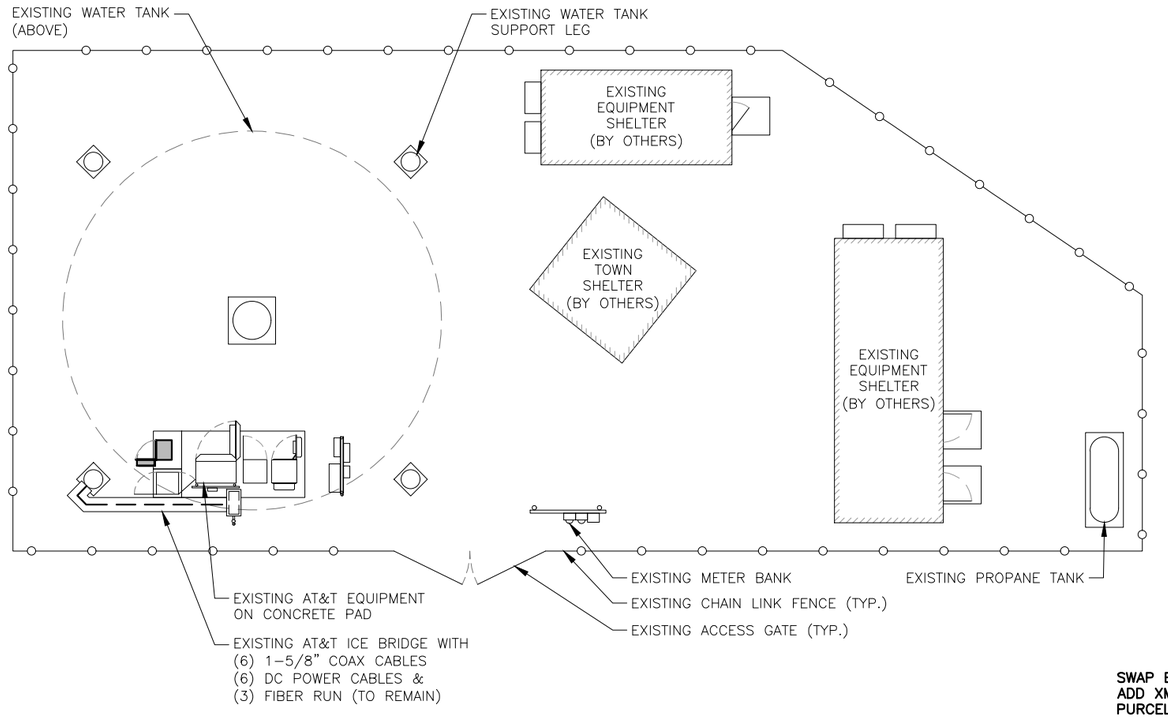
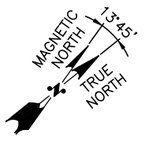
GENERAL NOTES
(LTE 2C/3C/4C/4TX4RX)

SITE NUMBER	DRAWING NUMBER	REV
CT5395	GN-1	1





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

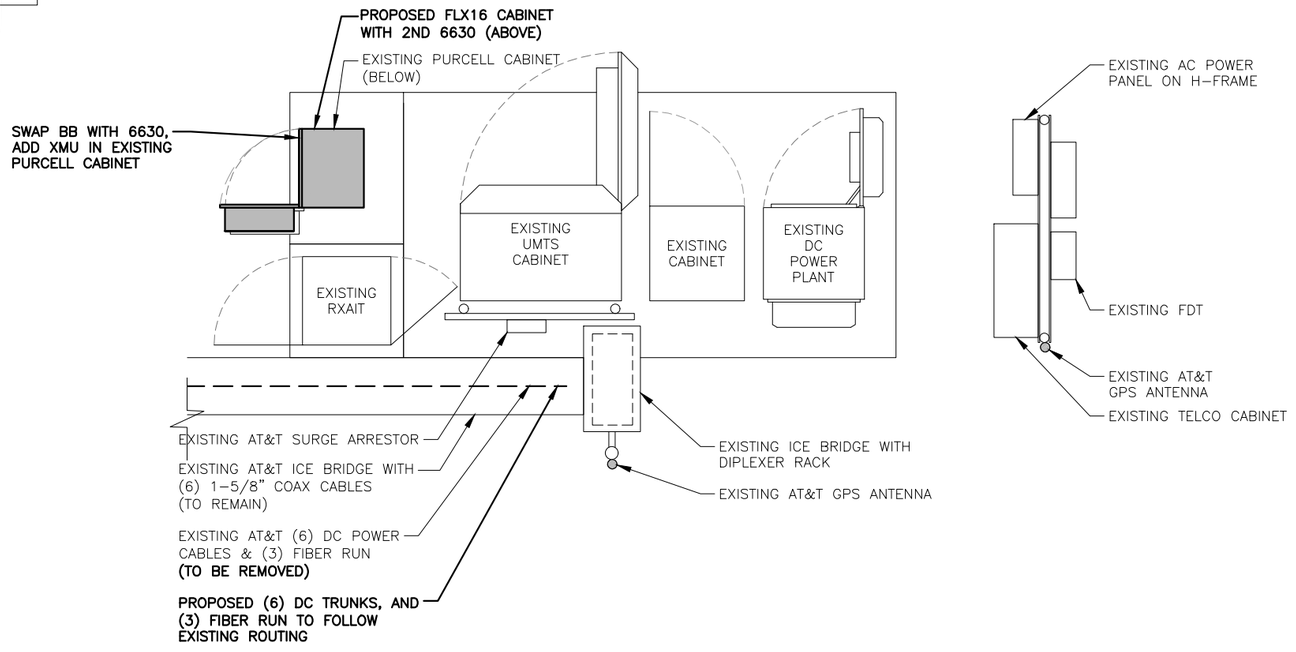
0 4'-0" 8'-0" 16'-0" 24'-0"

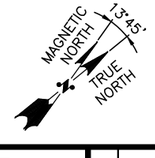
NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:
PAINT ALL VISIBLE PROPOSED EQUIPMENT TO MATCH EXISTING SURROUNDINGS.

NOTE:

REFER TO STRUCTURAL ANALYSIS BY: HUDSON DESIGN GROUP, LLC, DATED: MARCH 27, 2019, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.





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

0 1'-0" 2'-0" 4'-0" 6'-0"

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: CT5395
SITE NAME: EAST WINDSOR CENTRAL

