

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:

NEW CINGULAR WIRELESS PCS, LLC (AT&T)
PETITION FOR A DECLARATORY RULING,
PURSUANT TO CONNECTICUT GENERAL
STATUTES §4-176 AND §16-50K, FOR THE
INSTALLATION OF A WIRELESS
TELECOMMUNICATIONS FACILITY ON
PROPERTY LOCATED AT 49 LEAVENWORTH
STREET, WATERBURY, CONNECTICUT.

PETITION NO. _____

February 25, 2022

PETITION FOR A DECLARATORY RULING:
INSTALLATION HAVING
NO SUBSTANTIAL ADVERSE ENVIRONMENTAL EFFECT

I. Introduction

Pursuant to Section 16-50j-38 and 16-50j-39 of the regulations of Connecticut State Agencies (“R.C.S.A.”), New Cingular Wireless PCS LLC (“AT&T”) hereby petitions the Connecticut Siting Council (the “Council”) for a declaratory ruling (“Petition”) that no Certificate of Environmental Compatibility and Public Need (“Certificate”) is required under Section 16-50k(a) of the Connecticut General Statutes (“C.G.S.”) to install a new wireless telecommunications facility at 49 Leavenworth Street, Waterbury, Connecticut (the “Site”). AT&T proposes to install a cannister antenna and remote radio head units (“RRH”) to the existing building at the Site. The property owner’s authorization for AT&T to file this Petition is included in **Attachment 1**.

II. Factual Background

a. AT&T’s Need for the Proposed Facility

AT&T identified a need for additional coverage and/or capacity relief in its network in this area of Waterbury. The proposed Facility is designed to assure reliable wireless service to AT&T customers and emergency service providers in the area of the Facility location.

b. The Site and AT&T’s Proposed Tower Facility

The Site is an approximately 0.29 acre parcel improved with a multi-story office building that includes a 2-story section and a 3-story section. The Site is classified in the CBD Central Business District. Surrounding land uses include commercial, retail, the municipal building, and a courthouse.

AT&T’s proposed Facility consists of a single cannister antenna mounted to the front of the building parapet and three RRH units and diplexer mounted to the rear of the parapet on the 2-story portion of the existing building located at the Site. The cannister antenna is approximately

24.7” in height and approximately 10” in diameter. Thus, AT&T’s antenna is a tower as defined by R.C.S.A. §16-50j-2a(23).¹ The top of AT&T’s antenna will reach a height of approximately 31’ above grade level. Specifications and details of AT&T’s proposed Facility are shown on the drawings included in **Attachment 2**. Also, included in **Attachment 3** is a structural analysis report confirming that AT&T’s proposed Facility can be structurally accommodated.

No back-up power for AT&T’s proposed Facility is proposed. Construction will take place four (4) full days a week, only during weekdays according to the following estimated schedule:

<i>Civil/Electrical</i>	<i>Days</i>	<i>Hours</i>
Power equipment and cabling	2	16
Antenna and wire installation	1	8
Integration and troubleshooting	1	8

III. Discussion

a. The Proposed Small Cell Facility Will Not Have A Substantial Environmental Impact

For the reasons set forth below, AT&T respectfully submits that its proposed Facility will not have a substantial environmental impact and as such a Certificate pursuant to C.G.S. Section 16-50k(a) is not required .

i. Physical Environmental Effects

AT&T’s proposed Facility will not result in any physical or environmental change to the Site or any adjacent parcels. No disturbance is associated with the proposed Facility.

ii. Visual Effects

The photosimulation included in **Attachment 4** demonstrates that the limited nature of AT&T’s proposed Facility will not result in any significant visual impacts to the area.

¹ R.C.S.A. §16-50j-20a(30) “Tower” means a structure, whether free standing or attached to a building or another structure, that has a height greater than its diameter and that is high relative to its surroundings, or that is used to support antennas for sending or receiving radio frequency signals, or for sending or receiving signals to or from satellites, or any of these, which is or is to be:
(A) used principally to support one or more antennas for receiving or sending radio frequency signals, or for sending or receiving signals to or from satellites, or any of these,...

iii. FCC Compliance

The operation of AT&T's antenna will not increase the total radio frequency electromagnetic power density at the site to a level at or above applicable standards. A power density report is included in **Attachment 5**. The total radio frequency power density will be well within standards adopted by the Connecticut Department of Environmental Protection as set forth in Section 22a-162 of the Connecticut General Statutes and the MPE limits established by the Federal Communications Commission.

b. Notice of Petition Filing

Pursuant to R.C.S.A. Section 16-50j-40(a), notice of AT&T's intent to file this Petition was sent to each person appearing of record as an owner of property that abuts the site, as well as the appropriate municipal officials and government agencies as required by Section 16-50l of the C.G.S. Certification of such notice, a copy of the notice and the list of property owners is included in **Attachment 6** along with the map from the Town's GIS website used to identify abutting property owners. **Attachment 6** also includes a certification of service to municipal officials and government agencies to whom notice was sent.

IV. Conclusion

As set forth above, AT&T's proposed Facility will not result in any known adverse environmental effects. Therefore, and for all the foregoing reasons, AT&T petitions the Council for a determination that the proposed Facility does not require a Certificate of Environmental Compatibility and Public Need and that the Council issue an order approving same.

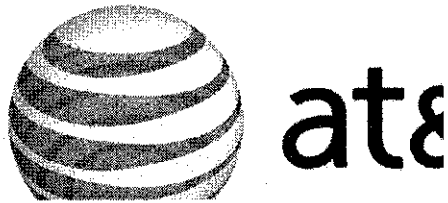
Respectfully submitted,



Lucia Chiocchio
On behalf of the Petitioner

cc: The Honorable Neil M. O'Leary, City of Waterbury
Robert Nerney, City Planner, City of Waterbury
AT&T
Centerline
Meyling Nunez, Cuddy & Feder, LLP

ATTACHMENT 1



LETTER OF AUTHORIZATION

RE: cRAN_RCTB_WTRBY_06 - Waterbury, CT

ADDRESS: 49 Leavenworth Street, Waterbury, CT

Leavenworth Partners, LLC c/o Leavenworth Professional Center, LLLC, owners of the above described property, authorize New Cingular Wireless PCS, LLC ("AT&T") and/or their agent, to act as our nonexclusive agent for the sole purpose of filing and consummating any land use or building permit application(s) necessary to obtain approval of the applicable jurisdiction for AT&T's installation of a small cell rooftop wireless communications facility at the above described property.

We understand that this application may be denied, modified or approved with conditions, and that any such conditions of approval or modifications will be the sole responsibility of the carrier and will be complied with prior to issuance of a building permit.

**Leavenworth Partners, LLC c/o Leavenworth
Professional Center, LLC**

By: _____

Name: Robert S. Kolesnik, Jr.

Its: Duly Authorized Representative

ATTACHMENT 2



AT&T SITE ID: CRAN_RCTB_WTRBY_06
49 LEAVENWORTH STREET
WATERBURY, CT 06704

FOR ZONING (NOT FOR CONSTRUCTION)



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



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

SHEET INDEX

SHEET NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	A
C-1	SITE PLAN	A
A-1	KEY PLAN AND ELEVATION	A
A-2	EQUIPMENT DETAILS	A

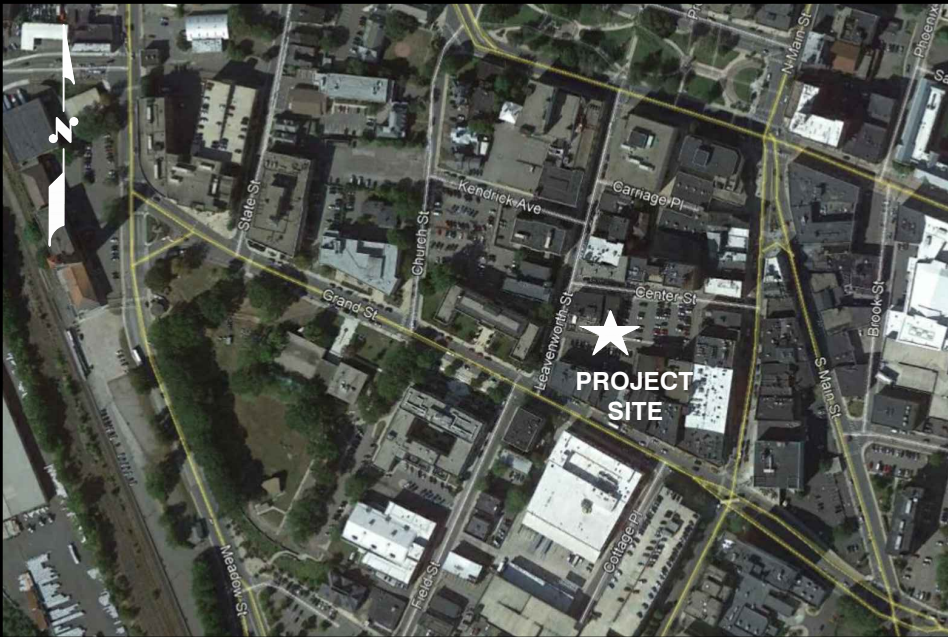
PROJECT DESCRIPTION

1. INSTALLATION OF ANTENNA AND ASSOCIATED EQUIPMENT ON EXISTING ROOFTOP.
2. THIS IS AN UNMANNED AND RESTRICTED ACCESS EQUIPMENT SITE AND WILL BE USED FOR THE TRANSMISSION OF RADIO SIGNALS FOR THE PURPOSE OF IMPROVING CELLULAR AND WIRELESS INTERNET SERVICE.

PROJECT SUMMARY

SITE ADDRESS:	49 LEAVENWORTH STREET WATERBURY, CT 06704
COUNTY:	NEW HAVEN
LATITUDE:	41.55463° N
LONGITUDE:	73.042632° W
STRUCTURE TYPE:	ROOFTOP
ARCHITECT/ENGINEER:	HUDSON DESIGN GROUP LLC 45 BEECHWOOD DRIVE NORTH ANDOVER, MA 01845

VICINITY MAP (NOT TO SCALE)



DRIVING DIRECTIONS

FROM ROCKY HILL, CT:
HEAD SOUTHEAST TOWARD CAPITAL BLVD. TURN LEFT ONTO CAPITAL BLVD. TURN LEFT ONTO STATE HWY 411. TURN LEFT TO MERGE ONTO I-91 S. MERGE ONTO I-91 S. KEEP RIGHT TO STAY ON I-91 S. TAKE EXIT 18 FOR I-691 W TOWARD MERIDEN/WATERBURY. CONTINUE ONTO I-691 W TOWARD MERIDEN/WATERBURY/DANBURY. TAKE EXIT 1 ON THE LEFT FOR I-84 W TOWARD WATERBURY/DANBURY. MERGE ONTO I-84. TAKE EXIT 21 FOR MEADOW ST. TOWARD BANK ST. TURN RIGHT ONTO FIELD ST. TURN RIGHT ONTO GRAND ST. TURN LEFT ONTO LEAVEWORTH ST.

