

BZA APPLICATION FORM

GENERAL INFORMATION

BZA-212851

The undersigned hereby petitions the Board of Zoning Appeal for the following:

Special Permit: ☒ X

Variance: _____

Appeal: _____

PETITIONER: Cellco Partnership d/b/a Verizon Wireless

PETITIONER'S ADDRESS: 900 Chelmsford Street, Tower 2, Floor 5, Lowell, MA 01851

LOCATION OF PROPERTY: 179 Sidney Street, Cambridge, MA 02139 a/k/a 80 Erie Street, Cambridge, MA 02139

TYPE OF OCCUPANCY: Multi-Use Commercial ZONING DISTRICT: Multi-Use Commercial

REASON FOR PETITION:

_____ Additions

_____ New Structure

_____ Change in Use/Occupancy

_____ Parking

_____ Conversion to Addi'l Dwelling Unit's

_____ Sign

_____ Dormer

_____ Subdivision

☒ X Other: Replace existing wireless communication equipment

DESCRIPTION OF PETITIONER'S PROPOSAL:

See narrative.

SECTIONS OF ZONING ORDINANCE CITED:

Article 4.000 Section 4.32.G.1 and Footnote 49 (4.40.49)

Article 10.000 Section 10.40 - 10.46

Article _____ Section _____

Applicants for a **Variance** must complete Pages 1-5

Applicants for a **Special Permit** must complete Pages 1-4 and 6

Applicants for an **Appeal** to the BZA of a Zoning determination by the Inspectional Services Department must attach a statement concerning the reasons for the appeal

Original Signature(s):


(Petitioner(s)/Owner)

Ellen W. Freyman

(Print Name)

Address: 1441 Main Street, Suite 1100

Springfield, MA 01103

Tel. No.: (413) 737-1131

E-Mail Address: efreyman@ssfpc.com

Date: _____

**Verizon Wireless 60-Day Eligible Facility
Request Modification of Existing Wireless Base Station**

Request Date: *March 1, 2023*

Jurisdiction: *City of Cambridge, Massachusetts*

Department: *Planning Board*

Site Address: *179 Sidney Street, Cambridge, Massachusetts 02139
a/k/a 80 Erie Street, Cambridge, Massachusetts 02139*

Verizon Wireless Contact: *Edward Onessimo, SAI Communication, (617) 691-7022*

This document serves as Verizon Wireless's eligible facilities request to modify an existing wireless rooftop facility at the above-referenced site address pursuant to Section 6409 of the Federal Spectrum Act and Federal Communications Commission ("FCC") rules (the "Spectrum Act"). Review by the City of Cambridge is limited to determining administratively whether the proposed modification qualifies as an eligible facilities request that does not substantially change the physical dimensions of the wireless facility. All permits necessary to commence construction must be approved within 60 days of the request date set forth above, subject to tolling for incompleteness.

For this request, Verizon Wireless attaches the following documents for the permit required by the City of Cambridge to commence construction of the modification:

- 1. Special Permit Application;*
- 2. Plans prepared by Dewberry Engineers Inc. dated January 6, 2023 (the "Plans");*
- 3. Letter of Authorization from property owner;*
- 4. Certified List of Abutters within 300 feet*
- 5. GIS Block Map*
- 6. FCC Licenses*
- 7. Structural Analysis*
- 8. Antenna Specifications*
- 9. RFDS Report*

10. Photo Simulations of proposed modifications

Project Description

There are currently nine (9) existing antennas located on the rooftop of the subject property, six (6) of which, Verizon Wireless proposes to remove and replace with six (6) new updated antennas. The remaining existing antennas, two of which are located in RF friendly cannisters (one in each) and a third antenna located on a mounting pipe will be relocated, along with the cannisters, as better shown on the Plans. Additionally, the proposal includes the installation of three (3) new Remote Radio Heads (RRHs) as well as updated support equipment and cables as shown in greater detail on the Plans. No additional changes are proposed for the modification.

FCC Rules for Eligible Facilities Requests

The Spectrum Act states that “a State or local government may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station.” An “eligible facilities request”¹ is defined to include any collocation, removal, or replacement of existing equipment.²

The FCC adopted rules providing legally binding guidance on key terms of the Spectrum Act, notably defining “substantial change” with the six thresholds described below.³ The FCC requires that qualifying eligible facilities requests be approved within 60 days, subject to tolling for incompleteness.⁴ The 60-day period begins when an applicant takes the first procedural step required by a local government, and submits written documentation.⁵ The only submittal documents a local government can require are those relevant to determining if a proposed modification qualifies as an eligible facilities request.⁶ If a local government does not render a decision within the 60-day period, an eligible facilities request can be deemed granted by operation of law.⁷

The Proposed Modification Does Not Constitute a “Substantial Change”

Below are the FCC’s six “substantial change” thresholds for a wireless base station,⁸ each followed by an explanation why the proposed modification does not exceed that threshold.

- 1) It increases the height of the structure by more than 10% or more than ten feet, whichever is greater.

¹ 47 U.S.C. § 1455(a)(1).

² 47 U.S.C. § 1455(a)(2).

³ See Report and Order FCC 14-153, 29 FCC Rcd. 12865 (FCC October 17, 2014); see also Report and Order FCC 20-153, 2020 WL 6501650 (FCC October 27, 2020).

⁴ See 47 C.F.R. § 1.6100(c)(2),(3).

⁵ Declaratory Ruling 20-75, 35 FCC Rcd 5977, ¶ 16 (FCC June 9, 2020).

⁶ See 47 C.F.R. § 1.6100(c)(1).

⁷ See 47 C.F.R. § 1.6100(c)(4).

⁸ See 47 C.F.R. § 1.6100(b)(7).

As shown on the Plans, there are no proposed height increases beyond any of the existing structures on the rooftop.

- 2) It involves adding an appurtenance to the body of the structure that would protrude from the edge of the structure by more than six feet.

As shown on the Plans, none of the proposed equipment protrudes from the edge of the building by more than six feet.

- 3) For any eligible support structure, it involves the installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four; or, for base stations, it involves installation of any new equipment cabinets on the ground if there are no pre-existing ground cabinets associated with the structure, or else involves installation of ground cabinets that are more than 10% larger in height or overall volume than any other ground cabinets associated with the structure.

As shown on the Plans, no new cabinets are proposed.

- 4) Entails any excavation or deployment outside the current site (as defined at 47 C.F.R. § 1.6100(b)(6)).

As shown on the Plans, none of the modifications entail excavation or deployment outside the current site.

- 5) Would defeat any concealment elements of the existing facility.

As shown on the Plans, the existing concealment elements of the base station will not change. Therefore, the modification does not defeat any concealment elements of the existing facility.

- 6) Does not comply with conditions associated with the prior approval of the existing facility, unless the non-compliance is due only to a change in height, width, etc., that does not exceed the first four thresholds.

There are no prior conditions of approval that would render the modification to be non-compliant, aside from any conditions that would be preempted by the first four "substantial change" thresholds.

In sum, the modification clearly qualifies as an "eligible facilities request" under the Spectrum Act and FCC rules, because it does not exceed any of the thresholds such that it would "substantially change" the physical dimensions of the existing base station.

Failure to process this eligible facilities request and approve all necessary permits within 60 days may result in the request being deemed granted by operation of law.

BZA APPLICATION FORM - OWNERSHIP INFORMATION

*To be completed by OWNER, signed before a notary and returned to
The Secretary of the Board of Zoning Appeals.*

I/We First C-G Limited Partnership c/o Donald Grossman

(OWNER)

Address: 179 Sidney Street Cambridge, MA 02139

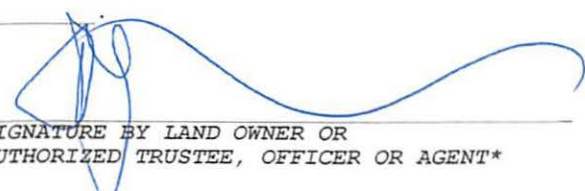
State that I/We own the property located at 80 Erie Street Cambridge,
which is the subject of this zoning application.

The record title of this property is in the name of First C-G Limited Partnership

*Pursuant to a deed of duly recorded in the date 1/02/1987, Middlesex South
County Registry of Deeds at Book 17749, Page 503; or

Middlesex Registry District of Land Court, Certificate No. _____

Book _____ Page _____

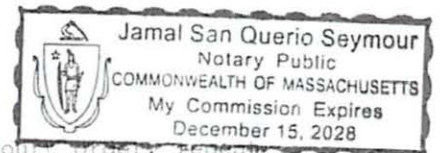

SIGNATURE BY LAND OWNER OR
AUTHORIZED TRUSTEE, OFFICER OR AGENT*

*Written evidence of Agent's standing to represent petitioner may be requested.

Commonwealth of Massachusetts, County of Middlesex

The above-name Donald Grossman personally appeared before me,
this 8 of February, 2023, and made oath that the above statement is true.


My commission expires December 15, 2028 (Notary Seal).



- If ownership is not shown in recorded deed, e.g. if by court order, recent deed, or inheritance, please include documentation.

BZA APPLICATION FORM

SUPPORTING STATEMENT FOR A SPECIAL PERMIT

Please describe in complete detail how you meet each of the following criteria referring to the property and proposed changes or uses which are requested in your application. Attach sheets with additional information for special permits which have additional criteria, e.g.; fast food permits, comprehensive permits, etc., which must be met.

179 Sidney Street

Granting the Special Permit requested for a/k/a 80 Erie Street (location) would not be a detriment to the public interest because:

- A) Requirements of the Ordinance can or will be met for the following reasons:

As required by Verizon Wireless's license from the Federal Communications Commission ("FCC"), the upgraded facility will conform with requirements of the FCC. The tower has been designed in a manner which will minimize any visual impacts to the surrounding properties and community, and the proposed modification to the existing facility is not inconsistent with the character that prevails in the surrounding neighborhood.

- B) Traffic generated or patterns of access or egress would not cause congestion hazard, or substantial change in established neighborhood character for the following reasons:

The upgraded facility will have no effect on existing traffic or patterns of ingress or egress. The facility only generates about one or two vehicle trips per month by a standard passenger vehicle during normal business hours for routine maintenance, which will remain the case after the modification is complete.

- C) The continued operation of or the development of adjacent uses as permitted in the Zoning Ordinance would not be adversely affected by the nature of the proposed use for the following reasons:

The upgraded facility will not adversely effect any operations of adjacent uses. There will be no emission of light, odor, dust or glare and it will not generate any unusual noise or other adverse impacts. Instead, the facility will benefit the adjacent uses by enhancing wireless coverage in the area around the tower.

- D) Nuisance or hazard would not be created to the detriment of the health, safety and/or welfare of the occupant of the proposed use or the citizens of the City for the following reasons:

The upgraded facility will create no nuisance, hazard, or any other negative impacts on the people or properties within the City of Cambridge. There will be no traffic, noise, light, odor or any other potentially negative impact generated from the upgraded facility. The upgraded facility will only provide the community with increased wireless service and enhance the health, safety, and welfare of the residents of Cambridge.

- E) For other reasons, the proposed use would not impair the integrity of the district or adjoining district or otherwise derogate from the intent or purpose of this ordinance for the following reasons:

The upgraded facility is designed to minimize any potential visual impact to the surrounding properties and in no way impairs, but rather aligns with the purpose and intent of the Zoning Ordinance as well as the previously issued Special Permit for this use.

BZA APPLICATION FORM

DIMENSIONAL INFORMATION

APPLICANT: Cellco Partnership d/b/a Verizon Wireless PRESENT USE/OCCUPANCY: Multi-Use Commercial

179 Sideny Street, Cambridge, MA 02139 a/k/a
LOCATION: 80 Erie Street, Cambridge, MA 02138 ZONE: Multi-Use Commercial

PHONE: (413) 737-1131 REQUESTED USE/OCCUPANCY: Wireless communications facility modification

	<u>EXISTING CONDITIONS</u>	<u>REQUESTED CONDITIONS</u>	<u>ORDINANCE REQUIREMENTS¹</u>
<u>TOTAL GROSS FLOOR AREA:</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u> (max.)
<u>LOT AREA:</u>	<u>N/A</u>		<u>N/A</u> (min.)
<u>RATIO OF GROSS FLOOR AREA TO LOT AREA:²</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u> (max.)
<u>LOT AREA FOR EACH DWELLING UNIT:</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u> (min.)
<u>SIZE OF LOT:</u>			
WIDTH	<u>N/A</u>		<u>N/A</u> (min.)
DEPTH			
<u>Setbacks in Feet:</u>			
FRONT	<u>N/A</u>	<u>N/A</u>	<u>N/A</u> (min.)
REAR	<u>N/A</u>	<u>N/A</u>	<u>N/A</u> (min.)
LEFT SIDE	<u>N/A</u>	<u>N/A</u>	<u>N/A</u> (min.)
RIGHT SIDE	<u>N/A</u>	<u>N/A</u>	<u>N/A</u> (min.)
<u>SIZE OF BLDG.:</u>			
HEIGHT	<u>46' - 3"</u>	<u>No change</u>	<u>N/A</u> (max.)
LENGTH			
WIDTH			
<u>RATIO OF USABLE OPEN SPACE TO LOT AREA:³</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u> (min.)
<u>NO. OF DWELLING UNITS:</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u> (max.)
<u>NO. OF PARKING SPACES:</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u> (min./max)
<u>NO. OF LOADING AREAS:</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u> (min.)
<u>DISTANCE TO NEAREST BLDG. ON SAME LOT:</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u> (min.)

Describe where applicable, other occupancies on same lot, the size of adjacent buildings on same lot, and type of construction proposed, e.g.; wood frame, concrete, brick, steel, etc.

Not applicable.

1. SEE CAMBRIDGE ZONING ORDINANCE ARTICLE 5.000, SECTION 5.30 (DISTRICT OF DIMENSIONAL REGULATIONS).
2. TOTAL GROSS FLOOR AREA (INCLUDING BASEMENT 7'-0" IN HEIGHT AND ATTIC AREAS GREATER THAN 5') DIVIDED BY LOT AREA.
3. OPEN SPACE SHALL NOT INCLUDE PARKING AREAS, WALKWAYS OR DRIVEWAYS AND SHALL HAVE A MINIMUM DIMENSION OF 15'.

This is a detailed street map of a neighborhood in Boston, Massachusetts. The map shows a grid of streets including Brookline St, Erie St, Sidney St, Hamilton St, Allston St, Waverly St, and Grove Ave. Property numbers are labeled on many of the streets. A red line is drawn around a central area, and a blue line is drawn around a smaller area within that red boundary. The map is labeled with 'Fulmore Park' and 'Fort Washington Park'.

96-127
KIM, YOON JAE & ANGELINA MIHYUN HONG
98-100 ERIE ST., #1
CAMBRIDGE, MA 02139

96-127
HOPKINS, ALBERT
CLEVEDALE, THE AVE. TWYFORD
WINCHESTER, _ S021 INJ

*179 Sidney St.
a/k/a 88 Eri*
Petitioner
SHATZ, SCHWARTZ AND FENTIN P.C
C/O ELLEN FREYMAN
1441 MAIN STREET – SUITE 1100
SPRINGFIELD, MA 01103

96-127
LURIE, JACOB
98-100 ERIE ST. UNIT#5
CAMBRIDGE, MA 02139

96-127
BRESSI, JEANETTE M. & DENNIS S. YAMASHITA
98-100 ERIE ST. #7
CAMBRIDGE, MA 02139

96-126
FIRST C-G LIMITED PARTNERSHIP
C/O DONALD GROSSMAN
179 SIDNEY STREET
CAMBRIDGE, MA 02139

96-127
OWSLEY, C. F. II
98-100 ERIE ST. UNIT#16
CAMBRIDGE, MA 02139

96-117
MIT 75 HAMILTON ST FEE OWNER LLC
C/O MIT INVESTMENT MANAGEMENT CO
ONE BROADWAY. 9TH FL, SUITE 200
CAMBRIDGE, MA 02142

96-118
MIT 187 SIDNEY STREET FEE OWNER LLC
C/O MIT INVESTMENT MANAGEMENT CO
ONE BROADWAY, 9TH FL, SUITE 200
CAMBRIDGE, MA 02142

96-124
MILTENYI BIOTEC, INC
2303 LINDBERGH ST
AUBURN, CA 95602

96-127
TESKEY, GORDON
98 ERIE ST., UNIT #2
CAMBRIDGE, MA 02139

96-127
CEBERS, GVIDO & ALETA CEBERS
98-100 ERIE ST., #6
CAMBRIDGE, MA 02139

96-127
LANDRIGAN, MARK
100 ERIE ST #10
CAMBRIDGE, MA 02139

96-127
ENGELMAN, KEVIN & RHONA ENGELMAN
98-100 ERIE ST., UNIT #11
CAMBRIDGE, MA 02139

66-153
BMR-200 SIDNEY STREET LLC,
C/O RYAN LLC
P.O. BOX 847
CARLSBAD, CA 92018

67-56
MIT 170/171 SIDNEY LLC C/O ARE EQUITIES
C/O ARE-MA REGION NO.23 LLC
P.O. BOX 847
CARLSBAD, CA 92018

95-74
MIT 170/171 SIDNEY LLC C/O ARE EQUITIES,
C/O ARE-MA REGION NO.23 LLC
3520 PIEDMONT RD NE SUITE 410
ATLANTA, GA 30305

95-75
MIT 99 ERIE LLC C/O ARE EQUITIES INC
C/O ARE-MA REGION NO. 33 LLC
3520 PIEDMONT RD NE SUITE 410
ATLANTA, GA 30305

96-59
TAYLOR, RENFORD G. AND
PATRICIA D. TAYLOR, TRS.
TAYLOR REALTY TRUST
210 BROOKLINE ST
CAMBRIDGE, MA 02139

96-60-61
MIT 99 ERIE LLC C/O ARE EQUITIES, INC
C/O ARE-MA REGION NO. 33 LLC
P.O. BOX 847
CARLSBAD, CA 92018

96-127
LEIGH, CAROLYN
98-100 ERIE ST UNIT 8
CAMBRIDGE, MA 02139

96-127
TATE, KARIN
98-100 ERIE ST., UNIT #9
CAMBRIDGE, MA 02139

96-127
SULLIVAN, MARY E.
98-100 ERIE ST., UNIT #14
CAMBRIDGE, MA 02139

96-127
VERLINDEN, MATTHEW C.
98-100 ERIE ST. UNIT#15
CAMBRIDGE, MA 02139

96-127
WILLIAMS KEITH N TRS KEITH N WILLIAMS TR
45-075 WAIKALUA RD - UNIT H
KANE OHE, HI 96744

96-127
STUDEN CHARLES R & LAURA R
TRS CHARLES R STUDEN TR
98 100 ERIE ST - UNIT 13
CAMBRIDGE, MA 02139

66-153
BMR-200 SIDNEY STREET LLC,
C/O RYAN LLC
P.O. BOX 847
CARLSBAD, CA 92018

66-43
49 ALLSTON LLC
70 FRANCIS AVE
CAMBRIDGE, MA 02138

66-53-1
JACOB BEN-DAVID ZIMMERMAN
43 ALLSTON ST., #1
CAMBRIDGE, MA 02139

66-53-2
SMITH, MAGIE L.
43 ALLSTON ST., UNIT #2
CAMBRIDGE, MA 02139

66-53-3
PARK, DANIEL J. & SUSAN Y. PARK
43 ALLSTON ST. UNIT#3
CAMBRIDGE, MA 02139

66-96
HAINES, PETER D. & SEKYO N. HAINES
202 SIDNEY ST
CAMBRIDGE, MA 02139

67-14
ROTTERDAM REALTY CORPORATION
162 SIDNEY ST
CAMBRIDGE, MA 02139-4240

67-48
MIT 148 SIDNEY SPE LLC,
C/O MIT INVESTMENT MANAGEMENT
COMPANY
ONE BROADWAY, 9TH FL. SUITE 200
CAMBRIDGE, MA 02142

67-56
MIT 170/171 SIDNEY LLC C/O ARE EQUITIES
C/O ARE-MA REGION NO.23 LLC
P.O. BOX 847
CARLSBAD, CA 92018

67-61
MIT 149 SIDNEY SPE LLC
C/O MIT INVESTMENT MANAG.
ONE BROADWAY 9FL. SUITE 200
CAMBRIDGE, MA 02142

67-65
BMR-21 ERIE STREET LLC,
C/O RYAN LLC
P.O. BOX 847
CARLSBAD, CA 92018

67-67
BMR-21 ERIE STREET LLC,
C/O RYAN LLC
P.O. BOX 847
CARLSBAD, CA 92018

95-1
W & D REALTY LIMITED PARTNERSHIP
163 MAGAZINE ST
CAMBRIDGE, MA 02138

95-2
W & D REALTY LIMITED PARTNERSHIP
163 MAGAZINE STREET
CAMBRIDGE, MA 02139

95-3
W & D REALTY LIMITED PARTNERSHIP
163 MAGAZINE ST
CAMBRIDGE, MA 02139

95-4
W & D REALTY LIMITED PARTNERSHIP
163 MAGAZINE ST
CAMBRIDGE, MA 02139

95-5
ROSA, DOMENIC D. &
PAUL W. NUGENT, TRS. OF
W. & D. REALTY TRUST
163 MAGAZINE ST
CAMBRIDGE, MA 02139

95-70
STIMPSON, EDWARD S. & EDWARD S. III, TRS
C/O MIT INVESTMENT MANAGEMENT COMP.
ONE BROADWAY, 9TH FL, SUITE 200
CAMBRIDGE, MA 02142-1012