41 DEPOT STREET
EAST WINDSOR, CT 06088
HARTFORD COUNTY

at&t
550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

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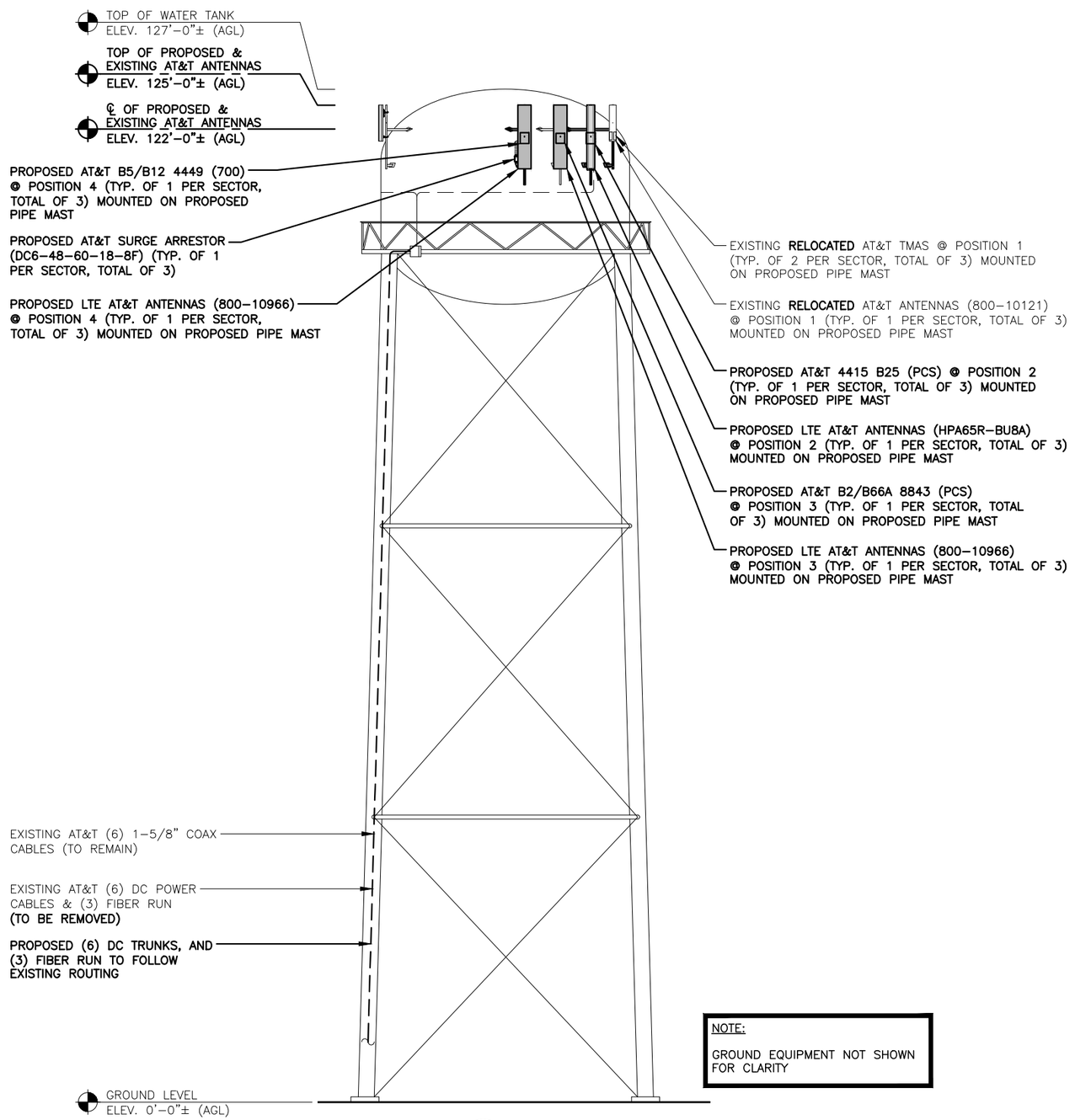
SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: DJM

STATE OF CONNECTICUT
DANIEL P. HAMM
No. 24178
LICENSED PROFESSIONAL ENGINEER

AT&T

COMPOUND & EQUIPMENT PLANS
(LTE 2C/3C/4C/4TX4RX)

SITE NUMBER	DRAWING NUMBER	REV
CT5395	A-1	1



ELEVATION (3 / A-2)
22x34 SCALE: 1/8"=1'-0"
11x17 SCALE: 1/16"=1'-0"

0 4'-0" 8'-0" 16'-0" 24'-0"

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

NOTE:
PAINT ALL VISIBLE PROPOSED EQUIPMENT TO MATCH EXISTING SURROUNDINGS.

NOTE:

REFER TO STRUCTURAL ANALYSIS BY: HUDSON DESIGN GROUP, LLC, DATED: MARCH 27, 2019, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

NOTE:

GROUND EQUIPMENT NOT SHOWN FOR CLARITY

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STATE OF CONNECTICUT · DANIEL P. HAMM · No. 24178 · LICENSED PROFESSIONAL ENGINEER

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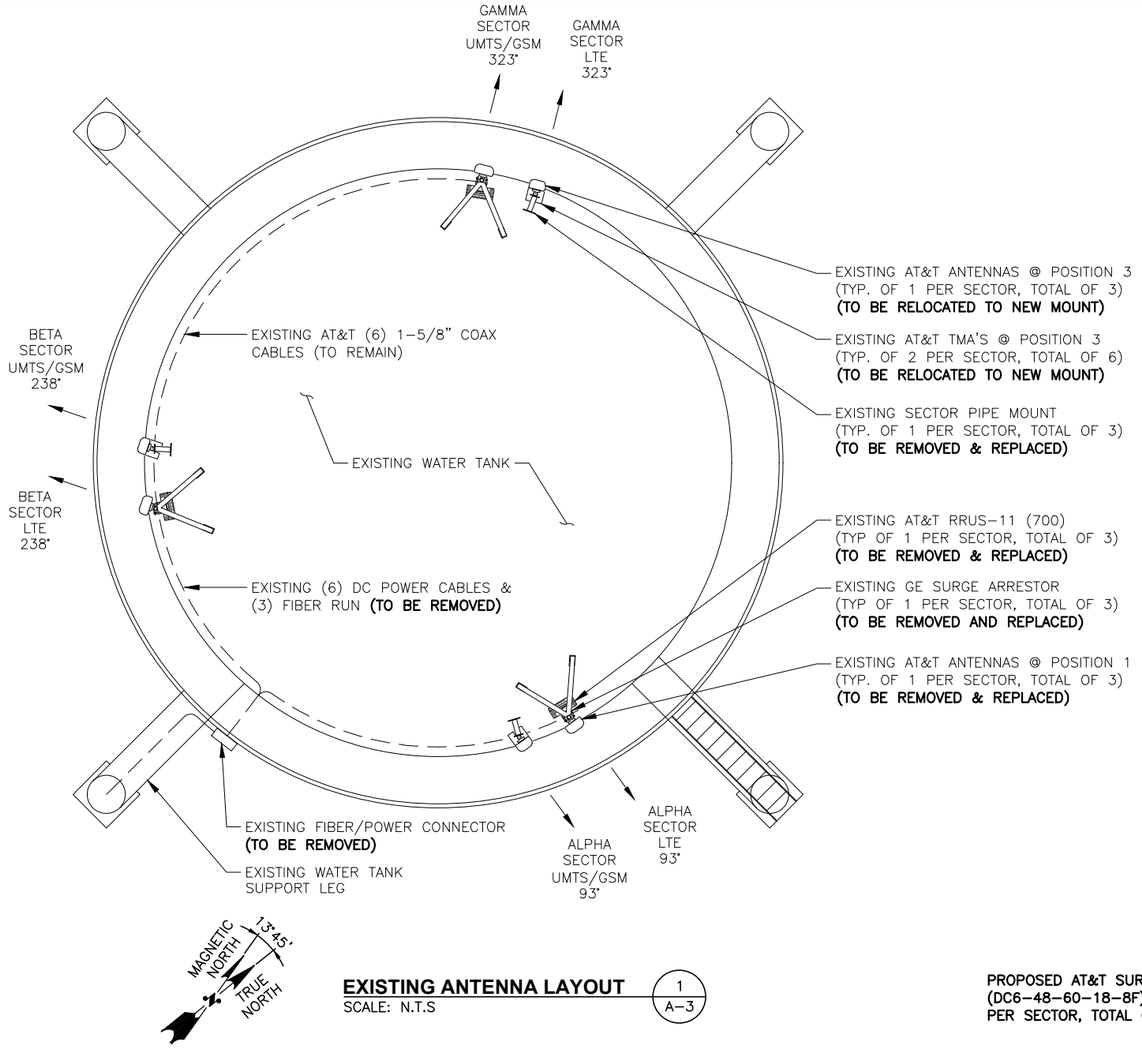
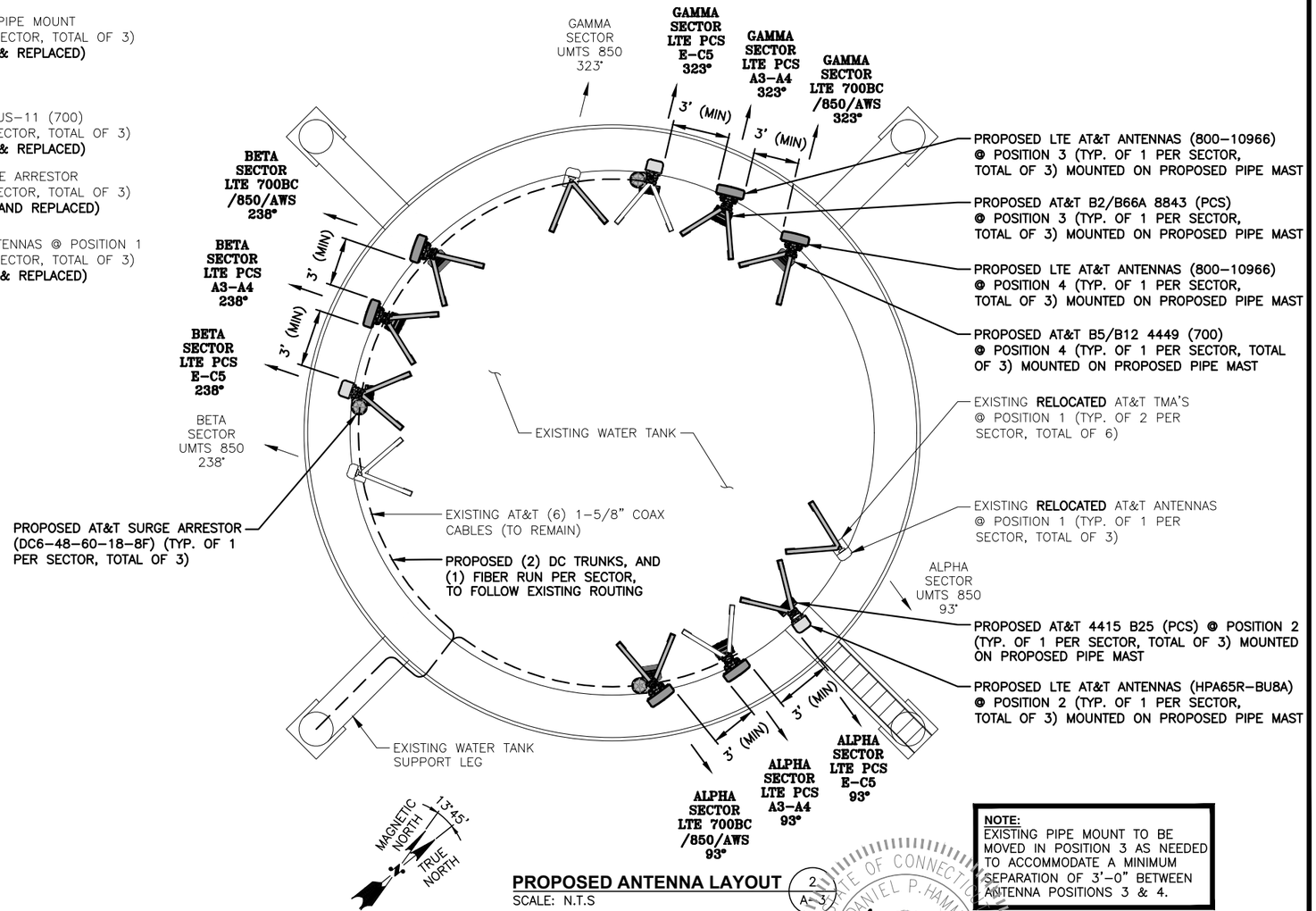
ELEVATION
(LTE 2C/3C/4C/4TX4RX)