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.

CHECKED BY: AT

APPROVED BY: DPH

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
A	01/12/22	ISSUED FOR REVIEW	MR

CLUSTER AND NODE NUMBER:
CRAN_RCTB_WTRBY_06

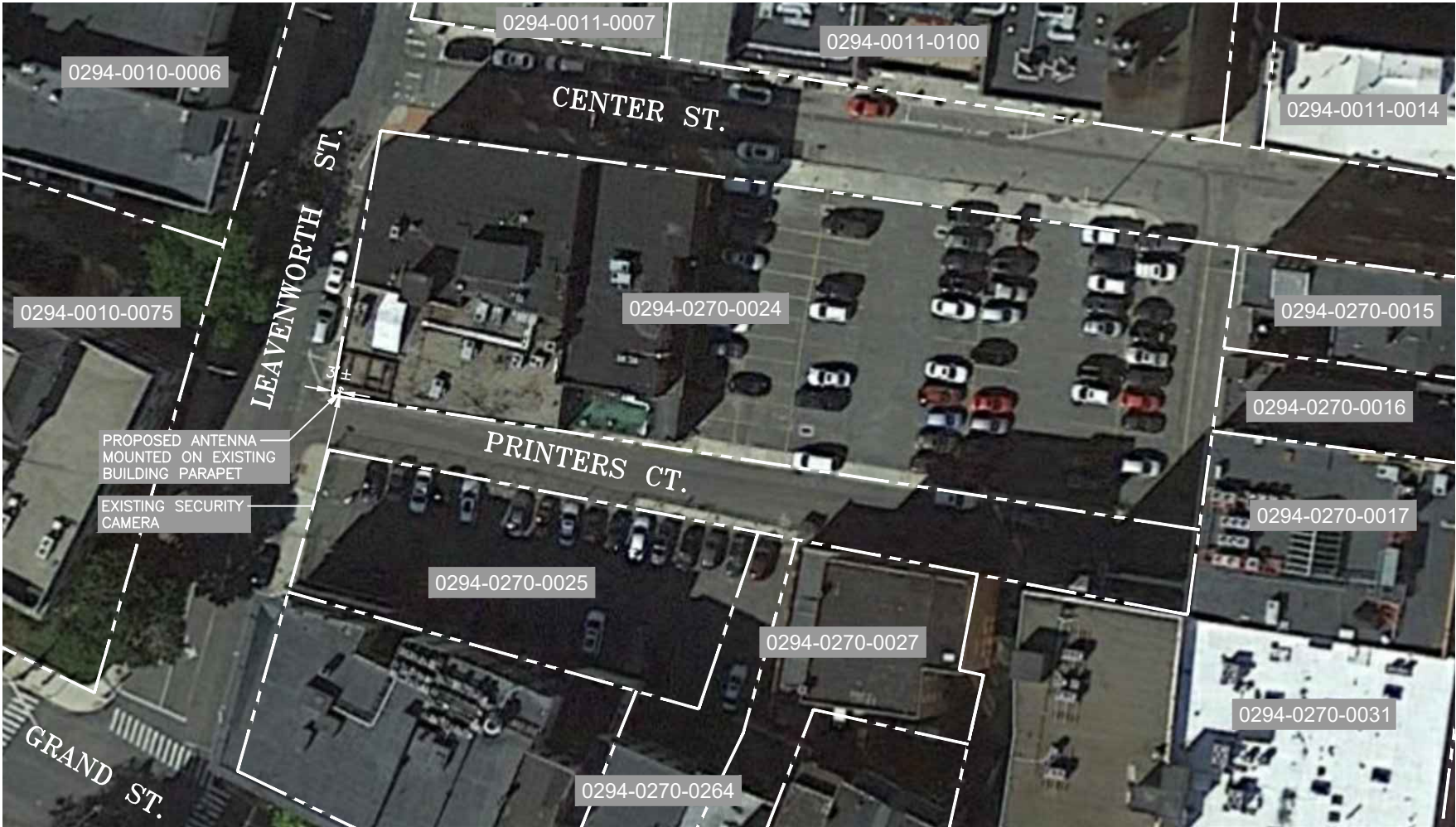
SITE ID:
CRAN_RCTB_WTRBY_06

SITE ADDRESS:
49 LEAVENWORTH STREET
WATERBURY, CT 06704
NEW HAVEN COUNTY

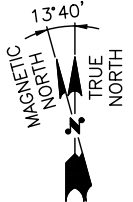
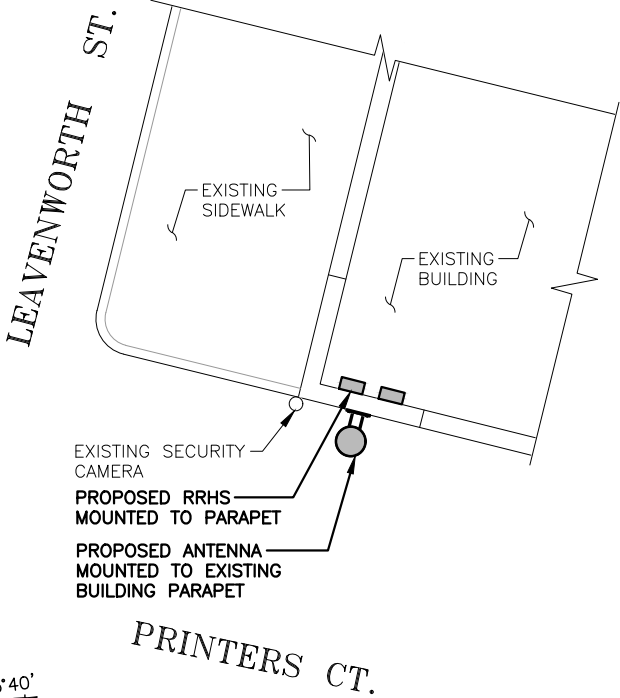
SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

IMMEDIATE ADJOINING PROPERTY OWNER INFORMATION			
PARCEL	OWNER	PHYSICAL ADDRESS	MAILING ADDRESS
0294-0270-0024	THERESE LLC & CARMEL LLC	47 LEAVENWORTH ST. WATERBURY, CT 06702	49 LEAVEWORTH ST. WATERBURY, CT 06702
0294-0270-0025	WEBSTER BANK NATIONAL ASSOCIATION	61 LEAVENWORTH ST. WATERBURY, CT 06702	200 EXECUTIVE BLVD. SO-200 SOUTHTONING, CT 06489
0294-0010-0075	CITY OF WATERBURY	236 GRAND ST. WATERBURY, CT 06702	235 GRAND ST. WATERBURY, CT 06702
0294-0010-0006	GRAND PROFESSIONAL BUILDING LLC	18 GRAND ST. WATERBURY, CT 06702	146 SHERIDAN DR. NAUGATUCK, CT 06770
0294-0011-0007	CENTER STREET ESTATES LLC.	68 CENTER ST. WATERBURY, CT 06702	517 OAK DR. FAR ROCKAWAY, NY 11691
0294-0270-0015	NARGI PHILLIP J.	82 BANK ST. WATERBURY, CT 06702	69 EAST RIDGE DR WATERBURY, CT 06708
0294-0270-0016	NARGI PHILLIP J.	92 BANK ST. WATERBURY, CT 06702	69 EAST RIDGE DR WATERBURY, CT 06708
0294-0270-0017	NARGI PHILLIP J.	96 BANK ST. WATERBURY, CT 06702	69 EAST RIDGE DR WATERBURY, CT 06708
0294-0270-0031	GREEN HUB DEVELOPMENT CORP II LLC.	114 BANK ST. WATERBURY, CT 06702	17A WHITTIER HILL RD. NORTH SALEM, NY 10560
0294-0270-0027	BYRNE PROPERTIES LLC	154 GRAND ST. WATERBURY, CT 06702	139 FAIRVIEW LLC WOLCOTT, CT 06716
0294-0011-0100	EXCHANGE PLACE PRESERVATION PARTNERS	44 CENTER ST. WATERBURY, CT 06702	122 EAST 42ND ST. SUITE 4900 NEW YORK, NY 10168
0294-0011-0014	68-70 BANK STREET LLC	68 BANK ST, WATERBURY, CT 06702	70 WEST 104 ST. APT. 6A NEW YORK, NY 10025
0294-0270-0264	JOHN BALE BOOKS LLC	158 GRAND ST. WATERBURY, CT 06702	158 GRAND ST. WATERBURY, CT 06702



APPROXIMATE COORDINATES: LAT: 41.55463° N LONG: 73.042632° W



INFORMATION SHOWN HEREON IS BASED ON EXISTING INFORMATION OBTAINED FROM TAX MAPS, MUNICIPAL GIS WEBSITE, & AERIAL IMAGERY. THE INFORMATION SHOWN IS NOT A RIGHT OF WAY OR BOUNDARY SURVEY AND DOES NOT SATISFY THE REQUIREMENTS FOR A BOUNDARY SURVEY. A SITE SURVEY WAS NOT PERFORMED BY HUDSON DESIGN GROUP, LLC



EQUIPMENT ORIENTATION PLAN
SCALE: N.T.S.

at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

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

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

CHECKED BY: AT

APPROVED BY: DPH

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
A	01/12/22	ISSUED FOR REVIEW	MR