95-71
MIT 12 EMILY STREET LLC
C/O MIT INVESTMENT MGMT CO
ONE BROADWAY, 9TH FL, SUITE 200
CAMBRIDGE, MA 02142

95-72
MIT 149 SIDNEY SPE LLC,
C/O MIT INVESTMENT MGMT CO
ONE BROADWAY. 9 FL, SUITE 200
CAMBRIDGE, MA 02142

95-74
MIT 170/171 SIDNEY LLC C/O ARE EQUITIES,
C/O ARE-MA REGION NO.23 LLC
3520 PIEDMONT RD NE SUITE 410
ATLANTA, GA 30305

95-75
MIT 99 ERIE LLC C/O ARE EQUITIES INC
C/O ARE-MA REGION NO. 33 LLC
3520 PIEDMONT RD NE SUITE 410
ATLANTA, GA 30305

96-102
LIRIODENDRON LIMITED LLC
64 PARKER ST.
NEWTON, MA 02459

96-109
MRH HAMILTON LLC
1778 COMMONWEALTH AVE.
BRIGHTON, MA 02135

96-110
CHANG, LEE MEI HUA &
STEVEN C. SIEGEL, TRUSTEES OF 84
HAMILTON REALTY TRUST
309 HURON AVE
CAMBRIDGE, MA 02138

96-115
CAMBRIDGE ADVISORS GROUP LLC
90 HAMILTON ST
CAMBRIDGE, MA 02139

96-117
MIT 75 HAMILTON ST FEE OWNER LLC
C/O MIT INVESTMENT MANAGEMENT CO
ONE BROADWAY. 9TH FL, SUITE 200
CAMBRIDGE, MA 02142

96-118
MIT 187 SIDNEY STREET FEE OWNER LLC
C/O MIT INVESTMENT MANAGEMENT CO
ONE BROADWAY, 9TH FL, SUITE 200
CAMBRIDGE, MA 02142

96-124
MILTENYI BIOTEC, INC
2303 LINDBERGH ST
AUBURN, CA 95602

96-126
FIRST C-G LIMITED PARTNERSHIP
179 SIDNEY STREET
CAMBRIDGE, MA 02139

96-127-1 KIM, YOON JAE & ANGELINA MIHYUN HONG 98-100 ERIE ST., #1 CAMBRIDGE, MA 02139	96-127-10 LANDRIGAN, MARK 100 ERIE ST #10 CAMBRIDGE, MA 02139	96-127-11 ENGELMAN, KEVIN & RHONA ENGELMAN 98-100 ERIE ST., UNIT #11 CAMBRIDGE, MA 02139
96-127-12 WILLIAMS KEITH N TRS KEITH N WILLIAMS TR 45-075 WAIKALUA RD UNIT H KANEOHE, HI 96744	96-127-13 STUDEN CHARLES R & LAURA R TRS CHARLES R STUDEN TR 98 100 ERIE ST UNIT 13 CAMBRIDGE, MA 02139	96-127-14 SULLIVAN, MARY E. 98-100 ERIE ST., UNIT #14 CAMBRIDGE, MA 02139
96-127-15 VERLINDEN, MATTHEW C. 98-100 ERIE ST. UNIT#15 CAMBRIDGE, MA 02139	96-127-16 OWSLEY, C. F. II 98-100 ERIE ST. UNIT#16 CAMBRIDGE, MA 02139	96-127-2 TESKEY, GORDON 98 ERIE ST., UNIT #2 CAMBRIDGE, MA 02138
96-127-3 HOPKINS, ALBERT CLEVEDALE,THE AVE. TWYFORD WINCHESTER, _ S021 INJ	96-127-4 GORDON, MICHELLE C. 98-100 ERIE ST., UNIT #4 CAMBRIDGE, MA 02139	96-127-5 LURIE, JACOB 98-100 ERIE ST. UNIT#5 CAMBRIDGE, MA 02138
96-127-6 CEBERS, GVIDO & ALETA CEBERS 98-100 ERIE ST., #6 CAMBRIDGE, MA 02139	96-127-7 BRESSI, JEANETTE M. & DENNIS S. YAMASHITA 98-100 ERIE ST.,#7 CAMBRIDGE, MA 02139	96-127-8 LEIGH, CAROLYN 98-100 ERIE ST UNIT 8 CAMBRIDGE, MA 02139
96-127-9 TATE, KARIN 98-100 ERIE ST.,UNIT #9 CAMBRIDGE, MA 02139	96-130 SHARP, ADAM MD. & DANIEL PALESTRANT, MD 64 HAMILTON ST CAMBRIDGE, MA 02139	96-53 ZHANG, XI HONG GE 232 BROOKLINE ST CAMBRIDGE, MA 02139
96-57 SHEFFIELD, LAURA JONATHAN AUSTIN TRS 217-219 BROOKLINE ST CAMBRIDGE, MA 02139	96-58 CAMBRIDGE CAPITALS LLC 214 BROOKLINE ST CAMBRIDGE, MA 02139	96-59 TAYLOR, RENFORD G. AND PATRICIA D. TAYLOR, TRS. TAYLOR REALTY TRUST 210 BROOKLINE ST CAMBRIDGE, MA 02139
96-60 MIT 99 ERIE LLC C/O ARE EQUITIES,INC C/O ARE-MA REGION NO. 33 LLC P.O. BOX 847 CARLSBAD, CA 92018	96-61 MIT 99 ERIE LLC C/O ARE EQUITIES, INC C/O ARE-MA REGION NO. 33 LLC P.O. BOX 847 CARLSBAD, CA 92018	96-88-1 ALLSTON57P1 LLC 64 ALLSTON ST UNIT 2 CAMBRIDGE, MA 02139
96-88-2 SIKRI VIVEK A 64-64 ALLSTON ST UNIT 2 CAMBRIDGE, MA 02139	96-88-3 MUNDY, CYNTHIA L. 59 ALLSTON ST. UNIT #3 CAMBRIDGE, MA 02139	96-89-1 HOFFMAN, MARC G. & JANE STOLZMAN TRTEE OF THE HOFFMAN STOLZMAN REVOC TRUST 63 ALLSTON ST UNIT #1 CAMBRIDGE, MA 02139
96-89-2 ECCLES, ISABEL MCCORD 63 ALLSTON ST., #2 CAMBRIDGE, MA 02139	96-89-3 WU, DEREK & CECILIA Z. WU 63 ALLSTON ST., #3 CAMBRIDGE, MA 02139	96-90 DESROSIERS, JOSEPH D., TRUSTEE OF 67 ALLSTON STREET REALTY TRUST P.O BOX 39 GREEN HARBOR, MA 0204100000

96-92-1
MUELLNER, LEO & JASMINE MORAN
73 ALLSTON ST., #1
CAMBRIDGE, MA 02139

96-92-2
LARKIN, TANYA
73 ALLSTON ST
#2
CAMBRIDGE, MA 02139

96-92-3
SACK, STEVEN
73 ALLSTON ST., #3
CAMBRIDGE, MA 02139

96-93
BELLOMO, MICHAEL J.
79 ALLSTON STREET
CAMBRIDGE, MA 02139-4516

96-94
GEORGOULOPOULOS, PETER,
VASILIKI GEORGOULOPOULOS &
GEORGE GEORGOULOPOULOS
85 ALLSTON STREET
CAMBRIDGE, MA 02139-4516

96-95
DKAIDEK, SAM
14 THERESA RD.
STONEHAM, MA 02180

96-96-1
ZHANG, MENGJIAO
95 ALLSTON ST., #1
CAMBRIDGE, MA 02139

96-96-2
YU, JEFFREY & PHOEBE K. YU
95 ALLSTON ST., #2
CAMBRIDGE, MA 02139

96-96-3
TANGBAN, NEJI
95 ALLSTON ST UNIT 3
CAMBRIDGE, MA 02139

96-98
60 HAMILTON MA, LLC,
FIRST NEEDHAM PLACE
250 FIRST AVE. SUITE 200
NEEDHAM, MA 02494

97-107
SHEFFIELD, LAURA
JONATHAN AUSTIN TRS
217-219 BROOKLINE ST
CAMBRIDGE, MA 02139

97-73-1
KARAKELLE, JOHN & CHRISTINE MALLOY
201 BROOKLINE ST., #1
CAMBRIDGE, MA 02139

97-73-2
SMITH, MICHAEL B.
201 BROOKLINE STREET, UNIT #2
CAMBRIDGE, MA 02139

97-73-3
MANTHIRAM, KARTHISH
201 BROOKLINE ST., #3
CAMBRIDGE, MA 02139

97-73-4
CALLADINE, JOHN C.P.
201 BROOKLINE STREET, UNIT #4
CAMBRIDGE, MA 02139

97-73-5
BEARD, RENNE & ADAM BARD
201 BROOKLINE ST. UNIT#5
CAMBRIDGE, MA 02139

97-73-6
FOULSHAM. WILLIAM & JENNIFER LORD
201 BROOKLINE ST. UNIT 6
CAMBRIDGE, MA 02139

**Verizon Wireless 60-Day Eligible Facility
Request Modification of Existing Wireless Base Station**

Request Date: *March 1, 2023*

Jurisdiction: *City of Cambridge, Massachusetts*

Department: *Planning Board*

Site Address: *179 Sidney Street, Cambridge, Massachusetts 02139
a/k/a 80 Erie Street, Cambridge, Massachusetts 02139*

Verizon Wireless Contact: *Edward Onessimo, SAI Communication, (617) 691-7022*

This document serves as Verizon Wireless's eligible facilities request to modify an existing wireless rooftop facility at the above-referenced site address pursuant to Section 6409 of the Federal Spectrum Act and Federal Communications Commission ("FCC") rules (the "Spectrum Act"). Review by the City of Cambridge is limited to determining administratively whether the proposed modification qualifies as an eligible facilities request that does not substantially change the physical dimensions of the wireless facility. All permits necessary to commence construction must be approved within 60 days of the request date set forth above, subject to tolling for incompleteness.

For this request, Verizon Wireless attaches the following documents for the permit required by the City of Cambridge to commence construction of the modification:

1. *Special Permit Application;*
2. *Plans prepared by Dewberry Engineers Inc. dated January 6, 2023 (the "Plans");*
3. *Letter of Authorization from property owner;*
4. *Certified List of Abutters within 300 feet*
5. *GIS Block Map*
6. *FCC Licenses*
7. *Structural Analysis*
8. *Antenna Specifications*
9. *RFDS Report*

10. Photo Simulations of proposed modifications

Project Description

There are currently nine (9) existing antennas located on the rooftop of the subject property, six (6) of which, Verizon Wireless proposes to remove and replace with six (6) new updated antennas. The remaining existing antennas, two of which are located in RF friendly cannisters (one in each) and a third antenna located on a mounting pipe will be relocated, along with the cannisters, as better shown on the Plans. Additionally, the proposal includes the installation of three (3) new Remote Radio Heads (RRHs) as well as updated support equipment and cables as shown in greater detail on the Plans. No additional changes are proposed for the modification.

FCC Rules for Eligible Facilities Requests

The Spectrum Act states that “a State or local government may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station.” An “eligible facilities request”¹ is defined to include any collocation, removal, or replacement of existing equipment.²

The FCC adopted rules providing legally binding guidance on key terms of the Spectrum Act, notably defining “substantial change” with the six thresholds described below.³ The FCC requires that qualifying eligible facilities requests be approved within 60 days, subject to tolling for incompleteness.⁴ The 60-day period begins when an applicant takes the first procedural step required by a local government, and submits written documentation.⁵ The only submittal documents a local government can require are those relevant to determining if a proposed modification qualifies as an eligible facilities request.⁶ If a local government does not render a decision within the 60-day period, an eligible facilities request can be deemed granted by operation of law.⁷

The Proposed Modification Does Not Constitute a “Substantial Change”

Below are the FCC’s six “substantial change” thresholds for a wireless base station,⁸ each followed by an explanation why the proposed modification does not exceed that threshold.

- 1) It increases the height of the structure by more than 10% or more than ten feet, whichever is greater.

¹ 47 U.S.C. § 1455(a)(1).

² 47 U.S.C. § 1455(a)(2).

³ See Report and Order FCC 14-153, 29 FCC Rcd. 12865 (FCC October 17, 2014); *see also* Report and Order FCC 20-153, 2020 WL 6501650 (FCC October 27, 2020).

⁴ See 47 C.F.R. § 1.6100(c)(2),(3).

⁵ Declaratory Ruling 20-75, 35 FCC Rcd 5977, ¶ 16 (FCC June 9, 2020).

⁶ See 47 C.F.R. § 1.6100(c)(1).

⁷ See 47 C.F.R. § 1.6100(c)(4).

⁸ See 47 C.F.R. § 1.6100(b)(7).

As shown on the Plans, there are no proposed height increases beyond any of the existing structures on the rooftop.

- 2) It involves adding an appurtenance to the body of the structure that would protrude from the edge of the structure by more than six feet.

As shown on the Plans, none of the proposed equipment protrudes from the edge of the building by more than six feet.

- 3) For any eligible support structure, it involves the installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four; or, for base stations, it involves installation of any new equipment cabinets on the ground if there are no pre-existing ground cabinets associated with the structure, or else involves installation of ground cabinets that are more than 10% larger in height or overall volume than any other ground cabinets associated with the structure.

As shown on the Plans, no new cabinets are proposed.

- 4) Entails any excavation or deployment outside the current site (as defined at 47 C.F.R. § 1.6100(b)(6)).

As shown on the Plans, none of the modifications entail excavation or deployment outside the current site.

- 5) Would defeat any concealment elements of the existing facility.

As shown on the Plans, the existing concealment elements of the base station will not change. Therefore, the modification does not defeat any concealment elements of the existing facility.

- 6) Does not comply with conditions associated with the prior approval of the existing facility, unless the non-compliance is due only to a change in height, width, etc., that does not exceed the first four thresholds.

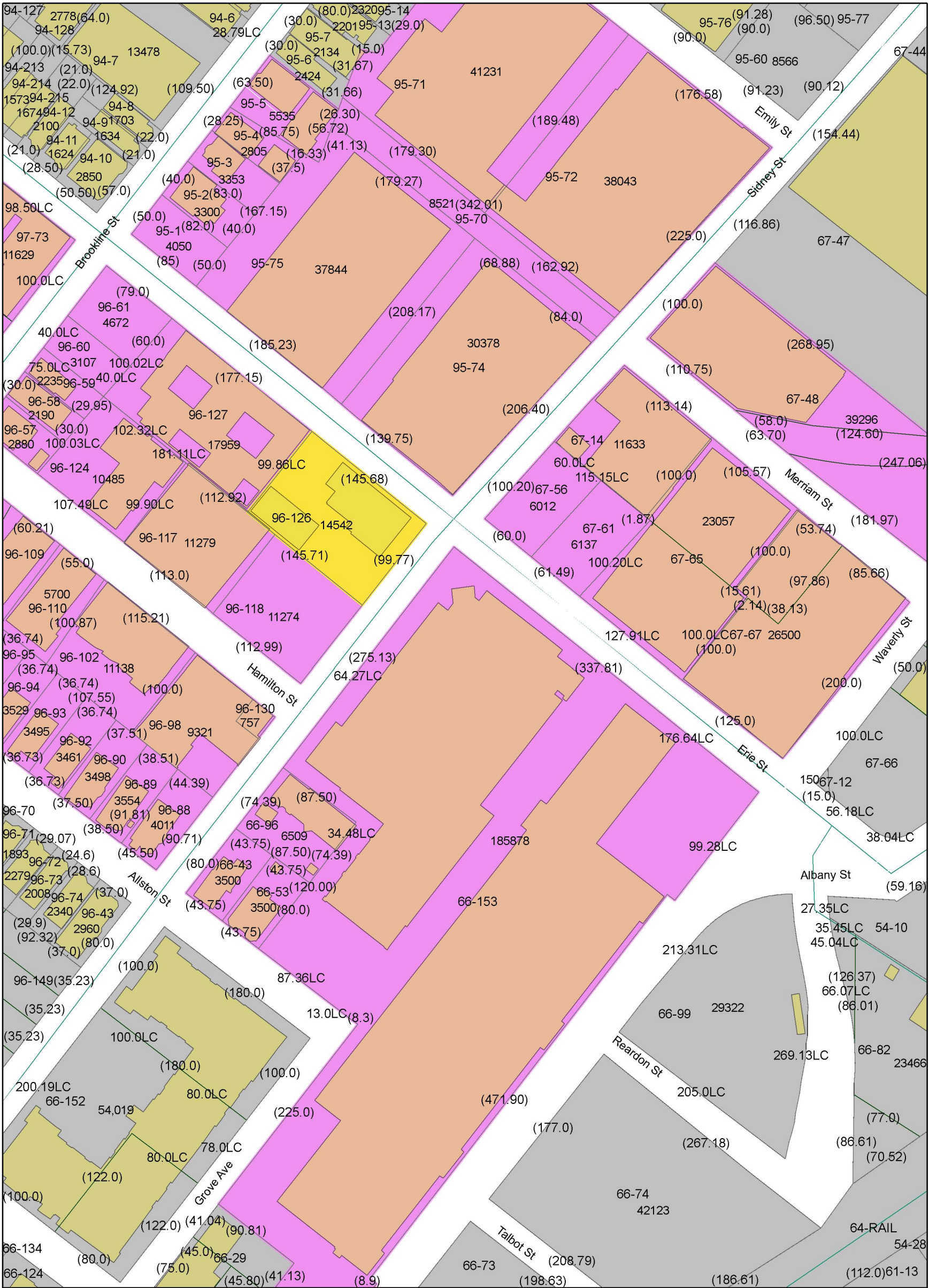
There are no prior conditions of approval that would render the modification to be non-compliant, aside from any conditions that would be preempted by the first four "substantial change" thresholds.

In sum, the modification clearly qualifies as an "eligible facilities request" under the Spectrum Act and FCC rules, because it does not exceed any of the thresholds such that it would "substantially change" the physical dimensions of the existing base station.

Failure to process this eligible facilities request and approve all necessary permits within 60 days may result in the request being deemed granted by operation of law.

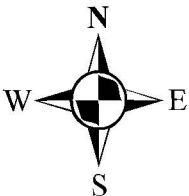
23\0045\Special Permit 2023\06 - Narrative (6409).16003

MAP TITLE



Cambridge, MA Assessing Department

Gayle Willett, Director





Dewberry Engineers Inc.
99 Summer Street, Suite 700
Boston, MA 02110-1200

617.695.3400
617.695.3310 fax
www.dewberry.com

December 9, 2021

Andrew Leone
Verizon Wireless
118 Flanders Road
Westborough, MA 01581

**Re: Cambridgeport_MA
Site ID: 161293
Fuze #: 2042716
80 Erie Street
Cambridge, MA 02139**

Dear Mr. Leone:

Verizon Wireless has proposed to replace (6) existing antennas with (3) new JMA MX14FIT465-01 antennas, (3) new JMA MX06FIT465-02 antennas, (3) new Samsung RT-8808-77A RRHs, and (3) CHB626-43-2X combiners on the rooftop at the above referenced site. Verizon also has (3) VZ-AT1k01 5G antennas w/ integrated AT1K01 DC RRHs, (3) Samsung B2/B66a RRHs, (3) Samsung B5/B13 RRHs, and (3) 6-OVPs that are to remain. The proposed antennas will be mounted within existing fiberglass flues on existing ballast mounts in the alpha and beta sectors and façade mounted on existing pipe mounts on the existing penthouse in the gamma sector. The RRHs and combiners will be mounted to an existing ballast sled frame in the alpha and beta sectors and façade mounted to the existing penthouse in the gamma sector.

Dewberry Engineers Inc. (Dewberry) has reviewed the antenna design sheets (dated 07/26/21) provided by Verizon Wireless and has determined, based on an ultimate wind speed of 128 mph and a minimum flat roof snow load of 30 psf per the Massachusetts State Building Code – 780 CMR 9th Edition, that the existing antenna mounts and building have adequate capacity to support the proposed equipment configuration. Dewberry assumes that the new antennas, RRHs, and associated equipment are installed per the latest Construction Drawings by Dewberry.

Our assessment is based on our visual inspection that the existing antenna mounts and building structure are in good condition and were constructed in conformance with all applicable state and local building codes. If, during construction, any damage, deterioration, and/or discrepancies are noticed, Dewberry is to be notified to assess any deviation from the assumed condition. Any alteration in equipment loading described above and on the associated plans will void any conclusions expressed herein and will require further analysis and design. No structural qualification is made or implied by this structural letter for existing structural members not supporting the proposed installation.

If you have any questions, please do not hesitate to call me at 617-531-0744.

Sincerely,
Dewberry Engineers Inc.