SITE NUMBER	DRAWING NUMBER	REV
CT5395	A-2	1



EXISTING ANTENNA LAYOUT (1 / A-3)
SCALE: N.T.S



PROPOSED ANTENNA LAYOUT (2 / A-3)
SCALE: N.T.S

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

NOTE:
PAINT ALL VISIBLE PROPOSED EQUIPMENT TO MATCH EXISTING SURROUNDINGS.

NOTE:
REFER TO STRUCTURAL ANALYSIS BY: HUDSON DESIGN GROUP, LLC, DATED: MARCH 27, 2019, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

NOTE:
EXISTING PIPE MOUNT TO BE MOVED IN POSITION 3 AS NEEDED TO ACCOMMODATE A MINIMUM SEPARATION OF 3'-0" BETWEEN ANTENNA POSITIONS 3 & 4.

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SITE NUMBER: CT5395
SITE NAME: EAST WINDSOR CENTRAL

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STATE OF CONNECTICUT — DANIEL P. HAMM — No. 24178 — LICENSED PROFESSIONAL ENGINEER

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ANTENNA LAYOUTS
(LTE 2C/3C/4C/4TX4RX)

SITE NUMBER	DRAWING NUMBER	REV
CT5395	A-3	1

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

NOTE:
PAINT ALL VISIBLE PROPOSED EQUIPMENT TO MATCH EXISTING SURROUNDINGS.

NOTE:

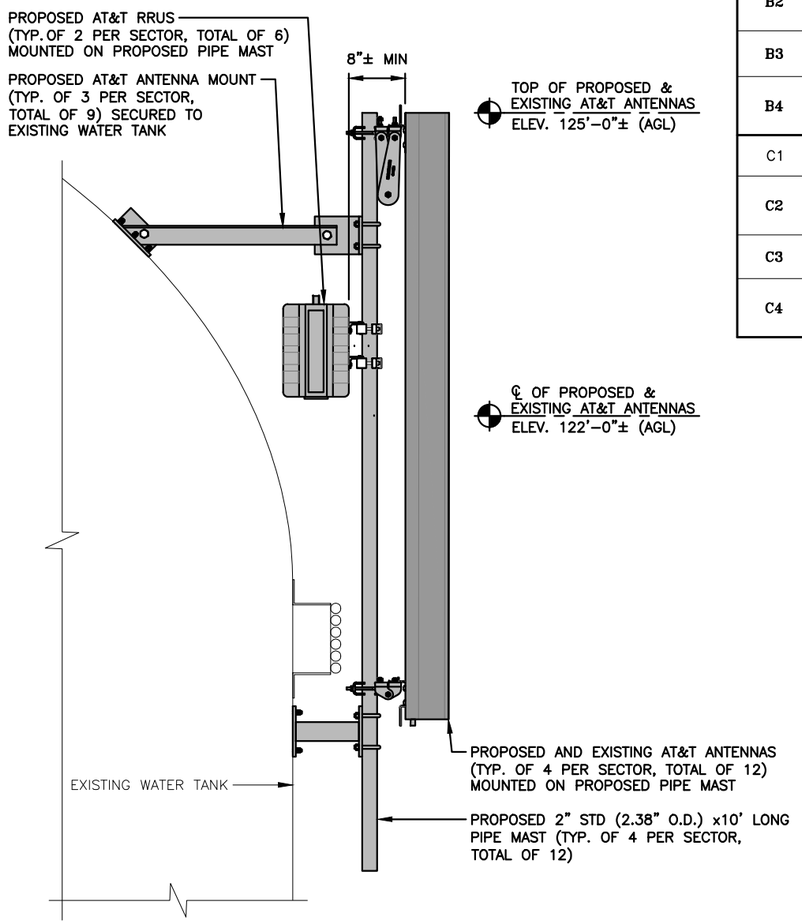
REFER TO STRUCTURAL ANALYSIS BY: HUDSON DESIGN GROUP, LLC, DATED: MARCH 27, 2019, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