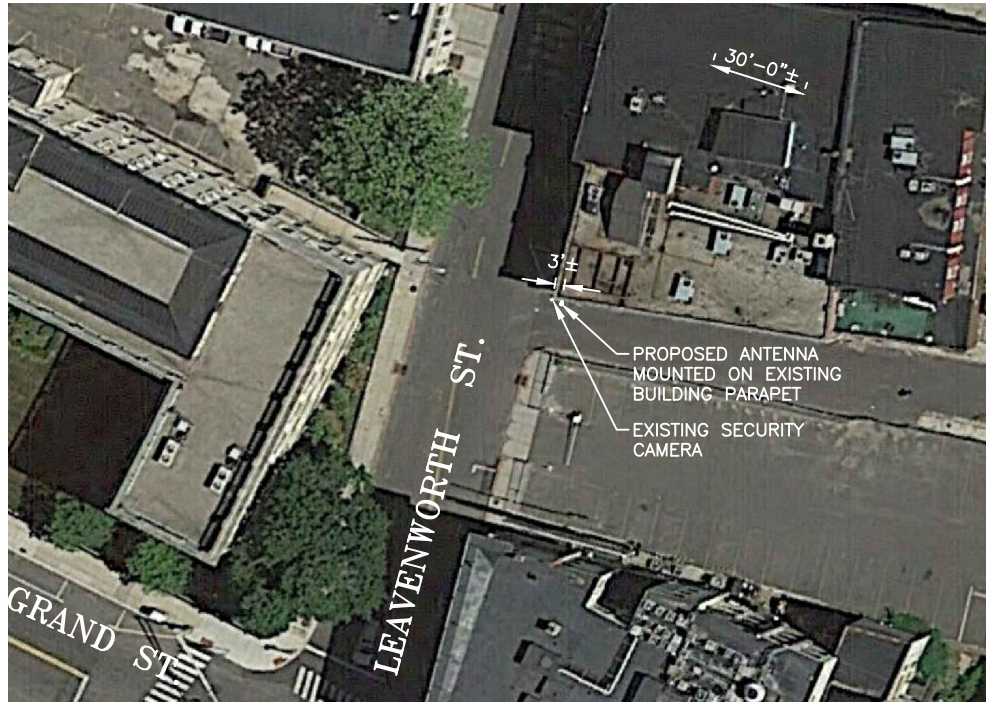
CLUSTER AND NODE NUMBER:
CRAN_RCTB_WTRBY_06

SITE ID:
CRAN_RCTB_WTRBY_06

SITE ADDRESS:
49 LEAVENWORTH STREET
WATERBURY, CT 06704
NEW HAVEN COUNTY

SHEET TITLE
SITE PLAN

SHEET NUMBER
C-1



NOTE:

1. THE WIRELESS COMMUNICATIONS OPERATOR IS RESPONSIBLE FOR PLACING A WARNING SIGN ON THE POWER SUPPLY COMMUNICATING THE RF EMISSIONS IN COMPLIANCE WITH THE CURRENT EDITION OF IEEE STANDARD C95.2. THIS SIGN MUST ALSO HAVE A 24-HOUR CONTACT PHONE NUMBER IN CASE OF EMERGENCY. THIS NUMBER MUST BE VISIBLE FROM THE GROUND.

APPROXIMATE COORDINATES: LAT: 41.55463° N LONG: 73.042632° W

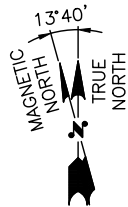

500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067



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



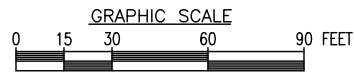
45 BEECHWOOD DRIVE N. ANDOVER, MA 01845 TEL: (978) 557-5553 FAX: (978) 336-5586



KEY PLAN

22x34 SCALE: 1"=30'
11x17 SCALE: 1"=60'

1
A-1



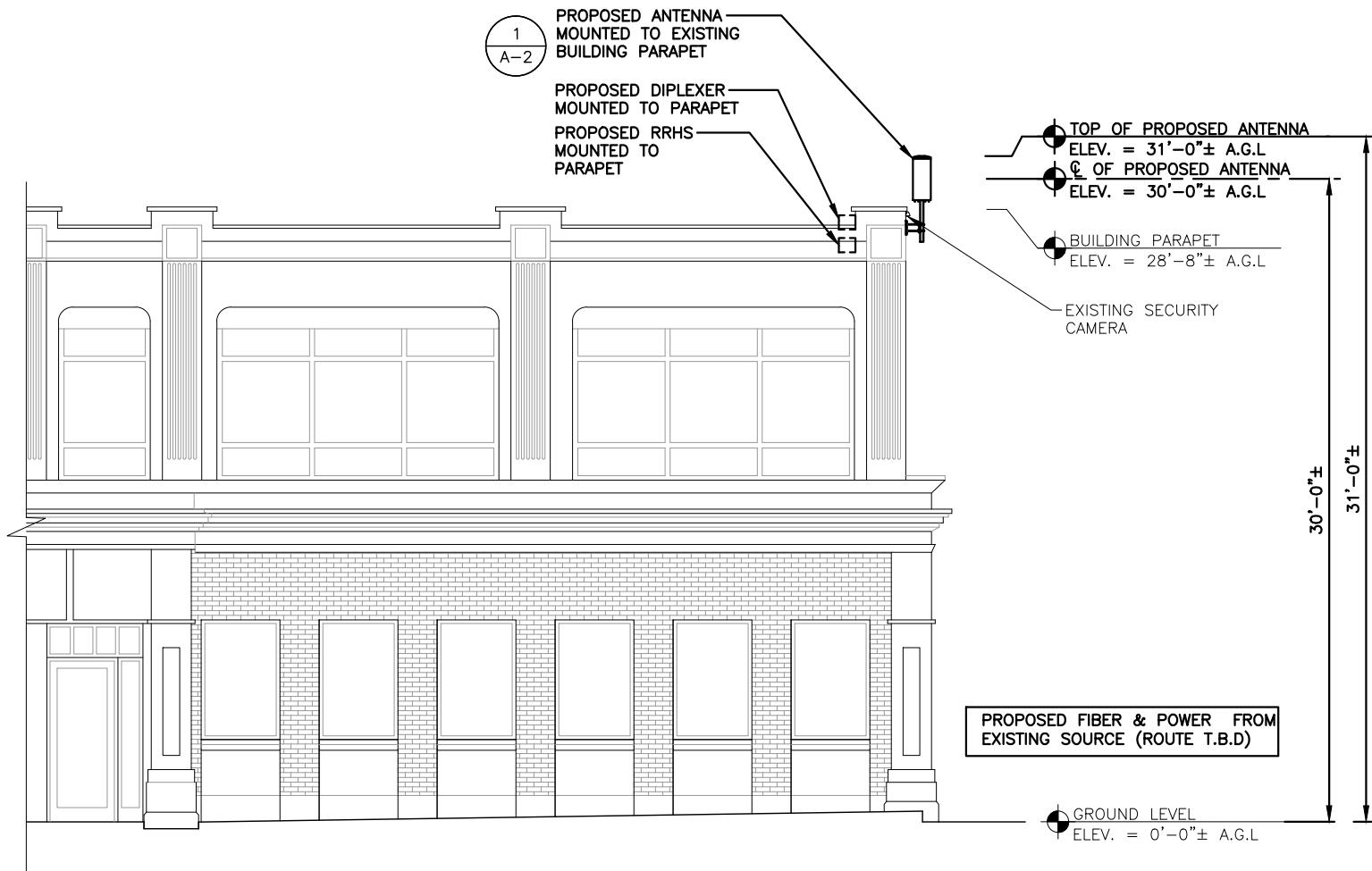
PROPOSED ANTENNA
MOUNTED TO EXISTING
BUILDING PARAPET
EXISTING SECURITY
CAMERA
EXISTING BUILDING
PARAPET



EXISTING CONDITIONS PHOTO DETAIL

SCALE: N.T.S

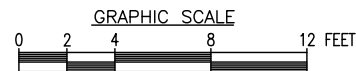
2
A-1



ELEVATION

22x34 SCALE: 1/4"=1'-0"
11x17 SCALE: 1/8"=1'-0"

3
A-1



CHECKED BY: AT

APPROVED BY: DPH

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
A	01/12/22	ISSUED FOR REVIEW	MR

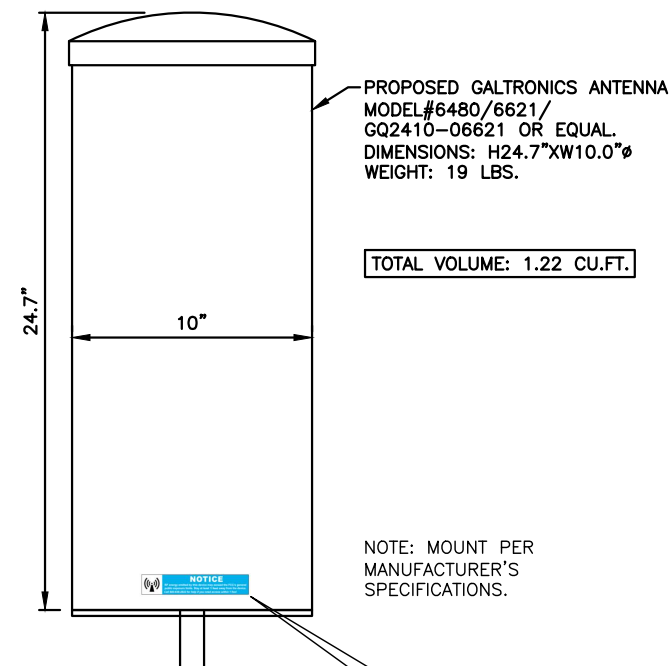
CLUSTER AND NODE NUMBER:
CRAN_RCTB_WTRBY_06