Brandon Kelsey, P.E.
Structural Project Engineer

GENERAL CONSTRUCTION NOTES :

1. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, AND COMPLY WITH VERIZON WIRELESS SPECIFICATIONS.
2. CONTRACTOR SHALL CONTACT "DIG SAFE" (888-344-7233) FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
4. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
5. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
6. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
7. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
9. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
10. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING.
11. EACH CONTRACTOR SHALL COOPERATE WITH THE OWNER'S REPRESENTATIVE, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
12. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE VERIZON WIRELESS CONSTRUCTION MANAGER.
13. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
14. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR WILL NOTIFY ENGINEER, VERIZON WIRELESS PROJECT CONSTRUCTION MANAGER, AND LANDLORD IMMEDIATELY.
15. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
16. ALL ROOF WORK SHALL BE DONE BY A QUALIFIED AND EXPERIENCED ROOFING CONTRACTOR IN COORDINATION WITH ANY CONTRACTOR WARRANTING THE ROOF TO ENSURE THAT THE WARRANTY IS MAINTAINED.
17. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
18. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH LANDLORD AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
19. CONTRACTOR SHALL FURNISH VERIZON WIRELESS WITH THREE AS-BUILT SETS OF DRAWINGS UPON COMPLETION OF WORK.
20. ANTENNAS AND CABLES ARE TYPICALLY PROVIDED BY VERIZON WIRELESS. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH PROJECT MANAGER TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED BY VERIZON WIRELESS. ALL ITEMS NOT PROVIDED BY VERIZON WIRELESS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED BY VERIZON WIRELESS.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR WILL COORDINATE WITH VERIZON WIRELESS PROJECT MANAGER TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY VERIZON WIRELESS. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON WIRELESS MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
22. GENERAL CONTRACTOR SHALL HAVE A LICENSED HVAC CONTRACTOR START THE HVAC UNITS, SYNCHRONIZE THE THERMOSTATS, ADJUST ALL SETTINGS ON EACH UNIT ACCORDING TO VERIZON WIRELESS CONSTRUCTION MANAGER'S SPECIFICATIONS, AND THOROUGHLY TEST AND BALANCE EACH UNIT TO ENSURE PROPER OPERATION PRIOR TO TURNING THE SITE OVER TO OWNER.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON WIRELESS SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. UNLESS OTHERWISE NOTED VERIZON WIRELESS SHALL PROVIDE ALL REQUIRED RF MATERIAL FOR CONTRACTOR TO INSTALL, INCLUDING ANTENNAS, TMA'S, BIAS-T'S, COMBINERS, PDU, DC BLOCKS, SURGE ARRESTORS, GPS ANTENNA, GPS SURGE ARRESTOR, COAXIAL CABLE.
26. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL VERIFY ALL EQUIPMENT TO BE PROVIDED BY VERIZON WIRELESS FOR INSTALLATION BY CONTRACTOR.
27. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON WIRELESS SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
28. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
29. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
30. CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 48 HOURS IN ADVANCE PRIOR TO CONSTRUCTION START, MORE SPECIFICALLY BEFORE SEALING ANY FLOOR, WALL OR ROOF PENETRATION, FINAL UTILITY CONNECTIONS, POURING CONCRETE, BACKFILLING UTILITY TRENCHES AND STRUCTURAL POST OR MOUNTING CONNECTIONS, FOR ENGINEERING REVIEW AND INSPECTION.
31. SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED D FIRE CODE APPROVED MATERIALS.
32. REPAIR ANY DAMAGE DURING CONSTRUCTION TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE CONSTRUCTION MANAGER AND LANDLORD.
33. ALL DISRUPTIVE WORK AND WORK WITHIN TENANT SPACES TO BE COORDINATED WITH BUILDING REPRESENTATIVE.

CODE SPECIFICATIONS:

1. ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:
MASSACHUSETTS STATE BUILDING CODE, 9TH EDITION, CONSISTENT WITH THE FOLLOWING CODES:
2015 INTERNATIONAL RESIDENTIAL CODE (IRC)
2015 INTERNATIONAL BUILDING CODE (IBC)
2015 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
2020 NATIONAL ELECTRICAL CODE (NEC)

IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL.
2. ALL STRUCTURAL WORK TO BE DONE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL, 13TH EDITION (AISC 13TH ED.)
3. ALL CONCRETE WORK TO BE DONE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI 301) SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 318) AND BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
4. ALL REINFORCING STEEL WORK TO BE DONE IN ACCORDANCE WITH THE (ACI 315) MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES.

GROUNDING NOTES:

1. GROUNDING SHALL COMPLY WITH NEC ART. 250.
2. GROUNDING CONDUCTORS SHALL BE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR INDOOR USE.
3. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
4. ROUTE GROUNDING CONNECTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NOT BE BENT AT RIGHT ANGLE. ALWAYS MAKE 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY.
5. CONNECTIONS TO GROUNDING BAR SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
6. TEST COMPLETED GROUNDING SYSTEM AND RECORD RESISTANCE VALUES FOR PROJECT CLOSE-OUT DOCUMENTATION. GROUND RESISTANCE SHALL NOT EXCEED 5 OHMS.
7. GROUNDING CONDUCTORS BETWEEN MGB AND WATERMAIN SHALL BE #2/0. BONDING JUMPERS FROM METALLIC SURFACES SHALL BE #2 MINIMUM. ALL GROUND CONDUCTORS AND BONDING JUMPERS SHALL BE SOFT DRAWN ANNEALED, TINNED, BARE STRANDED COPPER WIRE. COAXIAL CABLES SHALL BE GROUNDED AT A MINIMUM OF TWO LOCATIONS USING VERIZON PROVIDED GROUNDING KITS. EXACT LOCATIONS SHALL BE FINALIZED IN THE FIELD BY THE CONSTRUCTION MANAGER.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
2. STRUCTURAL STEEL ROLLED SHAPES, PLATES, AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:
ASTM A-992, GRADE 50 ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE.
ASTM A-36 ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.
ASTM A-500, GRADE B HSS SECTION (SQUARE, RECTANGULAR, ROUND)
ASTM A-325, TYPE SC OR N. ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS.
F1554, GRADE 36 ALL ANCHORS BOLTS, UNLESS NOTED OTHERWISE.
ASTM A-53, GRADE B STEEL PIPE
3. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1 WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 14TH EDITION. WHERE WELD LENGTH IS NOT INDICATED, USE FULL LENGTH WELD. AT THE COMPLETION OF ALL WELDING, ALL DAMAGE TO GALVANIZED COATING SHALL BE REPAIRED.
4. BOLTED CONNECTIONS SHALL USE BEARING TYPE GALVANIZED ASTM A325 BOLTS (3/4" DIA.) SUPPLIED WITH A NUT AND WASHER UNDER TURNED END AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
5. DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
6. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. GALVANIZED ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.
7. USE PRECAUTIONS & PROCEDURES PER AWS D1.1 WHEN WELDING GALVANIZED METALS.
8. ALL EXISTING BEAM AND COLUMN DIMENSIONS SHALL BE FIELD VERIFY BY CONTRACTOR PRIOR TO FABRICATION. ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THOSE SHOWN SHALL BE REPORTED TO DEWBERRY ENGINEER IMMEDIATELY.
9. CONNECTION DESIGN BY FABRICATOR WILL BE SUBJECT TO REVIEW AND APPROVAL BY ENGINEER.
10. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH SPECIFICATION ASTM A123/A123M-00 HOT-DIP GALVANIZED FINISH UNLESS OTHERWISE NOTED. GALVANIZING SHALL BE PERFORMED AFTER SHOP FABRICATION TO THE GREATEST EXTENT POSSIBLE. ALL DINGS, SCRAPES, MARKS, AND WELDS IN THE GALVANIZED AREAS SHALL BE REPAIRED. REPAIR DAMAGED GALVANIZED COATINGS ON GALVANIZED ITEMS WITH GALVANIZED REPAIR PAINT ACCORDING TO ASTM A780 AND MANUFACTURER'S WRITTEN INSTRUCTIONS, PRIOR TO COMPLETION OF WORK. TOUCHUP ALL DAMAGED GALVANIZED STEEL WITH APPROVED COLD ZINC, "GALVANOX", "DRY GALV", "ZINC-IT", OR APPROVED EQUIVALENT, IN ACCORDANCE WITH MANUFACTURERS GUIDELINES. TOUCHUP DAMAGED NON GALVANIZED STEEL WITH SAME PAINT APPLIED IN SHOP OR FIELD.
11. ALL WELDED COMPONENTS TO BE SHOP WELDED PRIOR TO INSTALLATION. NO WELDING ACTIVITIES IS PERMITTED DURING INSTALLATION OF PROPOSED EQUIPMENTS AND/OR HARDWARE ON SITE.



VERIZON WIRELESS
900 CHELMSFORD STREET
TOWER 2 FLOOR 5
LOWELL, MA 01851

CAMBRIDGEPORT
MA

ANTMO DRAWINGS

5	01/06/23	FOR SUBMITTAL
4	12/29/22	FOR SUBMITTAL
3	11/01/22	FOR SUBMITTAL
2	07/19/22	FOR SUBMITTAL
1	05/20/22	FOR SUBMITTAL
0	04/20/22	FOR SUBMITTAL



Dewberry Engineers Inc.
99 SUMMER STREET
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310



01/06/2023

DRAWN BY: MR

REVIEWED BY: AJB

CHECKED BY: BBR

PROJECT NUMBER: 50121487

JOB NUMBER: 50143857

SITE NUMBER:

161293

SITE NUMBER:

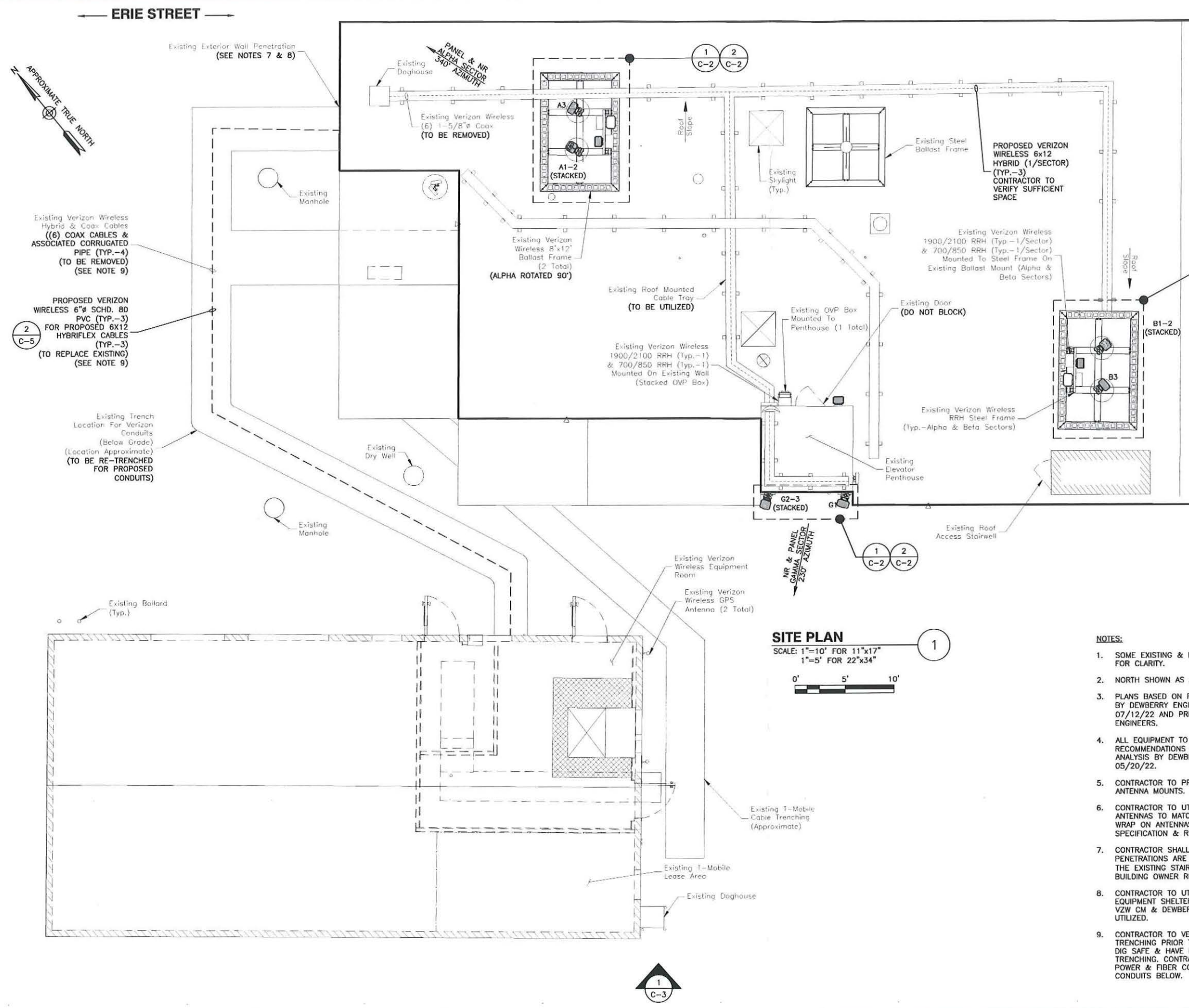
80 ERIE STREET
CAMBRIDGE, MA 02139

SHEET TITLE

GENERAL NOTES

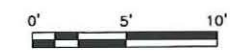
SHEET NUMBER

GN-1



SITE PLAN

SCALE: 1"=10' FOR 11"x17"
1"=5' FOR 22"x34"



NOTES:

- SOME EXISTING & PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
- NORTH SHOWN AS APPROXIMATE.
- PLANS BASED ON FIELD OBSERVATION DURING SITE VISIT BY DEWBERRY ENGINEERS INC. ON 10/28/21, 07/12/22 AND PREVIOUS DRAWINGS BY DEWBERRY ENGINEERS.
- ALL EQUIPMENT TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS & IN ACCORDANCE WITH STRUCTURAL ANALYSIS BY DEWBERRY ENGINEERS INC. DATED 05/20/22.
- CONTRACTOR TO PROVIDE PIPE CAPS FOR ALL EXISTING ANTENNA MOUNTS.
- CONTRACTOR TO UTILIZE 3M WRAP FOR GAMMA SECTOR ANTENNAS TO MATCH SURROUNDING AREAS. INSTALL 3M WRAP ON ANTENNAS PER MANUFACTURER'S SPECIFICATION & RECOMMENDATIONS.
- CONTRACTOR SHALL VERIFY THAT ALL EXTERIOR WALL PENETRATIONS ARE WEATHERSEALED (NOT LIMITED TO THE EXISTING STAIRWELL, CHASE, ETC). COORDINATE WITH BUILDING OWNER REPRESENTATIVE.
- CONTRACTOR TO UTILIZE EXISTING BUILDING & EQUIPMENT SHELTER CORES. CONTRACTOR TO NOTIFY VZW CM & DEWBERRY IF EXISTING CORES CAN NOT BE UTILIZED.
- CONTRACTOR TO VERIFY EXISTING CONDITIONS & TRENCHING PRIOR TO CONSTRUCTION. CONTRACTOR TO DIG SAFE & HAVE PRIVATE UTILITIES LOCATED PRIOR TO TRENCHING. CONTRACTOR TO TEMPORARILY SUPPORT POWER & FIBER CONDUITS WHILE REPLACING FLEX CONDUITS BELOW.

verizon
WIRELESS
VERIZON WIRELESS
900 CHELMSFORD STREET
TOWER 2 FLOOR 5
LOWELL, MA 01851

**CAMBRIDGEPORT
MA**

ANTMO DRAWINGS

5	01/06/23	FOR SUBMITTAL
4	12/29/22	FOR SUBMITTAL
3	11/01/22	FOR SUBMITTAL
2	07/19/22	FOR SUBMITTAL
1	05/20/22	FOR SUBMITTAL
0	04/20/22	FOR SUBMITTAL

Dewberry
Dewberry Engineers Inc.
99 SUMMER STREET
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310



01/06/2023

DRAWN BY:	MR
REVIEWED BY:	AJB
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50143857
SITE NUMBER:	

161293

SITE NUMBER:

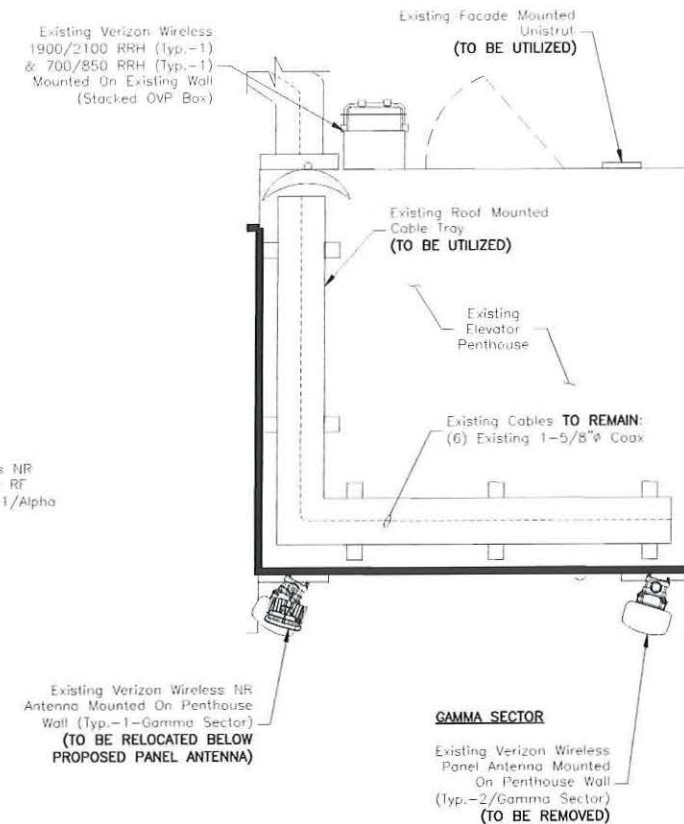
80 ERIE STREET
CAMBRIDGE, MA 02139

SHEET TITLE

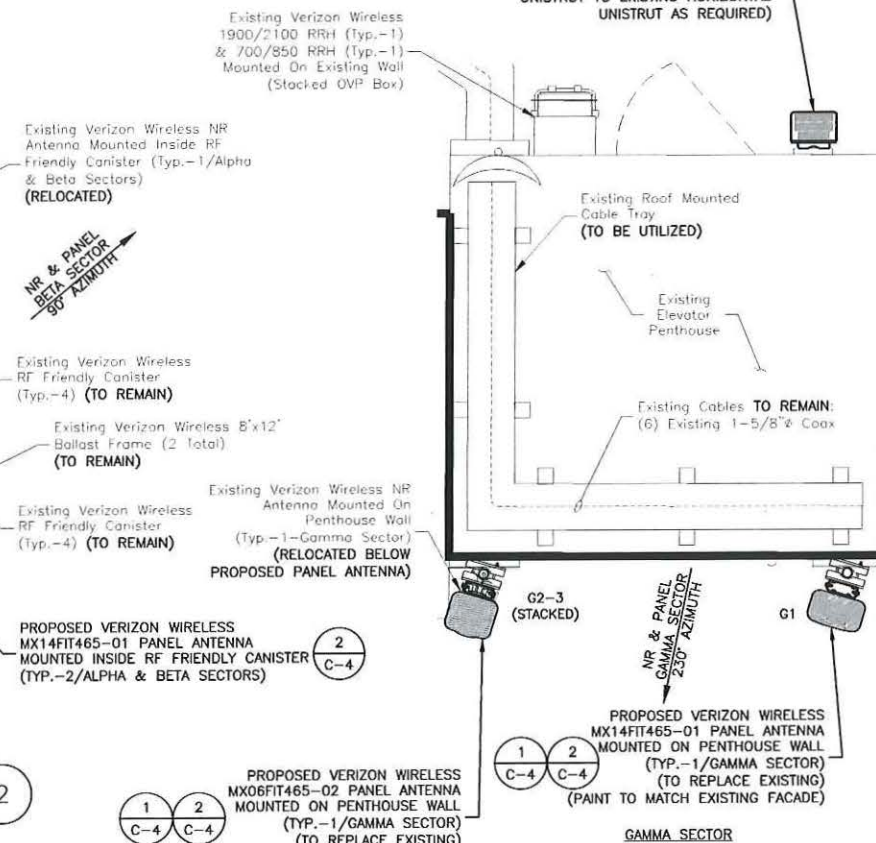
SITE PLAN

SHEET NUMBER

C-1



- EXISTING SECTOR PLANS**
SCALE: 1/4"=1' FOR 11"x17"
1/2"=1' FOR 22"x34"



C-2



VERIZON WIRELESS
900 CHELMSFORD STREET
TOWER 2 FLOOR 5
LOWELL, MA 01851

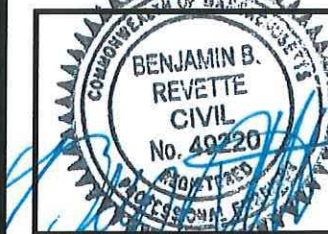
CAMBRIDGEPORT MA

ANTMO DRAWINGS

5	01/06/23	FOR SUBMITTAL
4	12/29/22	FOR SUBMITTAL
3	11/01/22	FOR SUBMITTAL
2	07/19/22	FOR SUBMITTAL
1	05/20/22	FOR SUBMITTAL
0	04/20/22	FOR SUBMITTAL



Dewberry Engineers Inc.
99 SUMMER STREET
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310



01/06/2023

DRAWN BY: MR

REVIEWED BY: AJB

CHECKED BY: BBR

PROJECT NUMBER: 50121487

JOB NUMBER: 50143857

SITE NUMBER:

161293

SITE NUMBER:

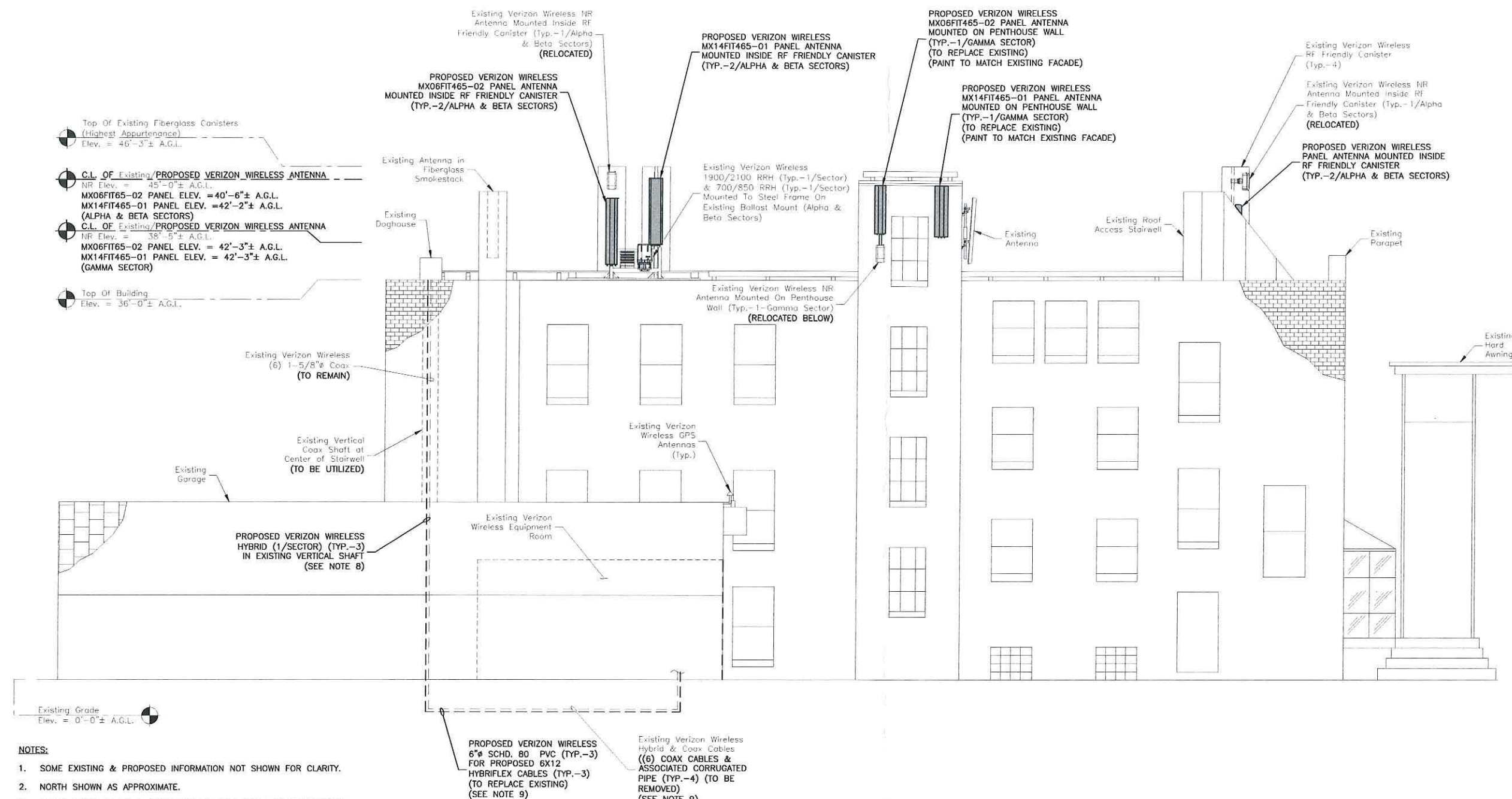
80 ERIE STREET
CAMBRIDGE, MA 02139

SHEET TITLE

ELEVATION

SHEET NUMBER

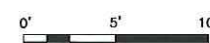
C-3



- NOTES:**
- SOME EXISTING & PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
 - NORTH SHOWN AS APPROXIMATE.
 - PLANS BASED ON FIELD OBSERVATION DURING SITE VISIT BY DEWBERRY ENGINEERS INC. ON 10/28/21 AND PREVIOUS DRAWINGS BY DEWBERRY ENGINEERS.
 - ALL EQUIPMENT TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS & IN ACCORDANCE WITH STRUCTURAL ANALYSIS BY DEWBERRY ENGINEERS INC. DATED 05/20/22.
 - CONTRACTOR TO PROVIDE PIPE CAPS FOR ALL EXISTING ANTENNA MOUNTS.
 - CONTRACTOR TO UTILIZE 3M WRAP FOR NR EXPOSED ANTENNAS TO MATCH SURROUNDING AREAS. INSTALL 3M WRAP ON ANTENNAS PER MANUFACTURER'S SPECIFICATION & RECOMMENDATIONS.
 - A.G.L. = ABOVE GROUND LEVEL
C.L. = CENTERLINE
 - CONTRACTOR TO UTILIZE EXISTING BUILDING & EQUIPMENT SHELTER CORES. CONTRACTOR TO NOTIFY VZW CM & DEWBERRY IF EXISTING CORES CAN NOT BE UTILIZED.
 - CONTRACTOR TO VERIFY EXISTING CONDITIONS & TRENCHING PRIOR TO CONSTRUCTION. CONTRACTOR TO DIG SAFE & HAVE PRIVATE UTILITIES LOCATED PRIOR TO TRENCHING. CONTRACTOR TO TEMPORARILY SUPPORT POWER & FIBER CONDUITS WHILE REPLACING FLEX CONDUITS BELOW.

ELEVATION

SCALE: 1"=10' FOR 11"x17"
1"=5' FOR 22"x34"





VERIZON WIRELESS
900 CHELMSFORD STREET
TOWER 2 FLOOR 5
LOWELL, MA 01851

CAMBRIDGEPORT MA

ANTMO DRAWINGS

5	01/06/23	FOR SUBMITTAL
4	12/29/22	FOR SUBMITTAL
3	11/01/22	FOR SUBMITTAL
2	07/19/22	FOR SUBMITTAL
1	05/20/22	FOR SUBMITTAL
0	04/20/22	FOR SUBMITTAL



Dewberry Engineers Inc.
89 SUMMER STREET
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310



01/06/2023

DRAWN BY: MR

REVIEWED BY: AJB

CHECKED BY: BBR

PROJECT NUMBER: 50121487

JOB NUMBER: 50143857

SITE NUMBER:

161293

SITE NUMBER:

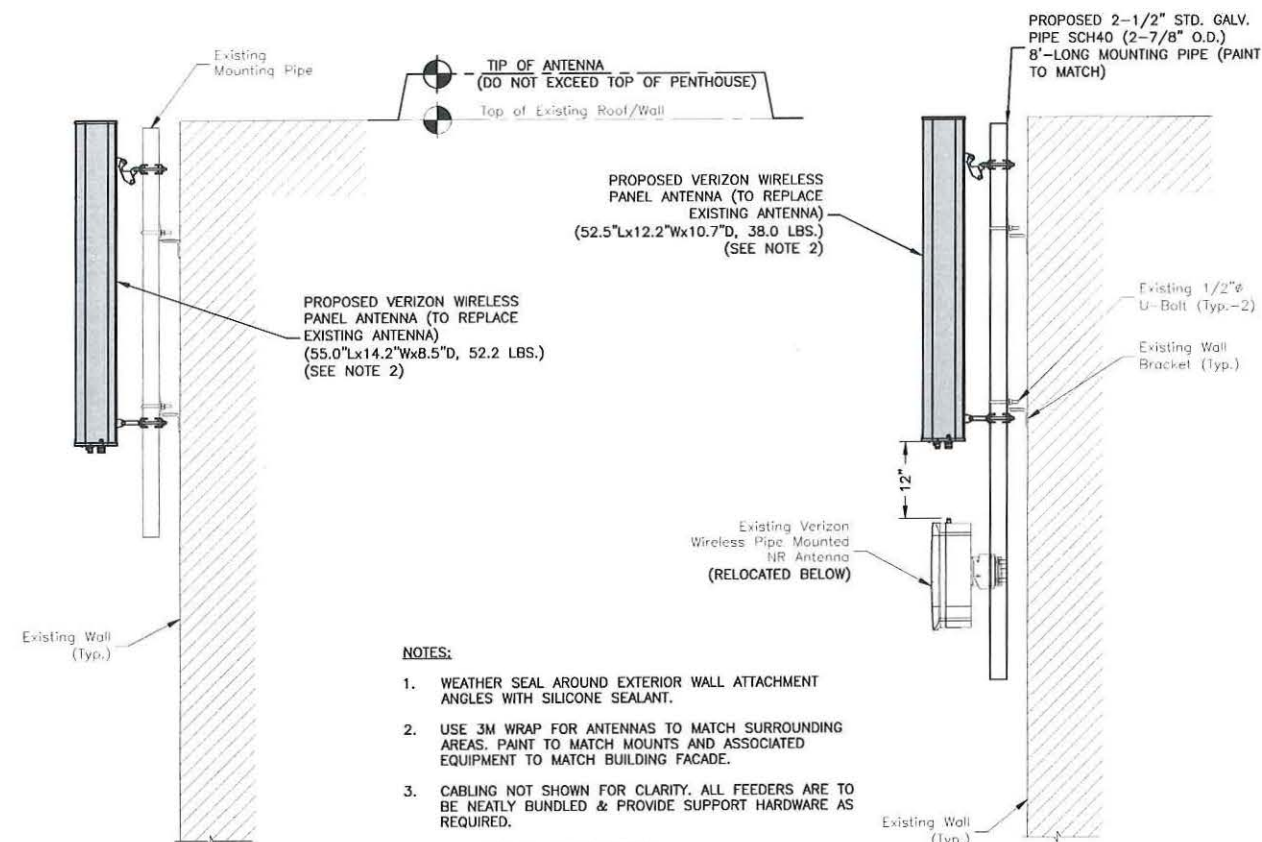
80 ERIE STREET
CAMBRIDGE, MA 02139

SHEET TITLE

CONSTRUCTION DETAILS

SHEET NUMBER

C-4



NOTES:

1. WEATHER SEAL AROUND EXTERIOR WALL ATTACHMENT ANGLES WITH SILICONE SEALANT.
2. USE 3M WRAP FOR ANTENNAS TO MATCH SURROUNDING AREAS. PAINT TO MATCH MOUNTS AND ASSOCIATED EQUIPMENT TO MATCH BUILDING FACADE.
3. CABLING NOT SHOWN FOR CLARITY. ALL FEEDERS ARE TO BE NEATLY BUNDLED & PROVIDE SUPPORT HARDWARE AS REQUIRED.
4. ALL STEEL TO BE GALVANIZED.
5. CONTRACTOR TO GROUND EXISTING PIPE MOUNTS WITH GROUNDING LEADS. CONNECT LEADS TO THE SECTOR GROUNDING BAR.

PANEL ANTENNA

PANEL & NR ANTENNA

PANEL & NR ANTENNA MOUNTING DETAIL

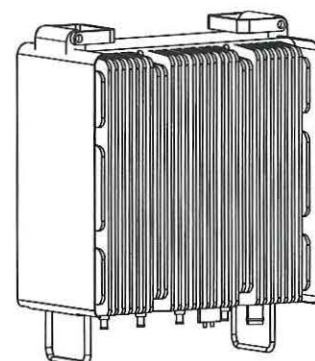
SCALE: 3/8"=1' FOR 11"x17"
3/4"=1' FOR 22"x34"

ANTENNA
(POSITION 1)

EXISTING NR ANTENNA
(RELOCATED AS REQUIRED)

ANTENNA
(POSITION 2)

PROPOSED PANEL ANTENNA
(TO REPLACE EXISTING)



PROPOSED 5G

MANUFACTURER: SAMSUNG
MODEL: 5G RRH
RT-8808-77A
DIMENSIONS: 15.0"H X 15.0"W X 6.8"D
WEIGHT: 59.5 LBS

NOTE:

1. CONTRACTOR TO VERIFY WITH CONSTRUCTION MANAGER FOR FINAL MANUFACTURER SPECIFICATIONS PRIOR TO CONSTRUCTION.
2. CONTRACTOR TO ADD VERTICAL UNISTRUT TO EXISTING HORIZONTAL UNISTRUT AS REQUIRED IN GAMMA SECTOR.

ANTENNA CONFIGURATION

SCALE: N.T.S.

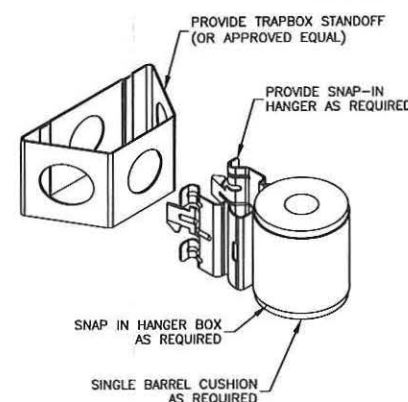
REMOTE UNIT DETAILS

SCALE: N.T.S.

MANUFACTURER: JMA
PART NUMBER: MX06FIT465-02
DIMENSIONS: 52.5"H X 12.2"W X 10.7"D
WEIGHT: 38 LBS (W/OUT MOUNTING KIT)

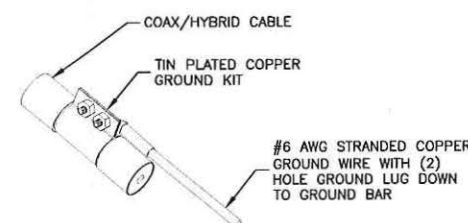
PIPE MOUNTED ANTENNA DETAIL

SCALE: N.T.S.



JUMPER MOUNT

SCALE: N.T.S.



NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND. ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TIN PLATED COPPER WITH TWO-HOLE LUG, SIZE PER COAX DIAMETER.
3. WEATHER SEAL GROUND KIT PER CARRIER REQUIREMENTS.
4. COAX CABLE GROUND KIT LOCATION & QUANTITY SHALL BE PER CARRIER SPECIFICATIONS & STANDARDS.

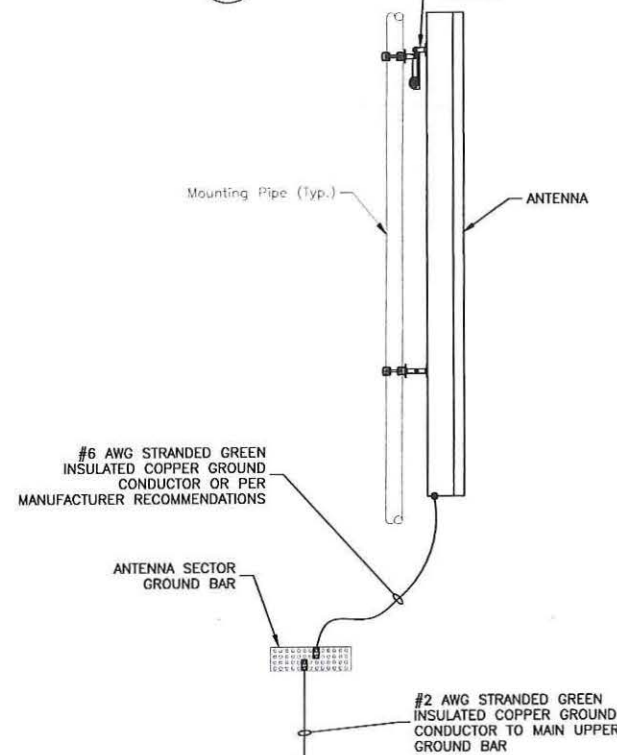
COAX/HYBRID GROUNDING DETAIL

SCALE: N.T.S.

MANUFACTURER: JMA
PART NUMBER: MX14FIT465-01
DIMENSIONS: 55.0"H X 14.2"W X 8.5"D
WEIGHT: 52.2 LBS (W/OUT MOUNTING KIT)

PIPE MOUNTED ANTENNA DETAIL

SCALE: N.T.S.



NOTES:

1. VERIFY EXISTING GROUNDING SYSTEM IS INSTALLED PER VERIZON WIRELESS STANDARDS.
2. BOND NEW EQUIPMENT INTO EXISTING GROUND SYSTEM IN ACCORDANCE WITH VERIZON WIRELESS STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.

TYPICAL ANTENNA GROUNDING DETAIL

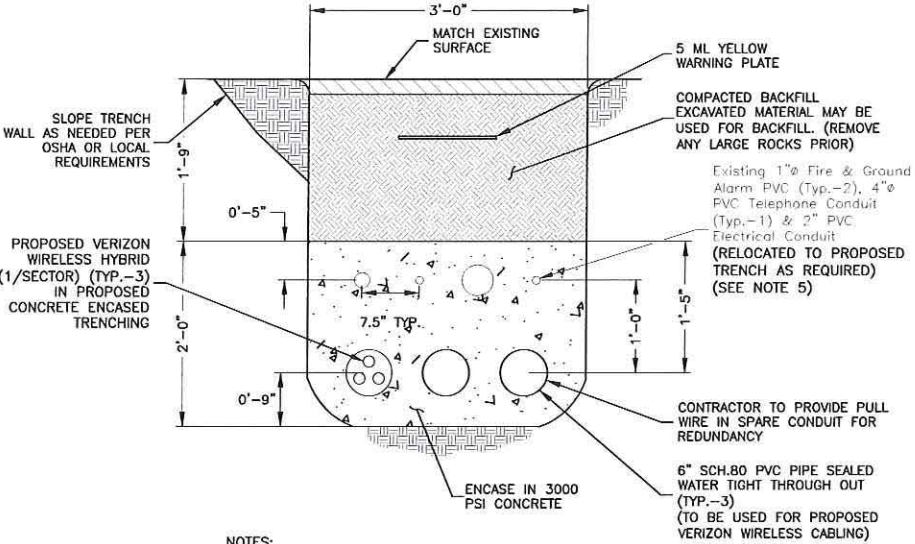
SCALE: N.T.S.

FINAL EQUIPMENT CONFIGURATION

SECTOR	POSITION	TECHNOLOGY	ANTENNA MODEL	VENDOR	RRH (QTY./MODEL)	CENTERLINE	AZIMUTH	OVP	CABLE TYPE	FEED LINE LENGTH*
ALPHA	A1	5G	(E) VZ-AT1K01	SAMSUNG	(1) (P) RT-8808-77A	45'-0"±	340°	(1) (E) 6-OVP BOX EXISTING TO REMAIN	(1) (P) 6X12 HYBRID CABLE (4) 1-5/8" COAX CABLE TO BE REMOVED	190'±
		LTE 700/850 5G/900/AWS/5G	(P) MX06FIT465-02	JMA		40'-6"±	340°			
	A2	LTE 700/850 5G/AWS/5G	(P) MX14FIT465-01	JMA	(1) (E) RFV01U-D1A (1) (E) RFV01U-D2A	42'-2"±	340°			
BETA	B1	5G	(E) VZ-AT1K01	SAMSUNG	(1) (P) RT-8808-77A	45'-0"±	90°	(1) (E) 6-OVP BOX EXISTING TO REMAIN	(1) (P) 6X12 HYBRID CABLE (4) 1-5/8" COAX CABLE TO BE REMOVED	280'±
		LTE 700/850 5G/900/AWS/5G	(P) MX06FIT465-02	JMA		40'-6"±	90°			
	B2	LTE 700/850 5G/AWS/5G	(P) MX14FIT465-01	JMA	(1) (E) RFV01U-D1A (1) (E) RFV01U-D2A	42'-2"±	90°			
GAMMA	G1	5G	(E) VZ-AT1K01	SAMSUNG	(1) (P) RT-8808-77A	38'-5"±	230°	(1) (E) 6-OVP BOX EXISTING TO REMAIN	(1) (P) 6X12 HYBRID CABLE (4) 1-5/8" COAX CABLE TO BE REMOVED	240'±
		LTE 700/850 5G/900/AWS/5G	(P) MX06FIT465-02	JMA		42'-3"±	230°			
	G2	LTE 700/850 5G/AWS/5G	(P) MX14FIT465-01	JMA	(1) (E) RFV01U-D1A (1) (E) RFV01U-D2A	42'-3"±	230°			
*CONTRACTOR TO FIELD VERIFY HYBRID CABLE LENGTHS PRIOR TO CONSTRUCTION. LENGTH IS ESTIMATED FROM THE BASE EQUIPMENT OVP TO SECTOR OVP.										
(E) = Existing (P) = PROPOSED										

FINAL EQUIPMENT CONFIGURATION
SCALE: N.T.S.

1



- NOTES:
1. MAINTAIN REQUIRED HYBRIFLEX BEND RADIUS.
 2. DO NOT REUSE ORGANIC OR DELETERIOUS MATERIALS OR LARGE ROCKS FOR BACK FILL.
 3. CONTRACTOR TO VERIFY EXISTING CONDITIONS & TRENCHING PRIOR TO CONSTRUCTION. CONTRACTOR TO DIG SAFE & HAVE PRIVATE UTILITIES LOCATED PRIOR TO TRENCHING
 4. CABLING SHOWN IS SCHEMATIC. FINAL CABLE COUNTS TO BE COORDINATED WITH VZW CM.
 5. CONTRACTOR TO TEMPORARILY SUPPORT EXISTING POWER & FIBER WHILE REPLACING EXISTING CONDUITS.

PROPOSED TRENCH DETAIL
SCALE: 1/2"=1' FOR 11"x17"
1"=1' FOR 22"x34"



2

verizon
WIRELESS
VERIZON WIRELESS
900 CHELMSFORD STREET
TOWER 2 FLOOR 5
LOWELL, MA 01851

**CAMBRIDGEPORT
MA**

ANTMO DRAWINGS

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Dewberry
Dewberry Engineers Inc.
88 SUMMER STREET
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310



01/06/2023

DRAWN BY:	MR
REVIEWED BY:	AJB
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50143857
SITE NUMBER:	

161293

80 ERIE STREET
CAMBRIDGE, MA 02139

SHEET TITLE

FINAL EQUIPMENT
CONFIGURATION & DETAIL

SHEET NUMBER

C-5

Prepared For:
Verizon Wireless
Site Name:
CAMBRIDGEPORT MA
80 Erie Street
Cambridge, MA 02139



Simulations Based On Rev-5 ANTMO Drawings Dated 01/06/23.