ANTENNA SCHEDULE

SECTOR	EXISTING/ PROPOSED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA ℄ HEIGHT	AZIMUTH	TMA/ DIPLEXER	RRU	SIZE (INCHES) (L x W x D)	FEEDER	RAYCAP
A1	EXISTING	UMTS 850	800-10121	54.5x10.3x5.9	±122'	93°	(2)(E) LGP21401	–	–	(2)1-5/8 COAX	--
A2	PROPOSED	LTE PCS E-C5	HPA-65R-BU8A	96x11.7x7.6	±122'	93°	–	(P)(1) 4415 B25 (PCS)	16.5x13.4x5.9	(2) DC POWER (1) FIBER	(P) (1) RAYCAP DC6-48-60-18-8F
A3	PROPOSED	LTE PCS A3-A4	800-10966	96x20x6.9	±122'	93°	–	(P)(1) B2/B66A 8843 (PCS)	14.9x13.2x10.9	(2) DC POWER (1) FIBER	
A4	PROPOSED	LTE 700BC /850/AWS	800-10966	96X20X6.9	±122'	93°	–	(P)(1) B5/B12 4449 (700)	14.9x13.2x10.4	(2) DC POWER (1) FIBER	
B1	EXISTING	UMTS 850	800-10121	54.5x10.3x5.9	±122'	238°	(2)(E) LGP21401	–	–	(2)1-5/8 COAX	--
B2	PROPOSED	LTE PCS E-C5	HPA-65R-BU8A	96x11.7x7.6	±122'	238°	–	(P)(1) 4415 B25 (PCS)	16.5X13.4X5.9	(2) DC POWER (1) FIBER	(P) (1) RAYCAP DC6-48-60-18-8F
B3	PROPOSED	LTE PCS A3-A4	800-10966	96x20x6.9	±122'	238°	–	(P)(1) B2/B66A 8843 (PCS)	14.9x13.2x10.9	(2) DC POWER (1) FIBER	
B4	PROPOSED	LTE 700BC /850/AWS	800-10966	96X20X6.9	±122'	238°	–	(P)(1) B5/B12 4449 (700)	14.9x13.2x10.4	(2) DC POWER (1) FIBER	
C1	EXISTING	UMTS 850	800-10121	54.5x10.3x5.9	±122'	323°	(2)(E) LGP21401	–	–	(2)1-5/8 COAX	--
C2	PROPOSED	LTE PCS E-C5	HPA-65R-BU8A	96x11.7x7.6	±122'	323°	–	(P)(1) 4415 B25 (PCS)	16.5X13.4X5.9	(2) DC POWER (1) FIBER	(P) (1) RAYCAP DC6-48-60-18-8F
C3	PROPOSED	LTE PCS A3-A4	800-10966	96x20x6.9	±122'	323°	–	(P)(1) B2/B66A 8843 (PCS)	14.9x13.2x10.9	(2) DC POWER (1) FIBER	
C4	PROPOSED	LTE 700BC /850/AWS	800-10966	96X20X6.9	±122'	323°	–	(P)(1) B5/B12 4449 (700)	14.9x13.2x10.4	(2) DC POWER (1) FIBER	

FINAL ANTENNA SCHEDULE (1 / A-4)
SCALE: N.T.S

NOTE:
MOUNT PROPOSED EQUIPMENT PER MANUFACTURER'S SPECIFICATIONS



PROPOSED LTE ANTENNA, RRH AND SURGE ARRESTOR MOUNTING DETAIL (2 / A-4)
22x34 SCALE: 1"=1'-0"
11x17 SCALE: 1/2"=1'-0"

0 0'-6" 1'-0" 2'-0" 3'-0"

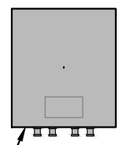
RRU CHART

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

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS

NOTE:

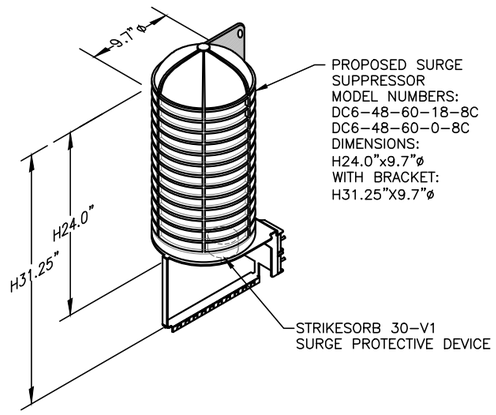
SEE RFDS FOR RRH FREQUENCY AND MODEL NUMBER



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

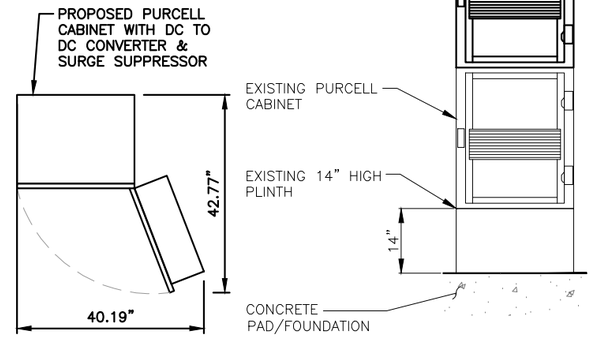
NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

PROPOSED RRUS DETAIL (3 / A-4)
SCALE: N.T.S



NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

DC SURGE SUPPRESSOR DETAIL (4 / A-3)
SCALE: N.T.S



PROPOSED FLX16 PURCELL CABINET MOUNTING DETAIL (5 / A-4)
SCALE: N.T.S

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WEST BRIDGEWATER, MA 02379

SITE NUMBER: CT5395
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STATE OF CONNECTICUT · DANIEL P. HAMM · No. 24178 · LICENSED PROFESSIONAL ENGINEER

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DETAILS
(LTE 2C/3C/4C/4TX4RX)

SITE NUMBER	DRAWING NUMBER	REV
CT5395	A-4	1

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 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 DI.I. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "STEEL CONSTRUCTION MANUAL". 14TH EDITION.
11. 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.
12. 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.
13. 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.
14. 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.
15. 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.
16. 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.
17. 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.
18. NO MATERIALS TO BE ORDERED AND NO WORK TO BE COMPLETED UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED IN WRITING.
19. 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.

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.

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
N/A	CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
N/A	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:	

HUDSON Design Group LLC
45 BEECHWOOD DRIVE
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CENTERLINE COMMUNICATIONS
750 WEST CENTER STREET., SUITE #301
WEST BRIDGEWATER, MA 02379

SITE NUMBER: CT5395
SITE NAME: EAST WINDSOR CENTRAL

41 DEPOT STREET
EAST WINDSOR, CT 06088
HARTFORD COUNTY

at&t
550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

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A	03/19/19	ISSUED FOR REVIEW	DJM	AT	DJC

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

STATE OF CONNECTICUT · DANIEL P. HAMM · No. 24178 · LICENSED PROFESSIONAL ENGINEER

AT&T

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

SITE NUMBER	DRAWING NUMBER	REV
CT5395	SN-1	1

STUD WELDING NOTES (WATER TANK):

GENERAL:

1. WELDING STUDS SHALL BE FLANGED THREADED LOW CARBON COPPER COATED STEEL STUDS, GRADE 1010 THROUGH 1020, CONFORMING TO ASTM A–108 "STEEL BARS, CARBON, COLD FINISHED, STANDARD QUALITY". ALL STUDS SHALL BE 3/8" DIAMETER BY 1–3/4" LONG, UNLESS OTHERWISE NOTED ON THE CONSTRUCTION DRAWINGS.
2. STUDS MUST BE WELDED BY THE CAPACITOR DISCHARGE METHOD, NELSON NCD 100 SYSTEM, AS MANUFACTURED AND MARKETED BY NELSON STUD WELDING, ELYRIA OHIO, (800) 635–9353 OR (440) 329–0400, OR APPROVED EQUAL. FILLET WELDS ARE NOT ACCEPTABLE.
3. CONTRACTOR SHALL RECEIVE IN WRITING THE OWNERS REQUIREMENTS FOR TANK INSPECTIONS PRIOR TO COMMENCING WITH THE WORK ON THE TANK. UPON THE COMPLETION OF CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A WRITTEN RELEASE FROM THE OWNER STATING THAT ALL WORK WAS PERFORMED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND THE OWNERS WRITTEN REQUIREMENTS AND RELEASES ALL LIABILITY TO THE CONTRACTOR, THE ENGINEER, THE APPLICANT, AND THE STUD MANUFACTURER.
4. CONTRACTOR SHALL COMPLY WITH AWS D1.1 AND AWS C5.4 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". CONTRACTOR SHALL ADHERE TO AWS RECOMMENDED "SAFE PRACTICES FOR WELDING".
5. WELDING PARAMETERS, MACHINE POWER AND DWELL TIME SHALL BE QUALIFIED FOR THE WELDING POSITION, MATERIAL THICKNESS AND STUD SIZE TO BE USED. IF CHANCES IN THE SET–UP OCCUR AS DEFINED IN AWS D1.1, THE PROCEDURE MUST BE REQUALIFIED. CONTRACTOR SHALL SUBMIT CERTIFICATION OF WELDERS FOR STUD WELDING TO THE ENGINEER PRIOR TO COMMENCEMENT OF THE WORK.

SURFACE PREPARATION

1. CLEANING PROCEDURES SHALL BE VERIFIED AS MEETING THE MINIMUM REQUIREMENTS PER THE AWS WELDING HANDBOOK, VOLUME 2, "QUALITY CONTROL AND INSPECTION" FOR STUD WELDING, IF THE EXISTING COATING SYSTEM CONTAINS LEAD OR OTHER POTENTIALLY HAZARDOUS MATERIALS, SPECIAL PROCEDURES FOR REMOVAL AND DISPOSAL WILL BE REQUIRED.
2. PREPARE SURFACE TO BE WELDED BY SPOT REMOVING PAINT TO BARE METAL USING POWER BRUSHING IN ACCORDANCE WITH SSPC–SP11, (STEEL STRUCTURES PAINTING COUNCIL, SSPC–VIS 1–671). USE A 3M STRIP–N–CLEAN FLEXIBLE WHEEL OR APPROVED EQUAL. A WIRE WHEEL IS NOT ACCEPTABLE.
3. FOLLOW POWER TOOL CLEANING WITH A NON–FLAMMABLE SOLVENT CLEANING TO REMOVE ANY OILS, CONTAMINANTS, RUST OR DIRT PRIOR TO STUD WELDING. (SSPC–SP1 BY STEEL STRUCTURES PAINTING COUNCIL, SSPC–VIS 1–67T)

STUD QUALIFICATION TESTING AND SAMPLING

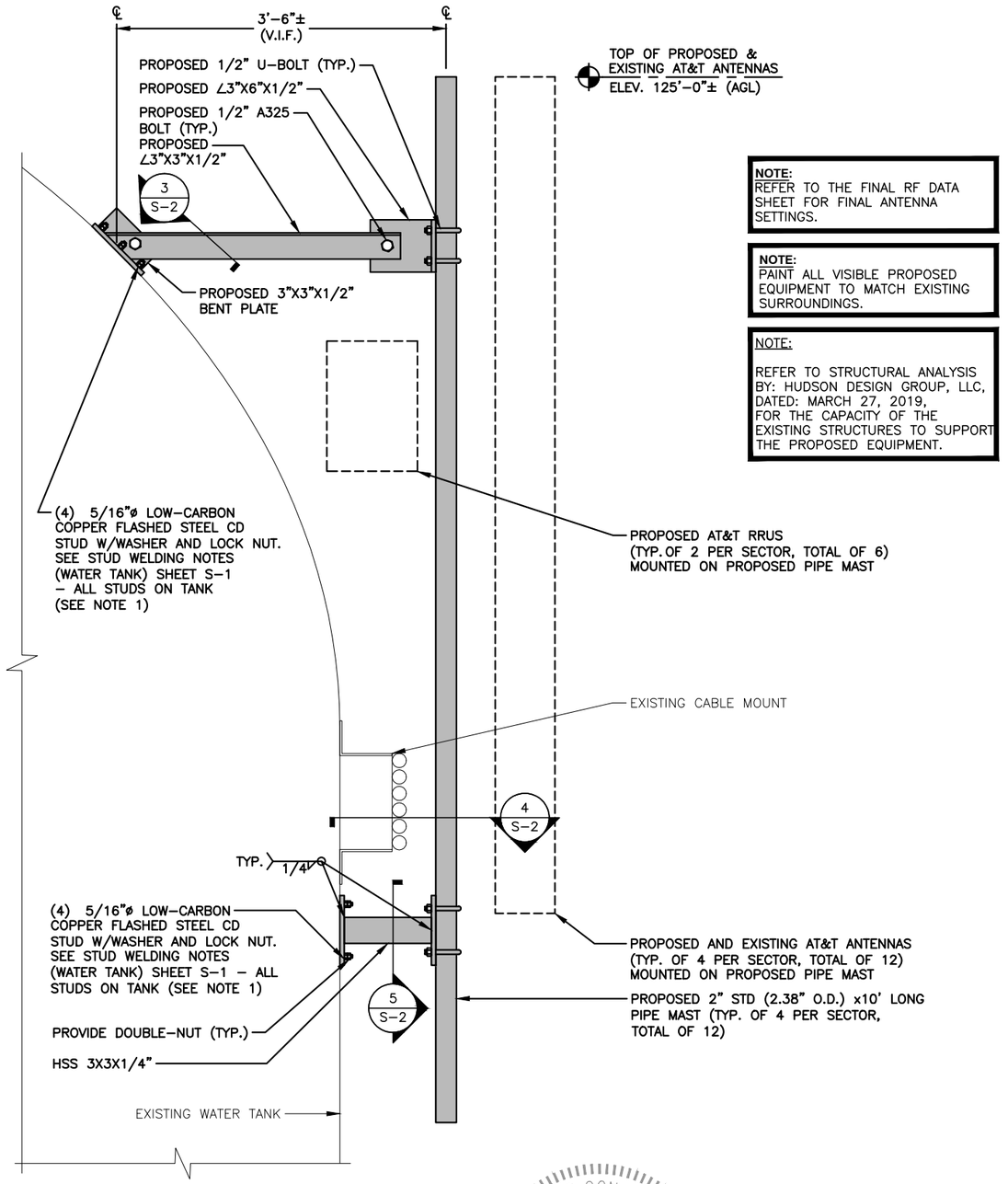
1. THE QUALIFICATION OF STUD APPLICATION AND PRE–PRODUCTION TESTING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 7 "STUD WELDING" OF AWS D1.1 INITIAL QUALIFICATION TESTING SHALL BE PERFORMED UNDER INSPECTION BY THE ENGINEER.
2. STUD APPLICATION SHALL BE QUALIFIED BY STUD WELDING TEN (10) SPECIMENS CONSECUTIVELY TO ASTM A–46 STEEL BASE MATERIALS USING RECOMMENDED PROCEDURES AND SETTINGS FOR EACH DIAMETER, POSITION, AND SURFACE GEOMETRY. THE TEN SPECIMENS SHALL BE TORQUE TESTED TO FAILURE. STUD APPLICATION SHALL BE CONSIDERED QUALIFICATION IF ALL TEST SPECIMENS ARE TORQUED TO DESTRUCTION WITHOUT FAILURE IN THE WELD. IN ADDITION, PRIOR TO PRODUCTION, CONTRACTOR SHALL PREPARE SIX (6) STUD WELDED SAMPLES USING A–46 STEEL PLATES AT THICKNESS EQUAL TO EACH OF THE PLATE THICKNESS OF THE WATER TANK TO BE WELDED TO. THE SIDE OPPOSITE THE STUD WELD SHALL HAVE A SIMILAR COATING (MINIMUM DFT–6MIL) TO THE EXISTING INTERIOR COATING OF THE WATER TANK. SAMPLES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
3. BEFORE PRODUCTION, AT THE START OF EVERY SHIFT AND FOR EACH PARTICULAR SETUP, TESTING SHALL BE PERFORMED ON THE FIRST TWO STUDS THAT ARE WELDED. IN PLACE OF THE ACTUAL PRODUCTION STUD, TESTING MAY BE PERFORMED ON A MATERIAL SIMILAR TO THE PRODUCTION MEMBER IN THICKNESS AND PROPERTIES. TESTING SHALL INCLUDE A VISUAL EXAMINATION OF THE STUD WELD FOR A FULL 360 DEGREE FLASH. IN ADDITION, THE TEST SHALL INCLUDE TORQUE TESTING THE STUDS IN ACCORDANCE WITH THE FOLLOWING CRITERIA.