SITE ID:
CRAN_RCTB_WTRBY_06

SITE ADDRESS:
49 LEAVENWORTH STREET
WATERBURY, CT 06704
NEW HAVEN COUNTY

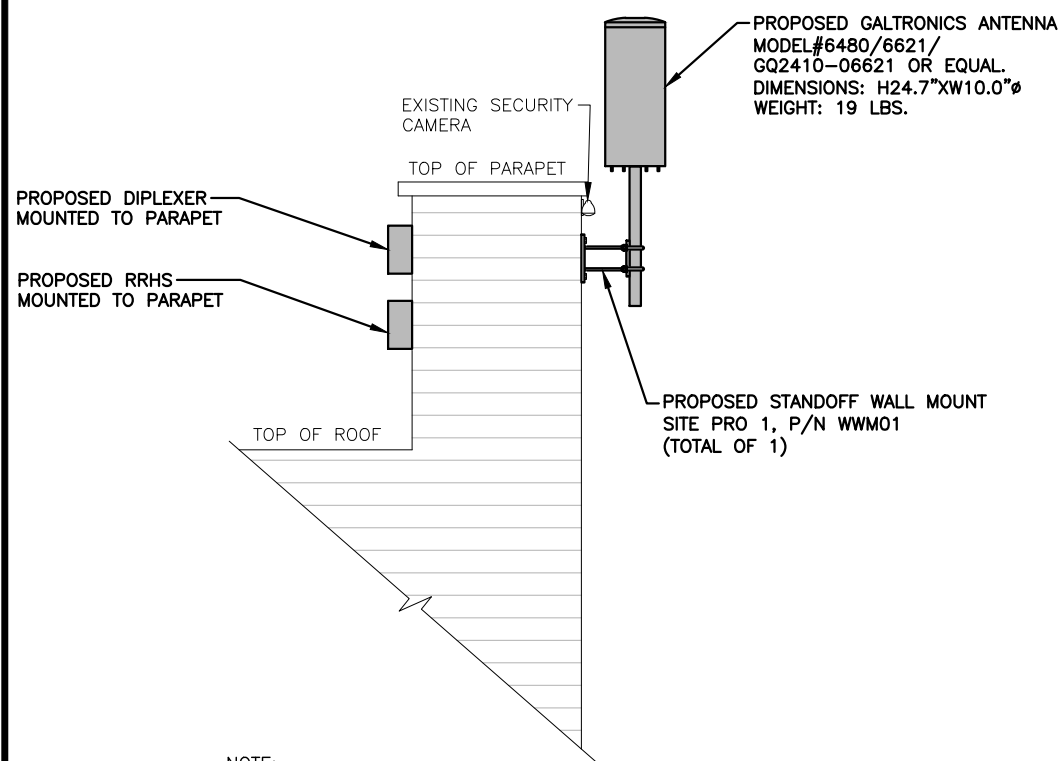
SHEET TITLE
KEY PLAN AND
ELEVATION

SHEET NUMBER
A-1



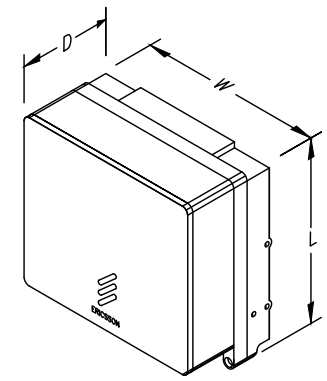
NO1-CD-16 1"x6" NOTICE DECAL
PLACE THREE NOTICE STICKERS EQUALLY SPACED
AROUND THE BOTTOM OF ANTENNA RADOME

ANTENNA DETAIL
SCALE: N.T.S



NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

ANTENNA MOUNT DETAIL
SCALE: N.T.S

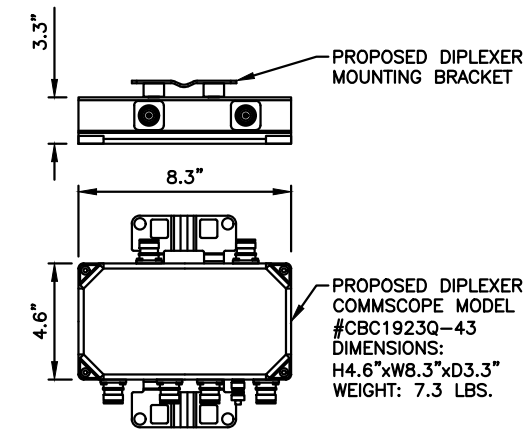


MODEL	QTY.	L	W	D	WGT.
4402	2	8.0"	8.0"	4.0"	11 LBS
2205	1	8.0"	8.0"	4.0"	11 LBS

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

RRH DETAIL

SCALE: N.T.S



NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

DIPLEXER DETAIL
(AS REQUIRED)

SCALE: N.T.S





500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067



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



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TEL: (978) 557-5553
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CHECKED BY: AT

APPROVED BY: DPH

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
A	01/12/22	ISSUED FOR REVIEW	MR

CLUSTER AND NODE NUMBER:
CRAN_RCTB_WTRBY_06

SITE ID:
CRAN_RCTB_WTRBY_06

SITE ADDRESS:
49 LEAVENWORTH STREET
WATERBURY, CT 06704
NEW HAVEN COUNTY

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
A-2

ATTACHMENT 3

STRUCTURAL ANALYSIS REPORT

For

CRAN_RCTB_WTRBY_06

49 Leavenworth Street
Waterbury, CT 06702

Antenna Mounted to the Parapet Facade



Prepared for:



Dated: February 2, 2022

Prepared by:



HUDSON
Design Group LLC



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



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 antenna listed below.

This office conducted an on-site visual survey of the above site on January 19, 2022. Attendees included Icaro De Andrade and Kevin S. Bano Maza (HDG – Engineers).

CONCLUSION SUMMARY:

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

	Member	Stress Ratio	Pass/Fail
Existing Parapet Wall	Parapet Wall	29%	PASS

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

	Member	Controlling Load Case	Stress Ratio	Pass/Fail
Proposed Antenna Mount	2	LC2	6%	PASS

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

	Member	Stress Ratio	Pass/Fail
Proposed Connection	5/8" Threaded Rod	5%	PASS



APPURTENANCE CONFIGURATION:

Appurtenances	Dimensions	Weight	**Elevation	Mount
(1) GQ2410-06621 Antenna	24.7"x10.0"Ø	19 lbs	30'	Wall Mount
(2) 4402 RRH's	8.0"x8.0"x4.0"	11 lbs	-	Unistrut
(1) 2205 RRH's	8.0"x8.0"x4.0"	11 lbs	-	Unistrut
(2) CBC1923Q-43 Diplexer	4.6"x8.3"x3.3"	8 lbs	-	Unistrut

* Proposed equipment shown in bold.

** Elevation to antenna centerline.

DESIGN CRITERIA:

International Building Code (IBC) 2015 with 2018 Connecticut State Building Code Amendments, and ASCE 7-10 (Minimum Design Loads for Buildings and Other Structures).		
Wind		
Reference Wind Speed:	125 mph	(2018 CSBC Appendix N)
Exposure Category:	C	(ASCE 7-10 Chapter 26)
Risk Category:	II	(ASCE 7-10 Table 1.5-1)
Snow		
Ground Snow, P _g :	35	(2018 CSBC Appendix N)
Importance Factor (I _s):	1.0	(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:	24.5 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:	Waterbury	
County:	New Haven	
Wind Load:	125 mph	(TIA-222-H Figure B-2)
Ice		
Design Ice Thickness (t _i):	1.0 in	(TIA-222-H Figure B-9)
Structure Class:	II	(TIA-222-H Table 2-1)
Importance Factor (I _i):	1.0	(TIA-222-H Table 2-3)
Factored Thickness of Radial Ice (t _{iz}):	0.99 in	(TIA-222-H Sec. 2.6.10)



HUDSON
Design Group LLC

EXISTING PARAPET WALL CONSTRUCTION:

The existing parapet wall construction consists of concrete masonry unit.

ANTENNA SUPPORT RECOMMENDATIONS:

The proposed antenna is to be mounted on a proposed pipe masts secured to the existing parapet wall with threaded rods.

RRH/DIPLEXER SUPPORT RECOMMENDATIONS:

The proposed RRH's, and diplexers are to be mounted on proposed vertical unistruts secured to the existing steel beam with threaded rods.

Limitations and Assumptions:

1. Reference the latest HDG construction drawings for all the equipment locations and details.
2. All detail requirements will be designed and furnished in the construction drawings.
3. 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.
4. HDG is not responsible for any modifications completed prior to and hereafter which HDG was not directly involved.
5. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer requirements.
6. If field conditions differ from what is assumed in this report, then the engineer of record is to be notified as soon as possible.



HUDSON
Design Group LLC

FIELD PHOTOS:



Photo 1: Sample photo illustrating the proposed location of the antenna.



Photo 2: Sample photo illustrating the existing building parapet wall.



HUDSON
Design Group LLC

Wind & Ice Calculations

Date: 1/14/2022
 Project Name: CRAN_RCTB_WTRBY_06
 Project No.: CRAN_RCTB_WTRBY_06
 Designed By: KSBM Checked By: MSC



2.6.5.2 Velocity Pressure Coeff:

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

$K_z =$ **0.982**

$z =$ 30 (ft)
 $z_g =$ 900 (ft)
 $\alpha =$ 9.5

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

Table 2-4

Exposure	Z_g	α	K_{zmin}	K_c
B	1200 ft	7.0	0.70	0.9
C	900 ft	9.5	0.85	1.0
D	700 ft	11.5	1.03	1.1

2.6.6.2 Topographic Factor:

Table 2-5

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

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

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

$K_{zt} =$ **1**

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

Category= **1**

$K_h =$ 1
 $K_c =$ 1.0 (from Table 2-4)
 $K_t =$ 0 (from Table 2-5)
 $f =$ 0 (from Table 2-5)
 $z =$ 30
 $z_s =$ 284 (Mean elevation of base of structure above sea level)
 $H =$ 0 (Ht. of the crest above surrounding terrain)
 $K_{zt} =$ 1.00 (from 2.6.6.2.1)
 $K_e =$ 0.99 (from 2.6.8)

2.6.10 Design Ice Thickness

Max Ice Thickness =
 Importance Factor =

$t_i =$ 1.00 in
 $I =$ 1.00 (from Table 2-3)
 $K_{iz} =$ 0.99 (from Sec. 2.6.10)

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

$t_{iz} =$ 0.99 in

Date: 1/14/2022
 Project Name: CRAN_RCTB_WTRBY_06
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 Designed By: KSBM Checked By: MSC



2.6.9 Gust Effect Factor

2.6.9.1 Self Supporting Lattice Structures

$G_h = 1.0$ Latticed Structures > 600 ft

$G_h = 0.85$ Latticed Structures 450 ft or less

$G_h = 0.85 + 0.15 [h/150 - 3.0]$ $h =$ ht. of structure

$h =$ 28.75

$G_h =$ 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

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

$G_h =$ 1.35

$G_h =$ 1.00

2.6.11.2 Design Wind Force on Appurtenances

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

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

$q_z =$ 36.94

$q_{z(ice)} =$ 5.91

$q_{z(30)} =$ 2.13

$K_z =$ 0.982 (from 2.6.5.2)

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

$K_s =$ 1.0 (from 2.6.7)

$K_e =$ 0.99 (from 2.6.8)

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

$V_{max} =$ 125 mph (Ultimate Wind Speed)

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

$V_{30} =$ 30 mph

Table 2-2

Structure Type	Wind Direction Probability Factor, K_d
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

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 Project Name: CRAN_RCTB_WTRBY_06
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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		$1.2 - 2.8(r_s) \geq 0.85$	$1.4 - 4.0(r_s) \geq 0.90$	$2.0 - 6.0(r_s) \geq 1.25$
Round	C < 39 (Subcritical)	0.7	0.8	1.2
	39 \leq C \leq 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 =

0.99 in

Angle = 0 (deg)

Equivalent Angle = 180 (deg)

Appurtenances	Height	Width	Depth	Flat Area	Aspect Ratio	Ca	Force (lbs)	Force (lbs) (w/ Ice)
GQ2410-06621 Antenna	24.7	10.0	10.0	1.72	2.47	1.20	76	16
4402 RRH	8.0	8.0	4.0	0.44	1.00	1.20	20	5
2205 RRH	8.0	8.0	4.0	0.44	1.00	1.20	20	5
CBC1923Q-43 Diplexer	4.6	8.3	3.3	0.27	0.55	1.20	12	3
2" Pipe	2.4	12.0		0.20	0.20	1.20	9	
HSS 4x4	4.0	12.0		0.33	0.33	1.25	15	

Date: 1/14/2022

Project Name: CRAN_RCTB_WTRBY_06

Project No.: CRAN_RCTB_WTRBY_06

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ICE WEIGHT CALCULATIONS

Thickness of ice: 0.99 in.