Photos Taken On: 07/29/20

For visual reference only. Actual visibility
is dependent upon weather conditions,
season, sunlight, and viewer location.

verizon
WIRELESS
900 Chelmsford Street
Tower 2 Floor 5
Lowell, MA 01851

CAMBRIDGEPORT MA

DEWBERRY NO. 50143857
(Page 1 of 8)


 **Dewberry**
Dewberry Engineers Inc.
99 Summer St.
Suite 700
Boston, MA 02110



PHOTO 1

SITE LOCATION

PHOTO 2

PHOTO 3

verizon
WIRELESS

CAMBRIDGE PORT MA

80 Erie Steet
Cambridge, MA 02139
(Page 2 of 8)

 **Dewberry**

Actual View

verizon[✓]
WIRELESS

CAMBRIDGEPORT MA

Photo 1A

View Facing Southeast
From Erie Street
(Page 3 of 8)

 **Dewberry**[®]

Proposed View

Relocated Verizon Wireless Alpha Sector
RF Friendly Canister (Typ.-2) Concealing
Existing and Proposed Antennas (Typ.-3)



verizon
WIRELESS

CAMBRIDGEPORT MA
Photo 1B
View Facing Southeast
From Erie Street
(Page 4 of 8)

Actual View

verizon[✓]
WIRELESS

CAMBRIDGEPORT MA

Photo 2A

View Facing West
From Sidney Street
(Page 5 of 8)



Dewberry[®]

Proposed View

Existing Verizon Wireless
Beta Sector RF Friendly Canister
(Typ.-2) Concealing Existing And
Proposed Antennas (Typ.-3)

Relocated Verizon Wireless Alpha
Sector RF Friendly Canister (Typ.-2)
Concealing Existing and Proposed
Antennas (Typ.-3)

verizon
WIRELESS
CAMBRIDGEPORT MA
Photo 2B
View Facing West
From Sidney Street
(Page 6 of 8)

Actual View

verizon[✓]
WIRELESS

CAMBRIDGEPORT MA

Photo 3A

View Facing Northeast
From Hamilton Street
(Page 7 of 8)

 **Dewberry**[®]

Proposed View

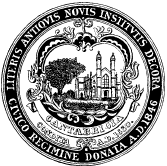
Relocated Verizon Wireless Alpha Sector
RF Friendly Canister (Typ.-2) Concealing
Existing and Proposed Antennas (Typ.-3)

Proposed Verizon Wireless
Gamma Sector Panel Antenna
(Typ.-2) (To Replace Existing)

Existing Verizon Wireless Beta
Sector RF Friendly Canister
(Typ.-2) Concealing Existing And
Proposed Antennas (Typ.-3)

verizon
WIRELESS
CAMBRIDGEPORT MA
Photo 3B
View Facing Northeast
From Hamilton Street
(Page 8 of 8)

 **Dewberry**[®]



City of Cambridge
Massachusetts

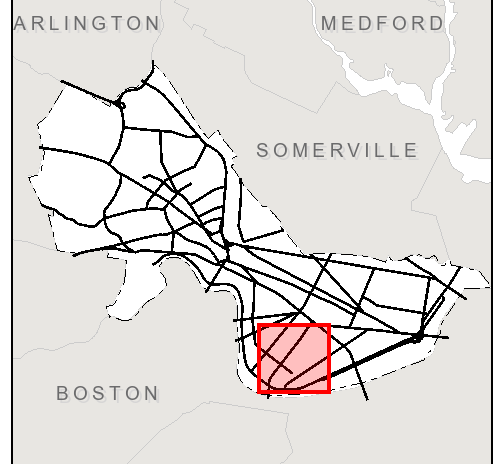
1" = 526 ft

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www.cambridgema.gov/gis



- Rail
- Building Footprints
- Paved Surfaces
 - Paved Roads
 - Bridges
 - Unpaved Roads
 - Unpaved Parking
- Sidewalks
- Driveways
- Alleys
- Other Paved Surface
- Public Footpath



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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
 CELLCO PARTNERSHIP
 5055 NORTH POINT PKWY, NP2NE ENGINEERING
 ALPHARETTA, GA 30022

Call Sign WRBA936	File Number
Radio Service UU - Upper Microwave Flexible Use Service	

FCC Registration Number (FRN): 0003290673

Grant Date 09-11-2018	Effective Date 02-27-2019	Expiration Date 10-06-2028	Print Date
Market Number BTA051	Channel Block L1	Sub-Market Designator 1	
Market Name Boston, MA			
1st Build-out Date 06-01-2024	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

Special Condition for AU/name change (6/4/2016): Grant of the request to update licensee name is conditioned on it not reflecting an assignment or transfer of control (see Rule 1.948); if an assignment or transfer occurred without proper notification or FCC approval, the grant is void and the station is licensed under the prior name.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: CELLCO PARTNERSHIP

Call Sign: WRBA936

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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**Federal Communications Commission
Wireless Telecommunications Bureau****RADIO STATION AUTHORIZATION****LICENSEE: CELLCO PARTNERSHIP**

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
WRBA937	
Radio Service	
UU - Upper Microwave Flexible Use Service	

FCC Registration Number (FRN): 0003290673

Grant Date 09-11-2018	Effective Date 02-27-2019	Expiration Date 10-06-2028	Print Date
Market Number BTA051	Channel Block L2	Sub-Market Designator 1	
Market Name Boston, MA			
1st Build-out Date 06-01-2024	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

Special Condition for AU/name change (6/4/2016): Grant of the request to update licensee name is conditioned on it not reflecting an assignment or transfer of control (see Rule 1.948); if an assignment or transfer occurred without proper notification or FCC approval, the grant is void and the station is licensed under the prior name.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: CELLCO PARTNERSHIP

Call Sign: WRBA937

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign WQJQ689	File Number
Radio Service WU - 700 MHz Upper Band (Block C)	

FCC Registration Number (FRN): 0003290673

Grant Date 09-11-2019	Effective Date 07-15-2020	Expiration Date 06-13-2029	Print Date
Market Number REA001	Channel Block C	Sub-Market Designator 0	
Market Name Northeast			
1st Build-out Date 06-13-2013	2nd Build-out Date 06-13-2019	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

If the facilities authorized herein are used to provide broadcast operations, whether exclusively or in combination with other services, the licensee must seek renewal of the license either within eight years from the commencement of the broadcast service or within the term of the license had the broadcast service not been provided, whichever period is shorter in length. See 47 CFR §27.13(b).

This authorization is conditioned upon compliance with section 27.16 of the Commission's rules

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Licensee Name: CELLCO PARTNERSHIP

Call Sign: WQJQ689

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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**Federal Communications Commission
Wireless Telecommunications Bureau**

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign KNKA201	File Number
Radio Service CL - Cellular	
Market Numer CMA006	Channel Block B
Sub-Market Designator 0	

FCC Registration Number (FRN): 0003290673

Market Name Boston-Lowell-Brockton-Lawrenc
--

Grant Date 08-26-2014	Effective Date 11-01-2016	Expiration Date 10-01-2024	Five Yr Build-Out Date	Print Date
---------------------------------	-------------------------------------	--------------------------------------	-------------------------------	-------------------

Site Information:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
1	42-38-26.3 N	070-36-25.2 W	36.3	35.7	
Address: (Rockport) Thatcher Road					
City: Rockport County: ESSEX State: MA Construction Deadline:					

Antenna: 5

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	70.400	34.100	34.100	34.100	70.400	67.800	55.200	61.300
Transmitting ERP (watts)	246.920	325.500	33.310	0.940	0.820	0.820	1.210	20.070

Antenna: 6

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	70.400	34.100	34.100	34.100	70.400	67.800	55.200	61.300
Transmitting ERP (watts)	0.820	3.330	54.020	373.730	191.670	10.780	0.820	0.820

Antenna: 7

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	70.400	34.100	34.100	34.100	70.400	67.800	55.200	61.300
Transmitting ERP (watts)	3.330	0.820	0.820	0.820	7.810	126.630	409.780	89.650

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKA201

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
4	42-08-56.4 N	071-24-55.2 W	75.6	44.2	

Address: 113 Main Street

City: Medway County: NORFOLK State: MA Construction Deadline:

Antenna: 4

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	59.500	66.700	61.200	46.900	23.900	39.300	13.900	12.300
Transmitting ERP (watts)	81.280	89.130	24.550	1.120	0.200	0.200	0.420	16.600

Antenna: 5

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	59.500	66.700	61.200	46.900	23.900	39.300	13.900	12.300
Transmitting ERP (watts)	0.200	2.000	33.800	95.500	67.610	10.700	0.200	0.200

Antenna: 6

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	59.500	66.700	61.200	46.900	23.900	39.300	13.900	12.300
Transmitting ERP (watts)	3.890	0.200	0.200	0.200	6.760	57.540	100.000	44.670

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
9	42-11-42.4 N	070-49-10.2 W	57.9	56.1	

Address: (Scituate) OFF CLAPP RD

City: SCITUATE County: PLYMOUTH State: MA Construction Deadline:

Antenna: 7

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	105.300	106.100	93.800	85.900	95.600	76.500	81.800	104.300
Transmitting ERP (watts)	172.400	167.230	26.990	1.190	0.960	0.960	1.720	28.870

Antenna: 8

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	105.300	106.100	93.800	85.900	95.600	76.500	81.800	104.300
Transmitting ERP (watts)	0.980	3.910	54.020	409.780	200.700	15.220	0.980	0.980

Antenna: 9

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	105.300	106.100	93.800	85.900	95.600	76.500	81.800	104.300
Transmitting ERP (watts)	4.490	0.980	0.980	1.300	10.060	123.750	449.320	96.060

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKA201

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
10	42-52-57.3 N	071-16-28.2 W	163.0	58.2	

Address: (Derry) 46 FLOYD ROAD

City: DERRY County: ROCKINGHAM State: NH Construction Deadline:

Antenna: 4

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	82.200	129.400	144.500	155.100	136.800	127.900	126.200	118.100
Transmitting ERP (watts)	31.810	146.820	102.310	15.410	1.000	1.000	1.000	1.130

Antenna: 5

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	82.200	129.400	144.500	155.100	136.800	127.900	126.200	118.100
Transmitting ERP (watts)	1.000	1.000	4.660	82.110	250.350	80.300	3.790	1.000

Antenna: 6

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	80.200	129.400	144.500	155.100	136.800	127.900	126.200	118.100
Transmitting ERP (watts)	32.480	1.680	1.000	1.000	1.000	13.740	107.220	143.470

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
12	41-52-08.3 N	070-52-56.1 W	29.6	58.2	

Address: (Middleboro) E. GROVE ST.

City: MIDDLESBORO County: PLYMOUTH State: MA Construction Deadline:

Antenna: 7

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	57.600	32.400	40.200	47.600	44.900	41.300	50.300	52.600
Transmitting ERP (watts)	277.330	364.730	40.890	2.250	0.960	0.960	2.410	20.640

Antenna: 8

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	57.600	32.400	40.200	47.600	44.900	41.300	50.300	52.600
Transmitting ERP (watts)	0.960	3.730	61.620	418.280	215.780	13.090	1.700	0.960

Antenna: 9

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	57.600	32.400	40.200	47.600	44.900	41.300	50.300	52.600
Transmitting ERP (watts)	5.070	1.130	0.610	1.600	5.050	89.040	278.490	66.210

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKA201

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
14	42-28-06.3 N	071-27-16.2 W	102.1	54.0	

Address: Main Street

City: South Acton County: MIDDLESEX State: MA Construction Deadline:

Antenna: 4

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	69.000	79.000	105.500	96.200	72.600	76.300	47.400	58.700
Transmitting ERP (watts)	65.200	77.960	20.970	2.400	0.200	0.200	2.000	13.720

Antenna: 5

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	69.000	79.900	105.500	96.200	72.600	76.300	47.400	58.700
Transmitting ERP (watts)	0.200	3.880	23.800	59.780	43.360	10.290	0.830	0.200

Antenna: 6

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	76.400	65.500	105.500	96.200	72.600	76.300	47.400	58.700
Transmitting ERP (watts)	5.010	0.420	0.200	0.740	6.570	43.660	91.210	34.920

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
15	42-30-08.4 N	070-55-02.2 W	39.6	46.3	

Address: 12 First Street

City: Salem County: ESSEX State: MA Construction Deadline:

Antenna: 7

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	63.400	62.100	62.800	77.900	77.500	70.500	40.900	50.900
Transmitting ERP (watts)	49.150	56.730	19.190	2.360	0.200	0.200	1.930	12.920

Antenna: 8

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	63.400	62.100	62.800	77.900	77.500	70.500	40.900	50.900
Transmitting ERP (watts)	0.100	1.550	9.520	23.920	17.350	4.120	0.330	0.100

Antenna: 9

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	63.400	62.100	62.800	77.900	77.500	70.500	40.900	50.900
Transmitting ERP (watts)	5.010	0.380	0.200	0.680	6.510	35.500	64.630	29.380

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKA201

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
16	42-16-51.4 N	071-02-04.2 W	5.2	53.0	

Address: 100 HANCOCK STREET

City: QUINCY County: NORFOLK State: MA Construction Deadline:

Antenna: 5

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	43.000	44.100	42.200	29.000	8.300	14.800	12.100	31.500
Transmitting ERP (watts)	7.170	6.480	6.790	0.320	0.100	0.100	0.160	5.630

Antenna: 6

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	40.900	41.900	40.000	26.800	6.200	12.600	9.900	29.300
Transmitting ERP (watts)	0.100	0.340	3.140	2.480	2.970	1.500	0.100	0.100

Antenna: 7

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	43.000	44.100	42.200	29.000	8.300	14.800	12.100	31.500
Transmitting ERP (watts)	0.100	0.100	0.100	0.120	2.640	2.770	2.720	2.360

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
21	42-30-36.4 N	070-51-21.2 W	23.2	47.2	

Address: Tioga Way

City: Marblehead County: ESSEX State: MA Construction Deadline:

Antenna: 2

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	44.200	46.700	37.200	60.400	60.400	54.600	28.000	43.700
Transmitting ERP (watts)	0.100	0.130	3.130	7.860	6.600	1.220	0.100	0.100

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	44.200	46.700	37.200	60.400	60.400	54.600	28.000	43.700
Transmitting ERP (watts)	0.410	0.100	0.100	0.100	0.530	5.070	8.210	4.870

Antenna: 4

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	44.200	46.700	37.200	60.400	60.400	54.600	28.000	43.700
Transmitting ERP (watts)	6.780	7.760	2.800	0.100	0.100	0.100	0.100	1.540

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKA201

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
22	42-51-55.4 N	070-56-13.2 W	94.5	50.9	

Address: (Amesbury) 10 DENNET WAY

City: AMESBURY County: ESSEX State: MA Construction Deadline:

Antenna: 4

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	117.000	123.800	125.500	137.800	126.100	109.800	94.200	100.300
Transmitting ERP (watts)	178.880	225.190	34.880	0.860	0.860	0.860	0.860	10.780

Antenna: 5

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	117.000	123.800	125.500	137.800	126.100	109.800	94.200	100.300
Transmitting ERP (watts)	0.860	1.240	35.690	258.560	148.780	12.380	0.860	0.860

Antenna: 6

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	117.000	123.800	125.500	137.800	126.100	109.800	94.200	100.300
Transmitting ERP (watts)	3.110	0.830	0.860	0.860	3.110	89.650	270.740	81.760

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
24	42-03-31.4 N	071-17-29.2 W	105.5	59.1	

Address: (Wrentham) 415 Washington St. - Route 1

City: WRENTHAM County: NORFOLK State: MA Construction Deadline:

Antenna: 4

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	99.900	78.700	94.600	120.300	114.800	77.800	71.700	95.700
Transmitting ERP (watts)	2.580	85.500	401.990	363.280	54.920	1.060	0.850	0.850

Antenna: 5

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	99.900	78.700	94.600	120.300	114.800	77.800	71.700	95.700
Transmitting ERP (watts)	0.850	0.850	0.850	8.930	146.240	311.250	197.740	18.980

Antenna: 6

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	99.900	78.700	94.600	120.300	114.800	77.800	71.700	95.700
Transmitting ERP (watts)	352.500	136.390	5.560	0.980	0.980	0.980	39.210	263.760

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKA201

File Number:

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
25	43-10-34.3 N	071-12-24.2 W	335.3	31.4	

Address: (Northwood) SADDLEBACK MOUNTAIN

City: NORTHWOOD County: ROCKINGHAM State: NH Construction Deadline:

Antenna: 4

Maximum Transmitting ERP in Watts: 140.820

	0	45	90	135	180	225	270	315
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	152.900	213.700	260.100	268.500	234.000	215.400	150.700	173.600
Transmitting ERP (watts)	45.240	219.790	199.540	31.860	1.550	1.000	1.000	2.360

Antenna: 5

Maximum Transmitting ERP in Watts: 140.820

	0	45	90	135	180	225	270	315
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	152.900	213.700	260.100	268.500	234.000	215.400	150.700	173.600
Transmitting ERP (watts)	1.000	1.000	6.160	105.350	236.610	142.220	7.190	1.780

Antenna: 6

Maximum Transmitting ERP in Watts: 140.820

	0	45	90	135	180	225	270	315
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	152.900	213.700	260.100	268.500	234.000	215.400	150.700	173.600
Transmitting ERP (watts)	55.630	1.980	1.000	1.000	2.260	8.170	110.540	141.320

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
27	41-41-13.4 N	070-48-25.1 W	22.9	59.4	

Address: (Mattapoisett) Industrial Drive

City: Mattapoisett County: PLYMOUTH State: MA Construction Deadline:

Antenna: 4

Maximum Transmitting ERP in Watts: 140.820

	0	45	90	135	180	225	270	315
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	61.700	76.400	79.200	79.900	80.600	75.400	56.100	60.600
Transmitting ERP (watts)	217.540	281.390	29.930	2.050	0.980	0.980	2.340	21.270

Antenna: 5

Maximum Transmitting ERP in Watts: 140.820

	0	45	90	135	180	225	270	315
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	61.700	76.400	79.300	79.900	80.600	75.400	56.100	60.600
Transmitting ERP (watts)	0.980	10.610	118.800	349.190	74.510	4.550	0.980	0.980

Antenna: 6

Maximum Transmitting ERP in Watts: 140.820

	0	45	90	135	180	225	270	315
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	61.700	76.400	79.200	79.900	80.600	75.400	56.100	60.600
Transmitting ERP (watts)	2.220	0.980	0.980	2.540	27.640	252.570	253.110	22.510

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKA201

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
29	41-55-21.0 N	070-39-05.0 W	39.6	77.4	1021869

Address: (Plymouth) CALEB ST

City: Plymouth County: PLYMOUTH State: MA Construction Deadline:

Antenna: 4

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	94.600	84.200	79.500	67.900	61.400	63.600	52.500	63.200
Transmitting ERP (watts)	252.450	246.240	37.800	1.470	0.940	0.940	2.080	39.370

Antenna: 5

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	94.600	84.200	79.500	67.900	61.400	63.600	52.500	63.200
Transmitting ERP (watts)	1.000	3.000	53.330	346.500	184.150	15.870	1.000	1.000

Antenna: 6

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	94.600	84.200	79.500	67.900	61.400	63.600	52.500	63.200
Transmitting ERP (watts)	4.660	1.000	1.000	1.000	5.610	128.480	425.450	99.740

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
31	42-14-40.0 N	071-30-38.0 W	142.6	102.0	1009024

Address: 1.25 MI NNE

City: HOPKINTON County: MIDDLESEX State: MA Construction Deadline:

Antenna: 4

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	107.800	138.000	130.800	126.800	101.200	85.900	73.000	97.500
Transmitting ERP (watts)	23.200	21.890	16.370	2.550	0.130	0.100	1.640	13.250

Antenna: 5

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	107.800	138.000	130.800	126.800	101.200	85.900	73.000	97.500
Transmitting ERP (watts)	0.940	9.100	53.990	96.320	78.580	26.320	3.730	0.460

Antenna: 6

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	107.800	138.000	130.800	126.800	101.200	85.900	73.000	97.500
Transmitting ERP (watts)	13.400	1.700	0.620	2.340	18.300	72.460	95.170	63.740

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKA201

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
34	42-23-29.5 N	071-07-22.9 W	7.9	26.8	

Address: 2067 MASSACHUSETTS AVENUE

City: CAMBRIDGE County: SUFFOLK State: MA Construction Deadline:

Antenna: 4

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	-3.400	5.800	21.700	28.600	13.000	-2.600	-14.400	-21.300
Transmitting ERP (watts)	6.780	7.760	2.800	0.100	0.100	0.100	0.100	1.540

Antenna: 5

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	-3.400	5.800	21.700	28.600	13.000	-2.600	-14.400	-21.300
Transmitting ERP (watts)	0.100	0.130	3.130	7.860	6.600	1.220	0.100	0.100

Antenna: 6

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	-3.400	5.800	21.700	28.300	13.000	-2.600	-14.400	-21.300
Transmitting ERP (watts)	0.410	0.100	0.100	0.100	0.530	5.070	8.210	4.870

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
35	42-39-16.7 N	071-44-12.3 W	192.6	51.2	

Address: 84 Bayberry Hill Road

City: Townsend County: MIDDLESEX State: MA Construction Deadline:

Antenna: 2

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	57.900	139.500	149.200	136.100	102.200	42.700	-79.000	-25.700
Transmitting ERP (watts)	0.580	7.080	42.660	95.500	77.620	22.390	2.820	0.460

Antenna: 4

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	51.300	146.600	148.900	136.600	101.300	25.000	-79.700	-22.300
Transmitting ERP (watts)	35.060	35.620	17.670	2.660	0.200	0.150	1.860	13.500

Antenna: 5

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	51.300	146.600	148.900	136.600	101.300	25.000	-79.700	-22.300
Transmitting ERP (watts)	5.360	0.690	0.250	0.930	7.320	28.980	38.070	25.500

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKA201

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
38	42-38-45.8 N	071-05-37.7 W	117.3	52.4	

Address: 5 Boston Hill Road

City: North Andover County: ESSEX State: MA Construction Deadline:

Antenna: 4

Maximum Transmitting ERP in Watts: 140.820

	0	45	90	135	180	225	270	315
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	96.900	98.200	110.000	111.300	110.000	101.700	90.300	106.200
Transmitting ERP (watts)	83.180	87.100	23.990	2.290	0.200	0.200	1.820	20.420

Antenna: 5

Maximum Transmitting ERP in Watts: 140.820

	0	45	90	135	180	225	270	315
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	96.900	98.100	110.000	111.300	110.000	101.700	90.200	106.200
Transmitting ERP (watts)	0.240	4.170	38.020	97.720	66.070	11.750	1.050	0.200

Antenna: 6

Maximum Transmitting ERP in Watts: 140.820

	0	45	90	135	180	225	270	315
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	96.900	98.200	110.000	111.300	110.000	101.700	90.200	106.200
Transmitting ERP (watts)	5.250	0.340	0.200	0.830	9.770	60.262	100.000	42.660

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
39	42-18-13.0 N	071-13-05.0 W	44.8	96.0	1018331

Address: 140 CABOT ST

City: NEEDHAM County: NORFOLK State: MA Construction Deadline:

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820

	0	45	90	135	180	225	270	315
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	44.200	68.400	58.900	48.800	36.300	40.300	44.100	41.600
Transmitting ERP (watts)	30.340	35.650	9.380	0.920	0.100	0.100	0.610	6.050

Antenna: 2

Maximum Transmitting ERP in Watts: 140.820

	0	45	90	135	180	225	270	315
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	44.200	68.400	58.900	48.800	36.300	40.300	44.100	41.600
Transmitting ERP (watts)	0.100	1.230	10.440	23.990	19.000	4.420	0.370	0.100

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820

	0	45	90	135	180	225	270	315
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	44.200	68.400	58.900	48.800	36.300	40.300	44.100	41.600
Transmitting ERP (watts)	2.200	0.190	0.100	0.300	2.700	19.270	35.660	16.260

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKA201

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
41	42-22-16.6 N	071-05-49.6 W	6.3	18.6	

Address: (Cambridge Donnelly Field site) 284 Norfolk Street

City: Cambridge County: MIDDLESEX State: MA Construction Deadline: 07-03-2014

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	-11.600	16.500	20.700	21.000	2.200	-20.400	2.300	-16.900
Transmitting ERP (watts)	48.150	197.980	63.920	1.080	0.680	0.680	0.680	0.850

Antenna: 2

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	-11.600	16.500	20.700	21.000	2.200	-20.400	2.300	-16.900
Transmitting ERP (watts)	0.670	0.670	18.990	128.120	74.750	3.300	0.670	0.670

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	-10.600	17.600	21.700	22.000	3.200	-19.400	3.400	-15.900
Transmitting ERP (watts)	28.690	0.650	0.650	0.650	0.650	5.700	114.450	208.740

Control Points:

Control Pt. No. 3

Address: 500 W. Dove Rd.