STUD DIAMETER (IN.)	TESTING TORQUE (FT. LB)	MAXIMUM FASTENING TORQUE (FT. LB)
5/16 – 18 UNC	11.9	6.0

4. IF FAILURE OCCURS, THE PROCEDURE SHALL BE CORRECTED AND TWO MORE STUDS SHALL BE WELDED AND TESTED.
5. PRIOR TO PRODUCTION, CONTRACTOR SHALL PERFORM THREE (3) TEST WELDS ON THE WATER TANK IN A LOCATION SPECIFIED BY THE TANK OWNER TO VERIFY THAT NO DAMAGE WILL OCCUR TO THE COATING SYSTEM ON THE INTERIOR OF THE TANK. ANY AND ALL DAMAGE TO THE INTERIOR COATING SHALL BE REPAIRED TO THE OWNER'S SATISFACTION. IF DAMAGE DOES OCCUR, THE PROCEDURE SHALL BE REEVALUATED BY THE ENGINEER, CONSTRUCTION AUTHORIZED REPRESENTATIVE, AND OWNER BEFORE COMMENCING WITH THE WORK.

REPAINTING

1. ALL PAINTING SURFACES AFFECTED BY WELDING OPERATIONS SHALL BE REPAINTED TO MATCH ADJACENT EXISTING SURFACES. PAINTING SHALL INCLUDE COATING OF THE STUDS.
2. PRIOR TO REPAINTING, SURFACES SHALL BE SOLVENT CLEANED TO REMOVE ANY OILS, CONTAMINANTS, RUST OR DIRT PRIOR TO REPAINTING (SSPC–SP1 BY STEEL STRUCTURES PAINTING COUNCIL, SSPC–VIS 1–67T)
3. PAINT USED TO REPAIR INTERIOR COATING SHALL MATCH THE EXISTING COATING SYSTEM OF THE TANK OR SHALL BE A SIMILAR SYSTEM COMPATIBLE WITH THE EXISTING SYSTEM AND ACCEPTABLE TO THE OWNER. VERIFY EXISTING COATING SYSTEM WITH THE TANK OWNER.
4. EXTERIOR STEEL SHALL BE PAINTED WITH 1 COAT EPOXY PRIMER (DFT–5–7 IL) AND 2 COATS POLYURETHANE FINISH (DFT–4–5 MIL) WITH COLOR TO MATCH EXISTING SURFACE. PAINT SHALL BE AS MANUFACTURED BY SHERWIN WILLIAMS, CLEVELAND, OHIO 1–800–321–8194 OR EQUAL COATING TO MATCH EXISTING. CONTRACTOR SHALL VERIFY OWNER'S PAINT REQUIREMENTS PRIOR TO COMMENCEMENT OF THE WORK.
5. CONTRACTOR TO VERIFY COATING SYSTEMS ARE COMPATIBLE WITH THE EXISTING SYSTEMS BY ADHESION TESTING PER ASTM D3359 "MEASURING ADHESION BY TAPE TEST".
6. CONTRACTOR TO VERIFY THAT CANS OF THE PRODUCT ARE NOT BEYOND MANUFACTURER RECOMMENDED SHELF LIFE. ASSURE THROUGH MIXING OF PREMEASURED TWO COMPONENT COATING SYSTEMS.
7. SURFACE CLEANING SHALL BE FOLLOWED WITH PRIMER COAT ON THE SAME DAY.
8. PAINT MUST BE APPLIED AT SURFACE AND AMBIENT TEMPERATURES BETWEEN 50 DEGREES TO 120 DEGREES FAHRENHEIT. NO PAINTING SHALL BE DONE ABOVE 80% RELATIVE HUMIDITY. THE AMBIENT TEMPERATURE BEFORE THE START OF COATING APPLICATION MUST AT BE LEAST 5 DEGREES FAHRENHEIT ABOVE THE DEW POINT AS DETERMINED BY CONVENTIONAL ACCEPTED STANDARDS.
9. PAINTSHALL BE APPLIED USING A NATURAL BRISTLE BRUSH FOR A SMOOTH BRUSH FINISH
10. PAINT SHALL BE FEATHERED OUT AT TIE–IN AREAS OF EXISTING COATING. PAINT SHALL BE WORKED IN AND AROUND IRREGULARITIES IN THE SURFACE



PROPOSED MOUNT MODIFICATION DETAIL 2 S–1
22x34 SCALE: 1"=1'–0"
11x17 SCALE: 1/2"=1'–0"

0 0'–6" 1'–0" 2'–0" 3'–0"

HUDSON Design Group LLC
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STATE OF CONNECTICUT — DANIEL P. HAMM — No. 24178 — LICENSED PROFESSIONAL ENGINEER

AT&T

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

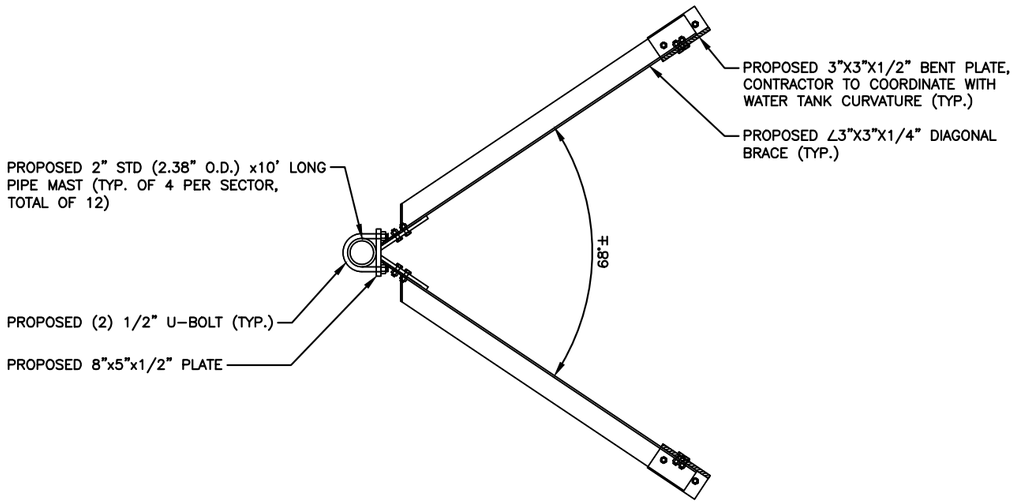
SITE NUMBER	DRAWING NUMBER	REV
CT5395	S–1	1

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

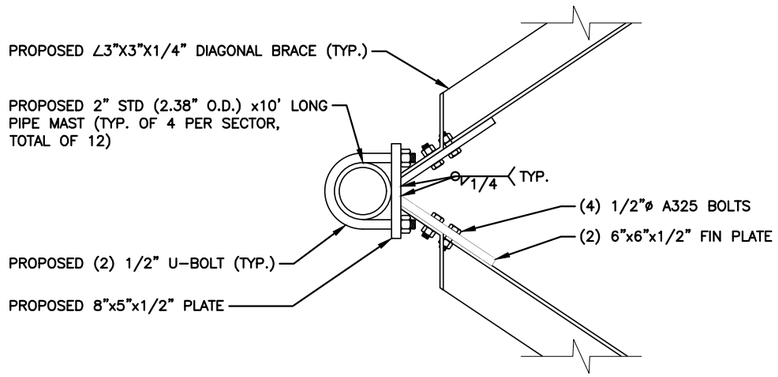
NOTE:
PAINT ALL VISIBLE PROPOSED EQUIPMENT TO MATCH EXISTING SURROUNDINGS.