Density of ice: 56 pcf

GQ2410-06621 Antenna

Weight of ice based on total radial SF area:

Depth (in): 24.7

Diameter(in): 10.0

Total weight of ice on object: 27 lbs

Weight of object: 19 lbs

Combined weight of ice and object: 46 lbs

2205 RRH

Weight of ice based on total radial SF area:

Height (in): 8.0

Width (in): 8.0

Depth (in): 4.0

Total weight of ice on object: 8 lbs

Weight of object: 11.0 lbs

Combined weight of ice and object: 19 lbs

HSS 4x4

Weight of ice based on total radial SF area:

Height (in): 4

Width (in): 4

Per foot weight of ice on object: 8 plf

4402 RRH

Weight of ice based on total radial SF area:

Height (in): 8.0

Width (in): 8.0

Depth (in): 4.0

Total weight of ice on object: 8 lbs

Weight of object: 11.0 lbs

Combined weight of ice and object: 19 lbs

CBC1923Q-43 Diplexer

Weight of ice based on total radial SF area:

Height (in): 4.6

Width (in): 8.3

Depth (in): 3.3

Total weight of ice on object: 5 lbs

Weight of object: 8.0 lbs

Combined weight of ice and object: 13 lbs

2" pipe

Per foot weight of ice:

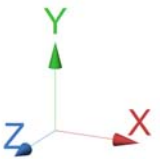
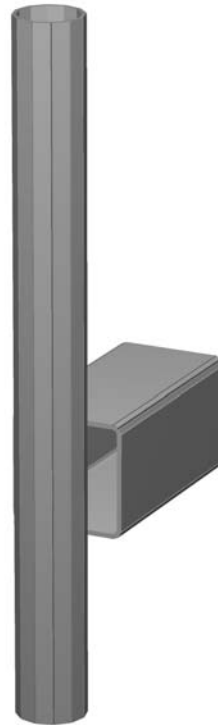
diameter (in): 2.38

Per foot weight of ice on object: 4 plf



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Antenna Mount Calculations

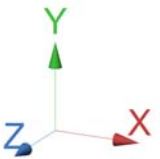


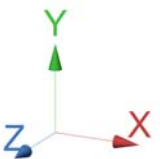


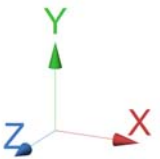
PIPE 2x0.154

A53 GrB

A500 GrB rectangular
HSS_SQR 4X4X3_16







Current Date: 1/13/2022 7:48 PM
 Units system: English

Load data

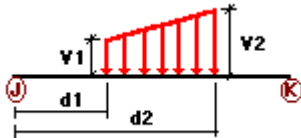
GLOSSARY

Comb : Indicates if load condition is a load combination

Load Conditions

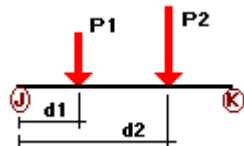
Condition	Description	Comb.	Category
DL	Dead Load	No	DL
Wf	Wind Load (FRONT)	No	WIND
Ws	Wind Load (SIDE)	No	WIND
Wfice	Wind ICE (FRONT)	No	WIND
Wsice	Wind ICE (SIDE)	No	WIND
Di	Ice Load	No	LL

Distributed force on members



Condition	Member	Dir1	Val1 [Kip/ft]	Val2 [Kip/ft]	Dist1 [ft]	%	Dist2 [ft]	%
Wf	1	z	-0.015	0.00	0.00	No	0.00	No
	2	z	-0.009	0.00	0.00	No	0.00	No
Ws	1	x	-0.015	0.00	0.00	No	0.00	No
	2	x	-0.009	0.00	0.00	No	0.00	No
Di	1	y	-0.08	0.00	0.00	No	0.00	No
	2	y	-0.004	0.00	0.00	No	0.00	No

Concentrated forces on members



Condition	Member	Dir1	Value1 [Kip]	Dist1 [ft]	%
DL	2	y	-0.019	0.00	No
Wf	2	z	-0.076	0.00	No
Ws	2	x	-0.076	0.00	No
Wfice	2	z	-0.016	0.00	No
Wsice	2	x	-0.016	0.00	No
Di	2	y	-0.028	0.00	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
Wfice	Wind ICE (FRONT)	No	0.00	0.00	0.00
Wsice	Wind 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
Wfice	0.00	0.00	0.00
Wsice	0.00	0.00	0.00
Di	0.00	0.00	0.00

Current Date: 1/13/2022 7:49 PM
Units system: English

Steel Code Check

Report: Summary - Group by member

Load conditions to be included in design :

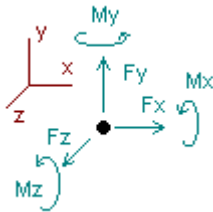
LC1=1.2DL+Wf
LC2=1.2DL+Ws
LC3=0.9DL+Wf
LC4=0.9DL+Ws
LC5=1.2DL+Wfice+Di
LC6=1.2DL+Wsice+Di
LC7=1.4DL
LC8=0.9DL

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
	HSS_SQR 4X4X3_16	1	LC3 at 100.00%	0.01	OK	
	PIPE 2x0.154	2	LC2 at 65.63%	0.06	OK	

Current Date: 1/13/2022 7:49 PM
 Units system: English

Analysis result

Reactions

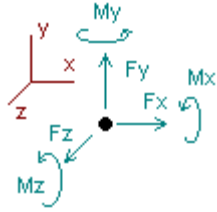


Direction of positive forces and moments

Node	Forces [Kip]			Moments [Kip*ft]		
	FX	FY	FZ	MX	MY	MZ
Condition LC1=1.2DL+Wf						
1	0.00000	0.03798	0.09400	0.08125	0.00000	0.00000
SUM	0.00000	0.03798	0.09400	0.08125	0.00000	0.00000
Condition LC2=1.2DL+Ws						
1	0.10400	0.03798	0.00000	-0.02609	0.07540	-0.10733
SUM	0.10400	0.03798	0.00000	-0.02609	0.07540	-0.10733
Condition LC3=0.9DL+Wf						
1	0.00000	0.02848	0.09400	0.08777	0.00000	0.00000
SUM	0.00000	0.02848	0.09400	0.08777	0.00000	0.00000
Condition LC4=0.9DL+Ws						
1	0.10400	0.02848	0.00000	-0.01956	0.07540	-0.10733
SUM	0.10400	0.02848	0.00000	-0.01956	0.07540	-0.10733
Condition LC5=1.2DL+Wfice+Di						
1	0.00000	0.11931	0.01600	-0.04400	0.00000	0.00000
SUM	0.00000	0.11931	0.01600	-0.04400	0.00000	0.00000
Condition LC6=1.2DL+Wfice+Di						
1	0.01600	0.11931	0.00000	-0.06533	0.01227	-0.02133
SUM	0.01600	0.11931	0.00000	-0.06533	0.01227	-0.02133
Condition LC7=1.4DL						
1	0.00000	0.04430	0.00000	-0.03043	0.00000	0.00000
SUM	0.00000	0.04430	0.00000	-0.03043	0.00000	0.00000
Condition LC8=0.9DL						
1	0.00000	0.02848	0.00000	-0.01956	0.00000	0.00000
SUM	0.00000	0.02848	0.00000	-0.01956	0.00000	0.00000

Envelope for nodal reactions

Note.- **lc** 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=0.9DL+Wf
 LC4=0.9DL+Ws
 LC5=1.2DL+Wfice+Di
 LC6=1.2DL+Wsice+Di
 LC7=1.4DL
 LC8=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
1	Max	0.104	LC2	0.119	LC5	0.094	LC1	0.08777	LC3	0.07540	LC2	0.00000	LC1
	Min	0.000	LC1	0.028	LC3	0.000	LC6	-0.06533	LC6	0.00000	LC1	-0.10733	LC2

Date: 2/2/2022
Project Name: CRAN_RCTB_WTRBY_06
Project Number: CRAN_RCTB_WTRBY_06
Designed By: KSBM Checked By: MSC



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CHECK THRU BOLT CONNECTION CAPACITY

Reference: AISC Steel Construction Manual 14th Edition (ASD)

Bolt Type = A325 5/8" Threaded Rod

Allowable Tensile Load =

$F_{Tall} =$ 13806 lbs.

Allowable Shear Load =

$F_{Vall} =$ 8283 lbs.

CONNECTION PLATE CONFIGURATION (4-BOLTS)

$N_{BOLT\ ROWS}$	=	2	rows
N_{BOLTS}	=	2	bolts/row
S_Y	=	6	in (Min.)
S_X	=	6	in (Min.)

TENSILE FORCES

Moment in Y axis:	75.40	lb-ft.	(See Bentley Output)
Couple Reaction from M_Y:	302	lbs.	
Moment in Z axis:	107.33	lb-ft.	(See Bentley Output)
Couple Reaction from M_Z:	430	lbs.	
Reaction in Z direction:	94	lbs.	(See Bentley Output)
Resultant:	390	lbs.	