City: Southlake County: TARRANT State: TX Telephone Number: (800)264-6620

Waivers/Conditions:

THE FOLLOWING CELLULAR GEOGRAPHIC SERVICE AREAS HAVE BEEN COMBINED (LISTED BY CALL SIGN, MARKET NUMBER AND BLOCK, AND MARKET NAME): KNKA201 6B BOSTON, MASSACHUSETTS KNKA251 76B

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**Federal Communications Commission
Wireless Telecommunications Bureau****RADIO STATION AUTHORIZATION****LICENSEE: CELLCO PARTNERSHIP**

CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign WQGB266	File Number 0009783855
Radio Service AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

FCC Registration Number (FRN): 0003290673

Grant Date 02-10-2022	Effective Date 02-10-2022	Expiration Date 11-29-2036	Print Date 02-11-2022
Market Number CMA006	Channel Block A	Sub-Market Designator 0	
Market Name Boston-Lowell-Brockton-Lawrenc			
1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: CELLCO PARTNERSHIP

Call Sign: WQGB266

File Number: 0009783855

Print Date: 02-11-2022

The license is subject to compliance with the provisions of the January 12, 2001 Agreement between Deutsche Telekom AG, VoiceStream Wireless Corporation, VoiceStream Wireless Holding Corporation and the Department of Justice (DOJ) and the Federal Bureau of Investigation (FBI), which addresses national security, law enforcement, and public safety issues of the FBI and the DOJ regarding the authority granted by this license. Nothing in the Agreement is intended to limit any obligation imposed by Federal law or regulation including, but not limited to, 47 U.S.C. Section 222(a) and (c)(1) and the FCC's implementing regulations. The Agreement is published at VoiceStream-DT Order, IB Docket No. 00-187, FCC 01-142, 16 FCC Rcd 9779, 9853 (2001).

Licensee Name: CELLCO PARTNERSHIP

Call Sign: WQGB266

File Number: 0009783855

Print Date: 02-11-2022

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

CELLCO PARTNERSHIP
 5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
 ALPHARETTA, GA 30022

Call Sign WQGA900	File Number 0009773233
Radio Service AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

FCC Registration Number (FRN): 0003290673

Grant Date 01-11-2022	Effective Date 01-11-2022	Expiration Date 11-29-2036	Print Date 01-12-2022
Market Number BEA003	Channel Block B	Sub-Market Designator 1	
Market Name Boston-Worcester-Lawrence-Lowe			
1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

AWS operations must not cause harmful interference across the Canadian or Mexican Border. The authority granted herein is subject to future international agreements with Canada or Mexico, as applicable.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: CELLCO PARTNERSHIP

Call Sign: WQGA900

File Number: 0009773233

Print Date: 01-12-2022

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
 CELLCO PARTNERSHIP
 5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
 ALPHARETTA, GA 30022

Call Sign WRNE629	File Number
Radio Service PM - 3.7 GHz Service	

FCC Registration Number (FRN): 0003290673

Grant Date 07-23-2021	Effective Date 07-23-2021	Expiration Date 07-23-2036	Print Date
Market Number PEA007	Channel Block A3	Sub-Market Designator 0	
Market Name Boston, MA			
1st Build-out Date 07-23-2029	2nd Build-out Date 07-23-2033	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

Operation for this combination license grants both interim and final rights for this PEA and is not impacted by the relocation process pursuant to 47 CFR ? 27.1412(g).

License is conditioned on compliance with all applicable FCC rules and regulations, including licensee making payments required by 47 C.F.R. §§ 27.1401- 27.1424 as described in FCC 20-22. See FCC 20-22, paras. 178-331.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Licensee Name: CELLCO PARTNERSHIP

Call Sign: WRNE629

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
 CELLCO PARTNERSHIP
 5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
 ALPHARETTA, GA 30022

Call Sign WRNE628	File Number
Radio Service PM - 3.7 GHz Service	

FCC Registration Number (FRN): 0003290673

Grant Date 07-23-2021	Effective Date 07-23-2021	Expiration Date 07-23-2036	Print Date
Market Number PEA007	Channel Block A2	Sub-Market Designator 0	
Market Name Boston, MA			
1st Build-out Date 07-23-2029	2nd Build-out Date 07-23-2033	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

Operation for this combination license grants both interim and final rights for this PEA and is not impacted by the relocation process pursuant to 47 CFR ? 27.1412(g).

License is conditioned on compliance with all applicable FCC rules and regulations, including licensee making payments required by 47 C.F.R. §§ 27.1401- 27.1424 as described in FCC 20-22. See FCC 20-22, paras. 178-331.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Licensee Name: CELLCO PARTNERSHIP

Call Sign: WRNE628

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
 CELLCO PARTNERSHIP
 5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
 ALPHARETTA, GA 30022

Call Sign WRNE627	File Number
Radio Service PM - 3.7 GHz Service	

FCC Registration Number (FRN): 0003290673

Grant Date 07-23-2021	Effective Date 07-23-2021	Expiration Date 07-23-2036	Print Date
Market Number PEA007	Channel Block A1	Sub-Market Designator 0	
Market Name Boston, MA			
1st Build-out Date 07-23-2029	2nd Build-out Date 07-23-2033	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

Operation for this combination license grants both interim and final rights for this PEA and is not impacted by the relocation process pursuant to 47 CFR ? 27.1412(g).

License is conditioned on compliance with all applicable FCC rules and regulations, including licensee making payments required by 47 C.F.R. §§ 27.1401- 27.1424 as described in FCC 20-22. See FCC 20-22, paras. 178-331.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Licensee Name: CELLCO PARTNERSHIP

Call Sign: WRNE627

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: AIRTOUCH CELLULAR

ATTN: REGULATORY
AIRTOUCH CELLULAR
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
KNLF646	
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0006146468

Grant Date 12-02-2016	Effective Date 11-30-2017	Expiration Date 01-03-2027	Print Date
Market Number BTA051	Channel Block C	Sub-Market Designator 3	
Market Name Boston, MA			
1st Build-out Date 12-07-2003	2nd Build-out Date 01-03-2007	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

Special Condition for AU/name change (6/4/2016): Grant of the request to update licensee name is conditioned on it not reflecting an assignment or transfer of control (see Rule 1.948); if an assignment or transfer occurred without proper notification or FCC approval, the grant is void and the station is licensed under the prior name.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: AIRTOUCH CELLULAR

Call Sign: KNLF646

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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**Federal Communications Commission
Wireless Telecommunications Bureau****RADIO STATION AUTHORIZATION**

LICENSEE: AIRTOUCH CELLULAR

ATTN: REGULATORY
AIRTOUCH CELLULAR
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
KNLH310	
Radio Service	
CW - PCS Broadband	

FCC Registration Number (FRN): 0006146468

Grant Date 06-08-2017	Effective Date 11-30-2017	Expiration Date 06-27-2027	Print Date
Market Number BTA051	Channel Block E	Sub-Market Designator 0	
Market Name Boston, MA			
1st Build-out Date 06-27-2002	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

NONE

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Licensee Name: AIRTOUCH CELLULAR

Call Sign: KNLH310

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
 CELLCO PARTNERSHIP
 5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
 ALPHARETTA, GA 30022

Call Sign KNLH242	File Number 0007716969
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0003290673

Grant Date 06-02-2017	Effective Date 06-02-2017	Expiration Date 06-27-2027	Print Date 06-06-2017
Market Number BTA051	Channel Block F	Sub-Market Designator 0	
Market Name Boston, MA			
1st Build-out Date 06-27-2002	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

This authorization is conditioned upon the full and timely payment of all monies due pursuant to Sections 1.2110 and 24.716 of the Commission's Rules and the terms of the Commission's installment plan as set forth in the Note and Security Agreement executed by the licensee. Failure to comply with this condition will result in the automatic cancellation of this authorization.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNLH242

File Number: 0007716969

Print Date: 06-06-2017

700 MHz Relicensed Area Information:

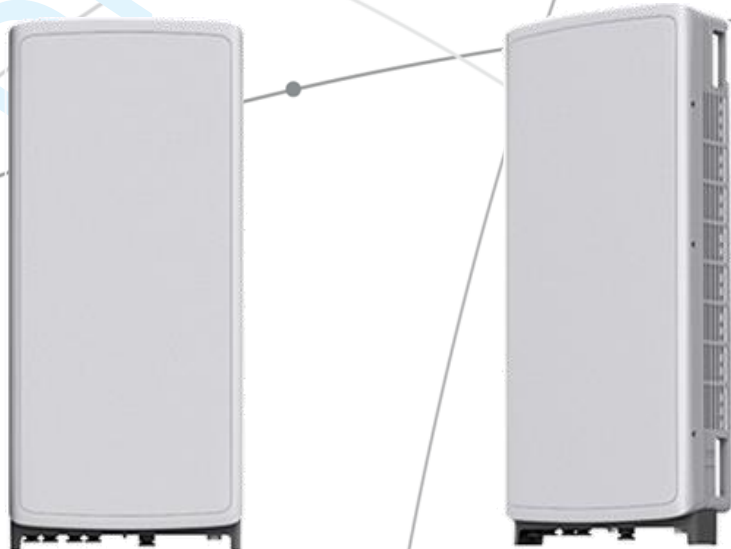
Market	Market Name	Buildout Deadline	Buildout Notification	Status
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SAMSUNG C-Band 64T64R Massive MIMO

C-Band 64T64R Massive MIMO Radio
for High Capacity and Wide Coverage

Samsung C-Band 64T64R Massive MIMO Radio enables mobile operators to increase coverage range, boost data speeds and ultimately offer enriched 5G experiences to users in the U.S..

Model Code : MT6407-77A

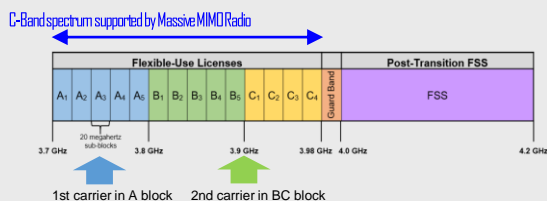


Points of Differentiation

Wide Bandwidth

Being able to support up to 2 CC carrier configuration, Samsung C-Band massive MIMO Radio supports 200 MHz bandwidth in the C-Band spectrum.

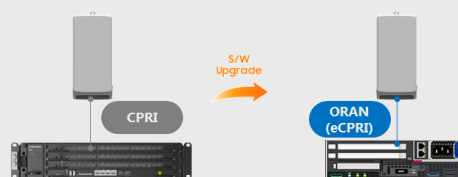
Samsung C-Band massive MIMO Radio uses C-Band 280 MHz spectrum at the same time, so it can cover all the bands the operator can be auctioned.



Future Proof Product

Samsung C-Band Massive MIMO radio supports eCPRI interface, thus, it can be used as O-RAN Massive MIMO Radio in the future. To provide O-RAN service, operators only need to update software since the hardware is already ready.

With the support of O-RAN, operators can reduce OPEX/CAPEX by increasing compatibility between equipment and get opportunity to design and develop their network with best-in-class solution that interoperate.



Enhanced Performance

C-Band massive MIMO Radio creates sharp beams and extends networks' coverage on the critical mid-band spectrum using a large number of antenna elements and high output power to boost data speeds.

This helps operators reduce their CAPEX as they now need less products to cover the same area than before.

Furthermore, as C-Band massive MIMO Radio supports MU-MIMO (Multi-user MIMO), it enables increased user throughput by minimizing interference.



Well Matched Design

Samsung's C-Band Massive MIMO radio utilizes 64 antennas, supports up to 280MHz bandwidth, and delivers a 200W output power. Despite the above advanced performance, the Radio has a compact size of 48L and 87.1 lbs. This makes it easy to install the Radio.

It is designed to look solid and small, and in particular, the design with wrap around has a thinly looking effect so that it can be harmonized with the surrounding environment when installed.



Technical Specifications

Item	Specification
Tech	NR
Brand	n77
Frequency Band	3700 - 3980 MHz
EIRP	78.5dBm (53.0 dBm+25.5 dBi)
IBW/DBW	280 MHz / 200 MHz
Installation	Pole/Wall
Size/Weight	16.06 x 35.12 x 5.51 inch (50.95L) / 87.1 lbs

DRAFT

About Samsung Electronics Co., Ltd.

Samsung inspires the world and shapes the future with transformation ideas and technologies. The company is reshaping the worlds of TVs, smartphones, wearable devices, tablets, digital appliances, network systems, and memory systems (SSD, storage and LED solutions).

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EAST > North East > New England > New England East > CAMBRIDGEPORT_MA

RF Submit by: Summers, Melissa - melissa.summers@verizonwireless.com - 4/26/2022, 12:32:30 PM

EE Submit by: , - -

Project Details	Location Information
FUZE Project ID: 2042716	Site ID: 469899
Project Name: CAMBRIDGEPORT_MA-ANTMO-700RRH-201509	E-NodeB ID: 0560074,0569001,056015
Project Alt Name: CAMBRIDGEPORT_MA-ANTMO-700RRH-201509	PSLC: 161293
Project Type: Modification	Switch Name: W Roxbury 1
Modification Type: RF	Tower Owner:
Designed Sector Carrier 4G: 15	Tower Type: Building Side-Mounted
Designed Sector Carrier 5G: 21	Site Type: MACRO
Additional Sector Carrier 4G: N/A	Site Sub Type: CRAN
Additional Sector Carrier 5G: N/A	Street Address: 80 Erie Street
FP Solution Type & Tech Type: MODIFICATION;4G_OPTM,5G_850,5G_L-Sub6,5G_Radio Swap	City: Cambridge
Carrier Aggregation: false	State: MA
MPT Id: 1315634	Zip Code: 02139
eCIP-0: false	County: Middlesex
Suffix: REV4	Latitude: 42.358419 / 42° 21' 30.3084" N
	Longitude: -71.105208 / 71° 6' 18.7488" W

RFDS Project Scope: RFDS SOW: 850 5GNR/ L-SUB6 8T8R carrier add, antenna change

REV1 (12/13/21): Updates C/Ls to match CDs

REV2 (3/10/22): Updates plumbing diagram to new 8T8R standard (no material changes)

REV3 (4/26/22): Updates C/L on staggered antennas to match the CDs

REV4 (8/10/22): Removes CDMA and spare coax per LL

Note: This project assumes project 15968823 is on air prior to start

1- Retain 700/ 850/ AWS/ PCS/ 28 GHz carriers and add 850 5GNR/ L-SUB6 8T8R carriers

2- Replace (6) existing NHH antennas with (3) new JMA MX06FIT465-02 antennas and (3) new JMA MX14FIT465-01 antennas

3- Add (3) new Samsung RT8808-77A RRHs to rooftop

4- Add (3) 1/2" coax from LS6 RRH to antenna for CAL

5- Remove coax

6- Plumb 700/ 850/ PCS/ AWS/ 28GHz/ L-SUB6 according to the plumbing diagram

7- Use RF ports on dual band RRHs to communicate with RETs via Smart bias-T built into the antenna

Antenna Summary

Added																	
700	850	1900	AWS	28 GHz	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity	Item ID		
		LTE				JMA	MX06FIT465-02	40.5	42.7	340(01) 90(02)	true	true	PHYSICAL	2	MX06FIT465-02		
		LTE				JMA	MX06FIT465-02	38.7	40.9	230(03)	true	true	PHYSICAL	1	MX06FIT465-02		
LTE	LTE 5G		LTE		5G	JMA Wireless	MX14FIT465-01	42.2	44.5	340(01) 90(02) 340(0112) 90(0113)	true	true	PHYSICAL	2			
LTE	LTE 5G		LTE		5G	JMA Wireless	MX14FIT465-01	41.6	43.9	230(03) 230(0114)	true	true	PHYSICAL	1			
Removed																	
700	850	1900	AWS	28 GHz	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity	Item ID		
LTE	LTE	LTE	LTE			COMMSCOPE	NHH-65A-R2B	42.2	44.5	230(03)	false	false	PHYSICAL	2			
LTE	LTE	LTE	LTE			COMMSCOPE	NHH-65A-R2B	43.4	45.7	340(01) 90(02)	false	false	PHYSICAL	4			
Retained																	
700	850	1900	AWS	28 GHz	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity	Item ID		
				5G		SAMSUNG	VZ-AT1K01	45	45.6	340(0216) 90(0217)	false	false	PHYSICAL	2			
				5G		SAMSUNG	VZ-AT1K01	43.8	44.4	230(0218)	false	false	PHYSICAL	1			

Added: 6	Removed: 6	Retained: 3
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Equipment Summary

Added																
Equipment Type	Location	700	850	1900	AWS	28 GHz	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity	Item ID		
Coaxial Cables	Tower						5G	N/A	1/2" Coax		1/2"	PHYSICAL	3			
RRU	Tower						5G	Samsung	RT-8808-77A			PHYSICAL	3			
Removed																
Equipment Type	Location	700	850	1900	AWS	28 GHz	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity	Item ID		
Coaxial Cables	Tower							N/A	1-5/8" Coax		1 5/8"	SPARE	12			
Retained																
Equipment Type	Location	700	850	1900	AWS	28 GHz	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity	Item ID		
Hybrid Cable	Tower	LTE	LTE 5G	LTE	LTE	5G	5G	N/A	6x12 Hybriflex LI		1 1/4"	PHYSICAL	3			
OVP Box	Tower	LTE	LTE 5G	LTE	LTE	5G	5G	Raycap	OVP-6			PHYSICAL	3			
RRU	Tower					5G		Samsung	AT1K01 DC			PHYSICAL	3			
RRU	Tower			LTE	LTE			Samsung	B2/B66A RRH-BR049 (RFV01U-D1A)			PHYSICAL	3			
RRU	Tower	LTE	LTE 5G					Samsung	B5/B13 RRH-BR04C (RFV01U-D2A)			PHYSICAL	3			