NOTE:

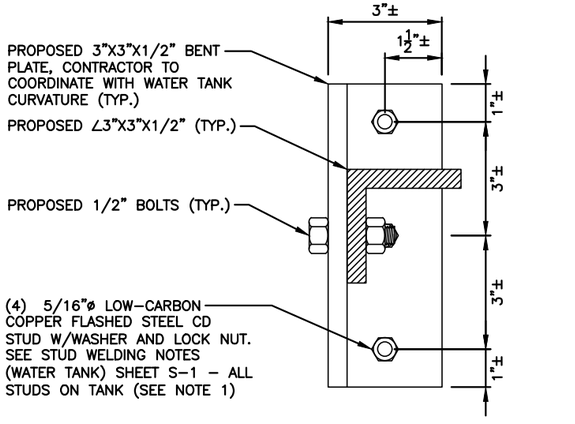
REFER TO STRUCTURAL ANALYSIS BY: HUDSON DESIGN GROUP, LLC, DATED: MARCH 27, 2019, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.



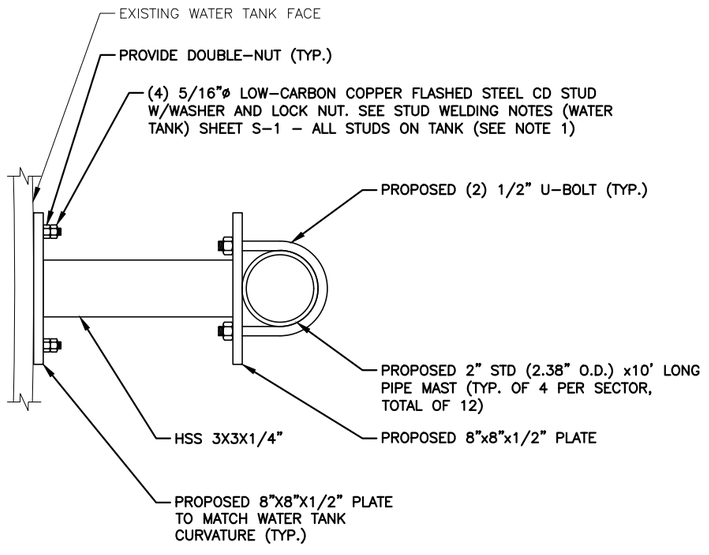
PROPOSED MOUNT MODIFICATION DETAIL (1 / S-2)
22x34 SCALE: 1-1/2"=1'-0"
11x17 SCALE: 3/4"=1'-0"
0 0'-4" 0'-8" 1'-4" 2'-0"



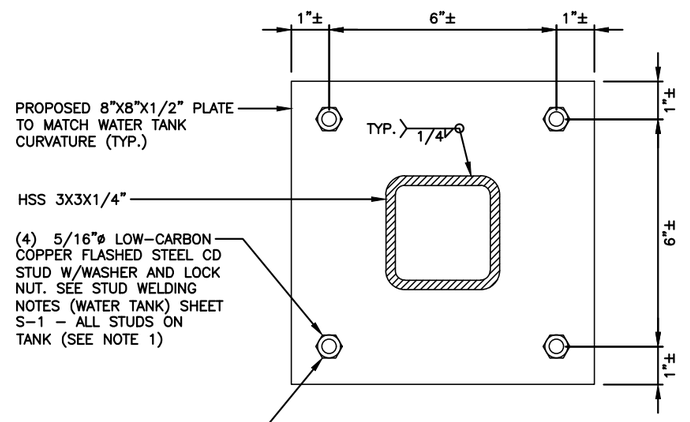
PROPOSED MAST DETAIL PLAN (1 / S-2)
22x34 SCALE: 3"=1'-0"
11x17 SCALE: 1-1/2"=1'-0"
0 0'-2" 0'-4" 0'-8" 1'-0"



SECTION (3 / S-2)
22x34 SCALE: 6"=1'-0"
11x17 SCALE: 3"=1'-0"
0 0'-1" 0'-2" 0'-4" 0'-6"



SECTION (4 / S-2)
22x34 SCALE: 3"=1'-0"
11x17 SCALE: 1-1/2"=1'-0"
0 0'-2" 0'-4" 0'-8" 1'-0"



SECTION (4 / S-2)
22x34 SCALE: 6"=1'-0"
11x17 SCALE: 3"=1'-0"
0 0'-1" 0'-2" 0'-4" 0'-6"

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

SITE NUMBER	DRAWING NUMBER	REV
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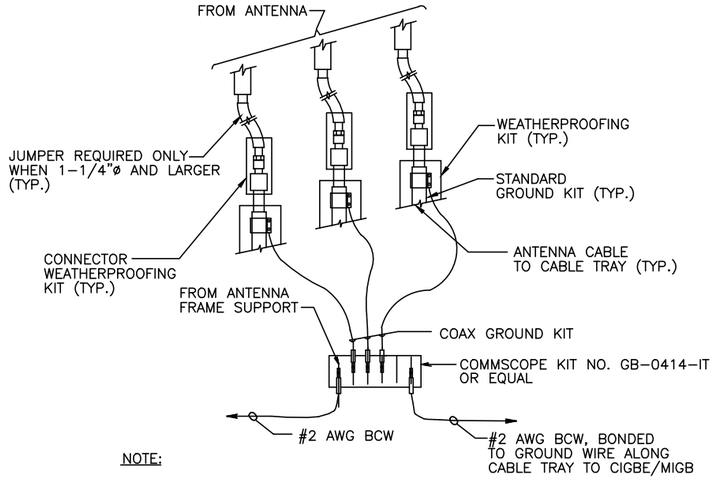


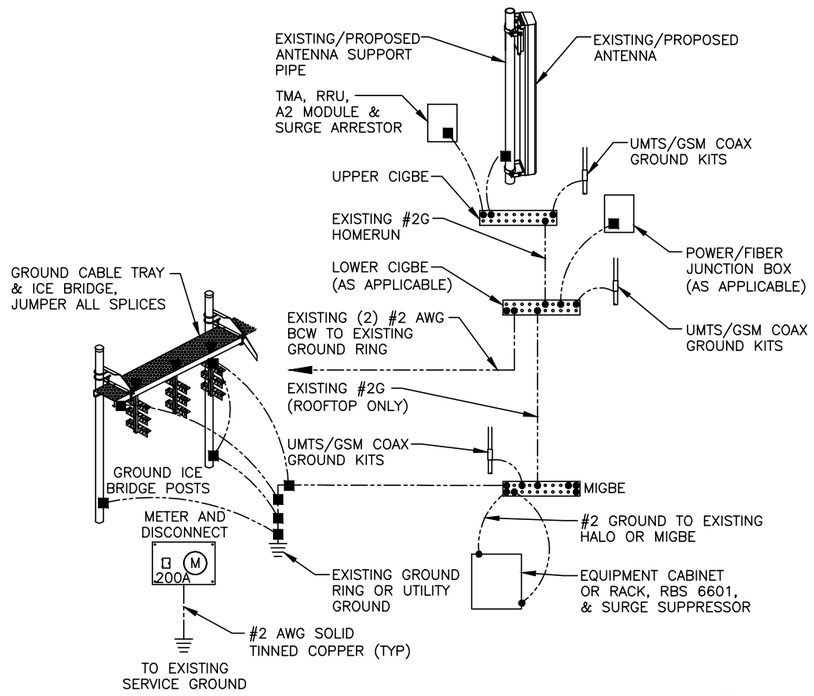
NOTE:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE.