SHEAR FORCES

Moment in X axis:	87.77	lb-ft.	(See Bentley Output)
Couple Reaction from M_X:	352	lbs.	
Reaction in X direction:	104	lbs.	(See Bentley Output)
Reaction in Y direction:	119	lbs.	(See Bentley Output)
Resultant:	216	lbs.	

Date: 2/2/2022

Project Name: CRAN_RCTB_WTRBY_06

Project Number: CRAN_RCTB_WTRBY_06

Designed By: KSBM Checked By: MSC



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(CONT.)

Tension Design Load /Bolts =

$$f_t = 389.50 \text{ lbs.} < 13806 \text{ lbs.} \text{ Therefore, OK !}$$

Shear Design Load / Bolts=

$$f_v = 215.51 \text{ lbs.} < 8283.5 \text{ lbs.} \text{ Therefore, OK !}$$

CHECK COMBINED TENSION AND SHEAR

$$\begin{array}{rclclcl} f_t / F_T & + & f_v / F_v & \leq & 1.0 \\ 0.028 & + & 0.026 & = & 0.054 < 1.0 \text{ Therefore, OK !} \end{array}$$

Date: 2/3/2022
 Project Name: CRAN_RCTB_WTRBY_06
 Project No.: CRAN_RCTB_WTRBY_06
 Designed By: KSBM Checked By: MSC



Wind Analysis

Reference Codes:

- 2018 Connecticut State Building Code Amendments

-International Building Code (IBC) 2015

-Minimum Design Loads for Buildings and Other Structures (ASCE 7-10)

Structure Classification	II	(ASCE 7-10 Table 1.5-1)
Basic Wind Speed, V	125 mph	(CT Building Code Appendix N)
Importance Factor, I	1	(ASCE 7-10 Table 1.5-2)
Exposure Category	C	(ASCE 7-10 Section 26.7)
Height Above Ground Level, z	30 ft	(Center of Enclosure)
Exposure Coefficient, K_z	0.98	(ASCE 7-10 Table 29.3.1)
Wind Directionality Coef., K_d	0.90	(ASCE 7-10 Table 26.6-1)
Topographic Factor, K_{zt}	1.00	(ASCE 7-10 Section 26.8.2)
Velocity Pressure, q_z	$= 0.00256K_zK_{zt}K_dV^2$ $= \underline{\underline{35.28 \text{ psf}}}$	(ASCE 7-10 Equation 29.3-1)
Gust Factor, G	0.85	(ASCE 7-10 Section 26.9)
Enclosure Shape:	Square	
Net Force Coefficient, C_f	1.34	(ASCE 7-10 Figure 29.5-1)
Area Wind Force, F	$= q_zGC_f$ $= \underline{\underline{40.15 \text{ psf}}}$	(ASCE 7-10 Equation 29.5-2)

Date: 2/3/2022
 Project Name: CRAN_RCTB_WTRBY_06
 Project No.: CRAN_RCTB_WTRBY_06
 Designed By: KSBM Checked By: MSC



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Parapet Wall Stress Check (12" Section - CMU Wall)

Parapet Type:	CMU	
Effective Width, L_w :	12.0 in	(Per ft.)
Parapet Height, h_w :	15.0 in	
Parapet Thickness, t_w :	11.0 in	
Density of CMU, ρ_{CMU} :	115.0 pcf	
Thickness of CMU Section, t_{CMU} :	10.0 in	
Weight of CMU, W_{CMU} :	119.8 lbs	(Per ft.)
Parapet Weight, W_p :	120 lbs	(Per ft.)
Net Area, A_n :	132.0 in ²	
Section Modulus, S_w :	242.0 in ³	
Wind Load:	0.279 psi	
Moment due to Wind, M_w :	376.4 lb*in	
Lateral Reaction at Support 1, P_a :	94.0 lbs	(See Bentley Output)
Distance from Roof to Support 1, e_v :	9.00 in	
Moment at Support 1, M_s :	904.80 lbs*in	(See Bentley Output)
Weight of Antenna + Pipe Mast, W_a :	51.27 lbs	
Horizontal Eccentricity of Mast, e_h :	5.50 in	
Total Moment, M_{max} :	2409.2 lb*in	$M_{max} = M_w + P_a e_v + W_a e_h + M_s$
Axial Stress, f_a :	1.296 psi	$f_a = (W_p + W_a)/A_n$
Bending Stress, f_b :	9.955 psi	$f_b = M_{max}/S_w$
Tensile Stress, $F_{t \text{ req'd}}$:	8.659 psi	$F_{t \text{ req'd}} = f_b - f_a$
Allowable Tensile Stress, F_t :	30 psi	(NCMA TEK 14-7B, Table 1)

$$f_t < F_t = \text{OK!}$$

8.66 psi	<	30.00 psi	Therefore, OK!
----------	---	-----------	-----------------------

ATTACHMENT 4

Prepared For:
CENTERLINE-AT&T

Site Number:
CRAN_RCTB_WTRBY_06

Site Name:
CRAN_RCTB_WTRBY_06

49 LEAVENWORTH STREET
WATERBURY, CT 06704



SITE NO: CRAN_RCTB_WTRBY_06

SITE NAME: CRAN_RCTB_WTRBY_06

ADDRESS: 49 LEAVENWORTH STREET
WATERBURY, CT 06704



550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

PREPARED FOR:



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



45 BEECHWOOD DRIVE
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5584

SITE TYPE: ROOFTOP

DATE: 01/03/2022 **REV:** 0

DRAWN BY: AM

SCALE: N.T.S.

THIS STUDY DOES NOT CLAIM IN ANY WAY TO SHOW THE ONLY AREAS OF VISIBILITY. IT IS MEANT TO SHOW A BROAD REPRESENTATION OF AREAS WHERE THE PROPOSED INSTALLATION MAY BE VISIBLE BASED UPON THE BEST INFORMATION FOR TOPOGRAPHY AND VEGETATION LOCATIONS AVAILABLE TO DATE.

PAGE 1 OF 4

LOCUS MAP

TAKEN FROM GOOGLE.COM ON 07-23-21

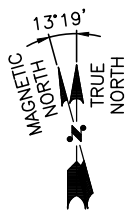


PHOTO LOCATION

SITE NO: CRAN_RCTB_WTRBY_06

SITE NAME: CRAN_RCTB_WTRBY_06

ADDRESS: 49 LEAVENWORTH STREET
WATERBURY, CT 06704



550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

PREPARED FOR:



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VIEW EAST FROM LEAVENWORTH STREET

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SITE NAME: CRAN_RCTB_WTRBY_06

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FRAMINGHAM, MA 01701

PREPARED FOR:



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VIEW EAST FROM LEAVENWORTH STREET

SITE NO: CRAN_RCTB_WTRBY_06

SITE NAME: CRAN_RCTB_WTRBY_06

ADDRESS: 49 LEAVENWORTH STREET
WATERBURY, CT 06704



550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

PREPARED FOR:



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



45 BEECHWOOD DRIVE
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5584

SITE TYPE: ROOFTOP

DATE: 01/03/2022 **REV:** 0

DRAWN BY: AM

SCALE: N.T.S.

THIS STUDY DOES NOT CLAIM IN ANY WAY TO SHOW THE ONLY AREAS OF VISIBILITY. IT IS MEANT TO SHOW A BROAD REPRESENTATION OF AREAS WHERE THE PROPOSED INSTALLATION MAY BE VISIBLE BASED UPON THE BEST INFORMATION FOR TOPOGRAPHY AND VEGETATION LOCATIONS AVAILABLE TO DATE.

ATTACHMENT 5



Radio Frequency Emissions Analysis Report

February 8, 2022

Centerline Communications on behalf of AT&T

Site Name: cRAN_RCTB_WTRBY_06

Site Address: 49 Leavenworth Street, Waterbury, CT 06704

FA#: 14941731

USID: 268444

Site Compliance Summary

Compliance Status:	Compliant
Carrier MPE%	0.13511200%
of FCC General Population Allowable Limit:	
Composite MPE%	0.13511200%
of FCC General Population Allowable Limit:	



February 8, 2022

AT&T New England
Attn: John Benedetto, RF Manager
5050 Cochituate Road Suite 550 - 13&14
Framingham, MA 01701

Emissions Analysis for Site: **cRAN_RCTB_WTRBY_06**

Centerline Communications, LLC ("Centerline") was directed to analyze the proposed AT&T facility to be located a rooftop near **49 Leavenworth Street, Waterbury CT 06704** for the purpose of determining whether the emissions from the proposed facility are within specified federal limits.

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

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

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

Population exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The general population exposure limits for the 1900 MHz (PCS), 2100 MHz (AWS) and 5150 MHz (LAA) bands is $1000 \mu\text{W}/\text{cm}^2$.

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, 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 facility using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since AT&T is proposing focused omnidirectional 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. This is a very conservative estimate since the gain reduction in actual applications is typically greater than 10 dB in the direction of ground immediately surrounding the facility. Real world emissions values from this facility are expected to be lower than values listed in this report at ground level. 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.

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

RRH #	Frequency Band	Technology	Channel Count	Transmit Power per Channel (W)
4402	1900	LTE	4	5
4402	2100	AWS	4	5
2205	5150	LAA	2	0.316

Table 1: Channel Data Table



The following antennas listed in Table 2 were used in the modeling for transmission in the 1900 MHz (PCS), 2100 MHz (AWS) and 5150 MHz (LAA) frequency bands. This is based on information from the carrier with regard to anticipated antenna selection.

Sector	Antenna Number	Make / Model	Centerline (ft)
A	1	GALTRONICS GQ2410-06621	30

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.

ID	Make / Model	Frequency Band	Gain (dBd)	Centerline (ft)	Channel Count	TX Power (W)	ERP (W)	MPE %
AT&T 1	GALTRONICS GQ2410-06621	1900	6.11	30.0	4	5	81.6639	0.034699000
AT&T 1	GALTRONICS GQ2410-06621	2100	6.33	30.0	4	5	85.9073	0.032330000
AT&T 1	GALTRONICS GQ2410-06621	5150	2.15	30.0	2	0.316	1.0369	0.000527000
AT&T MPE%								0.13511200 %

Table 3: AT&T Antenna Inventory & Power Level



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 4* below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated AT&T sector(s). Since this proposed facility is utilizing an omnidirectional antenna there is only one sector for this site (Sector A).