Service Info

28 GHz 5G NR				5GLS		
Sector	0216	0001	0218	0216	0217	0218
Azimuth	340	90	230	340	90	230
Cell / ENode B ID	0560074	0560074	0560074	0560074	0560074	0560074
Antenna Model	VZ-AT1K01	VZ-AT1K01	VZ-AT1K01	VZ-AT1K01	VZ-AT1K01	VZ-AT1K01
Antenna Make	SAMSUNG	SAMSUNG	SAMSUNG	SAMSUNG	SAMSUNG	SAMSUNG
Antenna Centerline(Ft)	45	45	43.8	45	45	43.8
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	0	0	0	0	0	0
Tip Height	45.6	45.6	44.4	45.6	45.6	44.4
Regulatory Power	1.76	1.76	1.76	1.86	1.86	1.86
DLEARFCN	2084165, 2076665, 2074999, 2080833,2080833, 2082499, 2073333, 2084165, 2082499, 2073333	2084165, 2076665, 2074999	2073333, 2080833, 2076665, 2074999, 2082499, 2084165	2082499, 2084165, 2076665, 2074999,2082499, 2074999, 2084165, 2080833,2080833, 2076665, 2073333, 2084165, 2073333, 2080833	2076665, 2073333	2082499, 2074999
Channel Bandwidth(MHz)	100	100	100	100	100	100
Total ERP (W)	153.04	153.04	153.04	153.04	153.04	153.04
TMA Make						
TMA Model						
RRU Make	Samsung	Samsung	Samsung	Samsung	Samsung	Samsung
RRU Model	AT1K01 DC	AT1K01 DC	AT1K01 DC	AT1K01 DC	AT1K01 DC	AT1K01 DC
Number of Tx, Rx Lines	4,4	4,4	4,4	4,4	4,4	4,4
Position						
Transmitter Id	4642630	4642631	4642632	10654056	10654057	10654058
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API
Secondary 1 - nL-Sub6				5GLS		
Sector				0112	0113	0114
Azimuth				340	90	230
Cell / ENode B ID				0569001	0569001	0569001
Antenna Model				MX14FIT465-01	MX14FIT465-01	MX14FIT465-01
Antenna Make				JMA Wireless	JMA Wireless	JMA Wireless
Antenna Centerline(Ft)				42.2	42.2	41.6
Mechanical Down-Tilt(Deg.)				0	0	0
Electrical Down-Tilt				4	4	4
Tip Height				44.5	44.5	43.9
Regulatory Power				785.15	785.15	785.15
DLEARFCN				648672	648672	648672
Channel Bandwidth(MHz)				60	60	60
Total ERP (W)				13639.55	13639.55	13639.55
TMA Make						
TMA Model						
RRU Make				Samsung	Samsung	Samsung
RRU Model				RT-8808-77A	RT-8808-77A	RT-8808-77A
Number of Tx, Rx Lines				2,2	2,2	2,2
Position						
Transmitter Id				10654080	10654081	10654082
Source				ATOLL_API	ATOLL_API	ATOLL_API

700 MHz LTE				0001	5GLS		
Sector	01	02	03		01	02	03
Azimuth	340	90	230		340	90	230
Cell / ENode B ID	056015	056015	056015		056015	056015	056015
Antenna Model	NHH-65A-R2B	NHH-65A-R2B	NHH-65A-R2B		MX14FIT465-01	MX14FIT465-01	MX14FIT465-01
Antenna Make	COMMSCOPE	COMMSCOPE	COMMSCOPE		JMA Wireless	JMA Wireless	JMA Wireless
Antenna Centerline(Ft)	43.4	43.4	42.2		42.2	42.2	41.6
Mechanical Down-Tilt(Deg.)	0	0	0		0	0	0
Electrical Down-Tilt	8	10	6		8	10	6
Tip Height	45.7	45.7	44.5		44.5	44.5	43.9
Regulatory Power	64.35	57.75	58.29		56.96	56.96	56.96
DLEARFCN	5230	5230	5230		5230	5230	5230
Channel Bandwidth(MHz)	10	10	10		10	10	10
Total ERP (W)	579.16	519.76	524.57		512.63	512.63	512.63
TMA Make							
TMA Model							
RRU Make	Samsung	Samsung	Samsung		Samsung	Samsung	Samsung
RRU Model	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)		B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)
Number of Tx, Rx Lines	2,2	2,2	2,2		4,4	4,4	4,4
Position							
Transmitter Id	1853961	1854737	1854896		10654059	10654063	10654067
Source	ATOLL_API	ATOLL_API	ATOLL_API		ATOLL_API	ATOLL_API	ATOLL_API
850 MHz LTE				0001	5GLS		
Sector	01	02	03		01	02	03
Azimuth	340	90	230		340	90	230
Cell / ENode B ID	056015	056015	056015		056015	056015	056015
Antenna Model	NHH-65A-R2B	NHH-65A-R2B	NHH-65A-R2B		MX14FIT465-01	MX14FIT465-01	MX14FIT465-01
Antenna Make	COMMSCOPE	COMMSCOPE	COMMSCOPE		JMA Wireless	JMA Wireless	JMA Wireless
Antenna Centerline(Ft)	43.4	43.4	42.2		42.2	42.2	41.6
Mechanical Down-Tilt(Deg.)	0	0	0		0	0	0
Electrical Down-Tilt	8	10	6		8	10	6
Tip Height	45.7	45.7	44.5		44.5	44.5	43.9
Regulatory Power	88.88	79.76	80.5		261.59	261.59	261.59
DLEARFCN	2560	2560	2560		2560	2560	2560
Channel Bandwidth(MHz)	10	10	10		10	10	10
Total ERP (W)	399.94	358.92	362.24		588.57	588.57	588.57
TMA Make							
TMA Model							
RRU Make	Samsung	Samsung	Samsung		Samsung	Samsung	Samsung
RRU Model	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)		B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)
Number of Tx, Rx Lines	2,2	2,2	2,2		4,4	4,4	4,4
Position							
Transmitter Id	4634004	4634005	4634006		10654077	10654078	10654079
Source	ATOLL_API	ATOLL_API	ATOLL_API		ATOLL_API	ATOLL_API	ATOLL_API

850 MHz 5GNR					5GLS		
Sector					0112	0113	0114
Azimuth					340	90	230
Cell / ENode B ID					0569001	0569001	0569001
Antenna Model					MX14FIT465-01	MX14FIT465-01	MX14FIT465-01
Antenna Make					JMA Wireless	JMA Wireless	JMA Wireless
Antenna Centerline(Ft)					42.2	42.2	41.6
Mechanical Down-Tilt(Deg.)					0	0	0
Electrical Down-Tilt					8	10	6
Tip Height					44.5	44.5	43.9
Regulatory Power					261.59	261.59	261.59
DLEARFCN					2560	2560	2560
Channel Bandwidth(MHz)					10	10	10
Total ERP (W)					588.57	588.57	588.57
TMA Make					Samsung	Samsung	Samsung
TMA Model					B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)
RRU Make					4,4	4,4	4,4
RRU Model							
Number of Tx, Rx Lines					10654077	10654078	10654079
Position					ATOLL_API	ATOLL_API	ATOLL_API
Transmitter Id							
Source							
1900 MHz LTE					5GLS		
Sector		01	0001	03	01	02	03
Azimuth		340	90	230	340	90	230
Cell / ENode B ID		056015	056015	056015	056015	056015	056015
Antenna Model		NHH-65A-R2B	NHH-65A-R2B	NHH-65A-R2B	MX06FIT465-02	MX06FIT465-02	MX06FIT465-02
Antenna Make		COMMSCOPE	COMMSCOPE	COMMSCOPE	JMA	JMA	JMA
Antenna Centerline(Ft)		43.4	43.4	42.2	40.5	40.5	38.7
Mechanical Down-Tilt(Deg.)		0	0	0	0	0	0
Electrical Down-Tilt		4	4	4	4	4	4
Tip Height		45.7	45.7	44.5	42.7	42.7	40.9
Regulatory Power		123.78	123.78	123.78	108.31	108.31	108.31
DLEARFCN		1025	1025	1025	1025	1025	1025
Channel Bandwidth(MHz)		15	15	15	15	15	15
Total ERP (W)		1018.59	1018.59	1018.59	891.25	891.25	891.25
TMA Make							
TMA Model							
RRU Make		Samsung	Samsung	Samsung	Samsung	Samsung	Samsung
RRU Model		B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)
Number of Tx, Rx Lines		4,4	4,4	4,4	4,4	4,4	4,4
Position							
Transmitter Id		1854472	1854808	1854001	10654060	10654064	10654068
Source		ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

2100 MHz LTE				5GLS		
Sector	01	02	03	01	02	03
Azimuth	340	90	230	340	90	230
Cell / ENode B ID	056015	056015	056015	056015	056015	056015
Antenna Model	NHH-65A-R2B	NHH-65A-R2B	NHH-65A-R2B	MX14FIT465-01	MX14FIT465-01	MX14FIT465-01
Antenna Make	COMMSCOPE	COMMSCOPE	COMMSCOPE	JMA Wireless	JMA Wireless	JMA Wireless
Antenna Centerline(Ft)	43.4	43.4	42.2	42.2	42.2	41.6
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	4	4	4	4	4	4
Tip Height	45.7	45.7	44.5	44.5	44.5	43.9
Regulatory Power	103.45	103.45	103.45	109.53	109.53	109.53
DLEARFCN	2050	2050	2050	2050	2050	2050
Channel Bandwidth(MHz)	20	20	20	20	20	20
Total ERP (W)	1135.01	1135.01	1135.01	1201.71	1201.71	1201.71
TMA Make						
TMA Model						
RRU Make	Samsung	Samsung	Samsung	Samsung	Samsung	Samsung
RRU Model	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)
Number of Tx, Rx Lines	4,4	4,4	4,4	4,4	4,4	4,4
Position						
Transmitter Id	1854480	1854812	1854005	10654061	10654065	10654069
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API
nL-Sub6				5GLS		
Sector				0112	0113	0114
Azimuth				340	90	230
Cell / ENode B ID				0569001	0569001	0569001
Antenna Model				MX14FIT465-01	MX14FIT465-01	MX14FIT465-01
Antenna Make				JMA Wireless	JMA Wireless	JMA Wireless
Antenna Centerline(Ft)				42.2	42.2	41.6
Mechanical Down-Tilt(Deg.)				0	0	0
Electrical Down-Tilt				4	4	4
Tip Height				44.5	44.5	43.9
Regulatory Power				785.15	785.15	785.15
DLEARFCN				648672	648672	648672
Channel Bandwidth(MHz)				60	60	60
Total ERP (W)				13639.55	13639.55	13639.55
TMA Make						
TMA Model						
RRU Make				Samsung	Samsung	Samsung
RRU Model				RT-8808-77A	RT-8808-77A	RT-8808-77A
Number of Tx, Rx Lines				2,2	2,2	2,2
Position						
Transmitter Id				10654080	10654081	10654082
Source				ATOLL_API	ATOLL_API	ATOLL_API
Service Comments						

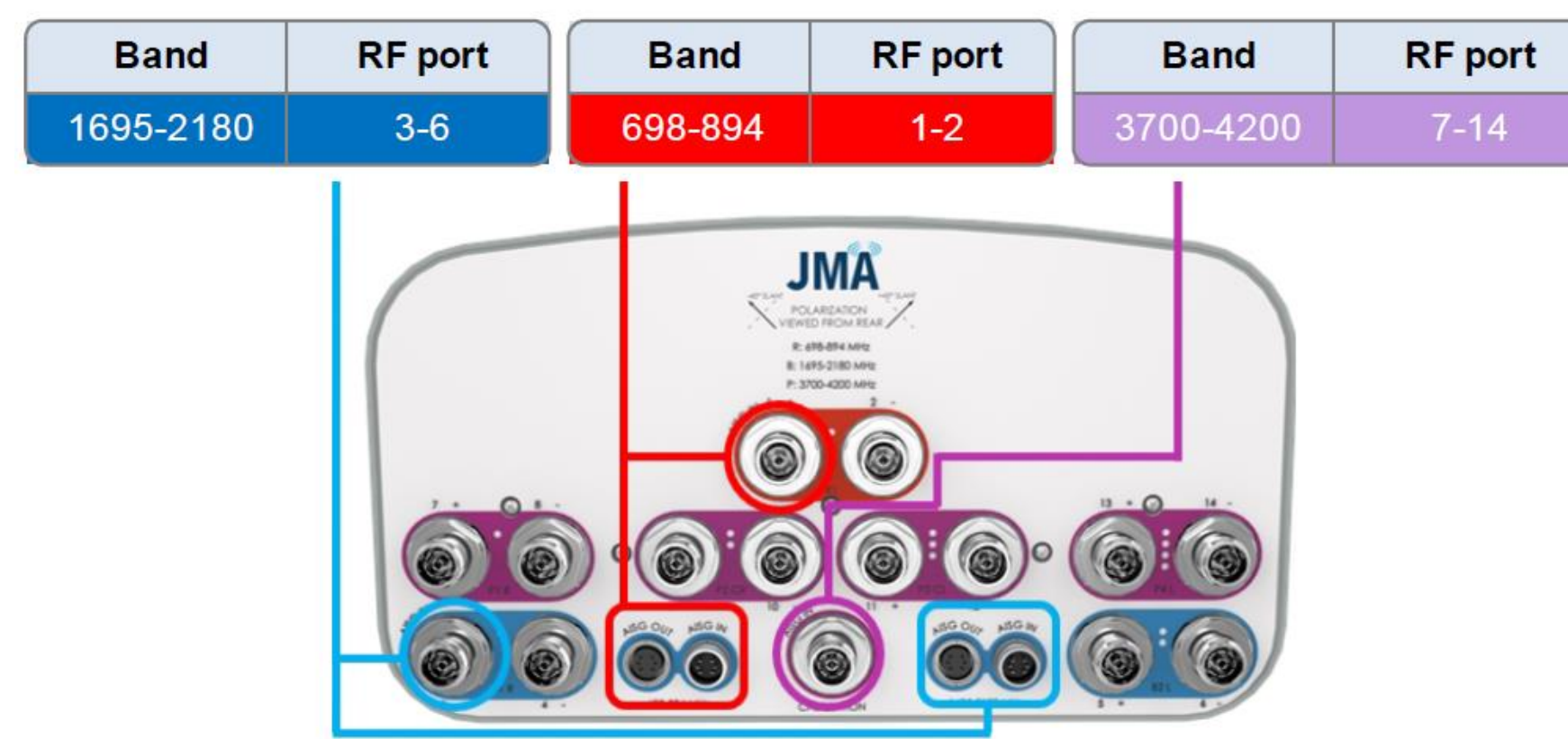
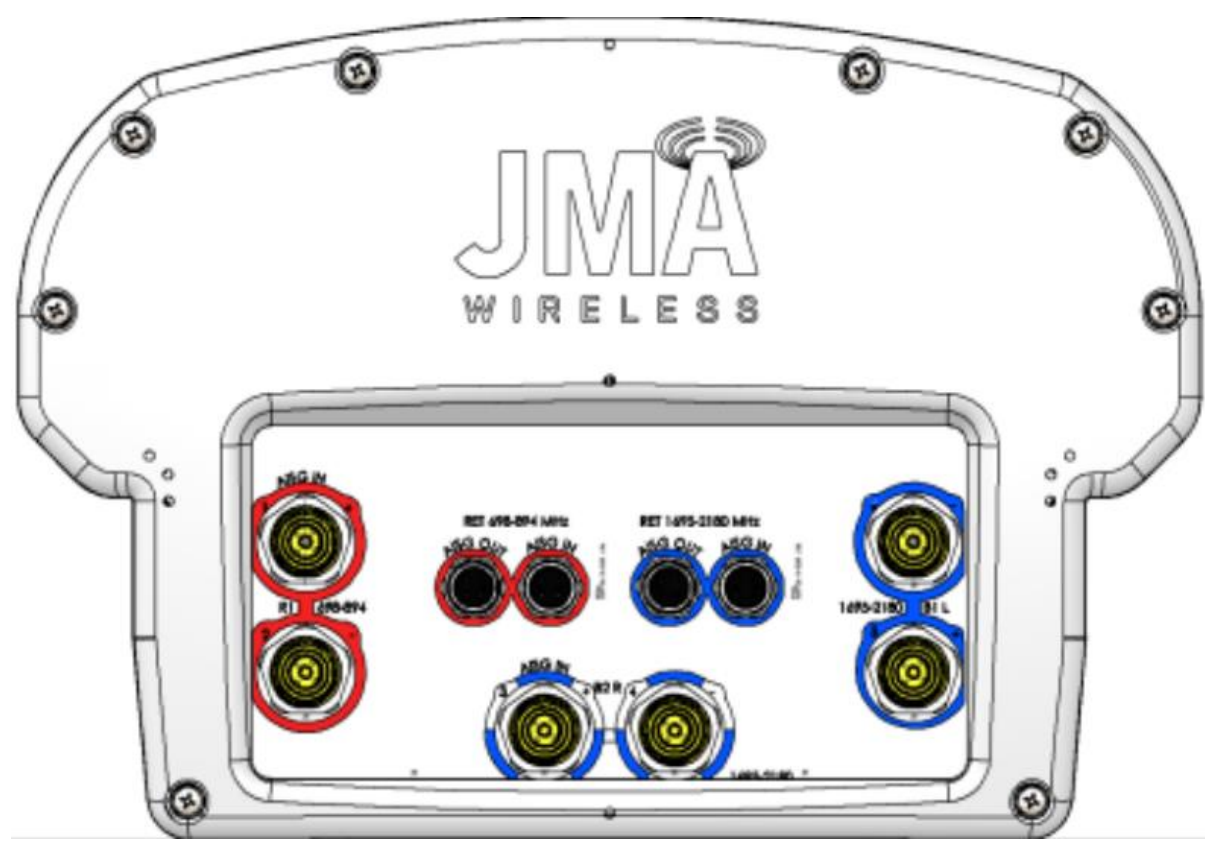
Callsigns Per Antenna

Sector	Antenna Make	Antenna Model	Ant CL Height AGL	Tip Height	Azimuth (TN)	Elec Tilt	Mech Tilt	Gain	Beam Width	Regulatory Power	Callsigns							
											700	850	1900	2100	28 GHz	31 GHz	39 GHz	
0114	JMA Wireless	MX14FIT465-01	41.6	43.9	230	4	0	20.748	88	785.15								
01	JMA Wireless	MX14FIT465-01	42.2	44.5	340	8	0	11.298	66	261.59		KNKA201						
01	JMA Wireless	MX14FIT465-01	42.2	44.5	340	4	0	14.698	58	109.53				WQGA900 WQGB266				
0112	JMA Wireless	MX14FIT465-01	42.2	44.5	340	4	0	20.748	88	785.15								
0114	JMA Wireless	MX14FIT465-01	41.6	43.9	230	6	0	11.398	66	261.59		KNKA201						
0113	JMA Wireless	MX14FIT465-01	42.2	44.5	90	10	0	11.298	66	261.59		KNKA201						
01	JMA	MX06FIT465-02	40.5	42.7	340	4	0	13.2	65.75	108.31			KNLF646 KNLH242 KNLH310					
0218	SAMSUNG	VZ-AT1K01	43.8	44.4	230	0	0	25.848	52	1.86					WRBA936 WRBA937			
0217	SAMSUNG	VZ-AT1K01	45	45.6	90	0	0	25.848	52	1.86					WRBA936 WRBA937			
02	JMA Wireless	MX14FIT465-01	42.2	44.5	90	10	0	10.998	68	56.96	WQJQ689							
01	JMA Wireless	MX14FIT465-01	42.2	44.5	340	8	0	10.998	68	56.96	WQJQ689							
02	JMA	MX06FIT465-02	40.5	42.7	90	4	0	13.2	65.75	108.31			KNLF646 KNLH242 KNLH310					
03	JMA Wireless	MX14FIT465-01	41.6	43.9	230	6	0	11.098	68	56.96	WQJQ689							
0216	SAMSUNG	VZ-AT1K01	45	45.6	340	0	0	25.848	52	1.86					WRBA936 WRBA937			
0113	JMA Wireless	MX14FIT465-01	42.2	44.5	90	4	0	20.748	88	785.15								
0112	JMA Wireless	MX14FIT465-01	42.2	44.5	340	8	0	11.298	66	261.59		KNKA201						
02	JMA Wireless	MX14FIT465-01	42.2	44.5	90	4	0	14.698	58	109.53				WQGA900 WQGB266				
03	JMA Wireless	MX14FIT465-01	41.6	43.9	230	6	0	11.398	66	261.59		KNKA201						
02	JMA Wireless	MX14FIT465-01	42.2	44.5	90	10	0	11.298	66	261.59		KNKA201						
03	JMA Wireless	MX14FIT465-01	41.6	43.9	230	4	0	14.698	58	109.53				WQGA900 WQGB266				
03	JMA	MX06FIT465-02	38.7	40.9	230	4	0	13.2	65.75	108.31			KNLF646 KNLH242 KNLH310					

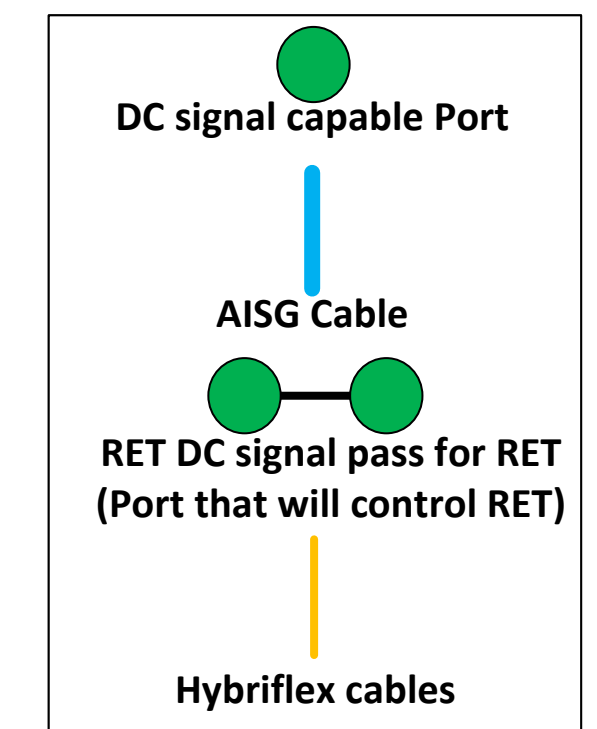
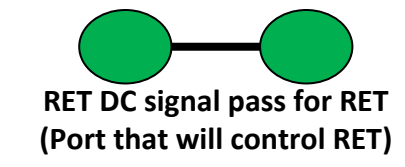
Callsigns