GROUND WIRE TO GROUND BAR CONNECTION DETAIL

SCALE: N.T.S

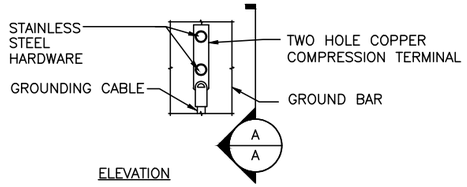
1 / G-1



GROUNDING RISER DIAGRAM

SCALE: N.T.S

2 / G-1



NOTES:

1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATION.
3. CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB

TYPICAL GROUND BAR CONNECTION DETAIL

SCALE: N.T.S

3 / G-1

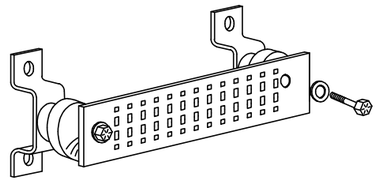
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

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

SCALE: N.T.S

4 / G-1

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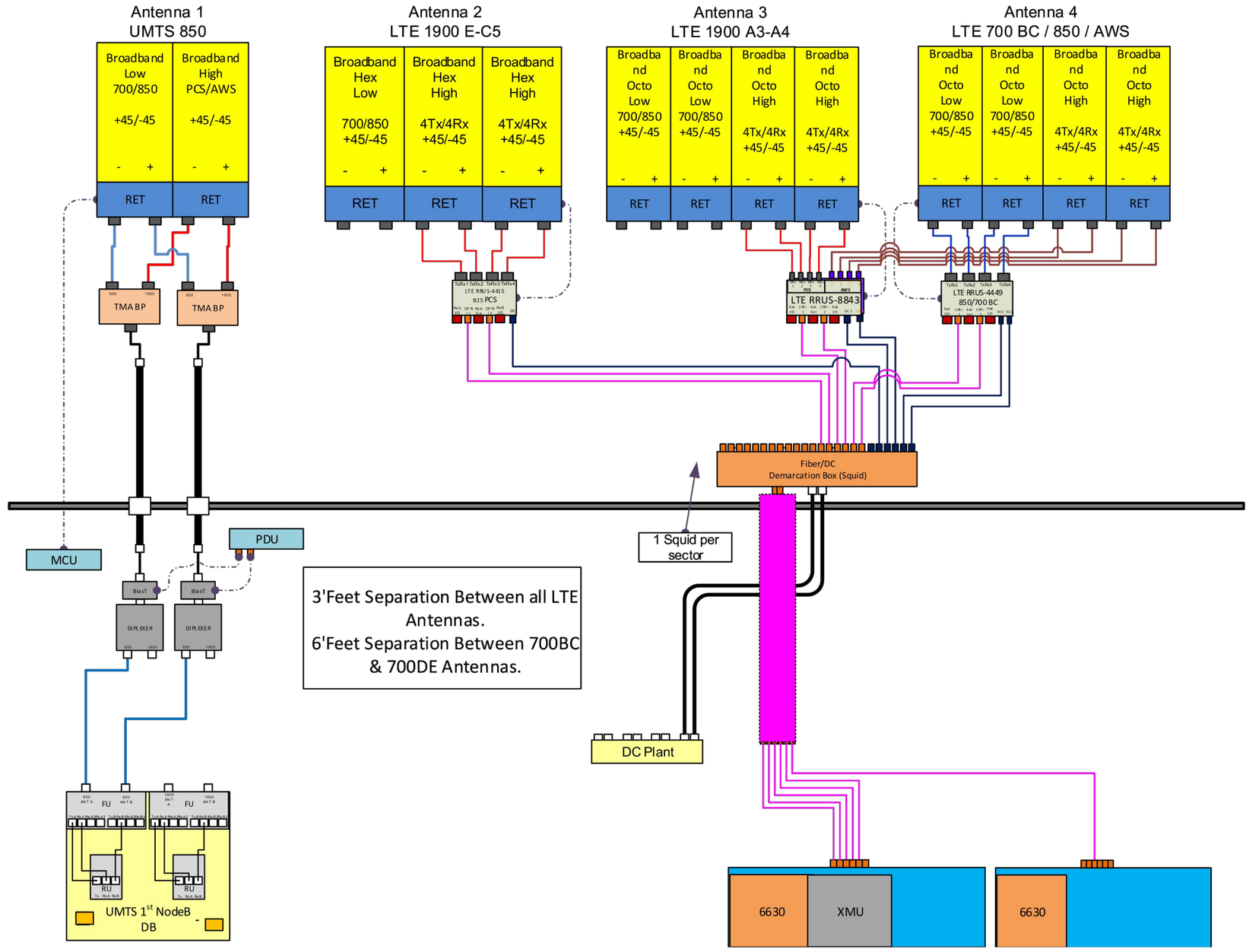

RF PLUMBING DIAGRAM (1 / RF–1)
SCALE: N.T.S

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.

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RF PLUMBING DIAGRAM
(LTE 2C/3C/4C/4TX4RX)

SITE NUMBER	DRAWING NUMBER	REV
CT5395	RF–1	1

Aidan Griffin

From: UPS Quantum View <pkginfo@ups.com>
Sent: Thursday, July 25, 2019 11:40 AM
To: Aidan Griffin
Subject: UPS Ship Notification, Tracking Number 1Z9Y45030201431486

You have a package coming.

Scheduled Delivery Date: Friday, 07/26/2019

This message was sent to you at the request of CENTERLINE SITE ACQUISITION to notify you that the shipment information below has been transmitted to UPS. The physical package may or may not have actually been tendered to UPS for shipment. To verify the actual transit status of your shipment, click on the tracking link below.

Shipment Details

From:	CENTERLINE SITE ACQUISITION
Tracking Number:	1Z9Y45030201431486
Ship To:	Donnel Dillon Connecticut Water Company 4 West Parkway PLAINFIELD, CT 063742047 US
UPS Service:	UPS 2ND DAY AIR
Number of Packages:	1
Scheduled Delivery:	07/26/2019
Shipment Type:	Letter

Download the UPS mobile app

Aidan Griffin

From: UPS Quantum View <pkginfo@ups.com>
Sent: Thursday, July 25, 2019 7:59 PM
To: Aidan Griffin
Subject: UPS Schedule Delivery Update, Tracking Number 1Z9Y45030215911404

Your scheduled delivery date has changed.
Scheduled Delivery Date: Friday, 07/26/2019

Important Delivery Information

From:	CENTERLINE SITE ACQUISITION
Tracking Number:	1Z9Y45030215911404

Shipment Details

Ship To:	Robert Maynard First Selectman's Office 11 Rye Street BROAD BROOK, CT 060169553 US
Number of Packages:	1
Shipment Type:	Letter

Download the UPS mobile app

Aidan Griffin

From: UPS Quantum View <pkginfo@ups.com>
Sent: Thursday, July 25, 2019 7:59 PM
To: Aidan Griffin
Subject: UPS Schedule Delivery Update, Tracking Number 1Z9Y45030218194416

Your scheduled delivery date has changed.
Scheduled Delivery Date: Friday, 07/26/2019

Important Delivery Information

From:	CENTERLINE SITE ACQUISITION
Tracking Number:	1Z9Y45030218194416

Shipment Details

Ship To:	Rand Stanley Building Department 11 Rye Street BROAD BROOK, CT 060169553 US
Number of Packages:	1
Shipment Type:	Letter

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