Frequency Band	Technology	Centerline (ft.)	# of Channels	ERP W (Per Channel)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	MPE %
1900	LTE	30.0	4	20.41596932	0.3469930	1000	0.03469900
2100	AWS	30.0	4	21.47682134	0.3233020	1000	0.03233000
5150	LAA	30.0	2	0.518426368	0.0052730	1000	0.00052700
AT&T MPE%							0.13511200 %

Table 4: 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:

Carrier	Predicted MPE %
AT&T	0.13511200%
Composite	0.13511200%

Table 5: Total Predicted MPE(%) by Carrier

Compliance Status:

The anticipated composite MPE value for this site assuming all carriers present is **0.13511200%** of the allowable FCC established general population limit sampled at the ground level.

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 at the ground level.

A handwritten signature in black ink that reads 'Michelle Stone'.

Michelle Stone
RF Compliance Consultant
Centerline Communications, LLC
750 West Center St. Suite 301
West Bridgewater, MA 02379

ATTACHMENT 6

CERTIFICATION OF SERVICE

I hereby certify that on February 23, 2022 a copy of the following notice of the intended filing of a Petition with the Connecticut Siting Council for a declaratory ruling was sent by certified mail, return receipt requested, to the list below:



Dated: February 23, 2022

Cuddy & Feder LLP
45 Hamilton Avenue, 14th Floor
White Plains, New York 10601
Attorneys for:
New Cingular Wireless PCS, LLC (AT&T)

State

THE HONORABLE WILLIAM TONG ATTORNEY GENERAL OFFICE OF THE ATTORNEY GENERAL 165 CAPITOL AVENUE HARTFORD, CT 06106	DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT DAVID LEHMAN, COMMISSIONER 450 COLUMBUS BLVD HARTFORD, CT 06103
DEPARTMENT OF PUBLIC HEALTH DR. MANISHA JUTHANI, MD, ACTING COMMISSIONER 410 CAPITOL AVENUE HARTFORD, CT 06134	PUBLIC UTILITIES REGULATORY AUTHORITY MARISSA P. GILLET, CHAIRMAN 10 FRANKLIN SQUARE NEW BRITAIN, CT 06051
COUNCIL ON ENVIRONMENTAL QUALITY PETER B. HEARN, EXECUTIVE DIRECTOR 79 ELM STREET, 6 th FLOOR HARTFORD, CT 06106	DEPARTMENT OF TRANSPORTATION JOSEPH GIULIETTI, COMMISSIONER 2800 BERLIN TURNPIKE, P.O. BOX 317546 NEWINGTON, CT 06131
DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION KATIE DYKES, COMMISSIONER 79 ELM STREET HARTFORD, CT 06106	DEPARTMENT OF AGRICULTURE BRYAN P. HURLBURT, COMMISSIONER 450 COLUMBUS BOULEVARD SUITE 701 HARTFORD, CT 06103
OFFICE OF POLICY AND MANAGEMENT MELISSA MCCAUGHY, SECRETARY 450 CAPITOL AVENUE HARTFORD, CT 06106	SECRETARY OF THE STATE DENISE W. MERRILL 165 CAPITOL AVENUE, SUITE 1000 P.O. BOX 150470 HARTFORD, CT 06106
NAUGATUCK VALLEY COUNCIL OF GOVERNMENTS 49 LEAVENWORTH STREET 3 RD FLOOR	DEPARTMENT OF EMERGENCY SERVICES & PUBLIC PROTECTION DIVISION OF EMERGENCY MANAGEMENT AND HOMELAND

WATERBURY, CT 06702	SECURITY JAMES C. ROVELLA, COMMISSIONER 1111 COUNTRY CLUB ROAD MIDDLETOWN, CT 06457
STATE HISTORIC PRESERVATION OFFICE DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT 450 COLUMBUS BLVD., 5 TH FLOOR HARTFORD, CT 06103	STATE REPRESENTATIVE – 75 TH DISTRICT GERALDO REYES LEGISLATIVE OFFICE BUILDING 300 CAPITOL AVENUE ROOM 4114 HARTFORD, CT 06106
STATE SENATOR – 15 th DISTRICT JOAN HARTLEY LEGISLATIVE OFFICE BUILDING 300 CAPITOL AVENUE ROOM 3300 HARTFORD, CT 06106	STATE SENATOR – 16 th DISTRICT ROB SAMPSON LEGISLATIVE OFFICE BUILDING 300 CAPITOL AVENUE ROOM 3400 HARTFORD, CT 06106

Federal

FEDERAL COMMUNICATIONS COMMISSION 45 L STREET NE WASHINGTON, DC 20554	FEDERAL AVIATION ADMINISTRATION 800 INDEPENDENCE AVENUE, SW WASHINGTON, DC 20591
U.S. SENATOR CHRIS MURPHY COLT GATEWAY 120 HUYSHOPE AVENUE SUITE 401 HARTFORD, CT 06106	U.S. SENATOR RICHARD BLUMENTHAL 90 STATE HOUSE SQUARE, 10 TH FLOOR HARTFORD, CT 06103
U.S. CONGRESSWOMAN – 5 TH DISTRICT JAHANA HAYES 108 BANK STREET, 2 ND FLOOR WATERBURY, CT 06702	U.S. CONGRESSWOMAN – 3 RD DISTRICT ROSA DELAURO 59 ELM STREET NEW HAVEN, CT 06510

City of Waterbury

THE HONORABLE NEIL M. O'LEARY MAYOR OF THE CITY OF WATERBURY CITY HALL BUILDING 235 GRAND STREET, 2 ND FLOOR WATERBURY, CT 06702	ROBERT NERNEY CITY PLANNER CITY OF WATERBURY 185 SOUTH MAIN STREET, 5 TH FLOOR (1 JEFFERSON SQUARE) WATERBURY, CT 06706
MICHAEL J. DALTON CITY CLERK 235 GRAND STREET COURTYARD LEVEL WATERBURY, CT 06702	SAMUEL LEISRING CHAIR OF INLAND/WETLAND COMMISSION 43 HOWLAND STREET WATERBURY, CT 06708

RAYMOND WORK CHAIR OF CITY PLAN COMMISSION 126 TOWER ROAD WATERBURY, CT 06710	JOHN EGAN CHAIR OF ZONING COMMISSION 76 TEDESCO DRIVE WATERBURY, CT 06708
STEVEN SCHRAG CHAIR OF ENVIRONMENTAL CONTROL COMMISSION 14 QUENTIN STREET WATERBURY, CT 06706	ANTOINETTE “CHICK” SPINELLI TOWN CLERK 235 GRAND STREET, 1 ST FLOOR WATERBURY, CT 06702

NOTICE

Notice is hereby given, pursuant to Section 16-50j-40(a) of the Regulations of Connecticut State Agencies of a Petition being filed with the Connecticut Siting Council (“Siting Council”) on or after February 25, 2022 by New Cingular Wireless PCS, LLC (“AT&T”). AT&T seeks a declaratory ruling that no Certificate of Environmental Compatibility and Public Need (“Certificate”) is required under Section 16-50k(a) of the Connecticut General Statutes (“C.G.S.”) to install a new “small cell” wireless telecommunications facility on an existing building.

The proposed telecommunications facility is located on property owned by Leavenworth Partners, LLC at 49 Leavenworth Street in the City of Waterbury (the “Property”). AT&T’s proposed Facility consists of a canister antenna, approximately 24.7” in height and 10” in diameter mounted to the front of the parapet and three small remote radio head units mounted to rear of the parapet of the existing building located at the Property. The top of AT&T’s antenna will reach a height of approximately 31’ above grade level. The proposed Facility is designed to assure reliable wireless service to AT&T customers and emergency service providers in the area of the Facility location.

The Petition will provide additional details of the proposal and explain why AT&T submits that this proposed small cell Facility presents no significant adverse environmental effects. The location, height and other features of the proposal are subject to review and potential change under the provisions of Connecticut General Statutes Sections 16-50g et. seq.

Copies of the Petition will be available for review during normal business hours on or after February 25, 2022 at the following:

Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

City of Waterbury
City Clerk
Michael J. Dalton
235 Grand Street
Courtyard Level
Waterbury, CT 06702

City of Waterbury
Town Clerk
Antoinette “Chick” Spinelli
235 Grand Street, 1st Floor
Waterbury, CT 06702

or the offices of the undersigned. A copy of the Petition will also be available on the Connecticut Siting Council website: <https://www.ct.gov/cSc/site/default.asp> under Pending Matters. All inquiries should be addressed to the Connecticut Siting Council or to the undersigned.

Lucia Chiocchio, Esq
Cuddy & Feder LLP
445 Hamilton Ave, 14th Floor
White Plains, New York 10601
(914) 761-1300
Attorneys for the Petitioner

CERTIFICATION OF SERVICE

I hereby certify that on February 23, 2022 a copy of the following letter and notice of the intended filing of a Petition with the Connecticut Siting Council for a declaratory ruling was sent by certified mail, return receipt requested, to the attached list of abutting property owners:



Dated: February 23, 2022

Cuddy & Feder LLP
45 Hamilton Avenue, 14th Floor
White Plains, New York 10601
Attorneys for:
New Cingular Wireless PCS, LLC (AT&T)

THERESE LLC & CARMEL LLC C/O LUX FINANCIAL SVS, LEON VACCARELLI 49 LEAVENWORTH STREET SUITE 204 WATERBURY, CT 06702	WEBSTER BANK NATIONAL ASSOCIATION 200 EXECUTIVE BLVD SO-200 SOUTHINGTON, CT 06489
THERESE LLC & CARMEL LLC C/O LUX FINANCIAL SVS, LEON VACCARELLI 47 LEAVENWORTH STREET WATERBURY, CT 06702	WEBSTER BANK NATIONAL ASSOCIATION 61 LEAVENWORTH STREET WATERBURY, CT 06702
CITY OF WATERBURY CHASE BUILDING 235 GRAND STREET WATERBURY, CT 06702	GRAND PROFESSIONAL BUILDING LLC 146 SHERIDAN DRIVE NAUGATUCK, CT 06770
CITY OF WATERBURY 236 GRAND STREET WATERBURY, CT 06702	GRAND PROFESSIONAL BUILDING LLC 186 GRAND STREET WATERBURY, CT 06702
CENTER STREET ESTATES LLC C/ON FRANKLIN ESTATES LLC 517 OAK DRIVE FAR ROCKAWAY, NY 11691	NARGI PHILLIP J 69 EAST RIDGE DRIVE WATERBURY, CT 06708
CENTER STREET ESTATES LLC C/ON FRANKLIN ESTATES LLC 68 CENTER STREET WATERBURY, CT 06702	NARGI PHILLIP J 82 BANK STREET WATERBURY, CT 06702
NARGI PHILLIP J 92 BANK STREET WATERBURY, CT 06702	NARGI PHILLIP J 96 BANK STREET WATERBURY, CT 06702
GREEN HUB DEVELOPMENT CORP II LLC 17A WHITTIER HILL ROAD NORTH SALEM, NY 10560	BYRNE PROPERTIES LLC 139 FAIRVIEW AVENUE WOLCOTT, CT 06716
GREEN HUB DEVELOPMENT CORP II LLC 114 BANK STREET	BYRNE PROPERTIES LLC 154 GRAND STREET