Callsign	Market	Radio Code	Market Number	Block	State	County	Licensee Name	Wholly Owned	Total MHZ	Freq Range 1	Freq Range 2	Freq Range 3	Freq Range 4	Regulatory Power	Threshold (W)	POPs /Sq Mi	Status	Action	Approved for Insvc	
WQJQ689	Northeast	WU	REA001	C	MA	Middlese	Cellco Partnership	Yes	22.000	746.000-757.000	776.000-787.000	.000-.000	.000-.000	56.96	1000	1995.55	Active	added	Yes	
KNKA201	Boston-Lowell-Brockton-Lawrence-Haverhill, MA-NH	CL	CMA006	B	MA	Middlese	Cellco Partnership	Yes	25.000	835.000-845.000	880.000-890.000	846.500-849.000	891.500-894.000	261.59	400	1995.55	Active	added	Yes	
KNLF646	Boston, MA	CW	BTA051	C	MA	Middlese	AirTouch Cellular	Yes	10.000	1895.000-1900.000	1975.000-1980.000	.000-.000	.000-.000	108.31	1640	1995.55	Active	added	Yes	
KNLH310	Boston, MA	CW	BTA051	E	MA	Middlese	AirTouch Cellular	Yes	10.000	1885.000-1890.000	1965.000-1970.000	.000-.000	.000-.000	108.31	1640	1995.55	Active	added	Yes	
KNLH242	Boston, MA	CW	BTA051	F	MA	Middlese	Cellco Partnership	Yes	10.000	1890.000-1895.000	1970.000-1975.000	.000-.000	.000-.000	108.31	1640	1995.55	Active	added	Yes	
WRBA936	Boston, MA	UU	BTA051	L1	MA	Middlese	Cellco Partnership	Yes	325.000	27600.000-27925.000	.000-.000	.000-.000	.000-.000	1.86		1995.55	Active	added	Yes	
WRBA937	Boston, MA	UU	BTA051	L2	MA	Middlese	Cellco Partnership	Yes	325.000	27925.000-27950.000	28050.000-28350.000	.000-.000	.000-.000	1.86		1995.55	Active	added	Yes	
WQGB266	Boston-Lowell-Brockton-Lawrence-Haverhill, MA-NH	AW	CMA006	A	MA	Middlese	Cellco Partnership	Yes	20.000	1710.000-1720.000	2110.000-2120.000	.000-.000	.000-.000	109.53	1640	1995.55	Active	added	Yes	
WRNE627	Boston, MA	PM	PEA007	A1	MA	Middlese	Cellco Partnership	Yes	20.000	3700.000-3720.000	.000-.000	.000-.000	.000-.000	785.15	1640	1995.55	Active	added	Yes	
WRNE628	Boston, MA	PM	PEA007	A2	MA	Middlese	Cellco Partnership	Yes	20.000	3720.000-3740.000	.000-.000	.000-.000	.000-.000	785.15	1640	1995.55	Active	added	Yes	
WRNE629	Boston, MA	PM	PEA007	A3	MA	Middlese	Cellco Partnership	Yes	20.000	3740.000-3760.000	.000-.000	.000-.000	.000-.000	785.15	1640	1995.55	Active	added	Yes	
WQGA900	Boston-Worcester-Lawrence-Lowell-Brockton, MA-NH-R	AW	BEA003	B	MA	Middlese	Cellco Partnership	Yes	20.000	1720.000-1730.000	2120.000-2130.000	.000-.000	.000-.000	109.53	1640	1995.55	Active	added	Yes	
WRHD671	Boston, MA	UU	PEA007	M1	MA	Middlese	Straight Path Spectrum, LLC	Yes	100.000	37600.000-37700.000	.000-.000	.000-.000	.000-.000			1995.55	Active		Yes	
WRHD672	Boston, MA	UU	PEA007	M10	MA	Middlese	Straight Path Spectrum, LLC	Yes	100.000	38500.000-38600.000	.000-.000	.000-.000	.000-.000			1995.55	Active	N/A	No	
WRHD673	Boston, MA	UU	PEA007	M2	MA	Middlese	Straight Path Spectrum, LLC	Yes	100.000	37700.000-37800.000	.000-.000	.000-.000	.000-.000			1995.55	Active		Yes	
WRHD674	Boston, MA	UU	PEA007	M3	MA	Middlese	Straight Path Spectrum, LLC	Yes	100.000	37800.000-37900.000	.000-.000	.000-.000	.000-.000			1995.55	Active		Yes	
WRHD675	Boston, MA	UU	PEA007	M4	MA	Middlese	Straight Path Spectrum, LLC	Yes	100.000	37900.000-38000.000	.000-.000	.000-.000	.000-.000			1995.55	Active		Yes	
WRHD676	Boston, MA	UU	PEA007	M5	MA	Middlese	Straight Path Spectrum, LLC	Yes	100.000	38000.000-38100.000	.000-.000	.000-.000	.000-.000			1995.55	Active		Yes	
WRHD677	Boston, MA	UU	PEA007	M6	MA	Middlese	Straight Path Spectrum, LLC	Yes	100.000	38100.000-38200.000	.000-.000	.000-.000	.000-.000			1995.55	Active		Yes	
WRHD678	Boston, MA	UU	PEA007	M7	MA	Middlese	Straight Path Spectrum, LLC	Yes	100.000	38200.000-38300.000	.000-.000	.000-.000	.000-.000			1995.55	Active		Yes	

WRHD679	Boston, MA	UU	PEA007	M8	MA	Middlese	Straight Path Spectrum, LLC	Yes	100.000	38300.000-38400.000	.000-.000	.000-.000	.000-.000			1995.55	Active		Yes
WRHD680	Boston, MA	UU	PEA007	M9	MA	Middlese	Straight Path Spectrum, LLC	Yes	100.000	38400.000-38500.000	.000-.000	.000-.000	.000-.000			1995.55	Active		Yes
WRHD681	Boston, MA	UU	PEA007	N1	MA	Middlese	Straight Path Spectrum, LLC	Yes	100.000	38600.000-38700.000	.000-.000	.000-.000	.000-.000			1995.55	Active	N/A	No
WRLD615	D25017 - Middlesex, MA	PL	D25017	O	MA	Middlese	Verizon Wireless Network Procurement LP	Yes	100.000	3550.000-3650.000	.000-.000	.000-.000	.000-.000		501	1995.55	Active		Yes
WRLD617	D25017 - Middlesex, MA	PL	D25017	O	MA	Middlese	Verizon Wireless Network Procurement LP	Yes	100.000	3550.000-3650.000	.000-.000	.000-.000	.000-.000		501	1995.55	Active		Yes
WRLD616	D25017 - Middlesex, MA	PL	D25017	O	MA	Middlese	Verizon Wireless Network Procurement LP	Yes	100.000	3550.000-3650.000	.000-.000	.000-.000	.000-.000		501	1995.55	Active		Yes
WRNE630	Boston, MA	PM	PEA007	A4	MA	Middlese	Cellco Partnership	Yes	20.000	3760.000-3780.000	.000-.000	.000-.000	.000-.000		1640	1995.55	Active		No
WRNE631	Boston, MA	PM	PEA007	A5	MA	Middlese	Cellco Partnership	Yes	20.000	3780.000-3800.000	.000-.000	.000-.000	.000-.000		1640	1995.55	Active		No
WRNE632	Boston, MA	PM	PEA007	B1	MA	Middlese	Cellco Partnership	Yes	20.000	3800.000-3820.000	.000-.000	.000-.000	.000-.000		1640	1995.55	Active		No
WRNE633	Boston, MA	PM	PEA007	B2	MA	Middlese	Cellco Partnership	Yes	20.000	3820.000-3840.000	.000-.000	.000-.000	.000-.000		1640	1995.55	Active		No
WRNE634	Boston, MA	PM	PEA007	B3	MA	Middlese	Cellco Partnership	Yes	20.000	3840.000-3860.000	.000-.000	.000-.000	.000-.000		1640	1995.55	Active		No



- Port 1 & 2 are for low band (698-896 MHz).
- Port 3,4,5, & 6 are for high band (1695-2360 MHz).
- Smart Bias Tee (SBT) is through antenna ports 1 & 3 (1 for low band & 3 for high band).
- AISG cable is only needed when drawn in the diagrams below, if it is not drawn then SBT is enough to control all RET motors.
- Not all SBT ports are needed to control RET, only green port connection to green port will control RET.



- The Calibration Port (CAL) on the antenna is required to be used on the MX14FIT antenna as C-Band cannot use the Beam Forming function without this. The cable to this port is shown in RED and should be connected to the antenna using 1/2" coax cable.



Calibration signal pass for Calibration
(Port that will control Calibration for C Band)

Comments:

Diagram shows antenna port configuration as viewed from below antennas.

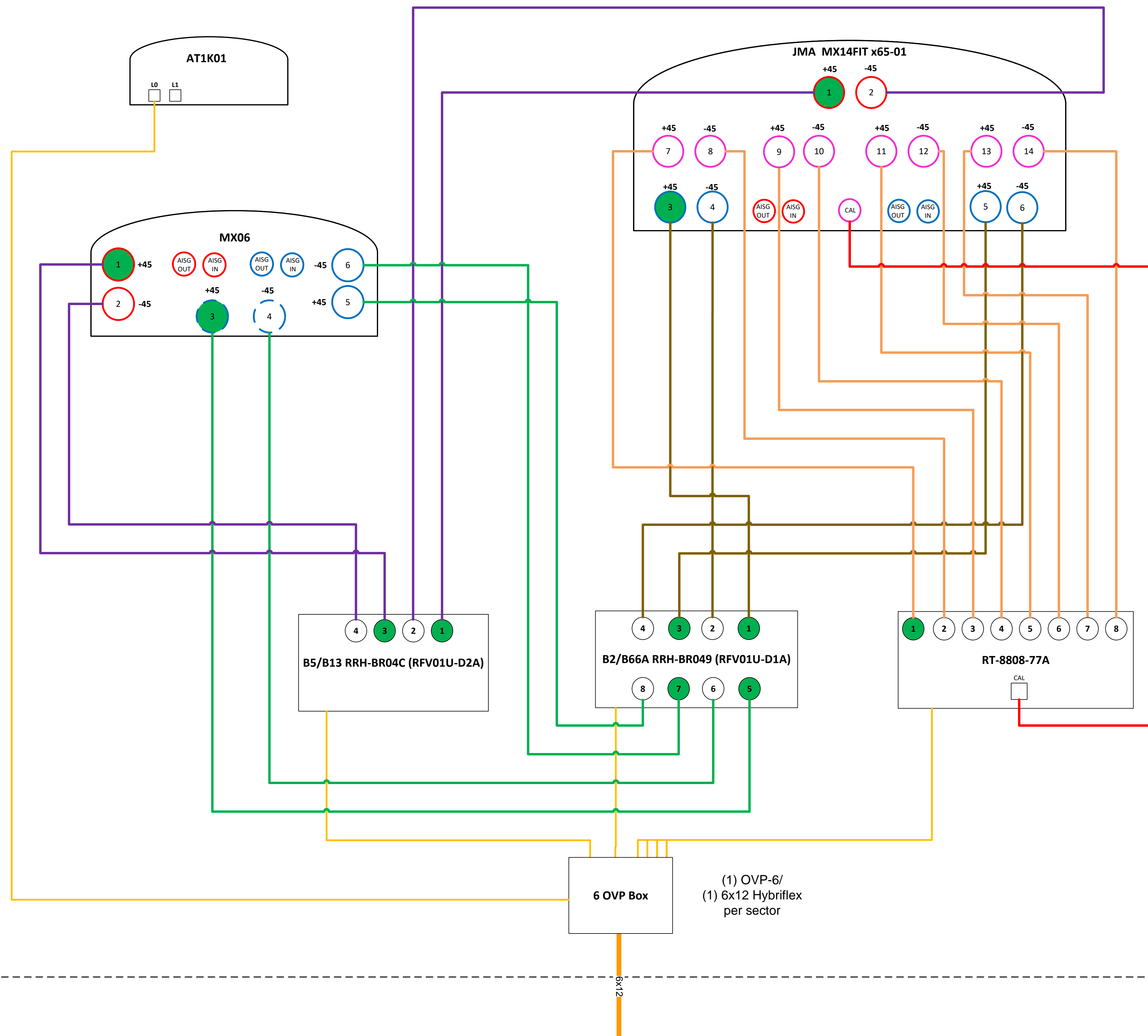
Antenna positions are indicated as viewed from IN FRONT of antennas.

Cap and weatherproof unused antenna ports.

All plumbing diagram colors are irrelevant except for AISG & Hybriflex cable. (For the coax colors follow Coax Colors guide above)

Tower/
Watertank/
Rooftop

Equipment Pad



Band		Sector 1 (Alpha) Color Codes								Sector 2 (Beta) Color Codes								Sector 3 (Gamma) Color Codes								
850 CDMA			R								B								G							
			R	R							B	B							G	G						
700			R	P							B	P							G	P						
			R	R	P						B	B	B	P					G	G	P					
			R	R	R	P					B	B	B	B	P				G	G	G	P				
			R	R	R	R	P				B	B	B	B	B	P			G	G	G	G	P			
850 LTE			R	P	P						B	P	P						G	P	P					
			R	R	P	P					B	B	P	P					G	G	P	P				
			R	R	R	P	P				B	B	B	P	P				G	G	G	P	P			
			R	R	R	R	P	P	P			B	B	B	B	P	P	P	G	G	G	G	P	P	P	
700 / 850			R	P	P	P					B	P	P	P					G	P	P	P				
			R	R	P	P	P				B	B	P	P	P				G	G	P	P	P			
			R	R	R	P	P	P			B	B	B	P	P	P			G	G	G	P	P	P		
			R	R	R	R	P	P	P	P		B	B	B	B	P	P	P	G	G	G	G	P	P	P	P
AWS			R	W							B	W							G	W						
			R	R	W						B	B	W						G	G	W					
			R	R	R	W					B	B	B	W					G	G	G	W				
			R	R	R	R	W				B	B	B	B	W				G	G	G	G	W			
PCS			R	W	W						B	W	W						G	W	W					
			R	R	W	W					B	B	W	W					G	G	W	W				
			R	R	R	W	W				B	B	B	W	W				G	G	G	W	W			
			R	R	R	R	W	W	W			B	B	B	B	W	W	W	G	G	G	W	W	W		
AWS / PCS			R	W	W	W					B	W	W	W					G	W	W	W				
			R	R	W	W	W				B	B	W	W	W				G	G	W	W	W			
			R	R	R	W	W	W			B	B	B	W	W	W			G	G	G	W	W	W		
			R	R	R	R	W	W	W	W		B	B	B	B	W	W	W	G	G	G	G	W	W	W	W
CBRS			R	Y							B	Y							G	Y						
			R	R	Y						B	B	Y						G	G	Y					
			R	R	R	Y					B	B	B	Y					G	G	G	Y				
			R	R	R	R	Y				B	B	B	B	Y				G	G	G	G	Y			
LAA			R	Y	Y						B	Y	Y						G	Y	Y					
			R	R	Y	Y					B	B	Y	Y					G	G	Y	Y				

		Sector 4 (Delta) Color Codes								Sector 5 (Epsilon) Color Codes								Sector 6 (Zeta) Color Codes								
850 CDMA	Gray		R							Gray	B							Gray	G							
	Gray		R	R						Gray	B	B						Gray	G	G						
700	Gray		R	P						Gray	B	P						Gray	G	P						
	Gray		R	R	P					Gray	B	B	B	P				Gray	G	G	P					
	Gray		R	R	R	P				Gray	B	B	B	B	P			Gray	G	G	G	P				
	Gray		R	R	R	R	P			Gray	B	B	B	B	B	P		Gray	G	G	G	G	P			
850 LTE	Gray		R	P	P					Gray	B	P	P					Gray	G	P	P					
	Gray		R	R	P	P				Gray	B	B	P	P				Gray	G	G	P	P				
	Gray		R	R	R	P	P			Gray	B	B	B	P	P			Gray	G	G	G	P	P			
	Gray		R	R	R	R	P	P	P		Gray	B	B	B	B	P	P	P	G	G	G	G	P	P		
700 / 850	Gray		R	P	P	P				Gray	B	P	P	P				Gray	G	P	P	P				
	Gray		R	R	P	P	P			Gray	B	B	P	P	P			Gray	G	G	P	P	P			
	Gray		R	R	R	P	P	P		Gray	B	B	B	P	P	P		Gray	G	G	G	P	P	P		
	Gray		R	R	R	R	P	P	P	P		Gray	B	B	B	B	P	P	P	G	G	G	G	P	P	P
AWS	Gray		R	W						Gray	B	W						Gray	G	W						
	Gray		R	R	W					Gray	B	B	W					Gray	G	G	W					
	Gray		R	R	R	W				Gray	B	B	B	W				Gray	G	G	G	W				
	Gray		R	R	R	R	W			Gray	B	B	B	B	W			Gray	G	G	G	G	W			
PCS	Gray		R	W	W					Gray	B	W	W					Gray	G	W	W					
	Gray		R	R	W	W				Gray	B	B	W	W				Gray	G	G	W	W				
	Gray		R	R	R	W	W			Gray	B	B	B	W	W			Gray	G	G	G	W	W			
	Gray		R	R	R	R	W	W	W		Gray	B	B	B	B	W	W	W	G	G	G	G	W	W		
AWS / PCS	Gray		R	W	W	W				Gray	B	W	W	W				Gray	G	W	W	W				
	Gray		R	R	W	W	W			Gray	B	B	W	W	W			Gray	G	G	W	W	W			
	Gray		R	R	R	W	W	W		Gray	B	B	B	W	W	W		Gray	G	G	G	W	W	W		
	Gray		R	R	R	R	W	W	W	W		Gray	B	B	B	B	W	W	W	G	G	G	G	W	W	W
CBRS	Gray		R	Y						Gray	B	Y						Gray	G	Y						
	Gray		R	R	Y					Gray	B	B	Y					Gray	G	G	Y					
	Gray		R	R	R	Y				Gray	B	B	B	Y				Gray	G	G	G	Y				
	Gray		R	R	R	R	Y			Gray	B	B	B	B	Y			Gray	G	G	G	G	Y			
LAA	Gray		R	Y	Y					Gray	B	Y	Y					Gray	G	Y	Y					
	Gray		R	R	Y	Y				Gray	B	B	Y	Y				Gray	G	G	Y	Y				

Sector	Antenna Desc	Base Station ID	Sector ID
Alpha	700-850	056015_1_17	056015_1,056015_1_7
Alpha	AWS	056015_1_2	056015_1_2
Alpha	PCS	056015_1_4	056015_1_4
Beta	700-850	056015_2_17	056015_2,056015_2_7
Beta	AWS	056015_2_2	056015_2_2
Beta	PCS	056015_2_4	056015_2_4
Gamma	700-850	056015_3_17	056015_3,056015_3_7
Gamma	AWS	056015_3_2	056015_3_2
Gamma	PCS	056015_3_4	056015_3_4

BOOK 19165 p 339

BK 17749 503

MASSACHUSETTS QUITCLAIM DEED SHORT FORM (INDIVIDUAL) 881

25.00

RE 430

TR

01/02/87 01:27

Cigarette Service Co., Inc., successor to Alrowe Realty Company, Inc.
a duly organized Massachusetts corporation having an usual place of
business in Cambridge, Middlesex County, Massachusetts,
xx

being unmarried, for consideration paid, and in full consideration of Seven Hundred Thousand
Dollars (\$700,000.00)

grant to ^{First} C-G Limited Partnership, a Massachusetts limited partnership *
with a mailing address at 22-1 Peters Street, Cambridge, Massachusetts 02139
xx with quitclaim instruments

the land in Cambridge, Middlesex County, Massachusetts, with the buildings
thereon, situated on the corner of Erie Street and Sidney Street,

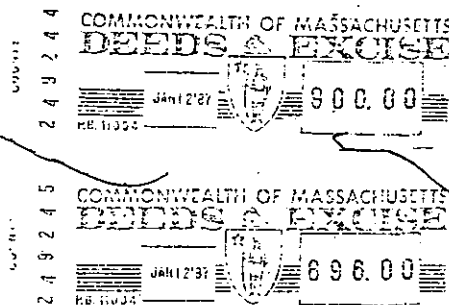
being shown as Lot "B-1" on a plan entitled "Plan of Land in Cambridge,
Mass." dated April 14, 1945, H. B. Ullian, C.E. and recorded with
Middlesex South District Deeds, Book 6850, Page 534, bounded and
described as follows:

NORTHEASTERLY by Erie Street, one hundred forty-five and 68/100
(145.68) feet;
SOUTHEASTERLY by Sidney Street, ninety-nine and 77/100 (99.77) feet;
SOUTHWESTERLY by land of owners unknown, one hundred forty-five
and 71/100 (145.71) feet; and
NORTHWESTERLY by Lot B² as shown on said plan, ninety-nine and
86/100 (99.86) feet.

Containing 14,542 square feet of land, according to said plan.

For title reference see deed from The Barry Corporation to Alrowe
Realty Company, Inc., dated February 1, 1951 and recorded with
Middlesex South Registry of Deeds, Book 7701, Page 330.

Please return to
Laurie M. Hoopes
Ropes, Gray
225 Franklin Street
Boston, MA 02110
GDZB-3



Witness its corporate and seal this 31st day of December, 1986

CIGARETTE SERVICE CO., INC.

By: *Charles R. LaSala*
President

The Commonwealth of Massachusetts

Suffolk, ss.

December 31, 1986

Then personally appeared the above named Charles R. LaSala, President
and acknowledged the foregoing instrument to be the free act and deed of the corporation

JOSEPH A. MALONE Notary Public - Suffolk County, Mass.

My commission expires April 4, 1991