WATERBURY, CT 06702	WATERBURY, CT 06702
EXCHANGE PLACE PRESERVATION PARTNERS LLC C/O NHP FOUNDATION 122 EAST 42ND STREET SUITE 4900 NEW YORK, NY 10168	68-70 BANK STREET LLC 70 WEST 107 STREET APT. 6A NEW YORK, NY 10025
EXCHANGE PLACE PRESERVATION PARTNERS LLC C/O NHP FOUNDATION 44 CENTER STREET WATERBURY, CT 06702	68-70 BANK STREET LLC 68 BANK STREET WATERBURY, CT 06702
JOHN BALE BOOKS LLC 158 GRAND STREET WATERBURY, CT 06702	LEAVENWORTH REALTY ASSOCIATES LLP 50 LEAVENWORTH STREET WATERBURY, CT 06702

February 23, 2022

VIA CERTIFIED MAIL/
RETURN RECEIPT REQUESTED

Re: New Cingular Wireless PCS, LLC (“AT&T”)
Installation of A Small Cell Wireless Telecommunication Facility
49 Leavenworth Street, Waterbury, Connecticut

To Whom it May Concern:

We are writing to you on behalf of our client New Cingular Wireless PCS, LLC (“AT&T”) with respect to the above referenced matter and our client’s intent to file a petition for a declaratory ruling with the State of Connecticut Siting Council for approval of installation of a small cell wireless telecommunication facility on an existing building (the “Facility”) at the above-captioned property.

State law requires that record owners of property abutting a parcel on which a facility is proposed be sent notice of an applicant’s intent to file a petition with the Siting Council.

Included with this letter please find a Notice of this submission and details of the proposal. The location, height and other features of the Facility are subject to review and potential change by the Connecticut Siting Council under the provisions of Connecticut General Statutes §16-50g *et seq.*

If you have any questions concerning this petition, please contact the Connecticut Siting Council or the undersigned after February 25, 2022 which is the date that the petition is expected to be on file.

Very truly yours,

Lucia Chiocchio
Enclosure

cc: Daniel Patrick, Esq., Cuddy & Feder LLP

NOTICE

Notice is hereby given, pursuant to Section 16-50j-40(a) of the Regulations of Connecticut State Agencies of a Petition being filed with the Connecticut Siting Council (“Siting Council”) on or after February 25, 2022 by New Cingular Wireless PCS, LLC (“AT&T”). AT&T seeks a declaratory ruling that no Certificate of Environmental Compatibility and Public Need (“Certificate”) is required under Section 16-50k(a) of the Connecticut General Statutes (“C.G.S.”) to install a new “small cell” wireless telecommunications facility on an existing building.

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Copies of the Petition will be available for review during normal business hours on or after February 25, 2022 at the following:

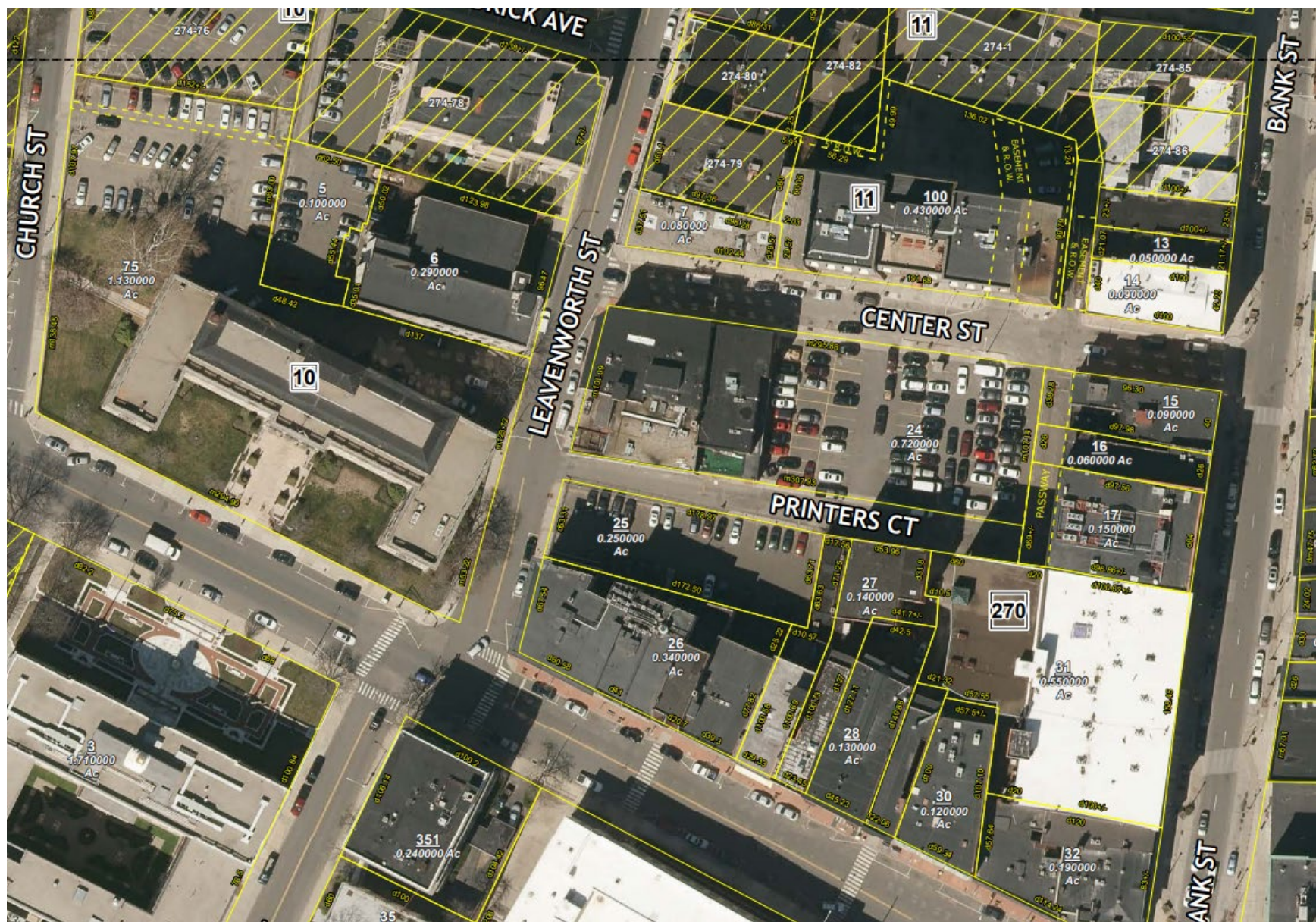
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

City of Waterbury
City Clerk
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Waterbury, CT 06702

City of Waterbury
Town Clerk
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or the offices of the undersigned. A copy of the Petition will also be available on the Connecticut Siting Council website: <https://www.ct.gov/cSc/site/default.asp> under Pending Matters. All inquiries should be addressed to the Connecticut Siting Council or to the undersigned.

Lucia Chiocchio, Esq
Cuddy & Feder LLP
445 Hamilton Ave, 14th Floor
White Plains, New York 10601
(914) 761-1300
Attorneys for the Petitioner



ABUTTER'S LIST

PARCEL ID	SITE ADDRESS	OWNER NAME	MAILING ADDRESS	CITY	STATE	ZIP
0294-0270-0024	47 Leavenworth Street, Waterbury	Therese LLC & Carmel LLC C/O Lux Financial SVS, Leon Vaccarelli	49 Leavenworth Street, Suite 204	Waterbury	CT	06702
0294-0270-0025	61 Leavenworth Street, Waterbury	Webster Bank National Association	200 Executive Blvd SO-200	Southington	CT	06489
0294-0010-0075	236 Grand Street, Waterbury	City of Waterbury	Chase Building 235 Grand Street	Waterbury	CT	06702
0294-0270-0026	186 Grand Street, Waterbury	Grand Professional Building LLC	146 Sheridan Drive	Naugatuck	CT	06770
0294-0011-0007	68 Center Street, Waterbury	Center Street Estates LLC C/ON Franklin Estates LLC	517 Oak Drive	Far Rockaway	NY	11691
0294-0270-0015	82 Bank Street, Waterbury	Nargi Phillip J	69 East Ridge Drive	Waterbury	CT	06708
0294-0270-0016	92 Bank Street, Waterbury	Nargi Phillip J	69 East Ridge Drive	Waterbury	CT	06708
0294-0270-0017	96 Bank Street, Waterbury	Nargi Phillip J	69 East Ridge Drive	Waterbury	CT	06708
0294-0270-0031	114 Bank Street, Waterbury	Green Hub Development Corp II LLC	17A Whittler Hill Road	North Salem	NY	10560
0294-0270-0027	154 Grand Street, Waterbury	Byrne Properties LLC	139 Fairview Avenue	Wolcott	CT	06716
0294-0011-0100	44 Center Street, Waterbury	Exchange Place Preservation Partners LLC C/O NHP Foundation	122 East 42nd Street, Suite 4900	New York	NY	10168

ABUTTER'S LIST

0294-0011-0014	68 Bank Street, Waterbury	68-70 Bank Street LLC	70 West 107 Street, Apt. 6A	New York	NY	10025
0294-0270-0264	158 Grand Street, Waterbury	John Bale Books LLC	158 Grand Street	Waterbury	CT	06702
0294-0010-0006	50 Leavenworth Street, Waterbury	Leavenworth Realty Associates LLP	50 Leavenworth Street	Waterbury	CT	06702